Information Circular No. 17

January 1955

Drought Affects

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STATE DIVISION OF CONSERVATION

# DEPARTMENT OF MINES, MINING AND GEOLOGY

**Garland Peyton, Director** 



425 STATE CAPITOL ATLANTA, GEORGIA

# SURFACE WATER RESOURCES OF GEORGIA DURING THE DROUGHT OF 1954

Part 1

**STREAMFLOW** 

By

ounty Creeks, Wells Run Cartersville Has Unlimited M. T. Thomson and R. F. Carter **United States Geological Survey** 

> Prepared cooperatively by the Geological Survey United States Department of the Interior Washington, D. C.

> > ds Auburn Atlanta

## LETTER OF TRANSMITTAL

Atlanta, Jan. 15, 1955

To His Excellency, Marvin Griffin, Governor Commissioner Ex-Officio State Division of Conservation

Sir:

I have the honor to submit herewith Information Circular No. 17, "Surface Water Resources of Georgia During the Drought of 1954, Part I-Streamflow".

This report is published to provide factual information about the effect of the drought on the surface-water resources of the State. It is published in two parts in order to make the observed streamflow data in Part I available immediately for general use in the design of reservoirs and other measures for protection against recurring droughts. Part II, the analytical portion of the report, will be published when the analyses are completed.

The drought of 1954 was an economic disaster to Georgia's agriculture and a serious problem to municipalities and industries. It caused many streams to reach their lowest flow of record, but in much of the State streamflow conditions in 1954 were neither unprecedented nor much more severe than in other years. The seriousness of the situation was largely due to the greatly increased need for dependable water supplies and the competitive demands for limited supplies.

Fortunately, there was an active investigation of surface-water resources in Georgia in 1954, so factual information about streamflow conditions throughout the State was available and currently reported. That information was of great value to municipalities and industries and to the engineers and agencies concerned with water supplies. Fortunately, too, the investigation was conducted on a statewide scale—accurate drought observations were made in practically every county.

The results of this drought investigation, the streamflow data for which is published herein, and the analyses of the data to follow will be of great value to the people of Georgia. The information will not only aid in the current measures now being taken for protection against recurring droughts, but will aid also in the wise development of our water resources to meet the ever-growing demands upon them. The 1954 drought has demonstrated the limitations of our water resources under natural conditions. It is now apparent that our water resources must be developed if they are to meet the future needs of Georgia's expanding cities and industry and the increased use of water for irrigation that this drought has demonstrated to be so desirable.

Very truly yours,

Garland Peyton

Leyton

Director

## CONTENTS

Letter of Transmittal	1	Altamaha River basin:	
Contents	2, 3	Ocmulgee River:	
Illustrations	4	Yellow River:	
ABSTRACT	5	Pew Creek near Lawrenceville, Ga.	25
		Yellow River near Snellville, Ga.	25
INTRODUCTION		Yellow River near Covington, Ga.	26
Purpose and Scope		Tobesofkee Creek near Macon, Ga.	26
Administration and Acknowledgments		Big Indian Creek at Perry, Ga.	27
DESCRIPTION OF GEORGIA	7	Oconee River:	
Physiographic Regions	7	Middle Oconee River:	
River Systems	8	Pond Fork of Middle Oconee River:	
FACTORS AFFECTING DROUGHT FLOW	9	Allen Creek at Talmo, Ga	27
Rainfall	9	Middle Oconee River near Athens, Ga.	28
Vegetative Seasons	9	Apalachee River near Buckhead, Ga.	28
Temperature and Evaporation	10	Little River:	
Land Characteristics	10	Murder Creek near Monticello, Ga.	29
Storage	10	Turkey Creek:	
Diversions	10	Rocky Creek near Dudley, Ga.	29
DROUGHT CONDITIONS IN 1954	11	Ohoopee River near Reidsville, Ga.	30
AVAILABLE DROUGHT RECORDS		Satilla River basin:	
		Satilla River near Waycross, Ga.	30
Significance of the Minimum Flow  Definition of Terms		Little Satilla River near Offerman, Ga.	31
Explanation of Data		Okefenokee Swamp:	
-	14	Suwannee Canal at Camp Cornelia, Ga.	32
Table I—Average and minimum flow of Georgia streams 14, 15	5, 16	Billy's Lake, Ga.	32
COMPARISON OF 1954 DROUGHT WITH		Suwannee River basin:	
OTHER DROUGHTS	17	Suwannee River at Fargo, Ga.	
Table 2—Annual average and minimum daily flow	4.0	Alapaha River near Alapaha, Ga.	
of selected streams in Georgia	19	Alapaha River at Statenville, Ga.	35
HYDROGRAPHS OF THE 1954 DROUGHT FLOW	20	Withlacoochee River:	05
Savannah River basin:		Little River near Adel, Ga.	33
Chattaooga River near Clayton, Ga.	20	Ochlockonee River basin:	0.0
Panther Creek near Toccoa, Ga	21	Ochlockonee River near Thomasville, Ga.	
South Beaverdam Creek at Dewy Rose, Ga	21	Tired Creek near Cairo, Ga	36
Broad River:		Apalachicola River basin:	27
North Fork Broad River near Toccoa, Ga		Chattahoochee River near Leaf, Ga	
North Fork Broad River near Carnesville, Ga.		Chestatee River near Dahlonega, Ga.	
Little River near Washington, Ga.		Sweetwater Creek near Austell, Ga.	
Brier Creek near Millhaven, Ga.	23	Snake Creek near Whitesburg, Ga	
Ogeechee River basin:	0.4	Yellowjacket Creek near LaGrange, Ga	
Ogeechee River at Scarboro, Ga.		Flint River near Griffin, Ga	
Canoochee River near Claxton, Ga.	24	Whitewater Creek near Butler, Ga.	41

## CONTENTS

Muckafoonee Creek:	Tennessee River basin:	
Kinchafoonee Creek at Preston, Ga 40	Hiawassee River at Presley, Ga. 4	٠5
Ichawaynochaway Creek near Milford, Ga 4	Nottely River near Blairsville, Ga. 4	6
Spring Creek near Iron City, Ga. 4	Toccoa River near Dial Ga	6
Mobile River basin:	Fightingtown Creek at McCaysville, Ga 4	£7
Cartecay River near Ellijay, Ga. 4		
Coosawattee River:	Chattanooga Creek near Flintstone, Ga 4	
Sallacoa River:	MEASUREMENTS AT PARTIAL-RECORD GAGING	
Pine Log Creek:	STATIONS AND METHODS OF USE 4	49
Little Pine Log Creek:	Computation of Minimum Flow at Partial-Record	
Rocky Branch near Fairmount, Ga 4		
Conasauga River:	Minimum-Flow Discrepancies 4	
Coahulla Creek:	Reliability Tests 4	
Mill Creek at Dalton, Ga 4	The Minimum Daily Flow of Unmeasured Streams 4	19
Etowah River near Dawsonville, Ga. 4	ractors Affecting the Minimum Daily Flow Per	52
Little River near Roswell, Ga 4		
Coosa River:	Evaluation 5	52
Cedar Creek near Cedartown, Ga. 4 Chattooga River at Summerville, Ga. 4	gaging stations in Georgia during the 1904	79

## **ILLUSTRATIONS**

Cove	r	Headlines during the 1954 drought from Georgia newspapers	
Fig.	1.	Farmers' trucks in line for water at Tifton	
Fig.	2.	Sandbagged water supply dam on the Flint River near Griffin	(
Fig.	3.	Temporary sandbag dam on the Chattahoochee River near Atlanta	(
Fig.	4.	An irrigation system in southern Georgia	(
Fig.	5.	Billy's Lake, in Okefenokee Swamp	9
Fig.	6.	Boat landing, at Billy's Island, in Okefenokee Swamp	9
Fig.	7.	Average and 1954 monthly rainfall and runoff	9
Fig.	8.	Diurnal fluctuations of small streams	10
Fig.	9.	Oconee River at Milledgeville	1
Fig.	10.	Gaging station on Ogeechee River at Scarboro	13
Fig.	11.	Water-stage recorder on Flint River near Griffin	1:
Fig.	12.	Measuring the flow of a small creek	1:
Fig.	13.	A portable weir used to measure the flow of a very small stream	13
Fig.	14.	Suwannee River at Fargo	1:
Fig.	15.	Annual flows, Chattahoochee River at West Point	17
Fig.	16.	Frequency of annual minimum daily flows	18
Fig.	17.	Graphical computation of minimum flow	48
Fig.	18.	Map showing average and 1954 minimum flow at index stations in Georgia	50
Fig.	19.	Map showing 1954 minimum flow at gaging stations on major rivers in Georgia	51
Loca	tion	Map (in pocket)—Inside back cover.	

## SURFACE WATER RESOURCES OF GEORGIA DURING THE DROUGHT OF 1954

By

M. T. Thomson and R. F. Carter

## PART I — STREAMFLOW

## **ABSTRACT**

Part I of this report contains streamflow data collected by the U. S. Geological Survey in Georgia during the 1954 drought for the study of minimum flows of Georgia streams. By methods explained in the text, the reader may compute, or estimate, the 1954 minimum flow for unregulated streams. He may approximately evaluate the frequency of drought occurrences from the data given for other years. He may use the data in this report during future droughts to predict their possible severity and thus protect himself from damage caused by low streamflow. Part II will present derived values of drought flows and storage needs for unregulated streams. This part of the report presents the streamflow data upon which the second part will be based.

#### INTRODUCTION

The drought of 1954 was a major agricultural disaster in Georgia. The Georgia Department of Agriculture estimated that total crop losses exceeded seventy-five million dollars. The loss of forage hurt the dairy and cattle industries severely. The U. S. Department of Agriculture designated 124 of the 159 counties in Georgia as emergency areas under Public Law 875 to receive the benefits of the emergency feed program and 141 counties to be eligible under Public Law 38 for emergency production loans. Because many wells and ponds were dry, farmers had to haul water from nearby towns.



Fig. 1. Farmers' trucks in line for water at Tifton. Many cities in southern Georgia furnish free water to farmers during droughts.

Municipalities and industries also suffered during the drought but to a lesser extent than farmers. Many communities had to restrict the use of water because of limited pumping capacities or distribution systems. According to the Georgia Department of Public Health, 18 cities and towns had serious difficulties because the streams on which they depend for their water supplies dropped below their requirements.



Fig. 2. Sandbagged water supply dam on Flint River near Griffin. At times during the drought the entire flow of the river at this point was pumped into the City water mains.

There was no power shortage in Georgia in 1954 as there was in the drought of 1941, but there was a serious loss of efficiency and increased cost of power production at two major steam plants—Plant Atkinson on the Chattahoochee River near Atlanta and Plant Arkwright on the Ocmulgee River near Macon. River water was recirculated at both places to keep the plants in operation. No major industries were reported to have closed down because of water shortages.

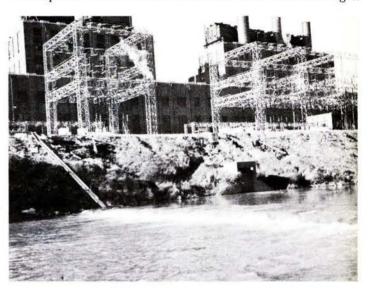


Fig. 3. Temporary sandbag dam on the Chattahoochee River. This was built below Plant Atkinson to provide for the recirculation of the river water for the condensers. Normal water requirement is 650 cubic feet per second. At times during the 1954 drought the flow here was as low as 250 cubic feet per second.

The flow of most Georgia streams dropped to the lowest of record since the historic drought of 1925. Of the four rivers in Georgia for which records are available for the 1925 drought, only the Oconee River had a lower minimum flow in 1954 than in 1925. The minimum daily flow in 1954, however, was slightly more than that for 1925. The other three have portions of their drainage basins in the mountain and valley regions of northern Georgia where the drought was not as severe as it was in other parts of the State.



Fig. 4. An irrigation system in southern Georgia. The value of irrigation was well demonstrated during the drought. As a result of the drought of 1954, a great increase in the number of irrigation systems in Georgia is expected.

With respect to streamflows, the drought was most severe in southern Georgia. Some streams were completely dry for the first time in the memory of local residents. Fortunately, most cities and industries in southern Georgia use artesian wells, which were not seriously affected by the drought. However, the lack of water in small streams and in ponds for stock and for irrigating was serious.

Although streams in the Piedmont Region of Georgia were not as low with respect to normal flows as in southern Georgia, the consequences were more serious because of the greater dependence on small streams for municipal and industrial water supplies.

#### Purpose and Scope

The intense concern with water resources in Georgia aroused by the 1954 drought and the consideration of many proposals to remedy the causes of recurrent drought damage have created an urgent need for the prompt publication of factual drought information. Streamflow information during the drought was recorded through the cooperative investigation of surface water resources by the Department of Mines, Mining and Geology of the Georgia Division of Conservation and the U. S. Geological Survey. The Geological Survey operates 108 gaging stations to keep continuous records of flow on the rivers of the State and makes supplemental measurements of streamflow at many other sites.

Gaging station records and flow measurements provide the basic facts about the occurrence of surface water resources necessary to their conservation, use, and control. The water resources of streams vary extremely, not only because of the irregular nature of rainfall but also because of the wide range of physical conditions that influence runoff. Thus, reliable streamflow information cannot be obtained from rainfall records alone. Neither can it be obtained from casual estimates of flow nor from observations of river stages alone. Reliable factual knowledge of surface water resources is obtainable only from actual measurements of streamflow and systematic recording of the variation of flow at gaging stations. This part of the report presents that information for the 1954 drought in Georgia.

In order to make the information available as promptly as possible, this part of the report is limited strictly to a presentation of the observed facts pertaining to the drought flows during 1954. It tabulates the minimum flow recorded at 105 continuous-record gaging stations. It lists the 1136 low-flow measurements that were made at 987 other sites called partial-record gaging stations. Those low-flow measurements were not necessarily made at the time of the minimum flow. However, additional data are included for 51 selected continuous-record gaging stations, called index stations, which the reader may use to compute the minimum flow for the partial-record sites and estimate it for ungaged sites on streams that are not regulated. Two stage records of Okefenokee Swamp are also shown.

The second part of the report, which will be published at a later time, will tabulate computed minimum flows and analyze other features of droughts such as their frequency, length, severity, regional characteristics, and the storage required to provide greater flow during future droughts. Those analyses will be based primarily on the data given in this report. Readers who are familiar with hydrologic methods may use the data in this report to make their own studies and analyses, if the need arises.

#### Administration and Acknowledgments

Most of the streamflow data at the continuous-record gaging stations in Georgia and the low-flow measurements at the partial-record gaging stations were collected under a cooperative agreement between the Department of Mines. Mining and Geology, Georgia State Division of Conservation, and the U. S. Geological Survey. The agreement also provides for the analysis of the drought flows and the preparation of this report. The Georgia State Highway Department has a cooperative agreement with the U. S. Geological Survey under which many of the drainage areas listed in this report were obtained. Assistance in the nature of funds or services was also given by the Corps of Engineers, Department of the Army, and the Soil Conservation Service, Department of Agriculture. The following organizations aided in collecting records: The Georgia Power Company, the Georgia Department of Public Health, the Crisp County Power Commission, DeKalb County, the U. S. Weather Bureau, U. S. Fish and Wildlife Service, and the cities of Atlanta. Carrollton, Dalton, East Point, Griffin, and Toccoa.

The cooperative streamflow investigations of the U. S. Geological Survey are conducted by the Water Resources Division, C. G. Paulsen, Chief, under the general direction of J. V. B. Wells, Chief, Surface Water Branch.

The report was prepared in the Atlanta District of the Surface Water Branch, U. S. Geological Survey, under the general direction of M. T. Thomson, District Engineer. R. F. Carter, hydraulic engineer in charge of special investigations, directed the collection of the data and their compilation. The entire staff of the Atlanta District participated in the drought investigation.

Data for the gaging stations on the Savannah River, St. Mary's River, Withlacoochee River, and the tributaries of the Tennessee River were furnished by district offices of the U. S. Geological Survey in States adjacent to Georgia.

#### **DESCRIPTION OF GEORGIA**

Georgia has an area of approximately 60,000 square miles. From north to south its length is 320 miles and its maximum width is 250 miles. Great variations of streamflow, both from physiographic and weather factors, are to be expected in such a large area. The southern part of the State, known as the Coastal Plain, is comparatively level and has an average altitude of 150 feet above mean sea level. Because of certain runoff characteristics, the Coastal Plain has been divided into two regions for this report. North of the Coastal Plain is the Piedmont Plateau, an elevated area ranging in altitude from 300 to 1,500 feet. Still farther north is the Appalachian Mountain Region where many peaks attain an altitude of 4,000 to 5,000 feet above mean sea level.

#### Physiographic Regions

The runoff of streams and other drought characteristics in Georgia are peculiar to the physiographic region of the State. The five principal physiographic regions are designated in this report as the Mountain Region, Valley Region, Piedmont Region, upper Coastal Plain, and lower Coastal Plain, as shown on the location map in the pocket. A description of those regions and of the factors that affect streamflow is essential to the use of the data in this report.

Mountain Region. The Mountain Region in northeastern Georgia has an average annual rainfall of 53 to 70 inches. Its streams have an average annual runoff of 26 to 41 inches.

The terrain is composed of high, forest-covered mountainous ridges, and narrow valleys in which most of the towns and cropland are found. The rivers generally have small drainage areas but relatively high water yields. They have steep rocky channels and swift flow over many rapids and waterfalls. There are many water power and storage reservoir sites. Springs supply most of the towns with water. If irrigation were to be practiced in the Mountain Region, there generally would be little difficulty in finding an adequate source because the bottomlands that would be irrigated are close to the streams.

Valley Region. The Valley Region in northwestern Georgia has an average annual rainfall of 49 to 58 inches. The rivers have an average annual runoff of 20 to 25 inches. The terrain is composed of wide cultivated valleys separated by narrow, steep, wooded ridges. Practically all the towns and farm lands are in the river valleys. The rivers flow in deep meandering channels bordered by wide flood plains except where they cut through the ridges in water gaps. There they are shallow and swift, with many rapids. The region has a few low-head water power sites on its major rivers and a few reservoir sites. In the water gaps through the ridges there are many good small dam sites for minor power development or reservoirs. Rivers and springs are the principal sources of municipal water. If water is desired for irrigation, there should be little difficulty in finding adequate supplies from the streams because most of the cultivated land is in the river bottoms close to the streams. There are, however, some minor streams in the region that have relatively small flows.

Piedmont Region. The Piedmont Region has an average annual rainfall of 45 to 59 inches. Its rivers have an average annual runoff of 14 to 21 inches. The region is a plateau with broad ridges separated by relatively narrow valleys. Nearly all the towns, highways, railroads, and farmlands are located on the ridges. The steep hillsides and most of the river valleys are wooded, but there are stretches of cultivated bottomlands along the larger rivers. The streams generally have moderate slopes and velocities and flow in well-defined channels within valleys of varying widths. Their beds are usually composed of silt or gravel overlying rock with occasional rapids and waterfalls. Small streams and rivers are the principal sources of water for cities and industries. There are many good, large water power and reservoir sites. Water for irrigation may be obtained from rivers and creeks for bottomland farms. Inasmuch as most of the farms are located on ridgetops, however, where there is no natural perennial source of water from the streams, the water usually must be obtained from farm ponds or by long pipe lines from larger streams.

Upper Coastal Plain. The Upper Coastal Plain Region has an average annual rainfall of 45 to 52 inches. Its larger streams have an average annual runoff of 14 to 28 inches. Paradoxically, however, the very small streams may have very little runoff because the pervious soil absorbs rain water rapidly. The channels of small streams do not cut deeply enough to intercept ground-water flow. The flow of the larger streams is strikingly uniform because of the small storm runoff and high yields due to ground-water seepage. The streams are generally sluggish, flowing in deep, me-andering low-banked, tree-choked channels. They are bordered by wide, swampy, densely wooded valleys. The ridges are generally broad with gentle slopes. Practically all cropland, transportation lines, and towns are on the ridges. River water is used for steam power plants, in the manufacturing of clay products and food products, and for the chemical industry, but artesian wells supply most of the towns and

many of the industries. The region has some fairly satisfactory low-head water power sites. It has few reservoir sites on either large or small streams because of the flat terrain and pervious soil. Irrigation water in this region generally may be obtained from wells or, to a lesser extent, from ponds.

Lower Coastal Plain. The Lower Coastal Plain Region has an average annual rainfall of 45 to 52 inches. Its rivers have an average annual runoff of 9 to 13 inches. It has generally the least streamflow of any part of Georgia, partly because of its much higher temperatures and low flow-producing land characteristics, and possibly because of the high consumptive demands for water by the dense growth in the swamps. The terrain consists of very wide and very flat ridges separated by wide, swampy, heavily wooded valleys. Most towns and farms are found on the broad ridgetops. River water is used for steam power plants and for waste disposal from pulp and paper mills, food plants, and chemical plants. Most towns and industries, however, obtain water from artesian wells. There are a few reservoir and low-head water power sites. The main source of irrigation water is wells and, to a lesser extent, ponds.

#### River Systems

Many of the larger rivers of Georgia are regulated by the storage reservoirs shown on the map in the pocket or by hydroelectric power plants. The flows of regulated rivers are complex. Records from gaging stations on them are not usable for computing the minimum flows of their tributaries.

The Savannah River system begins in the Mountain Region with the Chattooga River which is joined by the Tallulah River to form the Tugaloo River, which in turn joins the Seneca River to form the Savannah River. The flow of Tallulah River is regulated by the storage at Lake Burton and six power plants. Clark Hill Dam creates a great multi-purpose storage reservoir for flood control and power that has enormous control over the flow below it. Clark Hill Dam is operated in conjunction with Stevens Creek Dam on the Savannah River to provide a relatively uniform flow below Augusta for navigation.

The Ogeechee River system begins in the Piedmont Region but receives most of its dry season flow as it crosses the upper Coastal Plain. It principal tributary, lying entirely within the lower Coastal Plain, is the Canoochee River.

The Altamaha River system is formed by two major branches, the Ocmulgee and Oconee Rivers, which rise in the Piedmont Region and receive substantial increments of flow as they cross the upper Coastal Plain. The upper tributary to the Ocmulgee River, the South River, receives part of its flow, amounting to a large part of the drought flow, from water diverted by the Atlanta and DeKalb County Water Works and sewer systems from the Chattahoochee River. Jackson Lake regulates the flow of the Ocmulgee River. The Oconee River has minor regulation below Barnett Shoals Reservoir and severe regulation below Sinclair Dam at Milledgeville, which is discernible as far downstream as Doctortown on the Altamaha River.

Southern Georgia rivers. The Satilla River lies wholly within the lower Coastal Plain and has no regulation. The St. Mary's River and the Suwannee River lie wholly within the lower Coastal Plain and both drain parts of the Okefenokee Swamp. The Alapaha River, the Little River-



Fig. 5. Billy's Lake, in Okefenokee Swamp. This picture, taken on October 18, 1954, shows the Lake about 3.7 feet below its average level for October. Photo by U. S. Fish and Wildlife Service.



Fig. 6. Boat landing, at Billy's Island, in Okefenokee Swamp, November 9, 1954. Photo by U. S. Fish and Wildlife Service.

Withlacoochee River system, and the Ochlockonee River all lie within the lower Coastal Plain and have no regulation within Georgia.

The Chattahoochee River is the longest river in Georgia—436 miles from its source in Union County to the Florida line. There is little regulation of the headwater streams in the Mountain Region and tributaries in the Piedmont Region. A power plant on the Soque River at Habersham Mills affects the drought flow of the main stem as far downstream as West Point. Power dams regulate the flow below West Point.

The Flint River system begins in the Piedmont of Georgia and has no regulation until it is well into the upper Coastal Plain. Below the Fall Line this river lies entirely within the upper Coastal Plain and in dry seasons receives enormous quantities of flow from ground water seepage and springs. The flow is regulated below low-head power plants near Cordele and at Albany.

The Coosa River system in Georgia consists of a number of major branches that rise in the Mountain Region. The main stem is the Cartecay River which becomes the Coosawattee River and then is joined by the Conasauga River in the Valley Region to form the Oostanaula River. The Etowah River also rises in the mountains and flows down through the Piedmont and Valley Regions to join with the Oostanaula River at Rome to form the Coosa River. The

lower Etowah River and the Coosa River are regulated by Allatoona Reservoir.

The Tallapoosa River system in Georgia consists of the upper part of the Tallapoosa River and of the Little Tallapoosa River, both of which lie within the Piedmont Region. Their drought flows are affected by the operation of mill dams and small storage reservoirs. The Tallapoosa River joins the Coosa River in Alabama to form the Alabama River.

The Tennessee River system in Georgia includes a number of tributaries in the Mountain Region. The upper portions are not regulated but near the Tennessee and North Carolina boundaries each of the principal rivers has a large storage and power reservoir that regulates its flow. The Tennessee River tributaries in the Valley Region have minor regulation from gristmills.

#### FACTORS AFFECTING DROUGHT FLOW

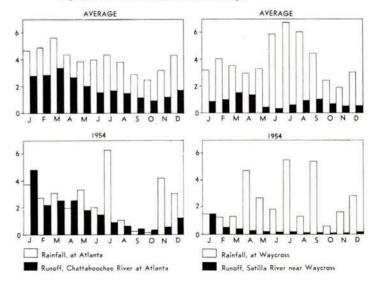
The flow of a stream is derived from the rain that falls on its drainage basin. Part of the rain that falls on an area is evaporated or is transpired into the air by vegetation and does not appear as streamflow. Thus, streamflow is the residual of rainfall after these natural demands have been satisfied. When these natural losses are high, as they are in the summer, and rainfall is relatively low, as in a drought, the residual of rainfall available for streamflow may be very small.

The relationship between rainfall and streamflow is complicated by the irregularities of natural factors such as rainfall, consumption by vegetation, temperatures and evaporation rates, land characteristics, and, of man-made factors such as storage, diversions, and power plant operations.

#### Rainfall

A deficiency of rainfall is the basic cause of drought. The effect on streamflow varies. Very light rain merely wets the ground surface and soon evaporates. It does not replenish soil moisture or benefit streamflow. Steady "soaking" rains replenish soil moisture but do not produce much runoff until the soil becomes saturated. Intense rains of the thunderstorm variety may produce flashy runoff without great benefit to soil moisture or "lasting" benefits to the streams. During periods of deficient rainfall, soil moisture is abnormally

Fig. 7. Average and 1954 monthly rainfall and runoff, in inches, at representative stations in northern and southern Georgia.



low and much or all of the rain is absorbed by the ground, leaving little or no water to reach the streams.

The diagrams of the average and 1954 monthly rainfall and runoff in figure 7 show typical conditions in Georgia. The Waycross rainfall and the Satilla River runoff are typical of southeastern Georgia. The rainfall and runoff as shown are not strictly comparable because the rainfall is that for only one spot in the drainage basin whereas the runoff is the result of the rainfall over the entire drainage basin. The runoff of the Chattahoochee River at Atlanta during the drought came mostly from the Mountain Region.

#### Vegetative Seasons

The vegetative seasons have a major effect on streamflow. The growing season lasts from April to October in northern Georgia and from March to November in southern Georgia. During the growing season vegetation requires much moisture, which it extracts from the soil through the root systems and transpires into the atmosphere through the foliage. As a result, the soil tends to dry rapidly and rainfall is largely

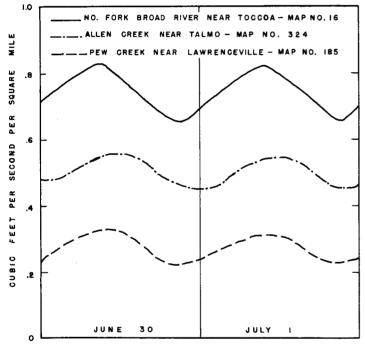


Fig. 8. Diurnal fluctuations of small streams caused by evapotranspiration losses.

absorbed in the replenishment of soil moisture. Only a small part of the water finds its way to the streams as overland runoff or seepage through the ground.

During the dormant season, from October or November until March or April, the soil moisture is not absorbed by root systems in as great quantities as during the growing season. Once the soil moisture is restored in autumn, the rains tend to maintain a saturated condition of the soil. A larger portion of the rain water flows overland into the streams, causing floods and high water. Also, a larger portion percolates downward to the water table. This causes the high sustained flow of the streams between freshets during the dormant season of winter and early spring.

#### Temperature and Evaporation

The hot summer temperatures in Georgia, particularly in southern Georgia, cause very high evaporation losses from water surfaces and transpiration losses from foliage. Evapo-

ration losses and vegetative consumption are generally treated together as "evapotranspiration losses". These losses are greater in summer than they are in winter and are greater by day than they are by night, resulting in diurnal fluctuations of the flow of small streams during the growing season. Figure 8 shows typical diurnal fluctuations of small streams. High evapotranspiration losses rapidly deplete any surplus of soil moisture or shallow ground-water storage that might otherwise have been available for streamflow in the spring. These influences are of great significance in the occurrence of surface water resources. Without summer rainfall, the streamflow in Georgia diminishes continually through the summer to become exceptionally low in the fall months.

Periods of intense heat during droughts appear to cause an accelerated diminishing of the streamflow. This is caused in part by the higher evapotranspiration losses. It may also be a result of increased rates of diversion of water from the streams for irrigation and other consumptive purposes. Natural and man-made decreases of streamflow during heat waves are generally indistinguishable on gaging station records.

#### Land Characteristics

The streamflow records in Georgia show marked differences in the several regions already described that can be attributed to the predominant land characteristics of the regions. The regional runoff characteristics are apparent not only in the storm runoff but they are particularly evident in the sustained flow periods between storms. Those differences may be studied on the hydrographs shown on pages 20 to 48.

The effects of the land on streamflow are particularly significant during the periods of extreme drought. Correct interpretation of the data in this report depends to a large extent upon recognition of the varied characteristics among the five regions of the State.

#### Storage

The effect of storage reservoirs on streamflow depends on the relative magnitudes of the reservoir and the flow and on the reservoir operation. Usually the operation of a reservoir involves the storing of surplus water during periods of floods or excess flows and the release of that water during dry periods. Most large reservoirs are carefully operated according to a definite plan, tending to make the flow uniform throughout the year. A relatively small reservoir that is not regulated, such as the usual farm pond, has little effect on the flow of a stream below it. A relatively large reservoir that is not regulated may reduce the "flashy" nature of storm runoff. It may reduce the dry season flow by the evaporation from its surface and by transpiration from vegetation on its banks. It may increase the dry season flow if it has an outlet that would release stored water during a dry period. A regulated storage reservoir, on the other hand, may have a dominant effect on the flow of the stream below it, particularly during droughts.

During severe droughts emergency storage reservoirs made by temporary dams may cause sharp decreases of streamflow below them.

#### **Diversions**

Water is diverted from many streams in Georgia by cities and industries. Usually the water is returned to the streams in essentially the same quantity.

In the vicinity of Atlanta large quantities of water from the Chattahoochee River are diverted for municipal water works systems. The DeKalb County water system diverted approximately 36 cfs (see page 12 for definition of the term cfs) and the Atlanta system 124 cfs during the drought, of which only 70 cfs was returned to the Chattahoochee River. Of the remainder, about 48 cfs was consumed through evaporation, irrigation of lawns, and other unsewered water uses. About 40 cfs was diverted through sewage treatment plants into the tributaries of South River in the Altamaha River system and about 2 cfs was diverted into the Flint River system.

At Griffin, approximately 6 cfs of the flow of Flint River, which includes that diverted from the Chattahoochee River, is pumped into the water system above the gaging station. Much of the water diverted to the municipal water system does not return to the Flint River but drains into tributaries of the Altamaha River system.

Diversions for irrigation are generally consumed by evapotranspiration and are not returned to the streams. Generally, irrigation diversions in Georgia are negligible, but in severe droughts they may greatly diminish the flow of small streams. They may be particularly noticeable during heat waves.

#### Power Plant Operations

Power plant operations at large dams usually involve the storage operations already described that tend to equalize the flow over the year. Both large and small power plants also tend to have a daily or weekly pattern of operation that makes the streamflow below them irregular. It is customary to operate water power plants for only parts of the day and to keep them idle at other times. Large flows are released during operation and little or no flow at other times. Larger power plants operate on regular daily schedules, often only during five days a week, and sometimes for only a few hours a day.

Power plant operations result in a wide variation of flow in the streams below the dams each weekday. Generally water is stored during weekends, causing periods of low flow. During droughts the effect of power plant operation is particularly prominent.

#### **DROUGHT CONDITIONS IN 1954**

Rainfall in Georgia was deficient in 1954 by amounts that exceeded 15 inches in most of the State. During September heavy rains accompanying a hurricane brought temporary relief in areas near the Atlantic Coast.

Streamflows in southern Georgia were below normal from February through December. Most of the gaging stations recorded record low flows during September, October, and early November. A slight recovery had set in by the end of November.

In the Piedmont Region, the flow began to drop below normal by July. Record low flows were recorded at most gaging stations in September and early October. A definite recovery set in at the end of the growing season in mid-October without appreciable rainfall. The streams had not returned to normal flows by the end of November.

In the Mountain and Valley Regions the drought pattern was similar to that in the Piedmont Region but the flows were not as low in proportion to normal flows or to previous droughts.

The major rivers that head in the Mountain Region, or that were regulated by major storage reservoirs, did not reach

the low levels that were recorded on other streams in the Piedmont and Coastal Plain regions.

The detailed effects of the 1954 drought on Georgia streams are shown in the gaging station records that follow.

#### AVAILABLE DROUGHT RECORDS

One hundred and eight complete-record gaging stations were in operation in Georgia during the drought of 1954. The minimum flows recorded at 105 of those stations are listed in table 1.

#### Significance of the Minimum Flow

The minimum flow of a stream is perhaps its most important drought statistic. If the period of record includes an extreme drought such as that of 1954, or 1925, the minimum flow is often assumed to be the amount that is always



Fig. 9. Oconee River at Milledgeville. The flow is about 90 cfs, the natural minimum in the 1925 drought and the regulated minimum in the 1954 drought.

available for use—at least for the length of time represented by the period of record.

It is customary in Georgia for engineers to design municipal and industrial water supplies and waste disposal systems on the basis of the minimum flow of record. If by chance a lesser flow than the minimum of record should occur, as it did on many streams in the 1954 drought, there may be serious consequences. Some communities may have to curtail the use of water severely or turn to emergency supplies from other sources. Industries may have to shut down altogether.

Important water rights may be based on the minimum flow of record. Under the Federal Power Commission License, for example, the power company is required to release at least 90 cfs from Sinclair Dam on the Oconee River at all times—that amount being equal to the 1925 minimum flow at the Milledgeville gaging station.

It is possible that future water rights in Georgia, governing municipal and industrial water supplies and waste disposal, the use of streams for irrigation, and the building of irrigation ponds, will be based on the minimum flows during the 1954 drought that are given in this report.

Great care has been taken in this report to distinguish between "minimum" and "minimum daily" flow. This is necessary because, despite the fact that the flow during the day may vary, practical considerations limit the publication of most streamflow data to mean daily amounts. Generally, it is only on the day of the minimum flow that the instantaneous minimum has any practical significance. However, as will be explained later, the variation during the day of streams having very small flows may be highly significant during droughts.

Minimum flow is the momentary or instantaneous minimum flow known at a site as opposed to the average or mean flow for a period of time. It is usually qualified, as "the 1954 minimum", or "the minimum of record" for a specified period of years. The minimum flow is given in table 1 and in the station descriptions for the index gaging stations on pages 14 and 16 unless it is qualified in the footnotes.

Minimum daily flow (technically the minimum mean daily flow) is the lowest known average or mean flow for the day as opposed to the instantaneous minimum flow during the day. The minimum daily flow is given in table 2. It is given in the station description for the index gaging stations on page 19 if it differs materially from the minimum flow. The daily flow is plotted on the hydrographs of the index gaging stations. Thus the lowest point on a hydrograph is the minimum daily flow and not the instantaneous minimum flow.

#### **Definition of Terms**

This report generally gives streamflow in cubic feet per second (cfs). This unit of flow is most commonly used by engineers concerned with major river developments such as storage reservoirs, hydroelectric power, navigation, and irrigation projects. It expresses a rate of flow. Specialized workers in the water resources field frequently use other terms for rate of flow. Small pumps are rated in gallons per minute (gpm). City water works are rated in million gallons per day (mgd). Irrigation works are rated in acreinches or acre-feet for various time periods. For the convenience of the reader, the hydrographs on pages 20 to 48 are given in both cubic feet per second and million gallons per day.

Cubic foot per second (cfs) is the rate of flow (discharge) of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second. For practical purposes a cubic foot per second may be taken to equal 450 gallons per minute, two-thirds of a million gallons per day, 1 acre-inch per hour, or 2 acre-feet per day. The rounded equivalents are well within the usual limits of accuracy of streamflow data.

Cubic feet per second per square mile (cfsm) is the average number of cubic feet of water per second flowing from each square mile of area drained, assuming that the runoff is distributed evenly in time and area.

Runoff in inches is the depth to which an area would be covered if all the water draining from it in a given period were uniformly distributed on its surface. The term is used to compare runoff with rainfall, which is also usually expressed in inches.

Acre-foot is the volume of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet. The term is commonly used in relation to storage for irrigation.



Fig. 10. Gaging station on the Ogeechee River at Scarboro, Ga., during the 1954 drought. The concrete tower encloses a well that is connected to the river by pipes. The upper part of the tower is a shelter for the recording instruments.

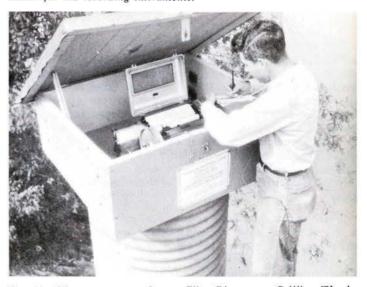


Fig. 11. Water-stage recorder on Flint River near Griffin. The instrument keeps a continuous record of all fluctuations of the water level.

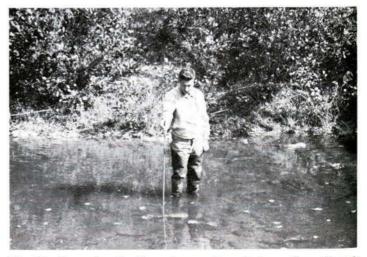


Fig. 12. Measuring the flow of a small creek in northern Georgia during the drought of 1954. The width is measured by the line across the channel. The depths are measured on the rod in the engineer's hand. The current meter measures the velocity of the water. The flow is computed from 20 or more observations of the depth and velocity across the channel.



Fig. 13. A portable weir used to measure the flow of a very small stream. The weir has a sharp-edged notch through which the water flows. By measuring the depth of water in the notch, as shown, an accurate measurement of small flows can be obtained.

The drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or non-contributing areas, within the area unless otherwise noted. When the drainage area has been omitted as in table 3, it is generally because the area has not yet been determined.

#### Explanation of Data

The base data collected at continuous-record gaging stations consist of records of stage, or water level, and measurements of flow. The records of stage are obtained either from direct readings on a non-recording gage by a local observer or from a water-stage recorder that gives a continuous record of water-level fluctuations. Measurements of flow are made with a current meter or a portable weir by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and in standard textbooks on the measurement of streamflow.

The first column of table 1 shows the map number of each site, in downstream order, for easy identification of the site on the location map. Inserts are shown on the location map for a few areas where the sites were too numerous to be indicated clearly.

The name of the gaging station in the second column includes the name of the stream and the name of the nearest place that can be readily identified. The location of the index stations may be found on pages 14 to 16.

The third column shows the period for which records are available at each gaging station. In general, the low-flow data are available in the annual Water-Supply Papers of the U. S. Geological Survey for all of the years shown. It will be noted that there are few gaging station records available during the severe drought year of 1925.

The drainage area in the fourth column is given in square miles. As a rule the drainage areas are accurate for areas greater than 10 square miles. The accuracy for smaller areas depends on the accuracy of the maps available.

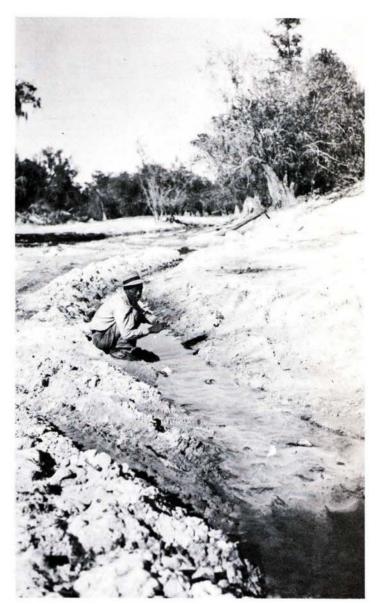


Fig. 14. Suwanee River at Fargo showing a ditch cut through a sand bar to drain a pool in the river channel. Operations such as these greatly alter the natural flow of streams during droughts.

The drainage areas are not necessarily as significant with very low drought flows as they are with more normal flows. During the drought farm ponds withheld water or cities and irrigation pumps diverted water from the streams in parts of the drainage area. As a result, only parts of the drainage areas contributed to the low flow. Therefore, flows of small streams may not be proportional to their drainage areas.

The average flow is given in the fifth column if the period of record exceeds five years. These averages are not strictly comparable because they are not for a common period of years.

The minimum of record in the sixth and seventh columns shows the flow and the date of its occurrence.

The minimum flow during 1954 is shown in the last two columns with the month and day of its occurrence. Footnotes call attention to regulation, diversions, and other factors.

TABLE 1. Average and minimum flow, in cubic feet per second, of Georgia streams.

	TABLE 1.	Average and minimu	III 110W, 111 (	- I leet j	Jer second,	of Georgia streams.		
						Minimum Flo	w	
Map No.	Gaging Station	Period of record	Drainage area (sq mi)	Average flow		Prior to 1954		1954
					Flow	Date	Flow	Date
	SAVANNAH RIVER BASIN							
1	Chattooga River near Clayton, Ga.	1907-8, 1939-54	203	611	122	Oct. 6, 7, 1947	88	Oct. 8, 12, 13
2	Panther Creek near Toccoa, Ga.	1943-54	31.4	75.3	14	Sept. 6, 7-Oct. 7, 1947	10	Sept. 30
3	Tugaloo River near Hartwell, Ga.	1925-27, 1940-54	905	2,014	d189	Oct. 6, 1941	182	Oct. 13, 20
6	Savannah River near Iva, S. C.	1950–54	2,231		809	Oct. 15, 1951	477	Oct. 12
11	South Beaverdam Creek at Dewy Rose, Ga.	1942–54	36.6	54.1	6.5	Sept. 9, 1947	0.80	Sept. 22
12	Savannah River near Calhoun Falls, S. C.	1896–1900, 1903, 1930–32, 1938–54	2,876	5,009	660	Oct. 14, 1941	492	Oct. 12
16	N. Fork Broad River near Toccoa, Ga.	1954	19.3				5.7	Sept. 25
22	N. Fork Broad River near Lavonia, Ga.	1954	42.0				11	Sept. 28
25	Toms Creek near Martin, Ga.	1954	10.3				2.0	Sept. 19, 20
28	N. Fork Broad River near Carnesville, Ga.	1942-44, 1954	119		44	Oct. 18, 1942-July 28, Sept. 9, 1944	16	Oct. 5
47	Broad River near Bell, Ga.	1926-32, 1937-54	1,420	1,754	d217	Oct. 13, 1941	109	Oct. 8
56	Little River near Washington, Ga.	1949-54	292	p256	10	Sept. 11, 12, 1951	0.32	Oct. 12–16
70	Savannah River at Augusta, Ga.	1884–91, 1898– 1906, 1925–54	a7,508	10,540	648	Sept. 24, 1939	5,170	Aug. 8
81	Savannah River at Burtons Ferry Bridge near Millhaven, Ga.	1939–54	8,650	10,570	d2,120	Sept. 9, 1951	5,500	Sept. 30, Oct. 1
93	Brier Creek at Millhaven, Ga.	1937-54	656	647	110	June 30, July 2, 1945	f64	Sept. 5-11
98	Savannah River near Clyo, Ga.	1937-54	9,850	11,460	d2,830	Oct, 19, 25-28, 1941	5,580	Oct. 2
	OGEECHEE RIVER BASIN							
135	Ogeechee River at Scarboro, Ga.	1937–54	1,940	1,688	146	Sept. 28, 1938	f120	Sept. 5-10
141	Ogeechee River near Eden, Ga.	193754	2,650	2,214	230	Aug. 2, 1952	131	Sept. 12-14
150	Canoochee River near Claxton, Ga.	1937–54	555	425	1.2	June 2, 3, 1941	m 0.86	Sept. 7-14, Oct. 25, 26, Nov. 2
	ALTAMAHA RIVER BASIN							
171	South River near McDonough, Ga.	1939-54	436	588	f70	Oct. 25-27, 1941	45	Oct. 17
185	Pew Creek near Lawrenceville, Ga.	1953–54	2.23				0.08	Oct. 6, 7
209	Yellow River near Snellville, Ga.	1942-54	144	177	5.0	Sept. 9, 10, 1951	1.5	Oct. 9
217	Yellow River near Covington, Ga.	1944-54	396	485	d24	Sept. 9, 1951	8.8	Oct. 5
228	Ocmulgee River near Jackson, Ga.	1906–15, 1939–54	1,420	1,735	h210	Dec. 22, 1912; July 26, 1914	69	Nov. 25, 26
256	Ocmulgee River at Macon, Ga.	1893–1913, 1931–54	2,240	2,767	d192	Nov. 9, 16, 23, 1931	122	Oct. 24, 31
269	Tobesofkee Creek near Macon, Ga.	1937–54	182	193	f 6	Sept. 10, 1951	1.6	Oct. 9
283	Big Indian Creek at Perry, Ga.	1943–54	108	83.9	21	Sept. 3-5, 9-11, 13, 1951; Aug. 27, 28, 1952	24	July 1, 2, 14; Sept. 7–10, 12–14
288	Ocmulgee River at Hawkinsville, Ga.	1944–54	3,800	4,246	d870	Oct. 15–17, 22–24, 1951	m412	Oct. 16, 18, 19
303	Ocmulgee River at Lumber City, Ga.	1936-54	5,180	5,565	1,310	Oct. 21, 1938	798	Nov. 2, 3
324	Allen Creek at Talmo, Ga.	1951-54	17.3		2.3	Sept. 8, 9, 1951	1.8	Oct. 6, 7
333	Middle Oconee River near Athens, Ga.	1901–2, 1929–32, 1937–54	398	490	d42	Sept. 23, 1941	27	Oct. 8
337	Oconee River near Greensboro, Ga.	1903-31, 1937-54	1,090	1,482	d60	Sept. 28, 1925	56	Oct. 11, 12
348	Apalachee River near Buckhead, Ga.	1901-8, 1937-54	436	547	e36	Sept. 11, 1951	14	Oct. 8

- a. Includes that of Butler Creek.
  b. Approximate. Includes part of watershed in Okefenokee Swamp which is indeterminate.
  c. Adjusted for storage.
  d. Minimum daily.
  e. Minimum daily.
  f. Minimum daily.
  g. Minimum daily.
  h. Minimum daily.
  h. Minimum daily.
  h. Minimum daily.
  considerable diurnal fluctuation at low flow. Diversion above station of dam. Flow of 18 cfs occurred Nov. 20, 1910 during construction of dam. Flow Some regulation at low flow construction of dam. Flow Some regulation at low flow caused by diversion above station for municipation.
- Minimum daily.

  Minimum daily.

  Considerable diurnal fluctuation at low flow. Diversion above station for municipal supply at Griffin.

  Minimum daily.

  Flow of 18 cfs occurred Nov. 20, 1910 during construction of dam. Flow regulated by Lloyd Shoals Reservoir and powerplant.

  Minimum daily.

  Some regulation at low flow caused by diversion above station for municipal and industrial supplies at Thomaston.

  Minimum daily.

  No flow Dec. 6, 1930, to Mar. 3, 1931 (caused by closing of Blue Ridge Dam). Flow regulated by Blue Ridge Reservoir beginning Dec. 6, 1930.

  Result of regulation. Result of regulation. Minimum observed.
- Minimum not determined. Measured flows of 1.74 cfs Sept. 17 and 1.82 cfs Oct. 4, which included storage releases from Lake Carroll. Partly estimated. Based on records for Little River near Lincolnton 1944-49. Flow of 0.76 cfs measured on Sept. 5, 1951 prior to establishment of continuous record station.

TABLE 1. Average and minimum flow, in cubic feet per second, of Georgia streams.

Map Gaging Station		Period of	Drainage	Average		Minimum Flo	w	
	Gaging Station	record '	area (sq mi)	flow		Prior to 1954		1954
					Flow	Date	Flow	Date
	ALTAMAHA RIVER BASIN—Cont.							
359	Murder Creek near Monticello, Ga.	1951-54	24		2.5	Oct. 17, 18, 19, 1951	0.67	Sept. 10
370	Oconee River at Milledgeville, Ga.	1903–31, 1937–54	2,950	2,950	d90	Several days in Aug., Sept., 1925	d92	July 17
383	Oconee River at Dublin, Ga.	1898-1913, 1931-54	4,400	4,992	333	Sept. 12, 1951	361	Aug. 17; Sept. 15; Oct. 26, 27
387	Rocky Creek near Dudley, Ga.	1951-54	62.9		r 1.8	July 31, 1953	0.23	Oct. 6
389	Oconee River near Mount Vernon, Ga.	1937-54	5,110	5,227	558	Sept. 13, 1951	450	Oct. 21
404	Ohoopee River near Reidsville, Ga.	1903-7, 1937-54	1,110	944	f28	June 4, 1941	19	Sept. 12-14
406	Altamaha River at Doctortown, Ga.	1931-54	13,600	13,080	1,760	Oct. 8, 9, 14, 15, 1931	m1,390	Oct. <b>27–2</b> 8
	SATILLA RIVER BASIN							
436	Satilla River near Waycross, Ga.	1937–54	1,300	931	12	Nov. 15, 16, 1942; Dec. 6, 14, 1943	6.0	Nov. 3, 4
442	Hurricane Creek near Alma, Ga.	1951–54	150		0	At times in most years	0	June 1 to Nov 29
458	Little Satilla River near Offerman, Ga.	1951–54	646		0.4	Sept. 11-15, 1952; June 23, 24, 1953	0	Oct. 9 to Nov. 15
459	Satilla River at Atkinson, Ga.	1931-54	2,880	2,077	4.5	Nov. 19, 20, 1931	21	Nov. 4, 7-14
460	North Prong St. Marys River at Moniac, Ga.	1921–23, 1927–30, 1932–34, 1950–54	b 160	169	0	At times in many years	0	Many days
461	St. Marys River near Macclenny, Fla.	1926-54	b720	673	12	May 22, 1932	17	Aug. 19
_	SUWANNEE RIVER BASIN							
482	Suwannee River at Fargo, Ga.	1921–23, 1927–31, 1937–54	b1,260	1,150	0	At times in 1931, 1943	0	At times Aug. to Nov.
498	Alapaha River near Alapaha, Ga.	1937–54	644	495	0.2	Nov. 11–17, 21, 22, 1942	0	Sept. 1 to Nov. 28
515	Alapaha River at Statenville, Ga.	1921, 1931-54	1,400	975	17	Dec. 21, 28-31, 1931	18	Sept. 10-14
546	Little River near Adel, Ga.	1940-54	547	517	1.5	Nov. 25. Dec. 13, 14, 1943	0.24	Oct. 26-28
572	Withlacoochee River near Pinetta, Fla.	193154	2,220	1,497	86	Oct. 29, 30, 1943	78	Nov. 30
	OCHLOCKONEE RIVER BASIN							
594	Ochlockonee River near Thomasville, Ga.	1937-54	550	470	2.6	Oct. 17, 18, 1938	3.3	Sept. 21
598	Tired Creek near Cairo, Ga.	1943–54	55	70.9	1.2	June 27, 1944	1.0	July 22
	APALACHICOLA RIVER BASIN							
615	Chattahoochee River near Leaf, Ga.	1940-54	150	397	e72	Oct. 26, 1941	71	Oct. 7
625	Chattahoochee River near Gainesville, Ga.	1901–3, 1937–54	559	1,185	d242	Oct. 13, 19, 26, 1941	208	Oct. 4, 10, 11, 15
630	Chestatee River near Dahlonega, Ga.	1929-31, 1940-54	153	344	e49	Oct. 4, 1931; Oct. 6, 1941	59	Sept. 30, Oct. 6, 7
641	Chattahoochee River near Buford, Ga.	1942-54	1,060	2,264	342	Sept. 10, 1951	357	Oct. 11, 12
646	Chattahoochee River near Roswell, Ga.	1941–54	1,230	2,417	384	Oct. 14, 21, 26, 27, 1941	322	Oct. 12
654	Chattahoochee River at Atlanta, Ga.	1928-31, 1936-54	1,450	2,590	d422	Oct. 26, 1941	296	Sept. 30
677	Sweetwater Creek near Austell, Ga.	1904-5, 1913, 1937-54	246	315	12	Sept. 11, 1951	2.0	Oct. 9
689	Snake Creek near Whitesburg, Ga.	1954	37				2.3	Sept. 28, 29; Oct. 7
712	Yellowjacket Creek near LaGrange, Ga.	1951–54	182		8.7	Sept. 10, 1951	4.6	Oct. 6
715	Chattahoochee River at West Point, Ga.	1896–1910, 1912–54	3,550	5,694	224	Sept. 12, 1925	350	Oct. 10
729	Mountain Creek near Hamilton, Ga.	1943–54	61.7	87.3	9.4	Oct. 8, 1952	5.1	Oct. 6
737	Chattahoochee River at Columbus, Ga.	1912, 1929–54	4,670	6,647	d480	Oct. 31, 1931	570	Nov. 3
795	Chattahoochee River at Columbia, Ala.	1928-54	8,040	11,070	1,220	Oct. 26, 1931	1,230	Oct. 6
817	Flint River near Griffin, Ga.	1937–54	272	334	g13	Sept. 9, 1951	g 2.4	Oct. 20
845	Potato Creek near Thomaston, Ga.	1938–54	186	226	i 2.8	Sept. 10, 1951	0.66	Oct. 11, 19
848	Flint River near Culloden, Ga.	1911-23, 1928-31			<del></del>		2	0 . 17
857	Whitewater Creek near Butler, Ga.	1937-54 1951-54	93.4	2,446	92 d112	Oct. 4, 6, 7, 1931 Oct. 16, 1951; Oct. 20–23,	87	Oct. 17, 18
				1		26, 1952	122	Sept. 7

TABLE 1. Average and minimum flow, in cubic feet per second, of Georgia streams.

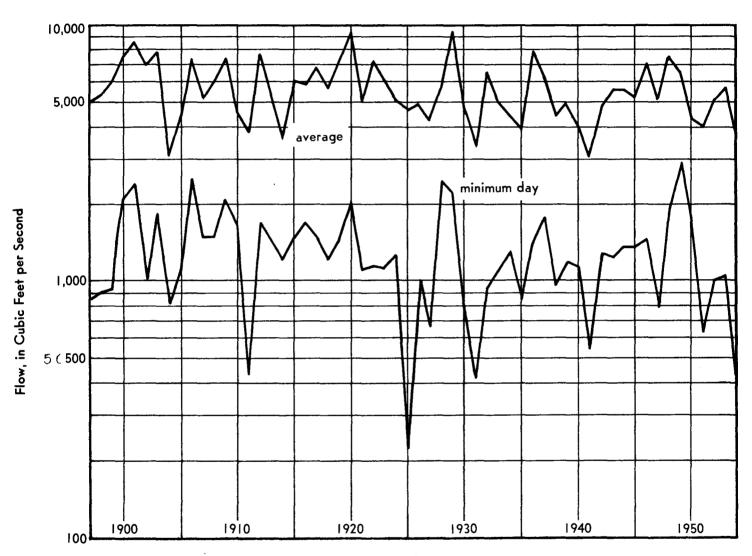
						Minimum Flo	w	
Map No.	Gaging Station	Period of record	Drainage area (sq mi)	Average flow		Prior to 1954		1954
					Flow	Date	Flow	Date
	APPALACHICOLA RIVER BASIN—Co	nt.						
881	Flint River at Oakfield, Ga.	1930–33, 1934–54	3,860	4,577	d152	June 8, 1941	k107	Oct. 18, Nov. 1
886	Kinchafoonee Creek at Preston, Ga.	1951–54	197		38	July 20, 21, 1952	33	Sept. 15
904	Flint River at Albany, Ga.	1902-21, 1929-54	5,230	6,387	d426	Aug. 24, 1930	k275	July 25
917	Ichawaynochaway Creek at Milford, Ga.	1905-7, 1939-54	620	837	` 138	Sept. 1, 1951	111	Sept. 16
932	Flint River at Bainbridge, Ga.	1908-13, 1928-54	7,350	8,568	1,960	Sept. 18, 19, 1951	1,940	Nov. 9
940	Spring Creek near Iron City, Ga.	1920-21, 1937-54	520	514	f14	Oct. 15–17, 1951	9.1	Oct. 30 to Nov. 2
941	Apalachicola River at Chattahoochee, Fla.	1928-54	17,100	22,190	5,120	Nov. 5, 11, 1931	k5,260	Oct. 20
	MOBILE RIVER BASIN		-					
943	Cartecay River near Ellijay, Ga.	1937–54	135	269	e64	Oct. 26, 1941	68	Oct. 16
945	Ellijay River at Ellijay, Ga.	1907, 1919–21, 1953–54	90		40	Several days in Sept., Oct. 1919	27	Sept. 30
960	Rocky Branch near Fairmount, Ga.	1951-54	10.9		0.7	Aug. 29, 1953	0.62	Sept. 20, Oct. 13, 14
966	Coosawattee River at Pine Chapel, Ga.	1938—54	856	1,425	f220	Oct. 26, 1941	218	Oct. 25
973	Mill Creek at Dalton, Ga.	1943-54	37	73.2	e14	Several days in Sept. 1943	. 9.5	Oct. 17, 20
976	Conasauga River at Tilton, Ga.	1937–54	682	1,159	85	Oct. 26, 1941	68	Oct. 24, 25
977	Oostanaula River at Resaca, Ga.	1896–1954	1,610	2,799	180	Sept. 7, 8, 1925	298	Oct. 25
986	Oostanaula River near Rome, Ga.	1939–53	2,120	3,503	f436	Oct. 10, 1941	f408	Oct. 25
988	Etowah River near Dawsonville, Ga.	1940–54	103	254	e55	Oct. 26, 1941	50	Oct. 24-28
1006	Etowah River at Canton, Ga.	1896–1905, 1937–54	605	1,098	190	Several days in Sept. Oct., 1904	178	Sept. 29, 30
1010	Little River near Roswell, Ga.	1947-54	60.5	87.8	f 5.2	Sept. 9, 1951	2.8	Sept. 30
1017	Etowah River at Allatoona Dam above Cartersville, Ga.	1938–54	1,110	c1,760	d208	May 3, 1953	d222	Jan. 24
1030	Etowah River near Kingston, Ga.	1928-31, 1936-54	1,630	2,378	d201	Oct. 19, 1931	d380	Sept. 12
1035	Etowah River at Rome, Ga.	1904-21, 1939-54	1,810	2,599	d360	Oct. 10, 24, 1904	d455	Nov. 8
1037	Coosa River near Rome, Ga.	1897–1903, 1928–31 1937–54	4,040	6,278	d870	Oct. 18-22, 1931	940	Oct. 25, 26
1045	Cedar Creek near Cedartown, Ga.	1942–54	109	165	d29	Oct. 22, 29; Nov. 26, 1944	f26	Oct. 20, Nov. 13, 14
1056	Chattooga River at Summerville, Ga.	1937-54	193	356	d38	Oct. 17, 1937; Nov. 9, 12, 1939	52	Oct. 16
1071	Little Tallapoosa River at Carrollton, Ga.	1937–54	89	138	5.4	Oct. 17, 18, 1938	n	n
	TENNESSEE RIVER BASIN							
1079	Hiwassee River at Presley, Ga.	1941–54	45.5	133	26	Oct. 18, 1951	21	Oct. 4, 7, 10-14
1080	Nottely River near Blairsville, Ga.	1942-54	74.8	175	27	Sept. 8, Oct. 7, 1947	28	Oct. 6
1081	Nottely River at Nottely Dam, near Ivylog, Ga.	1942–54	215	c416	0.3	Feb. 8, 1951	0.2	Many days August to Oct.
1082	Toccoa River near Dial, Ga.	1913–54	177	488	60	Sept. 6, 1925	109	Oct. 25, 26-30
1083	Toccoa River near Blue Ridge, Ga.	1913-54	233	588	j3.5	Nov. 22, 1953	d7.9	Jan. 9
1084	Fightingtown Creek at McCaysville, Ga.	1942-54	70.9	204	37	Nov. 19, 1953	37	Sept. 29, 30
1089	South Chickamauga Creek near Chickamauga, Tenn.	1928–54	428	708	61	Oct. 8, 1941	61	Oct. 18, 19
1092	Chattanooga Creek near Flintstone, Ga.	1950–54	50.6		f 2.9	Oct. 19-22, 1953	1.0	Sept. 8, 9

## COMPARISON OF 1954 DROUGHT WITH OTHER DROUGHTS

The relative severity of the 1954 drought may be judged, in part, by comparison of its minimum daily flow with those recorded in other years. An extensive summary of this nature has not been attempted for this part of the report, but table 2 has been prepared to show comparable annual minimum daily flows for five representative gaging stations.

The data in table 2 for Chattahoochee River at West Point are shown graphically in figure 15. The data for four of the stations have been used to prepare figure 16 showing the frequency of the annual minimum daily flows. These data show a recurrence interval of the 1954 minimum daily flow ranging from 13 to 30 years and a magnitude ranging from 36 to 82 percent of the 5-year frequency minimum daily flow.

FIG.--15



Annual Flows, Chattahoochee River at West Point

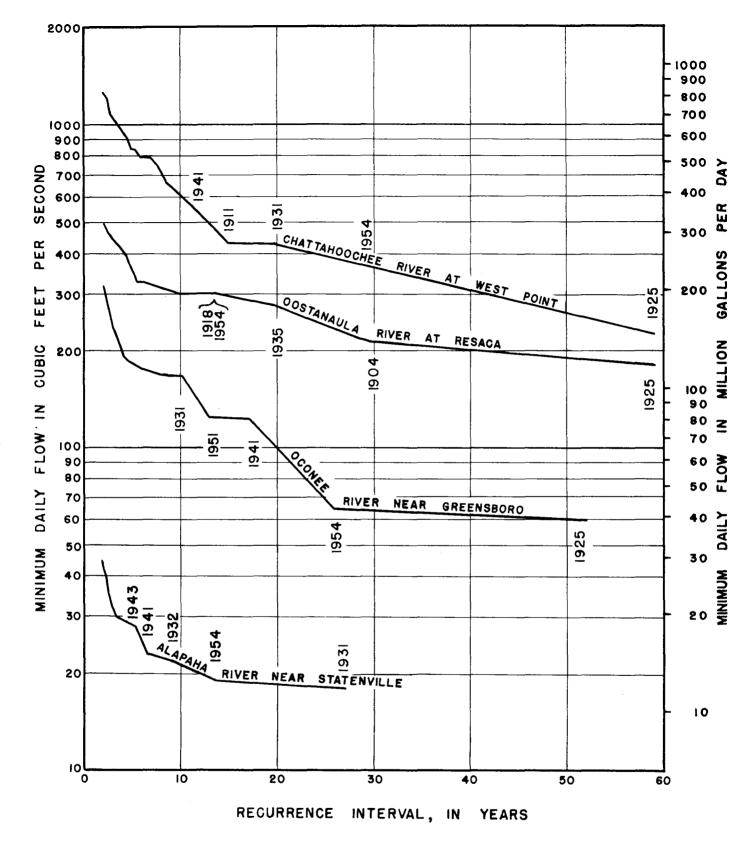


Fig. 16. Frequency of annual minimum daily flows. This shows the relative frequency and magnitude for drought years rarer than a 5-year recurrence interval. The data in Table II were used to prepare this figure omitting the Toccoa River data for clarity. The frequency,

or recurrence interval, is based on the period of record at each gaging station so that the graphs are not strictly comparable. This is particularly true of the Alapaha River graph because it does not include the 1925 drought.

TABLE 2. Annual average and minimum daily flow, in cubic feet per second, of selected streams in Georgia.

Calendar Year	(337) Occ	onee River eensboro	(515) Ala <sub>1</sub>	oaha River	(715) Cha		(977) Oc	estanaula t Resaca	(1082)	Toccoa ear Dial
Tear	Average	Minimum				Minimum				Minimum
1897 1898 1899 1900					4,983 5,324 5,948 7,545	845 900 930 2,100	2,716 2,662 c3,400 c3,600	325 600 c540 c740	Average	Minimum
1901 1902 1903 1904 1905	830 1,108	215 185			8,667 6,859 7,806 3,015 4,351	2,380 1,000 1,840 800 1,090	c4,500 c3,000 3,014 1,285 2,522	c800 c520 385 212 455		
1906 1907 1908 1909 1910	1,961 1,337 2,098 1,843 1,393	620 345 575 575 476			7,435 5,086 6,015 7,516 4,483	2,530 1,490 1,490 2,100 1,680	4,040 2,621 2,463 3,802 2,524	$\begin{array}{c} 1,240 \\ 620 \\ 300 \\ 455 \\ 730 \end{array}$		
1911 1912 1913 1914 1915	1,158 2,195 1,543 1,283 1,507	172 490 400 310 180			b3,800 7,869 5,164 3,564 6,090	b430 1,700 1,420 1,200 1,460	2,170 3,183 2,635 1,634 2,559	325 535 385 385 325	514 310 481	140 109 144
1916 1917 1918 1919 1920	$1,101 \\ 1,479 \\ 1,371 \\ 2,005 \\ 2,162$	256 314 194 352 520			5,790 6,773 5,601 7,236 9,287	1,670 1,470 1,200 1,420 2,100	2,776 3,513 2,550 3,205 4,839	575 355 300 535 1,120	607 621 479 563 777	225 165 125 135 282
1921 1922 1923 1924 1925	1,268 $1,877$ $2,200$ $1,918$ $1,382$	276 352 548 414 60			4,911 7,329 6,018 4,968 4,653	1,100 1,150 1,120 1,280 224	3,077 3,588 3,196 2,919 1,863	620 495 620 455 180	507 612 583 470 274	120 158 225 142 60
1926 1927 1928 1929 1930	1,490 1,034 1,482 2,804 1,117	235 175 617 411 235	$1,710 \\ 1,223$	245 45	4,812 3,737 5,807 9,839 4,573	$\begin{array}{c} 1,020 \\ 660 \\ 2,420 \\ 2,200 \\ 771 \end{array}$	2,508 2,735 3,130 4,502 2,054	495 475 995 815 410	379 420 571 791 378	167 157 300 276 130
1931 1932 1933 1934 1935	1,074 a1,430 a1,120 a1,140 a870	165 a310 a200 a330 a170	543 725 1,008 399 457	18 22 30 29 32	3,345 6,691 4,878 4,458 3,891	$\begin{array}{c} 426 \\ 942 \\ 1,110 \\ 1,320 \\ 842 \end{array}$	2,068 $4,351$ $2,526$ $2,101$ $2,270$	308 550 470 510 275	392 684 523 403 385	115 192 124 143 112
1936 1937 1938 1939 1940	a2,300 a1,630 1,071 1,223 1,126	a320 a400 188 314 272	1,185 $1,419$ $260$ $778$ $547$	55 158 38 33 34	8,061 6,328 4,364 5,017 4,149	1,420 1,810 950 1,200 1,140	3,569 $2,973$ $2,775$ $2,496$ $1,575$	405 490 530 394 388	525 465 452 437 329	140 151 171 123 117
1941 1942 1943 1944 1945	$795 \\ 1,271 \\ 1,492 \\ 1,337 \\ 1,219$	122 285 313 316 322	333 1,026 523 1,849 1,061	23 29 28 96 72	3,018 $4,765$ $5,566$ $5,627$ $5,215$	540 1,300 1,250 1,370 1,370	1,274 $2,582$ $2,621$ $2,947$ $2,484$	318 670 485 420 472	284 469 464 400 362	130 230 147 123 166
1946 1947 1948 1949 1950	1,551 1,400 2,089 1,772 931	386 236 441 699 287	1,122 $2,250$ $2,209$ $1,253$ $343$	61 60 103 110 53	7,123 5,241 7,624 6,587 4,257	$1,490 \\ 799 \\ 1,880 \\ 2,950 \\ 1,740$	3,946 2,645 3,080 3,332 3,126	612 395 455 855 772	704 406 475 647 531	200 127 158 323 215
1951 1952 1953 1954	900 1,278 1,257 706	124 225 166 65	613 794 1,063 401	53 43 105 19	3,968 5,102 5,672 3,439	610 1,010 1,060 364	3,160 $2,539$ $2,409$ $2,370$	505 510 445 300	479 491 406 402	156 139 124 109

<sup>a. Flow estimated on basis of records for Oconee River at Dublin, Ga.
b. Flow estimated on basis of records for Chattahoochee River near Norcross, Ga.
c. Flow estimated on basis of records for Coosa River near Rome, Ga.</sup> 

#### HYDROGRAPHS OF THE 1954 DROUGHT FLOWS

The hydrographs of flow at the index gaging stations are shown on pages 20 to 48. These hydrographs are the day-by-day plotting of the daily mean flow at the gaging stations. The hydrographs are plotted to a logarithmic flow scale to show a wide range of flow values to a significant scale. Also, the logarithmic scale is proportional; that is, a relative percentage change is shown by the same vertical intercept anywhere on the chart. That fact can be used to great advantage in the analysis of streamflow records.

The hydrographs are shown only for the index gaging stations. Index gaging stations are those on streams that drain

relatively small drainage areas lying mostly within one physiographic region and that are not appreciably affected by regulation. The hydrographs show the daily mean flows during the period June 1 to November 30. This period includes all of the recorded minimum flows in Georgia during the 1954 drought. Because very low rates of flow are not reliable for use in quantitative comparisons, hydrographs of flow at the index stations are not plotted for periods when the rates of flow were below 0.1 cubic foot per second.

The average monthly flows are shown on each hydrograph by horizontal lines to indicate the relative severity of the drought flow. The amounts shown are the average for the period of years given in item 3 of the station description.

#### SAVANNAH RIVER BASIN

(I) CHATTOOGA RIVER NEAR CLAYTON, GA.

LOCATION.—Lat. 34° 49', long. 83° 18', downstream from new bridge on U. S. Highway 76 and 7 miles southeast of Clayton, Rabun County.

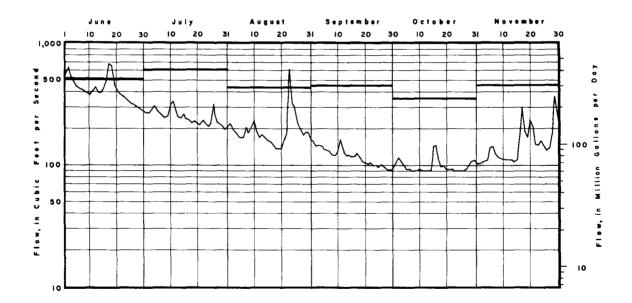
DRAINAGE AREA.—203 sq. mi.

RECORDS AVAILABLE.—May 1907 to June 1908, November 1939 to November 1954. GAGE.—Water-stage recorder. May 1907 to June 1908 staff gage at site 400 ft. upstream. AVERAGE FLOW.—14 years (1939-53), 611 cfs.

MINIMUM FLOW.—1954: 88 cfs Oct. 8, 12, 13. 1907-8, 1939-53: 122 cfs Oct. 6, 7, 1947.

REMARKS.-Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. June July August September October November Average flow, in cfs. 419 246 199 118 988 154 2.30 Runoff, in inches. 1.40 1.13 0.65 0.56 0.85



### SAVANNAH RIVER BASIN

(2) PANTHER CREEK NEAR TOCCOA, GA.

LOCATION.—Lat. 34° 41', long. 83° 21', on left bank at Yonah Dam Settlement and 7 miles north of Toccoa, Stevens County.

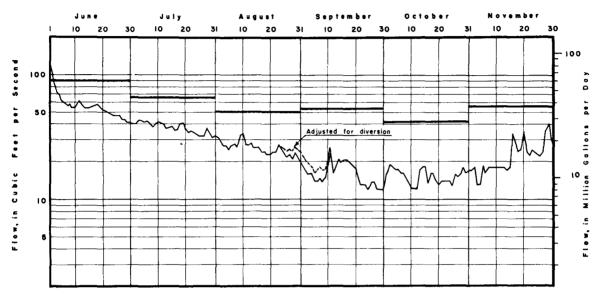
DRAINAGE AREA.—31.4 sq. mi.
RECORDS AVAILABLE.—January 1943 to November 1954.

GAGE.-Water-stage recorder.

AVERAGE FLOW.—10 years (1943-53); 75.3 cfs.
MINIMUM FLOW.—1954: 10 cfs Sept. 30, 1943-53: 14 cfs Sept. 6, 7, Oct. 7, 1947.
REMARKS.—Records good. Diversion above station for Municipal Supply of Toccoa.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

WOULD TOWS	ina cany nyan	ograpii ioi peri	ou Julie 1 10 14	OTENIDE 30, 173	·	
·	June	July	August	September	October	November
Average flow, in cfs	56.4	37.4	25.8	16.1	15.3	22.4
Runoff, in inches	2.01	1.37	0.95	0.57	0.56	0.80



(II) SOUTH BEAVERDAM CREEK AT DEWY ROSE, GA.

LOCATION.—Lat. 34° 11', long. 82° 57', 50 ft. upstream from county highway bridge and 1 mile northeast of Dewy Rose, Elbert County.

DRAINAGE AREA.-36.6 sq. mi.

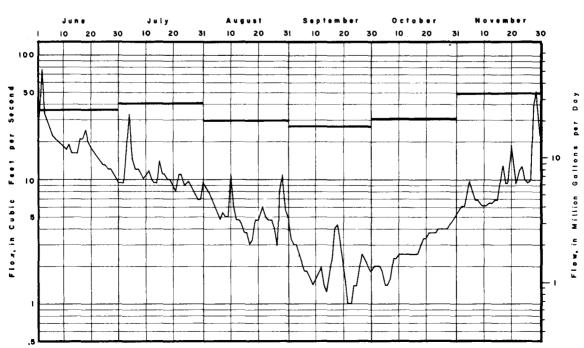
RECORDS AVAILABLE.—October 1942 to November 1954.

GAGE.—Water-stage recorder. Prior to November 20, 1952 staff gage at same site.

AVERAGE FLOW.—11 years (1942-53), 54.1 cfs.
MINIMUM FLOW.—1954: 0.80 cfs. Sept. 22, 1942-53: Minimum observed, 6.5 cfs Sept. 9, 1947.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. June July October August September November Average flow, in cfs. 20.0 HÁ 5.50 2.07 2.94 11.7 Runoff, in inches. 16.0 0.35 0.17 0.06 0.09 0.36



### SAVANNAH RIVER BASIN

(16) NORTH FORK BROAD RIVER NEAR TOCCOA, GA.

LOCATION.—Lat. 34° 31', long. 83° 19', 150 ft. upstream from bridge on State Highway 106 and 5 miles south of Toccoa, Stevens County.

DRAINAGE AREA.—19.3 sq. mi.
RECORDS AVAILABLE.—May 1954 to November 1954.

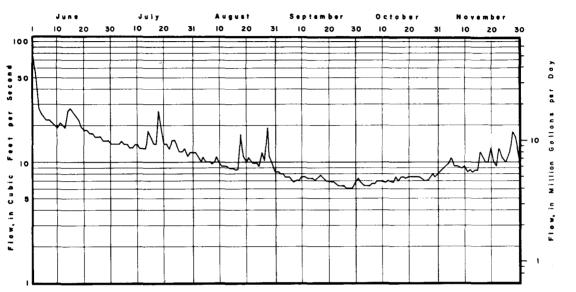
GAGE.-Water-stage recorder.

MINIMUM FLOW.—1954: 5.7 cfs Sept. 25.

REMARKS.—Records good. Considerable diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July September October November August 14.2 10.4 7.06 10.4 Average flow, in cfs\_ 23.1 7.12 Runoff, in inches 1.34 0.41 0.42 0.60 0.85 0.62



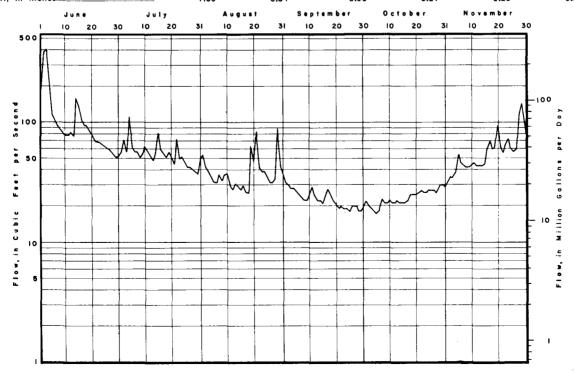
(28) NORTH FORK BROAD RIVER NEAR CARNESVILLE, GA. LOCATION.—Lat. 34° 19', long. 83° 11', at bridge on State Highway 51 and 41/4 miles southeast of Carnesville, Franklin County. DRAINAGE AREA .-- 119 sq. mi.

RECORDS AVAILABLE.—October 1942 to December 1944, April 1954 to November 1954. GAGE.—Water-stage recorder. Oct. 1, 1942 to Dec. 31, 1944, wire-weight gage at present site.

MINIMUM FLOW.—1954: 16 cfs Oct. 5. 1942-44; 44 cfs Oct. 18, 1942, July 28, Sept. 9, 1944. REMARKS.—Records good. Moderate diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

October November June July August September Average flow, in cfs. 55.3 110 38.8 22.9 23.4 57.6 Runoff, in inches 1.03 0.38 0.21 0.23 0.54 0.54



#### SAVANNAH RIVER BASIN

(56) LITTLE RIVER NEAR WASHINGTON, GA. LOCATION.—Lat. 33° 36' 40", long. 82° 44' 40", on downstream side of county highway bridge, 4 miles downstream from Georgia Railroad bridge and 9 miles south of Washington, Wilkes County.

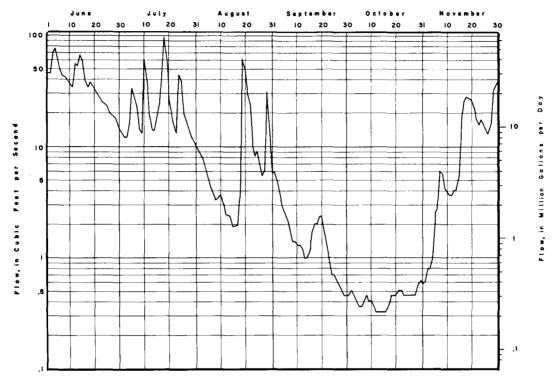
DRAINAGE AREA.—292 sq. mi.
RECORDS AVAILABLE.—October 1949 to November 1954.

GAGE.—Water-stage recorder.

MINIMUM FLOW.—1954: 0.32 cfs Oct. 12-16. 1949-53: 10 cfs Sept. 11, 12, 1951.

REMARKS.—Records good except those below 1 cfs, which are fair.

Monthly flows a	nd daily hydr	ograph for perio	od June I to N	ovember 30, 1954	<b>}.</b>	
	June	July	August	September	October	November
Average flow, in cfs	38.9	25.6	10.7	1.72	0.435	12.8
Runoff, in inches	0.15	0.10	0.04	0.007	0.002	0.05



(93) BRIER CREEK AT MILLHAVEN, GA.

LOCATION.—Lat. 32° 56' 00", long. 81° 39' 05", on downstream side of county highway bridge at Millhaven, Screven County.

DRAINAGE AREA.—656 sq. mi.
RECORDS AVAILABLE.—April 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to June 7, 1950 staff gage at site 200 ft. downstream. June 7,1950 to April 30, 1951, wire-weight gage at present site.

10

AVERAGE FLOW.—16 years (1937-53), 647 cfs.
MINIMUM FLOW.—1954: Minimum daily, 64 cfs (estimated) Sept. 5-11. 1937-53: Minimum observed, 110 cfs June 30, July 2, 1945. REMARKS.—Records good except those for periods Aug. 4-13 and Aug. 15 to Sept. 16, which are poor. Slight diurnal fluctuation at low flow caused by grist mills above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. July 165 June August September October November Average flow, in cfs\_ 220 94.9 102 120 211 Runoff, in inches 0.37 0.29 0.17 0.17 0.21 0.36 October 10 20 30 10 20 31 10 20 31 10 20 30 10 20 31 10 20 30 1,000 00 Second 500 : 100 Million 100 50 10

#### OGEECHEE RIVER BASIN

(135) OGEECHEE RIVER AT SCARBORO, GA.

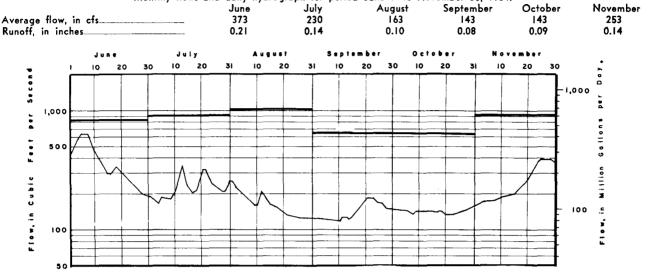
LUCATION.—Lat. 32° 42' 40", long. 81° 52' 45", 15 ft. downstream from county highway bridge at Scarboro, Jenkins County. DRAINAGE AREA.-I,940 sq. mi.

RECORDS AVAILABLE .-- April 1937 to November 1954.

GAGE.-Water-stage recorder. Prior to Dec. 18, 1941, staff gage at same site.

AVERAGE FLOW.-16 years (1937-53), 1,688 cfs.

MINIMUM FLOW.—1954: Minimum daily, 120 cfs (estimated) Sept. 5-10. 1937-53: Minimum observed, 146 cfs Sept. 28, 1938. REMARKS.—Records good except those for periods June 20 to July 11, July 16-18, 27-29, and Aug. 3 to Sept. 10, which are fair. Monthly flows and daily hydrograph for period June 1 to November 30, 1954.



(150) CANOOCHEE RIVER NEAR CLAXTON, GA.

LOCATION.—Lat. 32° 11' 05", long. 81° 53' 25", 400 ft. upstream from bridge on State Highway 73, 2 miles northeast of Claxton, Evans County.

DRAINAGE AREA.—555 sq. mi.
RECORDS AVAILABLE.—May 1937 to November 1954.

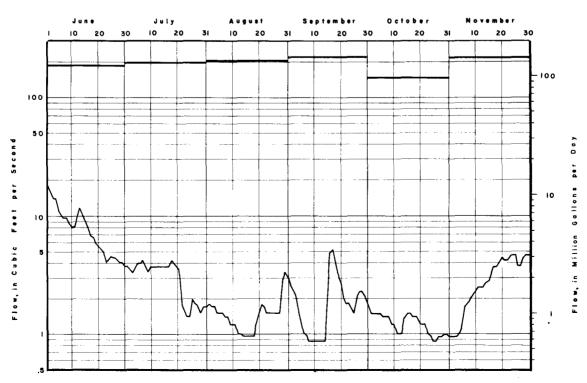
GAGE .-- Water-stage recorder. Prior to Oct. 20, 1949, staff gage at same site.

AVERAGE FLOW.—16 years (1937-53), 425 cfs.

MINIMUM FLOW.—1954: Minimum observed, 0.86 cfs Sept. 7-14, Oct. 25, 26, Nov. 2. 1937-53: Minimum observed, 1.2 cfs June 2, 3. 1941.

REMARKS.—Records good except those for period Aug. 19 to Nov. 25, which are fair.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. August June July September. October November Average flow, in cfs... 8.16 3.05 1.53 1.98 1.22 3.02 Runoff, in inches. 0.003 0.004 0.003 0.006 0.02 0.006



(185) PEW CREEK NEAR LAWRENCEVILLE, GA.
LOCATION.—Lat. 33° 56', long. 84° 01', 20 ft. upstream from county bridge, a quarter of a mile southeast of State Highway 8 and 21/4 miles southeast of Lawrenceville, Gwinnett County.

DRAINAGE AREA.-2.23 sq. mi.

RECORDS AVAILABLE .- October 1953 to November 1954.

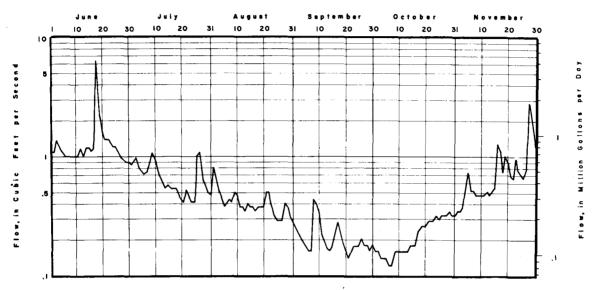
GAGE.-Water-stage recorder.

MINIMUM FLOW .- 1954: 0.08 cfs Oct. 6, 7.

REMARKS.—Records good except those for Sept. 1-13, which are fair. Considerable diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July October August September November Average flow, in cfs\_ 1.34 0.677 0.414 0.212 0.223 0.789 Runoff, in inches. 0.67 0.35 0.21 0.11 0.12 0.40



(209) YELLOW RIVER NEAR SNELLVILLE, GA.

LOCATION.—Lat. 33° 51', long. 84° 05', on downstream side of county highway bridge and 31/4 miles west of Snellville, Gwinnett County.

DRAINAGE AREA .-- 144 sq. mi.

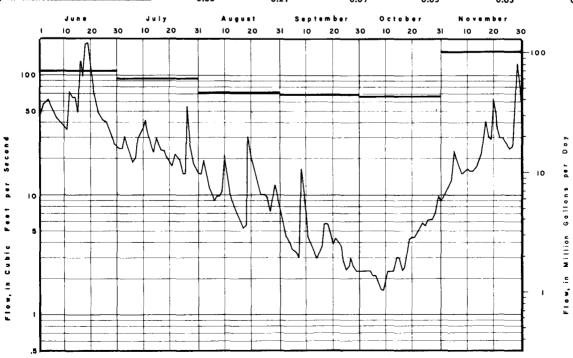
RECORDS AVAILABLE.—October 1942 to November 1954.

GAGE.—Water-stage recorder. Prior to Nov. 4, 1952, staff gage at same site.

AVERAGE FLOW.—11 years (1942-53), 177 cfs.
MINIMUM FLOW.—1954: 1.5 cfs Oct. 9, 1942-53: Minimum observed 5.0 cfs Sept. 9, 10, 1951.

REMARKS .- Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. June July August September October November Average flow, in cfs\_ 64.4 11.7 26.1 4.40 3.89 29.7 Runoff, in inches 0.50 0.21 0.09 0.03 0.03 0.23



(217) YELLOW RIVER NEAR COVINGTON, GA.

LOCATION.—Lat. 33° 37', long. 83° 55', on downstream side of bridge on State Highway 12, a quarter of a mile downstream from Georgia Railroad bridge, and 31/2 miles northwest of Covington, Newton County. DRAINAGE AREA .- 396 sq. mi.

RECORDS AVAILABLE—September to December 1897, May 1899 to December 1901, July 1944 to November 1954.

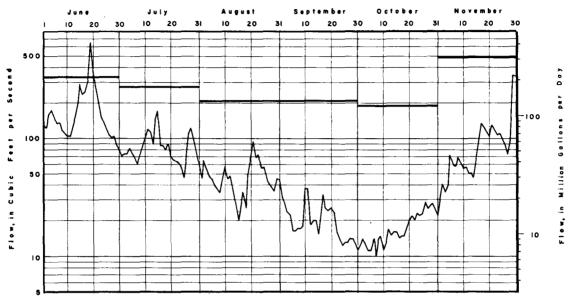
GAGE.—Water-stage recorder. September to December 1897, staff at same site. May 1899 to December 1901, staff gage at site I mile upstream.

AVERAGE FLOW.—9 years (1944-53), 485 cfs.
MINIMUM FLOW.—1954: 8.8 cfs Oct. 5. 1944-53; Minimum daily, 24 cfs Sept. 9, 1951.

REMARKS.—Records good. Diurnal fluctuation caused by mill dam above station.

Monthly flows and daily hydrograph for period June 1, to November 30, 1954

wiching hows a	na dany nya	ograpii toi perit	ou same : 10 140	רכלו יטב ושטוושיי	r•	
	June	July	August	September	October	November
Total flow, in cfs	5,441	2,628	1,449	613	548	2,865
Average flow, in cfs	181.4	84.8	46.7	20.4	17.7	95.5
Runoff, in inches	0.51	0.25	0.14	0.06	0.05	0.27



(269) TOBESOFKEE CREEK NEAR MACON, GA.

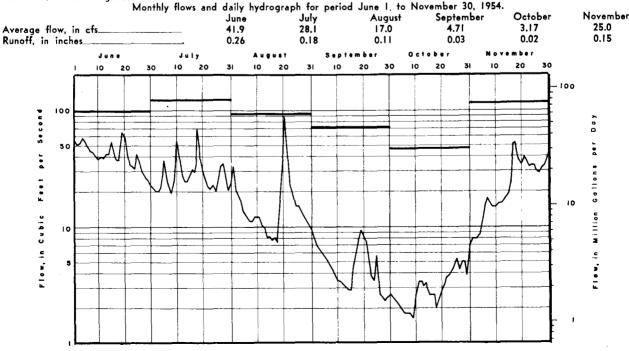
LOCATION.—Lat. 32° 48', long. 83° 46', on downstream side of bridge on U. S. Highway 80, 8 miles west of Macon, Bibb County. DRAINAGE AREA.—182 sq. mi.

RECORDS AVAILABLE .- March 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Feb. 3, 1938, staff gage and Feb. 3, 1938 to Aug. 27, 1942, wire-weight gage at same site. AVERAGE FLOW .-- 16 years (1937-53), 193 cfs.

MINIMUM FLOW.—1954: 1.6 cfs Oct. 9. 1937-53: Minimum daily, 6 cfs Sept. 10, 1951.

REMARKS.—Records' good.



(283) BIG INDIAN CREEK AT PERRY, GA.

LOCATION.—Lat. 32° 27', long. 83° 44', at Municipal Waterworks at Perry, Houston County, on left bank 300 ft. downstream from bridge on U. S. Highway 41.

DRAINAGE AREA .- 108 sq. mi.

RECORDS AVAILABLE.—September 1943 to November 1954.

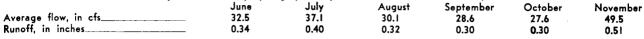
GAGE.—Water-stage recorder. Prior to Sept. 24, 1953 staff gage at same site.

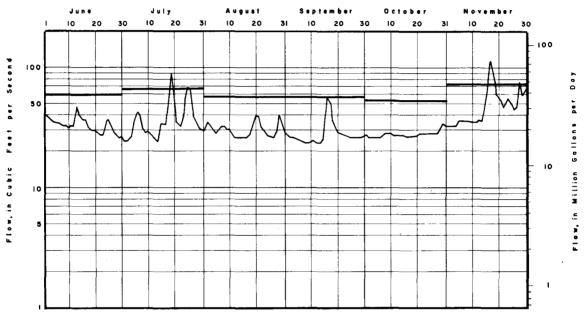
AVERAGE FLOW.-10 years (1943-53), 83.9 cfs.

MINIMUM FLOW.-1954: 24 cfs July 1, 2, 14, Sept. 7-10, 12-14. 1943-53: Minimum observed, 21 cfs Sept. 3-5, 9-11, 13, 1951, Aug. 27, 28, 1952.

REMARKS .-- Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.





(324) ALLEN CREEK AT TALMO, GA.

LOCATION.—Lat. 34° 12', long. 83° 43', 400 ft. upstream from bridge on State Highway II and half a mile north of Talmo, Jackson County.

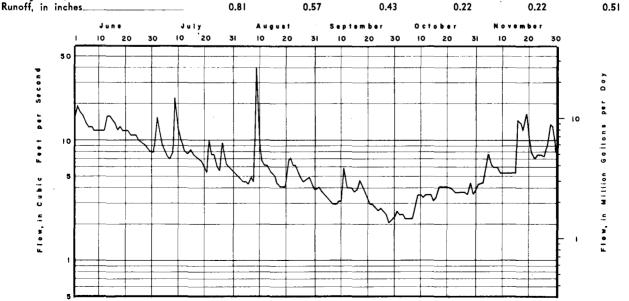
DRAINAGE AREA.—17.3 sq. mi.
RECORDS AVAILABLE.—July 1951 to November 1954.

GAGE.—Water-stage recorder.

MINIMUM FLOW.—1954: 1.8 cfs Oct. 6, 7. 1951-53: 2.3 cfs Sept. 8, 9, 1951.

REMARKS.—Records good prior to Oct. 10 and fair thereafter. Moderate diurnal fluctuation at low flow caused by evapotranspiration

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. July October June August September November Average flow, in cfs. 12.6 8.54 6.46 3.34 3.36 7.93



(333) MIDDLE OCONEE RIVER NEAR ATHENS, GA.

LOCATION.—Lat. 33° 58', long. 83° 25', on left bank half a mile upstream from U. S. Highway 29 and 2 miles west of Athens, Clarke County.

DRAINAGE AREA.-398 sq. mi.

RECORDS AVAILABLE.—October 1901 to October 1902, January 1929 to March 1932, April 1937 to November 1954.

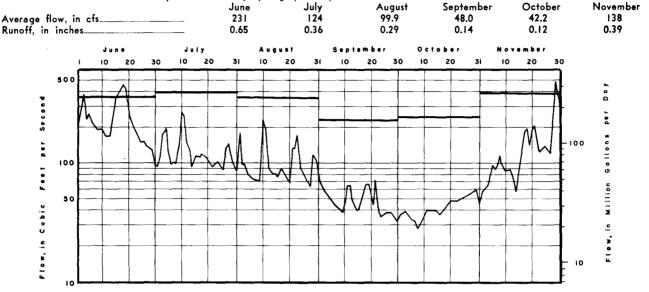
GAGE.—Water-stage recorder. October 1901 to October 1902 staff gage at site 1 mile upstream. January 1929 to March 1932 and April 1927 to September 1940 water-stage recorder at site 4 miles downstream.

AVERAGE FLOW.—16 years (1937-53), 490 cfs.

MINIMUM FLOW.—1954: 27 cfs Oct. 8. 1901-2, 1929-32, 1937-53: Minimum daily, 42 cfs Sept. 23, 1941.

REMARKS.—Records good. Diurnal fluctuation and slight regulation at times caused by powerplants above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.



(348) APALACHEE RIVER NEAR BUCKHEAD, GA.

LOCATION.—Lat. 33° 36', long. 83° 21', at downstream side of bridge on State Highway 12 and 3 miles northeast of Buckhead, Morgan County.

DRAINAGE AREA.-436 sq. mi.

RECORDS AVAILABLE.—March 1901 to December 1908, May 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Mar. 22, 1905, staff gage, and Mar. 22, 1905 to December 1908, chain gage at same site. May 13, 1937 to Feb. 1, 1939, staff gage at same site.

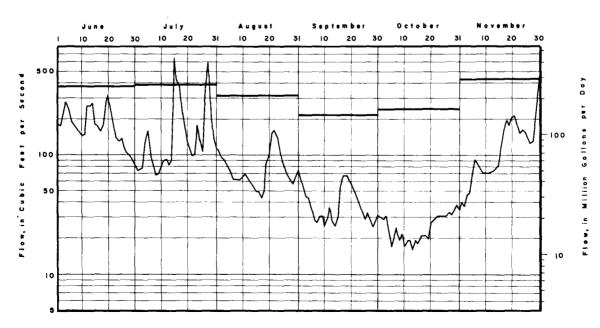
AVERAGE FLOW.—16 years (1937-53), 547 cfs.

MINIMUM FLOW.—1954: 14 cfs Oct. 8, 1901-8, 1937-53: Minimum daily, 36 cfs Sept. 11, 1951.

REMARKS.—Records good. Moderate diurnal fluctuation at low flow caused by mill dams above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	180	167	79.2	39.3	25.5	125
Runoff, in inches	0.46	0.44	0.21	01.0	0.07	0.32



(359) MURDER CREEK NEAR MONTICELLO, GA.
LOCATION.—Lat. 33° 24' 45", long. 83° 39' 40", 350 ft. upstream from bridge on State Highway 229 and 8 miles north of Monticello, Jasper County.

DRAINAGE AREA.—24 sq. mi.

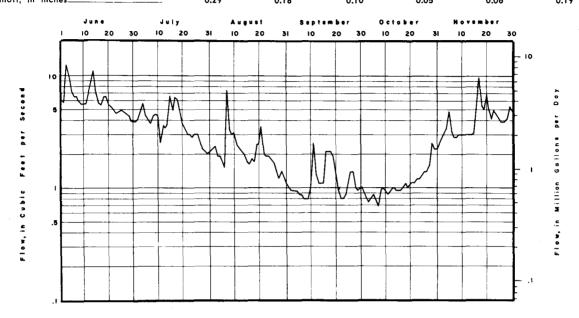
RECORDS AVAILABLE.—September 1951 to November 1954.

GAGE.—Water-stage recorder.
MINIMUM FLOW.—1954: 0.61 cfs Sept. 10. 1951-53: 2.5 cfs Oct. 17, 18, 19, 1951.

REMARKS.—Records fair. Considerable diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July October August September November Average flow, in cfs\_ 6.19 3.83 2.19 1.17 1.14 4.13 Runoff, in inches. 0.19 0.29 0.05 0.06 0.18 0.10



(387) ROCKY CREEK NEAR DUDLEY, GA.

LOCATION.—Lat. 32° 29', long. 83° 09', on downstream side of county highway bridge and 5 miles southeast of Dudley, Laurens County.

DRAINAGE AREA .-- 62.9 sq. mi.

RECORDS AVAILABLE.—November 1951 to November 1954.

GAGE.—Water-stage recorder.
MINIMUM FLOW.—1954: 0.23 cfs Oct. 6. 1951-53: 1.8 cfs July 31, 1952.

ge flow, in f, in inches	cfs					June 5.19 0.09		į	July 5.74 0.10		Au	gust 87		Septe 1.4 0.0	mber I		Octob 1.98 0.04		Novemb 7.32 0.13
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(404) OHOOPEE RIVER NEAR REIDSVILLE, GA.

LOCATION.—Lat. 32° 04', long. 82° 11', on downstream side of Sheppard Bridge and 31/2 miles west of Reidsville, Tattnall County. DRAINAGE AREA .- I 110 sq. mi.

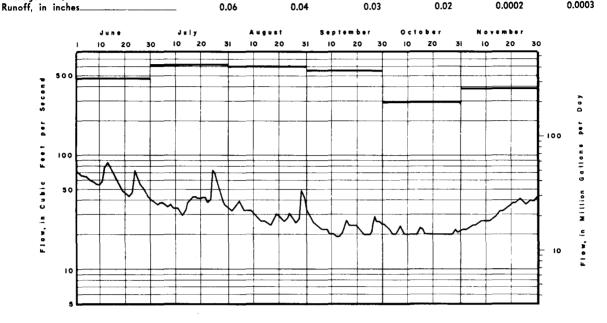
RECORDS AVAILABLE.—June 1903 to December 1907, May 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to December 1907 and May 1937 to Feb. 15, 1941, staff gage at same site.

AVERAGE FLOW.—20 years (1903-7, 1937-53), 944 cfs.
MINIMUM FLOW.—1954: 19 cfs Sept. 12-14. 1903-7, 1937-53: Minimum daily, 28 cfs June 4, 1941.

REMARKS.—Records good.

Monthly flows and	d daily	hydrograph for period	June I to	November 30, 1954.		
•	June	July	August	September	October	November
Average flow, in cfs	58.9	40.Í	30.5	23.0	0.208	0.312
Donatt to task a	0.04	0.04	Λ Λ2	0.02	0.0002	0.0003



#### SATILLA RIVER BASIN

(436) SATILLA RIVER NEAR WAYCROSS, GA.

LOCATION.—Lat. 31° 14', long. 82° 19', on downstream side of bridge on State Highway 38 and 3 miles northeast of Waycross, Ware County.

DRAINAGE AREA.—1,300 sq. mi.
RECORDS AVAILABLE.—March 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Nov. 22, 1952, staff gage at site 300 ft. downstream.

AVERAGE FLOW.-16 years (1937-53), 931 cfs.

MINIMUM FLOW.—1954: 6.0 cfs Nov. 3, 4, 1937-53: Minimum observed, 12 cfs Nov. 15, 16, 1942. Dec. 6-14, 1943.

REMARKS.—Records good. Atlantic Coast Line Railroad diverts 4 to 5 cfs from pool at gage for use in shops.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

Average flow, in Runoff, in inche	cfs	<del></del>				June 21.0 0.02			July 20.6 0.02			Aug 12. 0.0	4			emb 3.1 01	er	Octo 7.5 0.00	2	Novembe 9.13 0.008
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(458) LITTLE SATILLA RIVER NEAR OFFERMAN, GA.
LOCATION.—Lat. 31° 27', long. 82° 03', on downstream side of Atlantic Coast Line Railroad bridge, 1,500 ft. downstream from bridge on State Highway 38 and 4 miles northeast of Offerman, Pierce County.

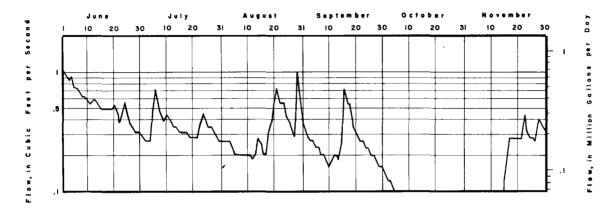
DRAINAGE AREA.—646 sq. mi.
RECORDS AVAILABLE.—January 1951 to November 1954.

GAGE.-Water-stage recorder. Prior to Nov. 8, 1952, at site 1,500 ft. upstream.

MINIMUM FLOW.—1954: No flow Oct. 9 to Nov. 15. 1951-53: 0.4 cfs Sept. 11-15, 1952, June 23, 24, 1953. REMARKS.—Records good except those below 0.5 cfs, which are fair.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	0.564	0.350	0.344	0.266	0.0251	0.155
	0.001	0.0006	0.0006	0.0005	0.00004	0.0003



#### OKEFENOKEE SWAMP

(473) SUWANNEE CANAL AT CAMP CORNELIA NEAR FOLKSTON, GA.

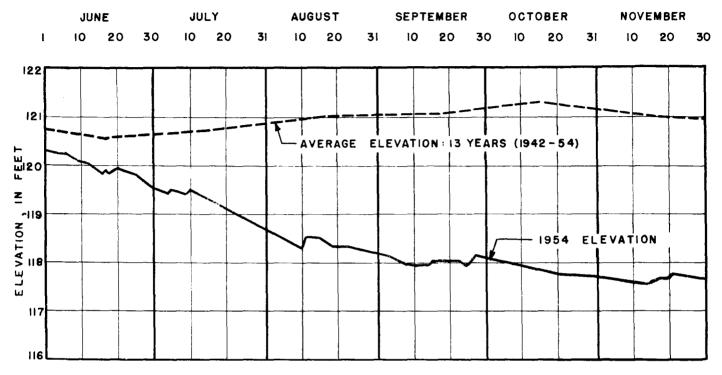
LOCATION.—Lat. 30° 44', long. 82° 08', at boat landing on Suwannee Canal and at Camp Cornelia, Charlton County. RECORDS AVAILABLE.—March 1942 to November 1954 (stage only).

GAGE.—Staff gage.

MINIMUM ELEVÁTION.—1954: 117.6 ft. on several days in November. 1942-53: 119.4 ft. on several days in December 1943 and July 1953.

REMARKS.—Records furnished by United States Fish and Wildlife Service.

Daily stages, in feet above mean sea level, for period June 1 to November 30, 1954.



(474) BILLY'S LAKE AT JONES ISLAND, GA.

LOCATION.—Lat. 30° 50', long. 82° 21', on canal at entrance of Billy's Lake, Charlton County.

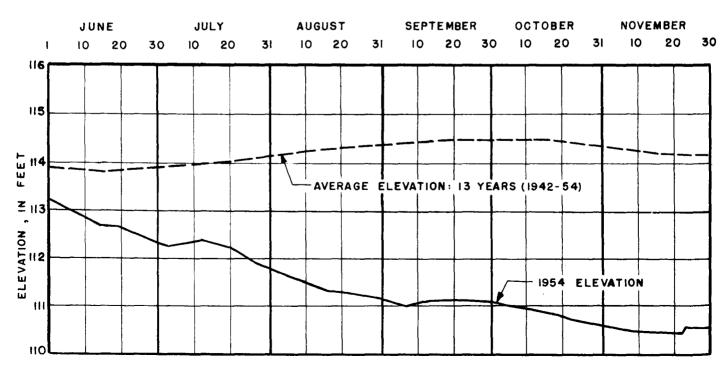
RECORDS AVAILABLE.—March 1942 to November 1954 (stage only).

GAGE.—Staff gage.

MINIMUM ELEVATION.—1954: 110.4 ft. on several days in November. 1942-53: 112.6 ft. on several days in December 1943 and July 1953.

REMARKS.—Records furnished by United States Fish and Wildlife Service.

Daily stages, in feet above mean sea level, for period June 1 to November 30, 1954.



## SUWANNEE RIVER BASIN

(482) SUWANNEE RIVER AT FARGO, GA.
LOCATION.—Lat. 30° 41', long. 82° 34', on downstream side of bridge on U. S. Highway 441 at Fargo, Clinch County.
DRAINAGE AREA.—About 1,260 sq. mi. (includes part of watershed in Okefenokee Swamp which is indeterminate).
RECORDS AVAILABLE.—January 1921 to September 1923 (stage only), January 1927 to December 1931, April 1927 to November

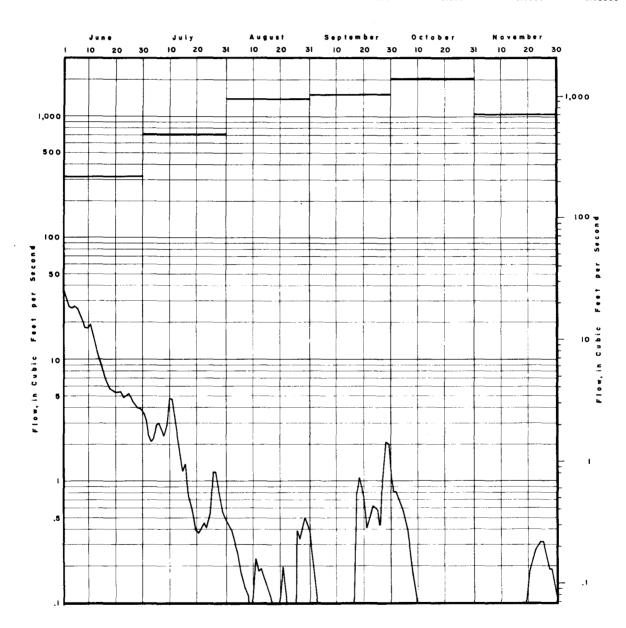
GAGE.—Water-stage recorder. January 1921 to September 1923, staff gage at site 1,200 ft. upstream. January 1927 to December 1931 and April 1937 to November 26, 1952, staff gage at site 1,000 ft. upstream.

AVERAGE FLOW.—20 years (1927-31, 1937-53), 1,150 cfs.
MINIMUM FLOW.—1954: No flow at times in August, September, October and November. 1921-23, 1927-31, 1937-53: No flow at times in 1931, 1948.

REMARKS.—Records good prior to July 22 and fair thereafter. Pools upstream drained by cutting sandbars Aug. 26, Sept. 1, 7, 14.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	Jı	une	July	August	September	October	November
Average flow, in cfs	1:	3.3	1.67	0.206	0.458	0.158	0.087
Runoff, in inches	0.	.01	0.002	0.0002	0.0004	0.0001	0.00008



## SUWANNEE RIVER BASIN

(498) ALAPAHA RIVER NEAR ALAPAHA, GA.
LOCATION.—Lat. 31° 23', long. 83° 10', on downstream side of bridge on State Highway 50 and 2 miles east of Alapaha, Berrien County.

DRAINAGE AREA.—644 sq. mi.
RECORDS AVAILABLE.—April 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Sept. 8, 1943, staff gage at same site.

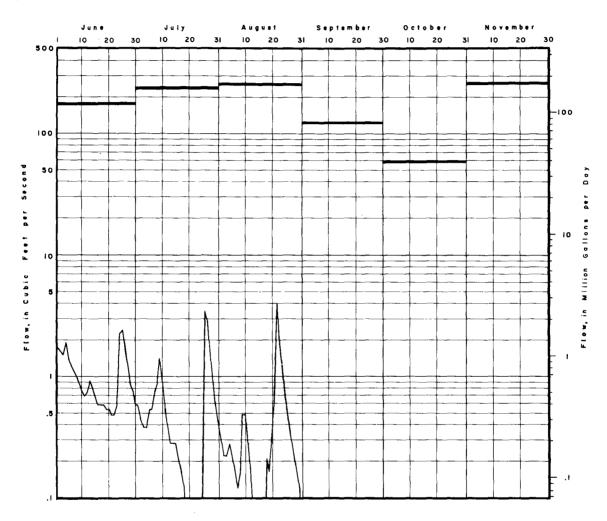
AVERAGE FLOW.—16 years (1937-53), 495 cfs.

MINIMUM FLOW.—1954: No flow July 23, 24, Sept. 2 to Nov. 28. 1937-53: Minimum observed, 0.2 cfs Nov. 11-17, 21, 22, 1942.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

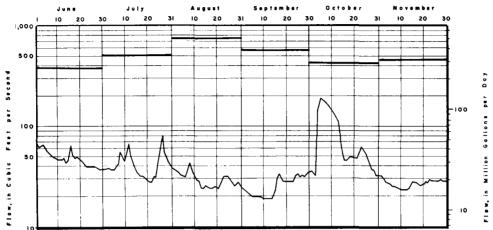
,	June	July	August	September	October	November
Average flow, in cfs	1.02	0.61 أ	0.340	0	0	0
Runoff, in inches	0.002	100.0	0.0006	0	0	0



#### SUWANNEE RIVER BASIN

(515) ALAPAHA RIYER AT STATENVILLE, GA.
LOCATION.—Lat. 30° 40', long. 83° 01', on upstream side of bridge on State Highway 94 and a quarter of a mile west of Staten-

	(515) ALAPAH	HA RIVER AT	STATENVILLE, G	Α.		
LOCATIONLat. 30° 40', long. 83° (	II', on upstream	side of bridge	on State Highwa	ay 94 and a quar	ter of a mile w	rest of Staten-
ville, Echols County.		_				
DRAINAGE AREA.—1,400 sq. mi.						
RECORDS AVAILABLE.—January to Ju						_
GAGEWire-weight gage, January to	June 1921, staff	gage at site 50	) ft. upstream. D	ec. 10, 1931 to .	July 9, 1935 cl	nain gage and
July 10, 1935, to Nov. 30, 1949 :	itaff gage at site	200 ft. upstre	em.			
AVERAGE FLOW.—21 years (1932-53),						
MINIMUM FLOW.—1954: 18 cfs Sept	. 10-14. 1921, 19	931-53: Minimu	m observed, 17	cfs Dec. 21, 28-3	1, 1931.	
REMARKS.—Records good. Flow affect	ted Oct. 3-15	by draining of I	Banks Lake upstre	am.		
Monthly flow	s and daily hydro	ograph for peri	od June I to No	ovember 30, 1954		
	June	July	August	September	October	November
Average flow, in cfs	49.0	42.Î	29.4	25.6	82.3	26.7
Runoff, in inches	0.04	0.03	0.02	0.02	0.07	0.02



(546) LITTLE RIVER NEAR ADEL, GA.
LOCATION.—Lat. 31° 09', long. 83° 33', on right bank 500 ft. downstream from bridge on State Highway 37, half a mile downstream from Georgia & Florida Railroad bridge and 7 miles west of Adel, Cook County.

DRAINAGE AREA.—547 sq. mi.
RECORDS AVAILABLE.—June 1940 to November 1954.

GAGE.—Water-stage recorder.

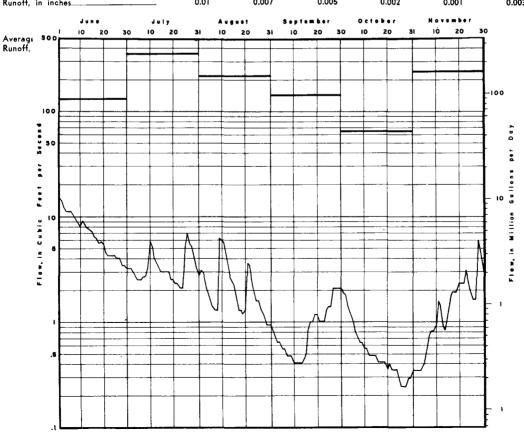
AVERAGE FLOW.—13 years (1940-53), 517 cfs.

MINIMUM FLOW.— 1954: 0.24 cfs Oct. 26-28. 1940-53: 1.5 cfs Nov. 25, Dec. 13, 14, 1943.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	7.29	3.41	2.32	0.954	0.598	1.63
Runoff, in inches	0.01	0.007	0.005	0.002	100.0	0.003



# OCHLOCKONEE RIVER BASIN

(594) OCHLOCKONEE RIVER NEAR THOMASVILLE, GA.
LOCATION.—Lat. 30° 52', long. 84° 03', on downstream side of bridge on U. S. Highway 84, 2 miles upstream from Atlantic Coast Line Railroad bridge and 5 miles northwest of Thomasville, Thomas County.

DRAINAGE AREA .- 550 sq. mi.

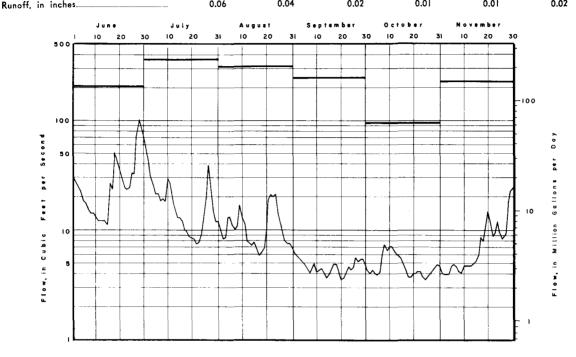
RECORDS AVAILABLE.—August 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to January 1947, wire-weight gage at same site.

AVERAGE FLOW.—16 years (1937-53), 470 cfs.
MINIMUM FLOW.—1954: 3.3 cfs Sept. 21. 1937-53: Minimum observed, 2.6 cfs Oct. 17, 18, 1938.

REMARKS .- Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. July October June August September November Average flow, in cfs\_\_\_ 18.6 31.1 10.8 4.68 4.76 8.24 0.01 10.0 0.02 0.02 0.06



(598) TIRED CREEK NEAR CAIRO, GA.

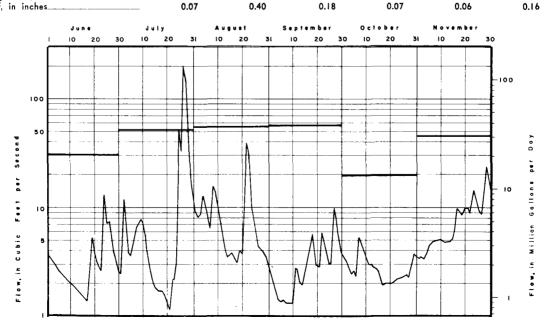
LOCATION.—Lat. 30° 54', long. 84° 16', on left bank 140 ft. upstream from highway bridge, I mile downstream from Atlentic Coast Line Railroad bridge and 3 miles west of Cairo, Grady County. DRAINAGE AREA.—55 sq. mi .
RECORDS AVAILABLE.—July 1943 to November 1954.

GAGE.—Water-stage recorder.

AVERAGE FLOW.—10 years (1943-53), 70.9 cfs.
MINIMUM FLOW.—1954: 1.0 cfs July 22. 1943-53: 1.2 cfs June 27, 1944.

REMARKS.—Records good except those for June 1-23, which are fair. Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

July 18.9 June August September October November Average flow, in cfs\_ Runoff, in inches\_\_\_\_ 3.30 8.58 3.21 2.81 8.05



(615) CHATTAHOOCHEE RIVER NEAR LEAF, GA.

LOCATION.—Lat. 34° 35', long. 83° 38', on left bank 700 ft. upstream from bridge on State Highway 115 and 11/2 miles east of Leaf, White County.

DRAINAGE AREA .- 150 sq. mi.

RECORDS AVAILABLE.—May to December 1907 (fragmentary), February 1940 to November 1954.

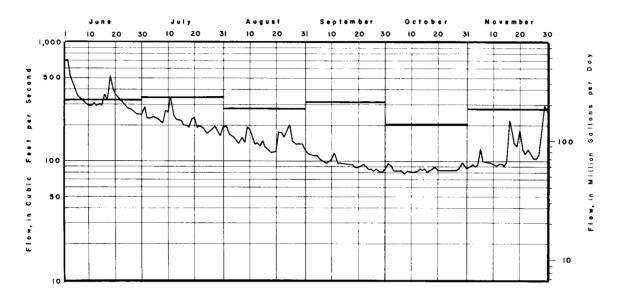
GAGE.—Water-stage recorder. May 8 to Dec. 31, 1907, staff gage at site 700 ft. downstream.

AVERAGE FLOW.—13 years (1940-53), 397 cfs.
MINIMUM FLOW.—1954: 71 cfs Oct. 7. 1940-53: Minimum daily, 72 cfs Oct. 26, 1941.

REMARKS.—Records good. Diurnal fluctuation at low flow caused by mill dams above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July October August September November Average flow, in cfs\_ 354 215 151 96.1 84.1 125 Runoff, in inches. 2.63 1.65 1.16 0.72 0.65 0.93



(630) CHESTATEE RIVER NEAR DAHLONEGA, GA.

LOCATION.—Lat. 34° 32', long. 83° 56', on left bank 250 ft. upstream from Bearden Bridge on State Highway 43 and 21/2 miles east of Dahlonega, Lumpkin County.

DRAINAGE AREA .-- 153 sq. mi.

RECORDS AVAILABLE.—July 1929 to December 1931, April 1940 to November 1954.

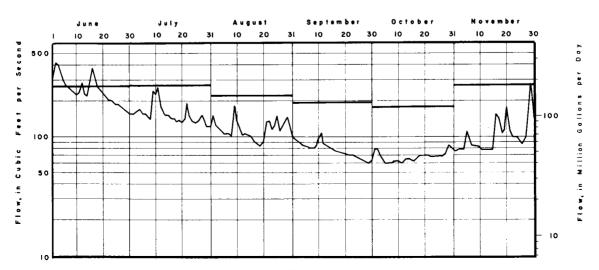
GAGE.—Water-stage recorder.

AVERAGE FLOW.—15 years (1929-31, 1940-53), 344 cfs.
MINIMUM FLOW.—1954: 59 cfs Sept. 30, Oct. 6, 7. 1929-31; 1940-53: Minimum daily, 49 cfs Oct. 4, 1931, Oct. 26, 1941.

REMARKS.—Records good. Moderate diurnal fluctuation at times caused by mill dam above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

•	June	July	August	September	October	November
Average flow, in cfs.	250	156	116	77.7	68.2	107
Runoff, in inches	1.82	1.18	0.87	0.57	0.51	0.78



(677) SWEETWATER CREEK NEAR AUSTELL, GA.

LOCATION.—Lat. 33° 46', long. 84° 37', on right bank 400 ft. upstream from Blair Bridge and 3 miles southeast of Austell, Cobb County.

DRAINAGE AREA.—246 sq. mi.

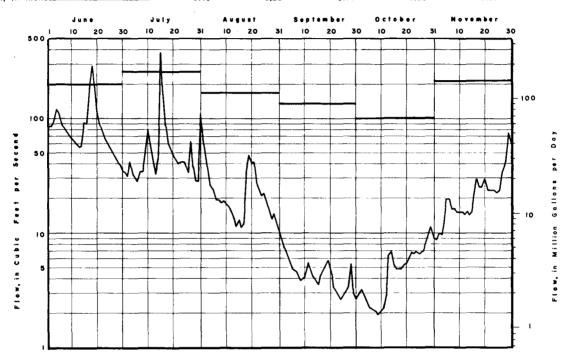
RECORDS AVAILABLE.—May 1904 to December 1905, November to December 1913, March 1937 to November 1954.

GAGE.—Water-stage recorder. May 6, 1904, to Dec. 31, 1905 and Nov. 3 to Dec. 27, 1913, staff gage at site 2½ miles upstream. Mar. 24 to Nov. 29, 1937, staff gage at present site. AVERAGE FLOW.—16 years (1937-53), 315 cfs.

MINIMUM FLOW.-1954: 2.0 cfs Oct. 9. 1904-5, 1913, 1937-53; 12 cfs Sept. Sept. 11, 1951.

REMARKS.—Records good. Considerable diurnal fluctuation at lowflow caused by evapotranspiration losses. Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July August September October November Average flow, in cfs.\_ 88.1 59.6 23.0 4.36 5.66 25.8 Runoff, in inches\_ 0.40 0.28 0.11 0.02 0.03 0.12



(689) SNAKE CREEK NEAR WHITESBURG, GA.

LOCATION.—Lat. 33° 32', long. 84° 56', at downstream side of county highway bridge at Banning Mills and 3 miles northwest of Whitesburg, Carroll County.

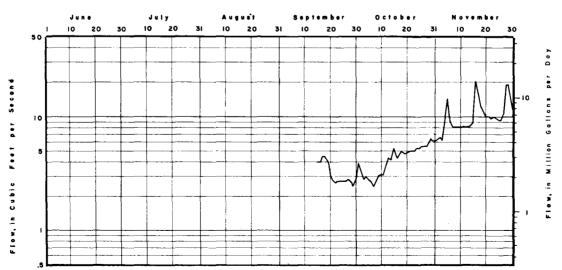
DRAINAGE AREA.—37 sq. mi.
RECORDS AVAILABLE.—September to November 1954.

GAGE.—Water-stage recorder.

MINIMUM FLOW.—1954: 2.3 cfs Sept. 28, 29, Oct. 7.

REMARKS.—Records fair.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. October November June July August September Average flow, in cfs\_ 4.34 10.5 Runoff, in inches\_ 0.13 0.32



(712) YELLOWJACKET CREEK NEAR LAGRANGE, GA.

LOCATION.-Lat. 33° 05' 25", long. 85° 03' 45", at downstream side of bridge on State Highway 219 and 41/2 miles northwest of LaGrange, Troup County.

DRAINAGE AREA,-182 sq. mi.

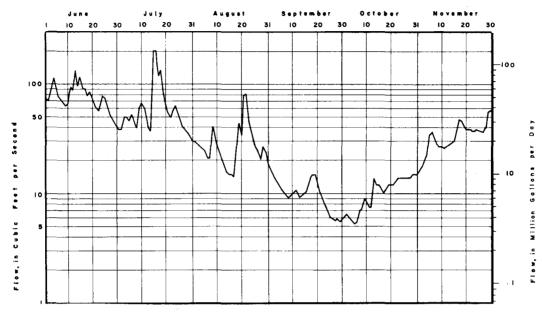
RECORDS AVAILABLE.—January 1951 to November 1954.

GAGE.—Water-stage recorder.
MINIMUM FLOW.—1954: 4.6 cfs Oct. 6. 1951-53: 8.7 cfs Sept 10, 1951.

REMARKS.—Records good. Moderate diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

July 63.2 June October August September November 76.9 Average flow, in cfs... 29.4 9.96 10.6 34.2 Runoff, in inches\_ 0.47 0.19 0.40 0.06 0.07 0.21



(817) FLINT RIVER NEAR GRIFFIN, GA.

LOCATION.—Lat. 33° 14', long. 84° 26', at downstream side of bridge on State Highway 16 and 10 miles west of Griffin, Spalding

DRAINAGE AREA.-272 sq. mi.

RECORDS AVAILABLE.-March 1937 to November 1954.

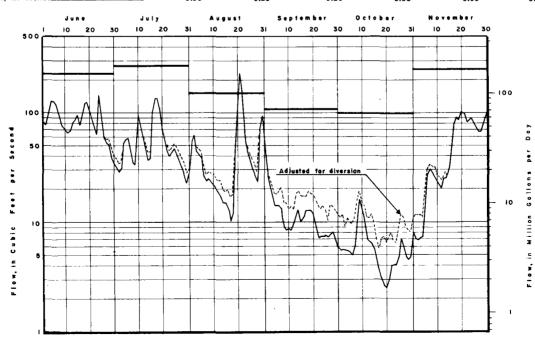
GAGE.-Water-stage recorder. Prior to May 6, 1941, wire-weight gage at same site.

AVERAGE FLOW.—16 years (1937-53), 334 cfs.
MINIMUM FLOW.—1954: 2.4 cfs. cfs Oct. 20. 1937-53: Minimum daily, 13 cfs. Sept. 9, 1951.

REMARKS.—Records fair. Considerable diurnal fluctuation at low flow caused by evapotranspiration losses. Diversion above station for municipal supply of Griffin.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

October June July August September November Average flow in cfs\_ Runoff, in inches\_\_\_\_ 85.8 46.5 54.5 50.3 11.2 10.6 0.35 0.21 0.23 0.20 0.05 0.03



(857) WHITEWATER CREEK NEAR BUTLER, GA.

LOCATION.—Lat. 32° 28', long. 84° 16', on left bank 500 ft. downstream from bridge on U. S. Highway 19 and 61/2 miles south of Butler, Taylor County.

DRAINAGE AREA .- 93.4 sq. mi.

RECORDS AVAILABLE.—October 1951 to November 1954.

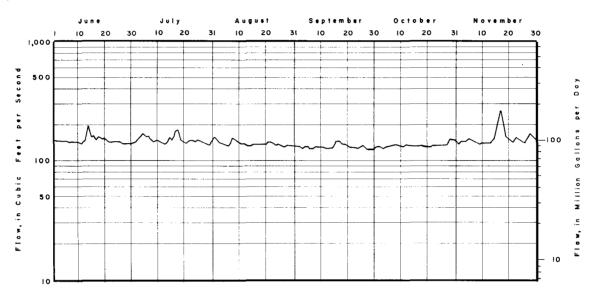
GAGE.-Water-stage recorder.

MINIMUM FLOW.-1954: 122 cfs Sept. 7, 1951-53: Minimum daily, 112 cfs Oct. 16, 1951, Oct. 20-23, 26, 1952.

REMARKS.—Records good. Variable backwater from Rambulette Creek which is regulated by Upton Mill.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

•	June ´	July	August	September	October	November
Average flow, in cfs	148	150	141	133	135	192
Runoff, in inches	1.76	1.86	1.74	1.58	1.67	2.30



(886) KINCHAFOONEE CREEK AT PRESTON, GA.

LOCATION.—Lat. 32° 03', long. 84° 33', at downstream side of bridge on State Highway 41 and 1 mile southwest of Preston, Webster County.

DRAINAGE AREA .- 197 sq. mi.

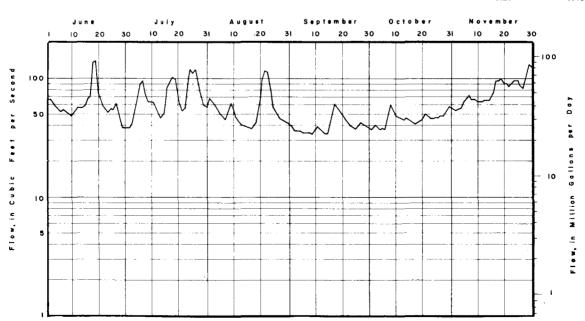
RECORDS AVAILABLE .- October 1951 to November 1954.

GAGE.—Water-stage recorder.

MINIMUM FLOW.—1954: 33 cfs Sept. 15. 1951-53: 38 cfs July 20, 21, 1952.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. June July August September October November Average flow, in cfs... 61.6 71.8 55.6 40.2 45.9 80.1 Runoff, in inches\_ 0.35 0.42 0.33 0.23 0.27 0.45



(917) ICHAWAYNOCHAWAY CREEK AT MILFORD, GA.

LOCATION.—Lat. 31° 22', long. 84° 32', on downstream side of highway bridge at Milford, Baker County.

DRAINAGE AREA .- 620 sq. mi.

RECORDS AVAILABLE.-August 1905 to December 1907, October 1939 to November 1954.

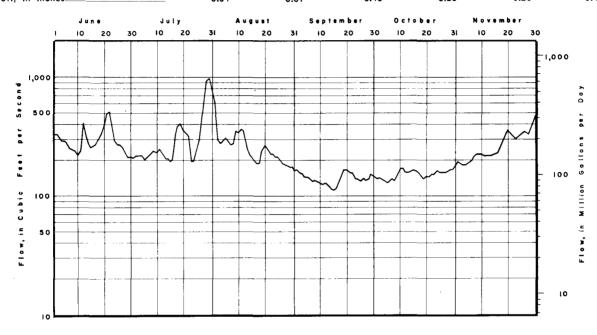
GAGE.—Water-stage recorder. August 1905 to April 1906 staff gage and April 1906 to January 1907, chain gage at same site. January 1907 to December 1907, staff gage at site 350 ft. downstream. October 1939 to Nov. 11, 1942, staff gage at present

AVERAGE FLOW.-14 years (1939-53), 837 cfs.

MINIMUM FLOW .-- 1954:111 cfs Sept. 16. 1905-7, 1939-53; 138 cfs Sept. 1, 1951.

REMARKS.—Records good. Moderate diurnal fluctuation at low flow.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. September October June July August November Average flow, in cfs\_ 300 33Ó 258 142 153 267 0.48 Runoff, in inches. 0.28 0.54 0.48 0.26 0.61



(940) SPRING CREEK NEAR IRON CITY, GA.

LOCATION.—Lat. 31° 03', long. 84° 43', on right bank just upstream from highway bridge and 51/2 miles northeast of Iron City, Seminole County.

DRAINAGE AREA.-520 sq. mi.

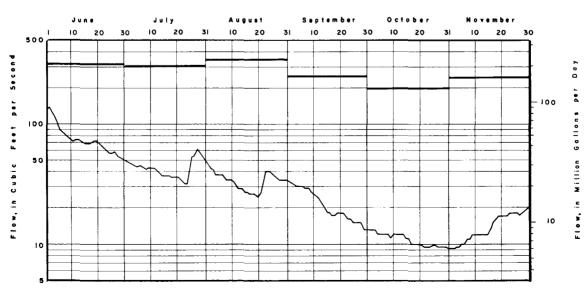
RECORDS AVAILABLE.—October 1920 to June 1921, June 1937 to November 1954.

GAGE.-Water-stage recorder. Prior to Oct. 18, 1952, staff gage at site 125 ft. upstream.

AVERAGE FLOW.—16 years (1937-53), 514 cfs.
MINIMUM FLOW.—1954: 9.1 cfs Oct. 30 to Nov. 2, 1920-21, 1937-53: Minimum daily, 14 cfs Oct. 15-17, 1951.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. October November June July August September Average flow, in cfs. 77.3 43.3 33.9 21.6 10.8 14.0 Runoff, in inches\_ 0.02 0.03 0.17 0.10 0.08 0.05



(943) CARTECAY RIVER NEAR ELLIJAY, GA.

LOCATION.—Lat. 34° 41', long. 84° 27', on right bank adjacent to State Highway 43 and 2 miles southeast of Ellijay, Gilmer County. DRAINAGE AREA.—135 sq. mi.

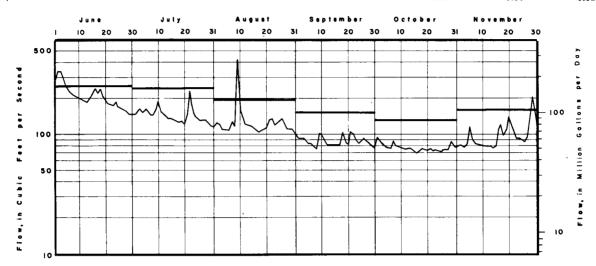
RECORDS AVAILABLE.-March 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Dec. 19, 1938, staff gage at same site.

AVERAGE FLOW.—16 years (1937-53), 269 cfs.
MINIMUM FLOW.—1954: 68 cfs Oct. 16. 1937-53: Minimum daily, 64 cfs Oct. 26, 1941.

REMARKS.—Records good. Some diurnal fluctuation caused by gristmills above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. July June August September October November Average flow, in cfs... 210 144 128 87.2 76.8 98.9 Runoff, in inches\_ 1.74 1.23 1.09 0.72 0.66 0.82



(960) ROCKY BRANCH NEAR FAIRMOUNT, GA.

LOCATION.—Lat. 34° 21' 30", long. 84° 46' 50", on right bank 30 ft. downstream from bridge on State Highway 140 and 7 miles southwest of Fairmount, Gordon County.

DRAINAGE AREA.-10.9 sq. mi.

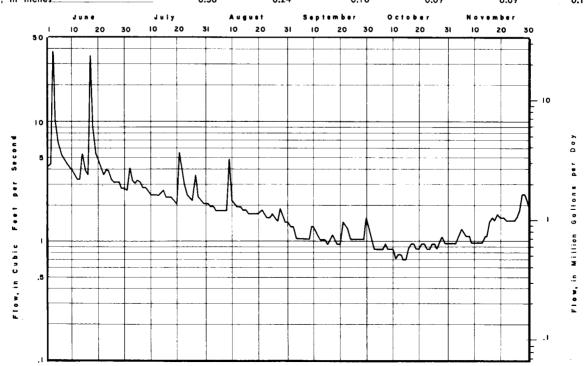
RECORDS AVAILABLE.—October 1951 to November 1954.

GAGE.—Water-stage recorder.

MINIMUM FLOW.—1954: 0.62 cfs Sept. 20, Oct. 13, 14. 1951-53: 0.7 cfs Aug. 29, 1953.

REMARKS.—Records good prior to Oct. 15 and fair thereafter. Moderate diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954. June July August September October November Average flow, in cfs\_ 5.49 2.27 0.928 1.55 0.894 1.39 Runoff, in inches 0.56 0.16 0.09 0.24 0.09 0.14



(973) MILL CREEK AT DALTON, GA.

LOCATION.—Lat. 34° 48', long. 84° 59', on left bank 1,000 ft upstream from city pumping plant at Dalton, Whitfield County. DRAINAGE AREA.—37 sq. mi.

RECORDS AVAILABLE.—August 1943 to November 1954.

GAGE .- Water-stage recorder.

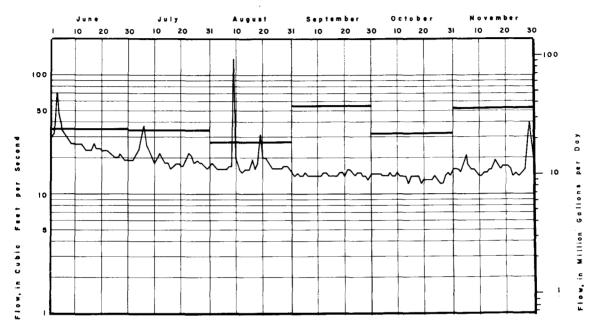
AVERAGE FLOW.—10 years (1943-53), 73.2 cfs.

MINIMUM FLOW.—1954: 9.5 cfs Oct. 17, 20. 1943-53: Minimum daily, 14 cfs on several days in September 1943.

REMARKS.—Records good except those for period July 2-12, which are fair. Considerable diurnal fluctuation at low and medium flow caused by mill dams above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	26.7	20.0	21.3	14.4	13.8	17.3
Runoff, in inches	0.81	0.62	0.66	0.43	0.43	0.52



(988) ETOWAH RIVER NEAR DAWSONVILLE, GA.

LOCATION.—Lat. 34° 23', long. 84° 04', on left bank half a mile upstream from State Highway 53 and 4 miles southeast of Dawson-ville, Dawson County.

DRAINAGE AREA.—103 sq. mi.

RECORDS AVAILABLE.—March 1940 to November 1954.

GAGE.—Water-stage recorder.

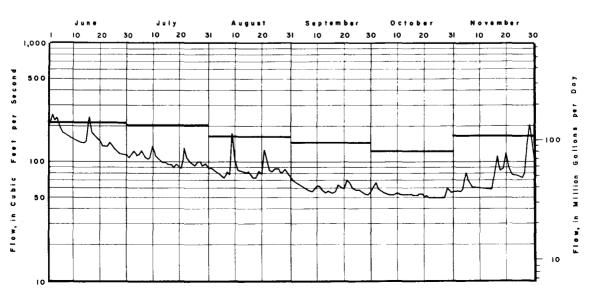
AVERAGE FLOW .-- 13 years (1940-53), 254 cfs.

MINIMUM FLOW.—1954: 50 cfs Oct. 24-28. 1940-53: Minimum daily, 55 cfs Oct. 26, 1941.

REMARKS.—Records good. Diurnal fluctuation at times during low flow caused by mills above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	161	104	86.3	59.2	53.5	79.2
Runoff, in inches	1.74	1.16	0.97	0.64	0.60	0.86



(1010) LITTLE RIVER NEAR ROSWELL, GA.

LOCATION.—Lat. 34° 07', long. 84° 23', on downstream side of old bridge pier, 500 ft. upstream from State Highway 140 and 7 miles north of Roswell, Fulton County.

DRAINAGE AREA .- 60.5 sq. mi.

RECORDS AVAILABLE .- March 1947 to November 1954.

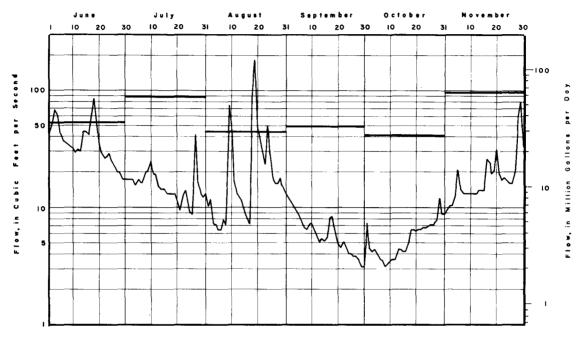
GAGE.—Water-stage recorder. Prior to July 25, 1949, wire-weight gage at same site.

AVERAGE FLOW.—6 years (1947-53), 87.8 cfs.
MINIMUM FLOW.—1954: 2.8 cfs Sept. 30. 1947-53: Minimum daily, 5.2 cfs Sept. 9, 1951.

REMARKS.—Records good. Considerable diurnal fluctuation at low flow caused by evapotranspiration losses.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	36.7	15.6	27.7	6.23	5.67	20.5
Runoff, in inches	0.68	0.30	0.53	0.11	0.11	0.38



(1045) CEDAR CREEK NEAR CEDARTOWN, GA. LOCATION.—Lat. 34° 04', long. 85° 19', on left bank 700 ft. downstream from bridge on State Highway 161 and 41/2 miles northwest of Cedartown, Polk County.

DRAINAGE AREA .-- 109 sq. mi.

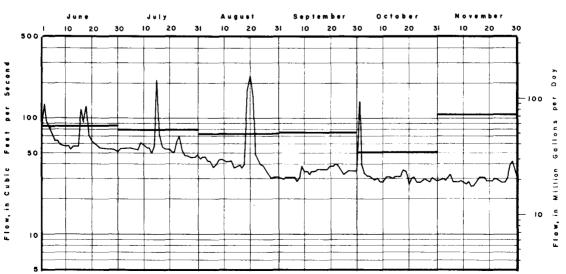
RECORDS AVAILABLE.—October 1942 to November 1954.

GAGE .-- Water-stage recorder.

AVERAGE FLOW.—I1 years (1942-53), 165 cfs.
MINIMUM FLOW.—1954: Minimum daily, 26 cfs on Oct. 20, Nov. 13, 14. 1942-53: Minimum daily, 29 cfs Oct. 22, 29, Nov. 26, 1944. REMARKS.—Records fair. Flow on Oct. 20 affected by temporary storage due to construction upstream. Diurnal fluctuation and moderate regulation at low flow caused by power plants above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	68.0	59.0	53.2	34.1	33.9	29.9
Runoff, in inches	0.70	0.62	0.56	0.35	0.36	0.31



(1056) CHATTOOGA RIVER AT SUMMERVILLE, GA.

LOCATION .- Lat. 34° 28', long. 85° 20', on left bank 600 ft. downstream from bridge on U. S. Highway 27 and I mile southeast of Summerville, Chattooga County.

DRAINAGE AREA.-193 sq. mi.

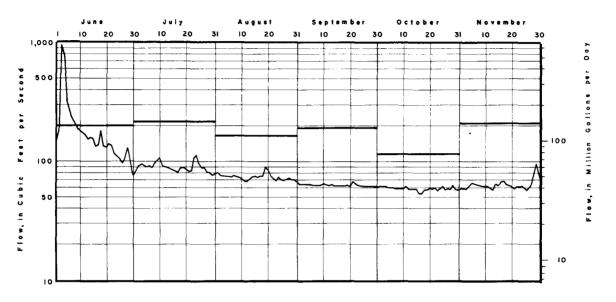
RECORDS AVAILABLE.-March 1937 to November 1954.

GAGE.—Water-stage recorder. Prior to Nov. 12, 1937, staff gage at same site.

AVERAGE FLOW.—16 years (1937-53), 356 cfs.
MINIMUM FLOW.—1954: 52 cfs on Oct. 16. 1937-53: Minimum daily, 38 cfs Oct. 17, 1937, Nov. 9, 12, 1939.

REMARKS.—Records good. Low and medium flow regulated by powerplant at Trion, 6 miles above station. Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July October August September November Average flow, in cfs\_ 203 89.7 59.2 64.5 73.6 63.2 Runoff, in inches\_ 0.35 0.37 1.17 0.54 0.44 0.36



# TENNESSEE RIVER BASIN

(1079) HIAWASSEE RIVER AT PRESLEY, GA.

LOCATION.—Lat. 34° 54' 17", long. 83° 43' 01", on left bank 0.5 mile southeast of Presley, Towns County.

DRAINAGE AREA.-45.5 sq. mi.

RECORDS AVAILABLE .- December 1941 to November 1954.

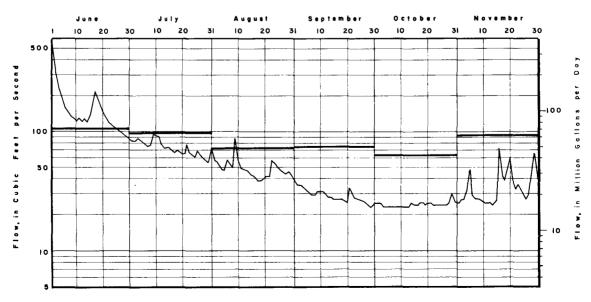
GAGE .- Water-stage recorder.

AVERAGE FLOW.—11 years (1942-53), 133 cfs.
MINIMUM FLOW.—1954: 21 cfs Oct. 4-7, 10-14. 1941-53: 26 cfs Oct. 18, 1951.

REMARKS.—Records excellent. Slight diurnal fluctuation caused by small mill above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July August September October November Average flow, in cfs\_ 157 73.Í 48.6 28.7 24.2 35.5 Runoff, in inches\_ 3.86 1.85 1.23 0.70 16.0 0.87



# TENNESSEE RIVER BASIN

(1080) NOTTELY RIVER NEAR BLAIRSVILLE, GA.

LOCATION.—Lat. 34° 50' 28", long. 83° 56, 10", on left bank at highway bridge and 2.7 miles southeast of Blairsville, Union County. DRAINAGE AREA .- 74.8 sq. mi.

RECORDS AVAILABLE.-January 1942 to November 1954.

GAGE.—Water-stage recorder.

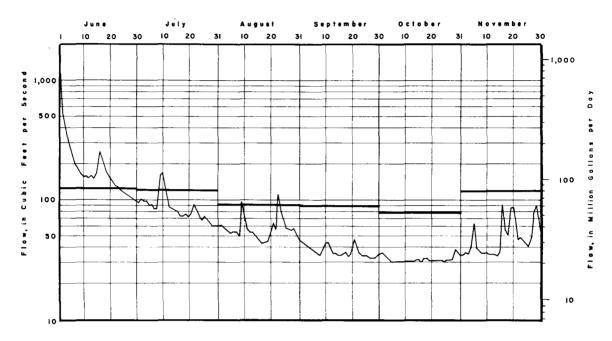
AVERAGE FLOW .-- 11 years (1942-53), 175 cfs.

MINIMUM FLOW.—1954:28 cfs Oct. 6. 1942-53: 27 cfs Sept. 8, Oct. 7, 1947.

REMARKS.—Records excellent. Slight diurnal fluctuation at low flow caused by mills above station. Occasional regulation by Lake Trahlyta in Vogel State Park.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	218	87.5	58.0	36.9	31.5	49.7
Runoff, in inches	3.25	1.35	0.89	0.55	0.49	0.74



(1082) TOCCOA RIVER NEAR DIAL, GA.

LOCATION.—Lat. 34° 47' 24", long. 84° 14' 24", on right bank 1.4 miles upstream from Shallow Ford Bridge and 2.5 miles northwest of Dial, Fannin County.

DRAINAGE AREA.—177 sq. mi.

RECORDS AVAILABLE.—January 1913 to November 1954.

GAGE.—Water-stage recorder. Prior to Oct. 1, 1927, water-stage recorder and Oct. 1, 1927, to Nov. 16, 1928, stagg gage at same site. AVERAGE FLOW.—40 years (1913-53), 488 cfs.
MINIMUM FLOW.—1954: 109 cfs Oct. 25, 26-28, 29. 1913-53: 60 cfs Sept. 6, 1925.

REMARKS.—Records excellent.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

Average flow, in cfs Runoff, in inches						June 426 2.69			July 267 1.74			August 209 1.36		September 140 0.88		r	October 119 0.77		November 155 0.97			
		Ju	n e			Jui	y		A u (	j u s t		S •	ptem	ber		0 c t	o b e r		Nov	e m b e r		
	1	10	20	3	0	10	20	31	10	20	31	1	0	20	30	10	20	31	10	20	30	
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# TENNESSEE RIVER BASIN

(1084) FIGHTINGTOWN CREEK AT McCAYSVILLE, GA.

LOCATION.—Lat. 34° 58' 53", long. 84° 23' 12", on right bank 0.2 mile upstream from county highway bridge and 0.9 mile west of McCaysville, Fannin County.

DRAINAGE AREA .- 70.9 sq. mi.

RECORDS AVAILABLE.—November 1942 to November 1954.

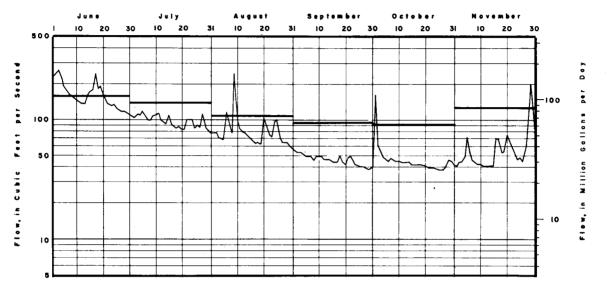
GAGE.-Water-stage recorder.

AVERAGE FLOW.—10 years (1943-53), 204 cfs.
MINIMUM FLOW.—1954: 37 cfs Sept. 29, 30. 1942-53: 37 cfs Nov. 19, 1953.

REMARKS.—Records good. Some diurnal fluctuation at low flow caused by small mills above station.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July October August September November Average flow, in cfs\_ 162 97.0 82.2 46.0 47.5 59.1 Runoff, in inches. 2.55 0.93 1.58 1.34 0.72 0.77



(1089) SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TENN.

LOCATION.—Lat. 35° 00' 50", long. 85° 12' 27", on right bank a third of a mile upstream from bridge on U. S. Highway II and 11/2 miles south of Chickamauga, Hamilton County, Tenn.

DRAINAGE AREA.—428 sq. mi.

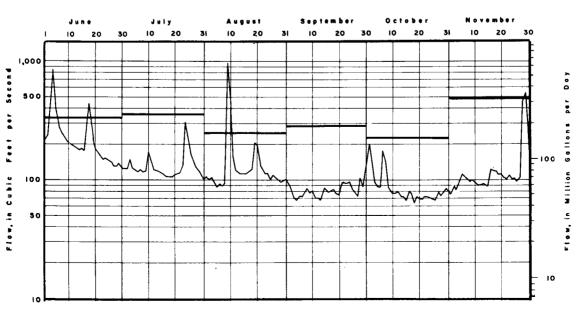
RECORDS AVAILABLE.—October 1928 to November 1954.

GAGE.—Water-stage recorder. Prior to Oct. 7, 1930, staff gage at same site.

AVERAGE FLOW.—25 years (1928-53), 708 cfs.
MINIMUM FLOW.—1954: 61 cfs Oct. 18, 19. 1928-53: 61 cfs Oct. 8, 1941.

REMARKS.—Records good. Some diurnal fluctuation at low flow caused by small mills above station. Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

June July August September October November Average flow, in cfs. 230 132 82.7 151 86.5 129 Runoff, in inches. 0.60 0.36 041 0.22 0.34 0.23



# TENNESSEE RIVER BASIN

(1092) CHATTANOOGA CREEK NEAR FLINTSTONE, GA.

LOCATION.—Lat. 34° 58' 20", long. 84° 19' 40", on right bank 0.8 mile south of Georgia-Tennessee State line and 2.3 miles northeast of Flintstone, Walker County.

DRAINAGE AREA .- 50.6 sq. mi.

RECORDS AVAILABLE.—December 1950 to November 1954.

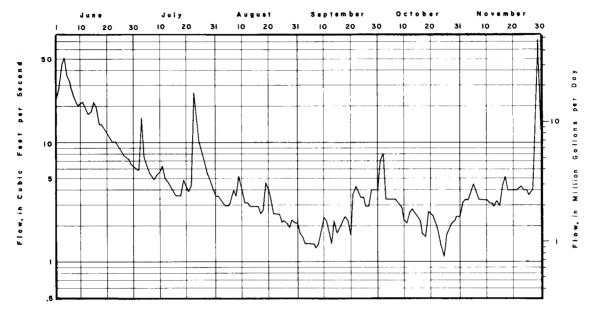
GAGE.-Water-stage recorder.

MINIMUM FLOW.—1954: 1.0 cfs Sept. 8, 9. 1950-53: Minimum daily, 2.9 cfs Oct. 19-22, 1953.

REMARKS.—Records good.

Monthly flows and daily hydrograph for period June 1 to November 30, 1954.

	June	July	August	September	October	November
Average flow, in cfs	18.7	6.57	2.98	2.39	2.80	6.78
Runoff, in inches	0.41	0.15	0.07	0.05	0.06	0.15



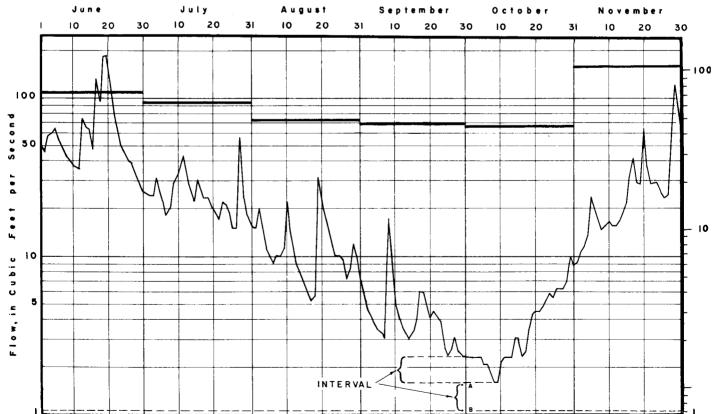


Fig. 17. Graphical computation of minimum flow.

# MEASUREMENTS AT PARTIAL-RECORD GAGING STATIONS AND METHODS OF USE

The U. S. Geological Survey made 1,136 low-water flow measurements, including observations of no flow, on small streams in Georgia during the 1954 drought at 987 sites where no continuous records of stage or flow are collected. At many of these sites one or more low-flow measurements are made each year during periods when the flow is not affected by surface runoff from showers. The sites are called partial-record gaging stations.

Table 3 shows the flows measured, the dates and time of day of the measurements, the map location number, the drainage areas, and a brief location of the site. Very low rates of flow reported in table 3 are rounded to the nearest 0.01 cfs. Rates of flow between 0.005 and 0 cfs are indicated by footnotes.

By means of these annual low-flow measurements and the records at nearby index gaging stations, reasonably reliable minimum flow characteristics may be computed for the partial-record sites by the flow-ratio method described below, which should be fairly reliable in most cases because the 1954 measurements were made at times when the flow was near the minimum.

# Computation of Minimum Flow at Partial-Record Stations

To compute the minimum daily flow at a partial-record station, select the nearest index gaging station whose drainage area lies within the same region (or approximately in the same proportion if more than one region is involved). The location map will assist in selecting the best index station, the hydrographs for which are shown on pages 20 to 48. Read from the hydrograph the flow at the index station on the same day that the measurement at the partial-record station was made, and the minimum daily flow at the index station. Obtain the ratio of those flows. Apply that ratio to the measured flow at the partial-record site to compute its minimum daily flow.

Similar results can be obtained graphically. For example, assume that the minimum flow at site 212, Stone Mountain Creek in DeKalb County, is desired. From the location map, select the index gaging station on Yellow River for comparison purposes. It is the nearest index station on a stream draining an area in the same region as Stone Mountain Creek. The data for that station are shown on page 58 and the hydrograph is reproduced on the opposite page in figure 17.

From table 3 the measured flow of Stone Mountain Creek at site 212 in DeKalb County was 1.55 cfs on September 29. Plot that on the hydrograph at "A". From the hydrograph, the flow at the index station is found to be 2.3 cfs on September 29, the date of the measurement, and the minimum daily flow for the year to be 1.6 cfs on October 8 and 9. Measure the interval between 2.3 and 1.6 cfs and transfer it to "A", finding 1.1 cfs at "B", which is the computed minimum daily flow. If the flow is desired in million gallons per day, read it on the auxiliary scale as 0.7 mgd. The scales given on the hydrographs are adequate to give results to two significant figures. Any further refinement would be false accuracy because there are inherent discrepancies in the relationships between the flows of streams at different sites.

# Minimum-Flow Discrepancies

The inherent discrepancies in the minimum flow of nearby

streams, caused by the factors that influence drought flows, may introduce errors in the above computations. For example, there may be different amounts of surface runoff from showers at either the index station or the partial-record station. Comparisons for days on which there were variable amounts of surface runoff would give erratic results. As a rule, the measurements at the partial-record sites were not made under those conditions. A measurement including local surface runoff may have been made because the engineer was not aware of local showers in the drainage basin.

Errors may also occur because of regulation from the operation of gristmills or irrigation pumps which may have caused variations of flow during the day at the partial-record site. The engineer who made the measurement would have no way of knowing that regulation was present without having a continuous water-stage recorder at the site.

Errors may result from the natural variation of flow of small streams caused by daily evapotranspiration fluctuations. (See Fig. 8 on page 10). This results in considerable fluctuation in the flow of most small streams. Generally (but not always) the flow is greater in the morning than it is in the late afternoon. Because of that fluctuation, the times that measurements were made are listed in table 3. The diurnal effect of evapotranspiration is more noticeable on small streams than on large ones. The percentage error from this natural daily fluctuation may be very great on streams that have flows on the order of a tenth of a cubic foot per second, or less. Streams with very small flows in the morning may have no flow in the late afternoon of a very hot day.

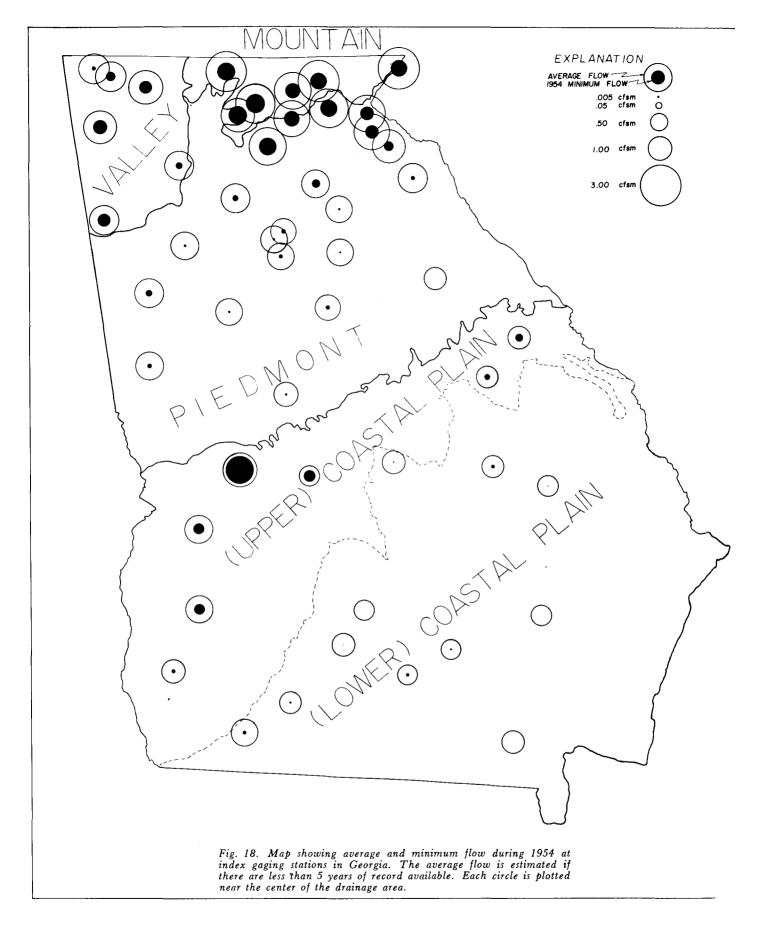
# Reliability Tests

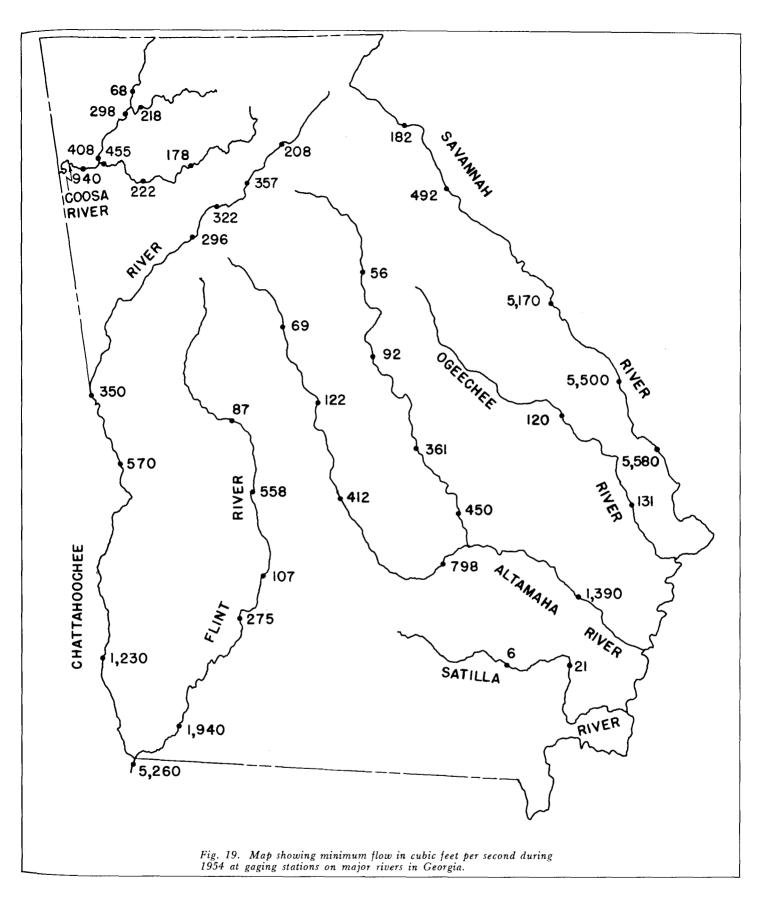
Studies of the magnitude of possible errors from the above causes were not within the scope of this part of the report. Therefore, the reader will need to make his own test of the reliability of a computation of flow that he may make. This may be done by comparing the computed flow with the minimum daily flow determined for one or more other sites in the vicinity.

To make that test, select, from table 3, nearby sites that are in the same region and that have about the same size drainage area. Compute the minimum daily flow for them in the manner that is described above. Divide each computed flow by the drainage area for its site, from table 3, to obtain the flow in cubic feet per second per square mile. If those amounts are similar, all of them are probably reliable. If, however, there are serious discrepancies among them, the computed results should be used with caution. The computations should be carefully checked. Inquiries should be made locally about the possible effects of springs, storage, diversions, or regulation. If no such influences are evident and all of the amounts seem to be equally reliable, select the lowest flow per square mile from the stations in the vicinity, multiply it by the drainage area at the site under consideration, and use that amount for the minimum daily flow.

## The Minimum Daily Flow of Unmeasured Streams

To estimate the minimum daily flow of a stream where no measurement is available, the reader will need to rely on the drainage area ratio method, which must be used with great caution because the possible errors are very great. To use this method, plot the location of the selected site on the location map. Next, delineate the drainage basin above the site on the best map available and measure its area in square miles. Compute the minimum daily flow for a number of





the partial-record stations in the vicinity by the flow-ratio method described above, selecting those that are similar in size of drainage area and in the same region. For each of these, compute the minimum daily flow per square mile of drainage area. If these amounts are similar, select the smallest and multiply it by the drainage area of the ungaged site to compute its minimum daily flow. The reader should be conservative when he estimates streamflows and use the smallest of possible amounts.

# Factors Affecting the Minimum Daily Flow Per Square Mile

The minimum daily flow per square mile within a region may vary naturally with two important factors. One of these is the location in the region and the other is the size of drainage area.

Variation with location is most easily discernible in the Piedmont Region. In general, the minimum daily flow per square mile is least along the Fall Line and tends to increase toward the Mountain Region. The map on figure 18 shows the variations of the minimum daily flows of the index stations over the State.

Variation with size of drainage area may be studied by plotting the minimum flow per square mile of drainage area of several partial-record stations against the drainage area. Both larger and smaller drainage areas than that of the stream in question should be examined. A study of the variation of minimum flow with size of drainage area may indicate a need to adjust the flow computed for a given site.

# The Minimum Flow of Regulated Streams

The minimum flow of a regulated stream may be influenced more by man-made variations than by natural climatic and physical factors. For example, the flow below a gristmill or a larger power dam may be shut off altogether for parts of a day even though the average flow for that day may be considerably above the natural daily flow. A flood-control reservoir that is operated so that no flow is released while floods are occurring in that region may, in turn, release large flows during a drought period.

Gaging station records on regulated streams in Georgia show an almost infinite number of irregular flow patterns during periods of low flow. Those records can sometimes be related to each other on the same river but they cannot be related satisfactorily to the flow of unregulated streams. For that reason, hydrographs for regulated streams have not been included in this report.

# **EVALUATION**

The streamflow data presented in this report constitute a presentation of the streamflow facts recorded by the U. S. Geological Survey during the drought of 1954 in Georgia.

Rainfall, temperature, and perhaps other data are perti-

nent to the interpretation and use of these data but they are supplemental to the streamflow data rather than a substitute for them. The streamflow data are factual. That is, the flows actually occurred when, and in the amounts, shown. These measured data are infinitely more reliable than any estimates derived from rainfall-runoff relationships or other indirect methods. Moreover, any application of these data to other unmeasured sites—when properly done—will be more reliable than estimates based on rainfall or general runoff values.

There are, however, certain limitations in the interpretation of the streamflow data that dictate a need for caution and the use of judgment on the part of the reader. Not that he should question the data, which are measured facts, but rather that he must judge the applicability of the data to a particular problem. There may be irregularities in the flow of a stream—either one which has been measured or one for which the reader desires to compute a minimum flow. If the reader suspects that such irregularities are present, he should not make arbitrary adjustments or discard the measured data altogether. Rather, he should identify the magnitude of the irregularities and make appropriate adjustments to the basic data in his computations. Only by so doing can he preserve the basis of factual reliability provided by the streamflow data.

Qualified consulting engineers supplement the streamflow information supplied by the Geological Survey with local examination of the sites involved. Only after satisfying themselves of the magnitude of possible irregularities do qualified engineers apply these data to the specific sites where they are to be used. These data, factual as they are, are nevertheless used with the considered judgment of the skilled hydrologist or consulting engineer.

The reader is advised to use this information discreetly and to obtain the services of competent consulting engineers on problems of economic importance.

The drought data in this report have permanent value for use during future droughts. By having these 1954 hydrographs at numerous index gaging stations in Georgia, the future operators of water works, sewage disposal plants, factories, irrigation systems, and the like, can be prepared to combat future droughts in a way that could not be done in 1954. The hydrographs provide factual precedents by which future drought emergencies may be gaged and preventive measures taken, early enough, to reduce and perhaps eliminate damage due to low streamflow.

Streamflow information computed for partial record gaging stations or estimated for ungaged sites lacks the completeness, accuracy, and reliability of information recorded at the continuous record gaging stations. Such information does, however, greatly extend the usefulness of the continuous station records. It also provides a means of evaluating the adequacy of the existing gaging station network and is a basis for modifying that network to secure the best statewide investigation of surface water resources.

#### OGEECHEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
128	Oct. 5	11 A.M.	31.7	0.12	Rocky Creek	Buckhead Creek	Burke County, lat 33°04', long. 82°06' at State Highway 24, 5 miles southwest of Waynes- boro.
129	Oct. 5		34.8	0	Rocky Creek	Buckhead Creek	Burke County, lat 33°02', long. 82°06' at State Highway 56, 6 miles southwest of Waynesboro.
130	Oct. 5		63.7	0	Buckhead Creek	Ogeechee River	Burke County, lat 32°58′, long. 82°07′ at State Highway 56, 10¼ miles southwest of Waynes- boro.
131	July 12	2 P.M.		11.4	Magnolia Springs	Buckhead Creek	Jenkins County, lat 32°52′, long. 82°02′, about 0.2 mile downstream from State Highway 25 and 5 miles north of Millen.
132	Sept. 10	11 A.M.		.02	Little Buck- head Creek	Buckhead Creek	Jenkins County, lat 32°49', long. 82°03' at State Highway 21, 1½ miles north of Millen.
133	Oct. 26			0	Richardson Creek	Ogeechee River	Jenkins County, lat 32°43′, long. 82°02′ at State Highway 23, 1¼ miles northeast of Thrift.
134	Sept. 9	6 P.M.		0	Richardson Creek	Ogeechee River	Jenkins County, lat 32°43', long. 81°58' at State Highway 67, 6 miles south of Millen.
136	July 28 Sept. 9	5 P.M.		0.02	Horse Creek	Ogeechee River	Screven County, lat 32°41′, long. 81°50′ at State Highway 167, 1½ miles northwest of Rocky Ford.
137	July 28	1 P.M.		235	Ogeechee River		Bulloch-Screven Counties, lat 32°34′, long. 81°43′, at State Highway 73, 9 miles northeast of Statesboro.
138	July 28 Sept. 9			0	Ogeechee Creek	Ogeechee River	Screven County, lat 32°47′, long. 81°43′ at county road, 5 miles northwest of Sylvania.
139	July 28			0	Ogeechee Creek	Ogeechee River	Screven County, lat 32°31′, long. 81°33′ at State Highway 167, 0.6 mile west of Oliver.
140	Sept. 9	3 P.M.		0	Mill Creek	Ogeechee River	Bulloch County, lat 32°28', long. 81°45' at State Highway 73, 2¼ miles northeast of Statesboro.
142	Oct. 26			0	Tributary to Upper Black Creek	Upper Black Creek	Bulloch County, lat 32°21', long. 81°39' at State Highway 26, 2½ miles southeast of Brooklet.
143	Oct. 26			0	Tributary to Iric Creek	Iric Creek	Bulloch County, lat 32°16′, long. 83°34′ at State Highway 26, 3¾ miles south of Stilson.
144	Oct. 26			0	Caney Branch	Black Creek	Bulloch County, lat 32°14′, long. 81°31′ at State Highway 26, 6½ miles south of Stilson.
145	Aug. 19 Sept. 9	9 A.M.		0	Black Creek	Ogeechee River	Bryan County, lat 32°10′, long. 81°29′ at State Highway 30, 4¾ miles southwest of Eldorado.
146	Oct. 26			0	Mill Creek	Black Creek	Bryan County, lat 32°09′, long. 81°30′ at State Highway 30, 6 miles southwest of Eldorado.
147	Aug. 23 Oct. 27	1 P.M.		0	Canoochee River	Ogeechee River	Emanuel County, lat 32°36′, long. 82°15′ at State Highway 26, 4½ miles east of Swainsboro.
148	Aug. 23			0	Little Canoo- chee River	Canoochee River	Emanuel County, lat 32°36′, long. 82°14′ at State Highway 26, 6 miles east of Swainsboro.

#### OGEECHEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
149	Oct. 26			0	Reedy Creek	Little Canoo- chee River	Emanuel County, lat 32°35′, long. 82°12′ at State Highway 26,7½ miles east of Swainsboro.
151	Sept. 9	3 P.M.		0	Lotts Creek	Canoochee River	Bulloch County, lat 32°22', long, 81°51' at State Highway 73, 7 miles southwest of Statesboro.
152	Sept. 9	11 A.M.		6.10	Canoochee River	Ogeechee River	Evans-Bryan Counties, lat 32°09′, long. 81°47′ at State Highway 30, 2 miles west of Groveland.
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153	Sept. 29		8.8	. 06	Sugar Creek	South River	DeKalb County, lat 33°42', long. 84°18' at Clifton Church Road, 2½ miles east of Con- stitution.
154	Sept. 29	1 P.M.	7.45	1.43	Shoal Creek	South River	DeKalb County, lat 33°42′, long. 84°16′ at Rainbow Drive, 5 miles southeast of Decatur.
155	Sept. 28	2 P.M.	6.9	. 61	Snapfinger Creek	South River	DeKalb County, lat 33°47', long. 84°13' at Rockbridge Road, east of Decatur.
156	Sept. 28	2 P.M.	4.60	. 45	Indian Creek	Snapfinger Creek	DeKalb County, lat 33°46′, long. 84°13′ at Indian Creek Road, east of Decatur.
157	Sept. 28	3 P.M.	28	2.83	Snapfinger Creek	South River	DeKalb County, lat 33°44′, long. 84°11′ at State Highway 12, east of Decatur.
158	Sept. 29	11 A.M.	3.4	. 42	Pole Bridge Creek	South River	DeKalb County, lat 33°43′, long. 84°08′ at State Highway 12, west of Lithonia.
159	Sept. 21	1 P.M.	3.3	. 52	Jackson Creek	South River	Rockdale County, lat 33°36′, long. 84°06′ at county road, 6½ miles southeast of Conyers and 0.6 miles upstream from mouth.
160	Sept. 21	2 P.M.	5.0	. 26	Upton Creek	Cotton Creek	Clayton County, lat 33°36′, long. 84°17′ at county road, 4½ miles southeast of Forest Park.
161	Sept. 27	5 P.M.	7.9	.38	Panther Creek	Upton Creek	Henry County, lat 33°34′, long. 84°16′ at State Highway 42, 2½ miles northwest of Stock- bridge.
162	Sept. 27	9 A.M.	46	1.60	Cotton Creek	Big Cotton River	Henry County, lat 33°33', long. 84°11' at State Highway 138, 3¼ miles east of Stockbridge.
163	Sept. 21	3 P.M.	.75	. 14	Rum Creek	Line Creek	Clayton County, lat 33°32′, long. 84°21′ a State Highway 138, east of Jonesboro.
164	Sept. 28	11 A.M.	18	1.52	Line Creek	Cotton Indian Creek	Henry County, lat 33°31′, long. 84°14′ at county road, 1½ miles south of Stockbridge.
165	Sept. 28	10 A.M.	11	. 64	Reeves Creek	Cotton Indian Creek	Henry County, lat 33°32′, long. 84°13′ at county road, 1½ miles southeast of Stockbridge.
166	Sept. 28	2 P.M.	17	1.03	Pates Creek	Cotton Indian Creek	Henry County, lat 33°30', long. 84°13' at county road, 3 miles southeast of Stockbridge
167	Sept. 28	1 P.M.	50	3.26	Cotton Indian Creek	Big Cotton River	Henry County, lat 33°32′, long. 84°12′ at State Highway 42,2½ miles southeast of Stockbridge.

# SAVANNAH RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
52	Oct. 6		45.7	0	South Fork Little River	Little River	Taliaferro County, lat 33°37', long. 82°55' at State Highway 22, 4¾ miles north of Crawfordville.
53	Oct. 7		47.2	0	Kettle Creek	Little River	Wilkes County, lat 33°41', long. 82°50' at State Highway 44, 6¾ miles southwest of Washington.
54	Oct. 6		4.49	. 04	Harden Creek	Little River	Taliaferro County, lat 33°33′, long. 82°50′ at State Highway 47, 3½ miles east of Crawford-ville.
55	Oct. 5		24.2	0	Harden Creek	Little River	Taliaferro County, lat 33°37', long. 82°46' at State Highway 47, 8/10 mile southwest of Ficklin.
57	Oct. 7		30.14	0	Rocky Creek	Little River	Wilkes County, lat 33°39′, long. 82°38′ at county road, 1½ miles southwest of Aonia.
58	Oct. 12	4 P.M.	17.52	0	Hart Creek	Big Creek	McDuffie County, lat 33°34′, long. 82°36′ at State Highway 80, 1¾ miles northwest of Wrightsboro.
59	Oct. 12	5 P.M.	10.5	0	Mattox Creek	Big Creek	McDuffie County, lat 33°30′, long. 82°32′ at State Highway 223, 2¾ miles northwest of Thomson.
60	Oct. 7		14.1	0	Lloyd Creek	Little River	Lincoln County, lat 33°42′, long. 82°29′ at State Highway 43, 6½ miles south of Lincolnton.
61	Oct. 4	4 P.M.	43.9	. 81	Kiokee Creek	Savannah River	Columbia County, lat 33°32′, long. 82°19′ at State Highway 47, 0.2 miles south of Appling.
62	Oct. 4		33.3	0	Greenbrier Creek	Kiokee Creek	Columbia County, lat 33°34′, long. 82°19′ at State Highway 47, 2½ miles north of Appling.
63	Oct. 4		106	. 01	Kiokee Creek	Savannah River	Columbia County, lat 33°36′, long. 82°14′ at State Highway 104, 7½ miles northwest of Evans.
64	Oct. 4	3 P.M.	13.6	. 48	Little Kiokee Creek	Savannah River	Columbia County, lat 33°32′, long. 82°15′ at State Highway 232, 4 miles southeast of Ap- pling.
65	Oct. 4		26.6	0	Little Kiokee Creek	Savannah River	Columbia County, lat 33°35', long. 82°13' at State Highway 104, 6 miles northwest of Evans.
66	Oct. 4		24.2	0	Uchee Creek	Savannah River	Columbia County, lat 33°28′, long. 82°14′ at Wrightsboro Road, 2½ miles northwest of Grovetown.
67	Oct. 4		58.3	0	Uchee Creek	Savannah River	Columbia County, lat 33°34′, long. 82°11′ at State Highway 104, 4 miles northwest of Evans.
68	Oct. 4	6 P.M.	5.81	. 24	Reed Creek	Savannah River	Columbia County, lat 33°31′, long. 82°07′ at StateHighway104,1¼ miles southeast of Evans
69	Oct. 5	8 A.M.	16.1	. 06	Raes Creek	Savannah River	Richmond County, lat 33°30′, long. 82°02′, l mile above State Highway 28 bridge, at Au- gusta.
	5	9 A.M.	10.5	2.14	Rocky Creek	Cason Dead River	Richmond County, lat 33°26', long. 82°02' at State Highway 4 at Augusta.

#### SAVANNAH RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
72	Oct. 5	10 A.M.	13.5	. 58	Butler Creek	Cason Dead River	Richmond County, lat 33°25′, long. 82°06′ at county road above Lombards Mill Pond, 8 miles southwest of Augusta.
73	Oct. 6	9 A.M.	29.4	9.27	Butler Creek	Cason Dead River	Richmond County, lat 33°23', long. 82°02' a State Highway 21, 6 miles south of Augusta.
74	Oct. 5	12 M.	18.0	12.7	Spirit Creek	Savannah River	Richmond County, lat 33°22', long. 82°08' a State Highway 4, 11 miles southwest of Augusta.
75	Oct. 5	3 P.M.	50.3	33.7	Spirit Creek	Savannah River	Richmond County, lat 33°21', long. 82°05' a Windsor Spring Road, 2¾ miles northeast o Hephzibah.
76	Oct. 5	5 P.M.	71.1	30.8	Spirit Creek	Savannah River	Richmond County, lat 33°19', long. 81°57' a State Highway 56, 5¼ miles north of McBean
77	Oct. 5	6 P.M.	28.3	5.50	Spirit Creek	Little Spirit Creek	Richmond County, lat 33°19', long. 81°57' a' State Highway 56, 5 miles north of McBean.
78	Oct. 6	8 A.M.	41.4	19.7	McBean Creek	Savannah River	Richmond-Burke Counties, lat 33°14', long 82°03' at State Highway 21, 5½ miles wes of McBean.
79	July 20 Oct. 4	9 A.M. 3 P.M.	70.0	40.9 41.1	McBean Creek	Savannah River	Richmond-Burke Counties, lat 33°14', long 81°57' at State Highway 56 at McBean.
80	July 20		23.3	13.1	Beaverdam Creek	Savannah River	Burke County, lat 33°08', long. 81°44' at county road, 6 miles north of Girard.
82	Oct. 14	10 A.M.	9.4	0	Brier Creek	Savannah River	Warren County, lat 33°25', long. 82°36' a State Highway 12, 4 miles east of Warrenton
83	Oct. 14	4 P.M.	55	. 01	Brier Creek	Savannah River	McDuffie County, lat 33°22′, long. 82°28′ a State Highway 17, 4¾ miles southwest of Bonesville.
84	Oct. 14	1 P.M.	7.46	. 15	Sweetwater Creek	Brier Creek	McDuffie County, lat 33°26′, long. 82°27′ a Highway 10, 0.8 mile northwest of Bonesville
85	Oct. 14	4 P.M.	24	1.06	Little Brier Creek	Brier Creek	McDuffie-Warren Counties, lat 33°20', long 82°28' at State Highway 17, 6½ miles south west of Dearing.
86	July 21 Oct. 5	4 P.M.	171	16.6 20.8	Brier Creek	Savannah River	Richmond-Jefferson Counties, lat 33°17', long 82°18' at State Highway 4, 5½ miles east of Blythe.
87	Oct. 6	10 A.M.	33.2	11.1	Sandy Run	Brier Creek	Richmond County, lat 33°18', long. 82°15' a State Highway 4, 3 miles east of Blythe.
88	Oct. 6		1.38	0	Brushy Creek	Brier Creek	Jefferson County, lat 33°14′, long. 82°27′ a State Highway 16, 2 miles northeast of Staple ton.
89	July 13 July 21 Oct. 6	10 A.M. 10 A.M.	9.40	0 3.10 1.56	Brushy Creek	Brier Creek	Jefferson County, lat 33°12', long. 82°24' a State Highway 4, 0.8 mile southwest of Wrens
90	July 21 Oct. 5	9 A.M. 3 P.M.	40.7	15.2 10.5	Brushy Creek	Brier Creek	Jefferson County, lat 33°11′, long. 82°16′ a Middle Ground Road, 3½ miles southeast o Matthews.

## SAVANNAH RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
91	July 20 Oct. 4	4 P.M. 6 P.M.	473	310 107	Brier Creek	Savannah River	Burke County, lat 33°07′, long. 81°58′ at State Highway 56, 3¾ miles northeast of Waynes- boro.
92	July 20 Oct. 5	4 P.M. 9 A.M.	6.80	. 88	McIntosh Creek	Brier Creek	Burke County, lat 33°05′, long. 82°01′ at State Highway 21, 0.7 mile southwest of Waynes- boro.
94	July 30	1 P.M.		182	Brier Creek	Savannah River	Screven County, lat 32°52′, long. 81°37′ at State Highway 73, 3 miles southeast of Hill- tonia.
95	July 29	3 P.M.		1.29	Beaverdam Creek	Brier Creek	Screven County, lat 32°52′, long. 81°40′ at county road, 1¼ miles southwest of Hilltonia
96	July 20	11 A.M.		13.1	Beaverdam Creek	Brier Creek	Screven County, lat 32°49', long. 81°38' at State Highway 24, 5 miles north of Sylvania
97	July 29	10 A.M.		26.7	Beaverdam Creek	Brier Creek	Screven County, lat 32 50', long. 81°36' below outflow from Blue Springs.
99	July 27	5 P.M.		0	Black Creek	Savannah River	Chatham County, lat 32°13', long. 81°12' at State Highway 21, 11½ miles north of Savan- nah.
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100	Oct. 6		27.9	0	North Fork Ogeechee River	Ogeechee River	Taliaferro County, lat 33°31', long. 82°54' at State Highway 22, 2½ miles south of Crawfordville.
101	Oct. 6	3 P.M.	33.0	. 36	South Fork Ogeechee River	Ogeechee River	Taliaferro County, lat 33°31', long. 82°55' at State Highway 22, 2¾ miles south of Crawfordville.
102	Oct. 4	5 P.M.	13.0	0	Long Creek	Ogeechee River	Warren County, lat 33°22', long. 82°45' at county road, 6 miles southwest of Warrenton.
103	Oct. 14			0	Fowler Branch	Long Creek	Warren County, lat 33°19′, long. 82°44′ at State Highway 16, 7½ miles south of Warrenton.
104	Oct. 4	6 P.M.	34.0	0	Long Creek	Ogeechee River	Warren County, lat 33°19', long. 82°46' at county road, 3¾ miles north of Shoals.
105	Oct. 14	11 A.M.	240	. 50	Ogeechee River	Atlantic Ocean	Hancock-Warren Counties, lat 33°18′, long 82°47′ at State Highway 16, 3½ miles northwest of Shoals.
106	Oct. 13	12 M.	495	19.2	Ogeechee River	Atlantic Ocean	Jefferson County, lat 32°59′, long. 82°26′ at State Highway 24, 1¾ miles southwest of Louisville.
107	Oct. 4		15.0	0	Rocky Comfort Creek	Ogeechee River	Warren County, lat 33°25', long. 82°43' at State Highway 24, 31/4 miles west of Warrenton.
108	Oct. 4		27.0	0	Rocky Comfort Creek	Ogeechee River	Warren County, lat 33°23', long. 82°41' at State Highway 16, 2½ miles southwest of Warrenton.
109	Oct. 4		7.1	0	Goldens Creek	Rocky Comfort Creek	Warren County, lat 33°24', long. 82°40' at State Highway 12, at Warrenton.

## OGEECHEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
110	Oct. 13		94.0	0.30	Rocky Comfort Creek	Ogeechee River	Glascock County, lat 33°15′, long. 82°36′ at State Highway 80, 1 mile north of Gibson.
111	Oct. 6	1 P.M.	3.17	1.86	Duhart Creek	Rocky Comfort Creek	Jefferson County, lat 33°13', long. 82°29' at State Highway 80, 1 mile west of Stapleton.
112	Oct. 13	11 P.M.	286	46.7	Rocky Comfort Creek	Ogeechee River	Jefferson County, lat 33°00', long. 82°25' at State Highway 24, 0.7 mile southwest of Louisville.
113	Oct. 13	9 A.M.	801	59.3	Ogeechee River	Atlantic Ocean	Jefferson County, lat 32°58′, long. 82°23′ at State Highway 4, 2½ miles southeast of Louisville.
114	Oct. 6	11 A.M.	8.07	2.40	Big Creek	Ogeechee River	Jefferson County, lat 33°11′, long. 82°25′ at Penns Bridge Road, 3 miles southwest of Wrens.
115	Oct. 6	9 A.M.	56.9	4.74	Big Creek	Ogeechee River	Jefferson County, lat 33°03′, long. 82°22′ at Middle Ground Road, 4½ miles northeast of Louisville.
116	Oct. 6	8 A.M.	2.31	.08	Tributary to Big Creek	Big Creek	Jefferson County, lat 33°02′, long. 82°22′ at Middle Ground Road, 4 miles northeast of Louisville.
117	Oct. 13	2 P.M.	95.8	23.6	Big Creek	Ogeechee River	Jefferson County, lat 32°54′, long. 82°21′ at State Highway 17, 3½ miles southeast of Louisville.
118	Oct. 15	12 M.	5.4	. 08	Salter Branch	Williamson Swamp Creek	Jefferson County, lat 32°53′, long. 82°30′ at county road, 1 mile southeast of Bartow.
119	Oct. 15	2 P.M.	185	17.1	Williamson Swamp Creek	Ogeechee River	Jefferson County, lat 32°52′, long. 82°28′ at State Highway 78, 0.4 mile southwest of Bar- tow.
120	Oct. 15	3 P.M.	5.7	0	Nails Creek	Williamson Swamp Creek	Jefferson County, lat 32°51′, long. 82°29′ at State Highway 78, 1¾ miles south of Bartow
121	Oct. 15	11 A.M.	9.0	0	Gray Coat Creek	Williamson Swamp Creek	Jefferson County, lat 32°52′, long. 82°27′ at State Highway 78, 1¾ miles east of Bartow.
122	Oct. 15	10 A.M.	232	21.7	Williamson Swamp Creek	Ogeechee River	Jefferson County, lat 32°51′, long. 82°24′ at State Highway 4, 1¼ miles south of Wadley.
123	Oct. 15		8.6	0	Boggy Gut Creek	Williamson Swamp Creek	Jefferson County, lat $32^{\circ}53'$ , long. $82^{\circ}24'$ at county road, $1\frac{1}{2}$ miles northeast of Wadley.
124	Oct. 15	11 A.M.		0	Rocky Creek	Ogeechee River	Emanuel-Jefferson Counties, lat 32°49′, long. 82°24′ at State Highway 4, 4 miles south of Wadley.
125	Sept. 10	4 P.M.	32.0	0	Barkcamp Creek	Ogeechee River	Burke County, lat 32°50′, long. 82°10′ at State Highway 17, 4½ miles east of Midville.
126	Sept. 10 Nov. 1	5 P.M. 2 P.M.			Chew Mill Creek	Ogeechee River	Jenkins County, lat 34°49', long. 82°05' at State Highway 17, 2¼ miles northeast of Herndon.
127	Sept. 10 Nov. 1			0	Tributary to Ogeechee River		Jenkins County, lat 34°48', long. 82°01' at State Highway 17, 4½ miles west of Millen.

## SAVANNAH RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
4	Oct. 15	3 P.M.	13.9	2.67	Lightwood Log Creek	Tugaloo River	Hart County, lat 34°22′, long. 82°57′ at State Highway 77, 1½ miles west of Hartwell.
5	Oct. 15	4 P.M.	7.19	1.93	Flat Shoals Creek	Lightwood Log Creek	Hart County, lat 34°23′, long. 82°57′ at county road 1¾ miles northwest of Hartwell.
7	Oct. 15	1 P.M.	12.6	2.15	Coldwater Creek	Savannah River	Hart County, lat 34°15′, long. 82°56′ at county road 5¾ miles northeast of Bowman.
8	Oct. 15	2 P.M.	.32	. 73	Boyds Creek	Little Cold- water Creek	Hart County, lat 34°18′, long. 82°57′ at State Highway 172, 4 miles south of Hartwell.
9	Oct. 19	10 A.M.	67.5	9.13	Coldwater Creek	Savannah River	Elbert County, lat 34°13′, long. 82°48′ at State Highway 82, 8 miles northwest of Elberton.
10	Oct. 15	11 A.M.	10.0	. 58	Morea Creek	South Beaver- dam Creek	Hart County, lat 34°17′, long. 83°04′ at State Highway 8, 3 miles east of Royston.
13	Oct. 12	12 M.		. 41	Tributary to North Fork Broad River	North Fork Broad River	Stephens County, lat 34°33′, long. 83°22′ at SCS Dam Site #2, 2¾ miles southwest of Toccoa.
14	Oct. 12	1 P.M.	7.71	3.37	North Fork Broad River	Broad River	Stephens County, lat 34°31′, long. 83°22′ at State Highway 13, 3 miles southwest of Toccoa.
15	Oct. 12	3 P.M.		. 84	Carnes Creek	North Fork Broad River	Stephens County, lat 34°33′, long. 83°20′ at SCS Dam Site #3, 2 miles southeast of Toccoa.
17	Oct. 12	4 P.M.		1.19	Tributary to North Fork Broad River	North Fork Broad River	Stephens County, lat 34°32′, long. 83°18′ at SCS Dam Site #4, 4 miles southeast of Toccoa.
18	Oct. 12	5 P.M.	24.7	9.00	North Fork Broad River	Broad River	Stephens County, lat 34°30′, long. 83°18′ at county road, 5½ miles south of Toccoa.
19	Oct. 12	6 P.M.		1.44	Bear Creek	North Fork Broad River	Stephens County, lat 34°28′, long. 83°18′ at SCS Dam site #6, 6 miles southwest of Avalon.
20	Oct. 14	11 A.M.	34.7	12.1	North Fork Broad River	Broad River	Franklin County, lat 34°28′, long. 83°14′ at county road, 5¼ miles west of Martin.
21	Oct. 14	12 M.		. 85	Tributary to North Fork	North Fork	Stephens County, lat 34°28′, long. 83°15′ at SCS Dam Site #5, 4 miles southwest of Martin.
23	Oct. 14	2 P.M.		1.66	Toms Creek	North Fork Broad River	Stephens County, lat 34°30′, long. 83°16′ at SCS Dam Site #11, 3½ miles west of Avalon.
24	Oct. 14	3 P.M.		. 46	Tributary to Toms Creek	Toms Creek	Stephens County, lat 34°29′, long. 83°14′ at SCS Dam Site #13, 2½ miles west of Martin.
26	Oct. 13	1 P.M.	56.3	14.5	North Fork Broad River	Broad River	Franklin County, lat 34°27′, long. 83°17′ at county road, 2¾ miles southwest of Martin.
27	Oct. 13	10 A.M.		17.9	North Fork Broad River	Broad River	Franklin County, lat 34°24′, long. 83°11′ at State Highway 59, 5 miles south of Martin.
29	Oct. 20	2 P.M.	8.98	6.59	Mountain Creek	Middle Fork Broad River	Banks County, lat 34°25′, long. 83°31′ at county road, 1½ miles south of Hollingsworth.
30	Oct. 20	1 P.M.	45.8	14.3	Middle Fork Broad River	Broad River	Banks County, lat 34°27′, long. 83°26′ at county road, 4¾ miles east of Hollingsworth.
31	Oct. 20	11 A.M.	46.2	17.0	Hudson River	Broad River	Banks County, lat 34°20', long. 83°29' at State Highway 41, at Homer.

## SAVANNAH RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
	Oct. 20	12 M.	12.9	3.42	Webb Creek	Hudson River	Banks County, lat 34°21′, long. 83°29′ at State Highway 51, 1½ miles northeast of Homer.
33	Oct. 20	10 A.M.	20.7	4.88	Grove Creek	Hudson River	Banks County, lat 34°18', long. 83°36' at county road, 6 miles west of Homer.
34	Oct. 20	11 A.M.	11.3	3.62	Hickory Level Creek	Grove Creek	Banks County, lat 34°17′, long. 83°32′ at State Highway 98, 3½ miles southwest of Homer.
35	Oct. 15	10 A.M.	7.85	1.29	Little Blue- stone Creek	Bluestone Creek	Madison County, lat 34°10′, long. 83°11′ at State Highway 191, 4 miles northeast of Dan- ielsville.
36	June 14 July 20 Sept. 3 Sept. 29	5 P.M. 3 P.M. 2 P.M. 10 A.M.	760	453 312 179 112	Broad River	Savannah River	Madison-Elbert Counties, lat 34°04′, long. 83°100′ at State Highway 72, 2¾ miles northeast of Carlton.
37	Oct. 11	1 P.M.	17.0	. 80	South Fork Broad River	Broad River	Madison County, lat 34°10', long. 83°18' at State Highway at Ila.
38	Oct. 11	2 P.M.	44.2	3.21	South Fork Broad River	Broad River	Madison County, lat 34°06′, long. 83°12′ at county road, 2½ miles southeast of Daniels-ville.
39	Oct. 11	3 P.M.	88.6	6.84	South Fork	Broad River	Madison County, lat 34°03', long. 83°10' at State Highway 72, 2 miles west of Comer.
40	Oct. 5	11 A.M.	47.3	1.02	Big Clouds Creek	Broad River	Oglethorpe County, lat 34°02′, long. 83°04′ at county road, 2¾ miles southwest of Carlton
41	Oct. 11	4 P.M.	20.2	. 65	Fork Creek	South Fork Broad River	Madison County, lat 34°03', long. 83°01' at State Highway 72 at Carlton.
42	Oct. 18	2 P.M.	4.26	.72	Little Dove Creek	Dove Creek	Elbert County, lat 34°04′, long. 82°58′ at State Highway 36 at Oglesby.
43	Oct. 18	3 P.M.		.73	Dove Creek	Broad River	Elbert County, lat 34°04′, long. 82°58′ at State Highway 36 at Oglesby.
44	Oct. 18	4 P.M.	43.6	. 96	Falling Creek	Broad River	Elbert County, lat 34°00′, long. 82°49′ at county road, 1¾ miles southwest of Fortsonia.
45	Oct. 3	11 A.M.	30.9	1.53	Long Creek	Broad River	Oglethorpe County, lat 33°50', long. 83°04' at State Highway 10, 3½ miles southeast of Lex- ington.
46	Oct. 7		42.6	0	Clark Creek	Long Creek	Wilkes County, lat 33°54′, long. 82°49′ at county road, 4½ miles northwest of Tignall.
48	Oct. 7		5.33	. 10	Chickasaw Creek	Broad River	Wilkes County, lat 33°56′, long. 82°46′ at State Highway 17, 4½ miles north of Tignall
49	Oct. 7		6.43	. 04	Rock Creek	Middle Creek	Wilkes County, lat 33°46′, long. 82°45′ at State Highway 17, 2½ miles north of Washington.
50	Oct. 7		32.6	0	Soap Creek	Savannah River	Lincoln County, lat 33°50′, long. 82°29′ at State Highway 79, 3 miles north of Lincolnton.
51	Oct. 6		66.1	0	North Fork Little River	Little River	Taliaferro County, lat 33°39', long. 82°55' at State Highway 22, 6½ miles north of Crawfordville.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
168	Sept. 28	3 P.M.	30	2.15	Walnut Creek	South River	Henry County, lat 33°28′, long. 84°10′ at State Highway 42, 1¾ miles northwest of Mc- Donough.
169	Sept. 28	5 P.M.	7.2	1.24	Camp Creek	Walnut Creek	Henry County, lat 33°28′, long. 84°10′ at State Highway 42, 1½ miles northwest of Mc- Donough.
170	Sept. 29	10 P.M.	51	4.89	Walnut Creek	South River	Henry County, lat 33°29', long. 84°06' at State Highway 20, 4 miles northeast of McDonough.
172	July 15 July 29 Oct. 13 Oct. 14	11 A.M. 12 M. 4 P.M. 11 A.M.	2.09	. 53 . 08 0	Yellow River	Ocmulgee River	Gwinnett County, lat 34°00′, long. 83°59′ at State Highway 20, 3 miles north of Lawrence-ville.
173	June 25 July 12 July 15 July 29 Aug. 12 Aug. 24 Sept. 10 Oct. 1 Oct. 14 Oct. 25 Nov. 1	2 P.M. 4 P.M. 12 M. 12 M. 12 M. 12 M. 8 P.M. 2 P.M. 3 P.M. 11 A.M. 3 P.M. 1 P.M.	1.59	.31 .25 .30 .14 .12 .09 .08 .04 .01 .07		Yellow River	Gwinnett County, lat 34°00′, long. 84°00′ at county road, 3½ miles north of Lawrenceville.
174	Oct. 14	10 A.M.	6.08	0	Yellow River	Ocmulgee River	Gwinnett County, lat 33°59′, long. 84°01′ at county road, 2½ miles northwest of Lawrence-ville.
175	Oct. 13	4 P.M.	4.99	0	Little Suwannee Creek	Yellow River	Gwinnett County, lat 34°01′, long. 84°01′ at county road, 4 miles southeast of Suwannee.
176	Oct. 13	3 P.M.	3.17	0	Ager Creek	Little Suwannee Creek	Gwinnett County, lat 34°00′, long. 84°02′ at county road, 4 miles southeast of Suwannee.
177	July 15 July 29 Sept. 10 Oct. 13	12 M. 2 P.M. 4 P.M.	9.62		Little Suwannee Creek	Yellow River	Gwinnett County, lat 34°00′, long. 84°01′ at county road, 3¼ miles northwest of Lawrence-ville.
178	Oct. 14	10 A.M.	17.7	. 06	Yellow River	Ocmulgee River	Gwinnett County, lat 33°59', long. 84°01' at county road, 2½ miles northwest of Lawrenceville.
179	July 15 July 29 Aug. 6 Aug. 6 Aug. 12 Aug. 12 Aug. 16 Aug. 16 Aug. 17 Aug. 17 Oct. 4	2 P.M. 4 P.M. 10 A.M. 12 M. 10 A.M. 9 P.M. 4 P.M. 10 P.M. 8 A.M. 8 P.M. 4 P.M. 9 A.M.	19.1	3.63 1.66 .31 .35 .78 1.10 .29 .18 .37 .12		Ocmulgee River	Gwinnett County, lat 33°58′, long. 84°02′ at State Highway 120, 2½ miles west of Lawrenceville.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
180	July 15 July 29 Oct. 4 Oct. 13	3 P.M. 2 P.M. 4 P.M. 4 P.M.	1.83	0.44 .34 0		Yellow River	Gwinnett County, lat 34°00′, long. 84°03′ at county road, 4½ miles northwest of Lawrenceville.
181	Aug. 6 Aug. 6 Aug. 12 Aug. 12 Aug. 16 Aug. 16 Aug. 17 Aug. 17 Oct. 14	8 A.M. 1 P.M. 8 A.M. 2 P.M. 5 P.M. 9 P.M. 8 A.M. 9 P.M. 9 A.M.	3.84	.36 .48 .45 .60 .21 .30 .26 .24		Yellow River	Gwinnett County, lat 33°58′, long. 84°02′ a State Highway 120, 3 miles west of Lawrence ville.
182	Oct. 14	8 A.M.	25.3	0	Yellow River	Ocmulgee River	Gwinnett County, lat 33°57', long. 84°02' a county road, 3 miles west of Lawrenceville.
183	Oct. 14	9 A.M.	26.5	0	Yellow River	Ocmulgee River	Gwinnett County, lat 33°57′, long. 84°03′ a county road, 3½ miles west of Lawrenceville
184	Oct. 7 Oct. 14	3 P.M. 9 A.M.	28.0	0	Yellow River	Ocmulgee River	Gwinnett County, lat 33°56', long. 84°03' a State Highway 8, 3¾ miles southwest of Lawrenceville.
186	July 15 July 29 Oct. 14	4 P.M. 5 P.M. 9 A.M.	3.11	. 50 . 53 . 27	Redland Creek	Pew Creek	Gwinnett County, lat 33°57', long. 84°02' a State Highway 8, 2¾ miles southwest of Lawrenceville.
187	Oct. 4 Oct. 14	12 M. 11 A.M.	5.99		Tributary to Yellow River	Yellow River	Gwinnett County, lat 33°55′, long. 84°02′ arcounty road, 4½ miles southwest of Lawrence ville.
188	Oct. 14	12 M.	43.5	.79	Yellow River	Ocmulgee River	Gwinnett County, lat 33°55′, long. 84°03′ at county road, 1 mile east of Gloster.
189	Oct. 7 Oct. 14	3 P.M. 2 P.M.	45.1	. 29	Yellow River	Ocmulgee River	Gwinnett County, lat 33°54', long. 84°04' at county road, 0.5 mile south of Gloster.
190	Oct. 14	1 P.M.	4.32	. 29	Bankstan Creek	Yellow River	Gwinnett County, lat 33°54′, long. 84°04′ at county road, 1 mile south of Gloster.
191	Oct. 14	2 P.M.	2.34	. 12	Fork Creek	Yellow River	Gwinnett County, lat 33°55', long. 84°05' at county road, 0.8 mile west of Gloster.
192	Oct. 4 Oct. 14	5 P.M. 8 A.M.	1.48	.01	Knox Creek	Sweetwater Creek	Gwinnett County, lat 33°59′, long. 84°08′ at State Highway 120, 1½ miles southeast of Duluth.
193	Oct. 14	9 A.M.	1.96	. 02	Fork Creek	Sweetwater Creek	Gwinnett County, lat 33°58′, long. 84°06′ at State Highway 120, 3½ miles southeast of Duluth.
194	Oct. 14	2 P.M.	19.5	. 16	Sweetwater Creek	Yellow River	Gwinnett County, lat 33°57′, long. 84°06′ at county road, 4½ miles southeast of Duluth.
195	Oct. 14	4 P.M.	2.34	.12	Beaver Ruin Creek	Sweetwater Creek	Gwinnett County, lat 33°56′, long. 84°12′ at county road, 1½ miles southeast of Norcross.
196	Oct. 14	6 P.M.	5.75	.28	Beaver Ruin Creek	Sweetwater Creek	Gwinnett County, lat 33°56′, long. 84°10′ at county road, 2¾ miles southeast of Norcross.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Mas	Date	Time	Drainage	171	C+	Tributana	Landin
Map No.	Date	Time	Area (sq mi)	Flow cfs	Stream	Tributary to	Location
197	June 3 June 25 July 12 July 15 July 29 Aug. 13 Aug. 24 Sept. 13 Oct. 1 Oct. 14 Oct. 25 Nov. 1	4 P.M. 11 A.M. 1 P.M. 6 P.M. 6 P.M. 5 P.M. 1 P.M. 1 P.M. 3 P.M. 4 P.M. 2 P.M.	0.98	1.52 .50 .20 .19 .10 .05 .06 .01 .03 .04		Beaver Ruin Creek	Gwinnett County, lat 33°57', long. 84°10' at county road, 3 miles east of Norcross.
198	Oct. 14	5 P.M.	9.45	. 42	Tributary to Beaver Ruin Creek	Beaver Ruin Creek	Gwinnett County, lat 33°56', long. 84°09' at county road, 4 miles east of Norcross.
199	Oct. 14	6 P.M.	11.7	. 30	Tributary to Beaver Ruin	Beaver Run Creek	Gwinnett County, lat 33°56′, long. 84°08′ at county road, 5 miles east of Norcross.
200	July 15 July 29 Oct. 7 Oct. 14	5 P.M. 6 P.M. 4 P.M. 1 P.M.	48.1		Sweetwater Creek	Yellow River	Gwinnett County, lat 33°55′, long. 84°06′ at State Highway 8, 7 miles southwest of Lawrenceville.
201	Oct. 4 Oct. 14	2 P.M. 9 A.M.	3.83	. 41	Jackson Creek	Sweetwater Creek	Gwinnett County, lat 33°53′, long. 84°11′ at county road, 4½ miles southeast of Norcross.
202	Oct. 14	10 A.M.	5.75	. 35	Jackson Creek	Sweetwater Creek	Gwinnett County, lat 33°53′, long. 84°10′ at county road, 4½ miles southeast of Norcross.
203	Oct. 14	11 A.M.	1.73	. 22	Pumpkin Vine Creek	Jackson Creek	Gwinnett County, lat 33°59′, long. 84°10′ at county road, 3¾ miles southeast of Norcross.
204	Oct. 14	11 A.M.	9.66	. 33	Jackson Creek	Sweetwater Creek	Gwinnett County, lat 33°54′, long. 84°09′ at county road, 5 miles southeast of Norcross.
205	Oct. 4 Oct. 14	1 P.M. 2 P.M.	5.55	. 61	Camp Creek	Jackson Creek	Gwinnett County, lat 33°53′, long. 84°08′ at county road, 6¼ miles southeast of Norcross.
206	Oct. 14	1 P.M.	18.8	.74	Jackson Creek	Sweetwater Creek	Gwinnett County, lat 33°53′, long. 84°07′ at county road, 6½ miles southeast of Norcross.
207	Oct. 14	3 P.M.	124	1.61	Yellow River	Ocmulgee River	Gwinnett County, lat 33°53′, long. 84°05′ at county road, 1¾ miles southwest of Gloster.
208	Oct. 14	4 P.M.	126	2.01	Yellow River	Ocmulgee River	Gwinnett County, lat 33°52′, long. 84°05′ at county road, 3¾ miles west of Snellville.
210	July 13 Aug. 13 Aug. 24 Sept. 10 Sept. 13 Oct. 1 Oct. 14 Oct. 25 Nov. 1	12 M. 3 P.M. 1 P.M. 11 A.M. 1 P.M. 9 A.M. 2 P.M. 12 M.	5.54	2.14 1.11 1.42 1.06 .88 .68 .76 1.10		Yellow River	Gwinnett County, lat 33°52′, long. 84°06′ at county road, 4½ miles west of Snellville.
211	Sept. 29	8 A.M.	7.0	. 85	Crooked Creek	Stone Moun- tain Creek	DeKalb County, lat 33°46′, long. 84°07′ at Stephenson Road, 4 miles north of Lithonia.

<sup>\*</sup>Flow less than 0.005 cfs.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
212	Sept. 29	10 A.M.	29	1.55	Stone Moun- tain Creek	Yellow River	DeKalb County, lat 33°46′, long. 84°05′ at State Highway 124, 4½ miles north of Lithonia.
213	Sept. 29	9 A.M.	5.1	. 20	Swift Creek	Yellow River	DeKalb County, lat 33°45′, long. 84°05′ at State Highway 124, 2½ miles north of Lithonia.
214	Sept. 20	4 P.M.	49	3.66	Haynes Creek	Yellow River	Rockdale County, lat 33°42′, long. 83°55′ at State Highway 138, 6 miles northeast of Con- yers.
215	Sept. 21	3 P.M.	25	1.48	Little Haynes Creek	Haynes Creek	Rockdale-Newton Counties, lat 33°43', long 83°55' at State Highway 138, 7 miles northeast of Conyers.
216	Oct. 13	11 A.M.		1.69	Gum Creek	Yellow River	Newton County, lat 33°38′, long. 83°54′ at county road, 3½ miles northwest of Covington.
218	Oct. 6	3 P.M.		.11	Alcovy River	Ocmulgee River	Gwinnett County, lat 33°59', long. 83°57' at county road, 3 miles northeast of Lawrence- ville.
219	Oct. 6	4 P.M.		. 19	Cedar Creek	Alcovy River	Gwinnett County, lat 33°58', long. 83°57' at county road, 2¾ miles northeast of Lawrence ville.
220	Sept. 22	11 A.M.	1.9	27	Mountain Creek	Alcovy River	Walton County, lat 33°49′, long. 83°44′ at county road, 2 miles northwest of Monroe.
221	Sept. 22	2 P.M.		. 50	Richland Creek	Alcovy River	Walton County, lat 33°42′, long. 83°44′ at county road, 2½ miles northwest of Social Circle.
222	Sept. 22	10 A.M.	5.4	. 26	Big Flat Creek	Alcovy River	Walton County, lat 33°50′, long. 83°52′ at State Highway 10, 2½ miles east of Loganville
223	Sept. 22	3 P.M.	7.0	. 80	Little Flat Creek	Big Flat Creek	Walton County, lat 33°46′, long. 83°47′ at Highway 138, 4½ miles west of Monroe.
224	Oct. 13	2 P.M.		.48	West Bear Creek	Bear Creek	Newton County, lat 33°31′, long. 83°47′ at State Highway 213, 3½ miles west of Mansfield
225	Sept. 30	3 P.M.		0	Malholms Creek	Tussahaw Creek	Butts County, lat 33°20′, long. 84°01′ at county road 1½ miles northeast of Jenkinsburg.
226	Oct. 4	1 P.M.		1.52	Tussahaw Creek	Branch Creek	Butts County, lat 33°23′, long. 83°58′ at county road 5½ miles north of Jackson.
227	Sept. 8	1 P.M.	15	.40	Herds Creek	Ocmulgee River	Jasper County, lat 33°21', long. 83°49' at county road, 8 miles northwest of Monticello.
229	Sept. 30	2 P.M.	11	.44	Yellow Water Creek	Ocmulgee River	Butts County, lat 33°18′, long. 83°58′ at State Highway 36, 1¼ miles north of Jackson.
230	Oct. 4	11 A.M.	28	1.00	Yellow Water Creek	Ocmulgee River	Butts County, lat 33°18′, long. 83°51′ at State Highway 16, 6¼ miles east of Jackson.
231	Sept. 30		3.4	. 54	Plymale Creek	Little Sandy Creek	Butts County, lat 33°15′, long. 83°53′ at county road 1 mile east of Flovilla.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Ārea (sq mi)	Flow cfs	Stream	Tributary to	Location
232	Oct. 5	9 A.M.	5.4	0.19	Hopoethyelo- holo Creek	Big Sandy Creek	Butts County, lat 33°15′, long. 84°01′ at State Highway 36, 3¾ miles southwest of Jackson.
233	Oct. 5	10 A.M.	3.4	. 39	Aboothlacoosta Creek	Big Sandy Creek	Butts County, lat 33°16′, long. 83°58′ at county road 2 miles south of Jackson.
234	Sept. 30	12 M.		. 89	Aboothlacoosta Creek	Big Sandy Creek	Butts County, lat 33°15′, long. 83°55′ near State Highway 42 at Indian Springs, and just upstream from confluence with Hopoethyelo- holo Creek.
235	Sept. 30	1 P.M.	31	3.20	Big Sandy Creek	Ocmulgee River	Butts County, lat 33°15′, long. 83°55′ at State Highway 42 at Indian Springs.
236	Sept. 30	11 A.M.	6.9	. 35	Rocky Creek	Big Sandy Creek	Butts County, lat 33°13′, long. 83°56′ at State Highway 42, 2½ miles south of Indian Springs.
237	Sept. 30	10 A.M.	57	2.43	Big Sandy Creek	Ocmulgee River	Butts-Monroe Counties, lat $33^{\circ}11'$ , long. $83^{\circ}50'$ at State Highway $87$ , $53'$ 4 miles southeast of Flovilla.
238	Sept. 24	2 P.M.	5.2	. 20	Towaliga River	Ocmulgee River	Henry County, lat 33°24′, long. 84°15′ at county road, 2 miles east of Hampton.
239	Sept. 27	5 P.M.	33	1.89	Towaliga River	Ocmulgee River	Spalding County, lat 33°19′, long. 84°11′ at State Highway 155, 7 miles northeast of Griffin.
240	Sept. 27	6 P.M.	17	2.98	Troublesome Creek	Towaliga River	Spalding County, lat 33°18′, long. 84°12′ at State Highway 155, 6 miles northeast of Griffin.
241	Sept. 29	1 P.M.	15	1.11	Indian Creek	Towaliga River	Henry County, lat 33°21', long. 84°08' at county road, 1½ miles west of Locust Grove.
242	Oct. 4	2 P.M.	105	5.69	Towaliga River	Ocmulgee River	Butts County, lat 33°16′, long. 84°04′ at State Highway 16, 6½ miles west of Jackson.
243	Oct. 4	4 P.M.	33	2.76	Cabin Creek	Towaliga River	Butts County, lat 33°14′, long. 84°04′ at county road, 7½ miles southwest of Jackson.
244	Sept. 28	9 A.M.	6.27	. 50	Buck Creek	Towaliga River	Spalding County, lat 33°13′, long. 84°11′ at county road, 5 miles southeast of Griffin.
245	Sept. 28	1 P.M.	4.63	. 63	Little Tow- aliga River	Towaliga River	Lamar County, lat 33°05′, long. 84°10′ at State Highway 7, 1½ miles northwest of Barnesville.
246	Sept. 29	9 A.M.	7.70	. 36	Edie Creek	Towaliga River	Lamar County, lat 33°09′, long. 84°09′ at county road, 3½ miles northeast of Milner.
247	Sept. 29	10 A.M.	2.38	. 17	Tributary to Edie Creek	Edie Creek	Lamar County, lat 33°07′, long. 84°09′ at State Highway 36, 4½ miles north of Barnesville.
248	Oct. 5	3 P.M.	26.5	. 57	Rocky Creek	Towaliga River	Monroe County, lat 33°07', long. 83°57' at county road, 2¾ miles north of Forsyth.
249	Sept. 8			0	Falling Creek	Caney Creek	Jasper County, lat 33°12′, long. 83°42′ at county road, 7½ miles south of Monticello.
250	Sept. 8			0	Gladesville Creek	Little Falling Creek	Jasper County, lat 33°12′, long. 83°47′ at State Highway 83, 9½ miles southwest of Monticello.
251	Oct. 7			0	Caney Creek	Ocmulgee River	Jones County, lat 33°02', long. 83°43' at county road, 1½ miles northeast of Dames Ferry.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
252	Oct. 6	4 P.M.	4.9	0.19	Walkers Branch	Rum Creek	Monroe County, lat 33°04′, long. 83°55′ at State Highway 83, 3½ miles northeast of Forsyth.
253	Oct. 5	12 M.	70.3	. 29	Rum Creek	Ocmulgee River	Monroe County, lat 33°00′, long. 83°45′ at State Highway 87, 1 mile south of Popes Ferry.
254	Oct. 5	11 A.M.		0	Tobler Creek	Ocmulgee River	Monroe County, lat 32°58′, long. 83°44′ at State Highway 87, 4½ miles northeast of Bolingbroke.
255	Nov. 4	3 P.M.		. 42	Beaverdam Creek	Ocmulgee River	Bibb County, lat 32°55′, long. 83°43′ at State Highway 87, 8 miles northwest of Macon.
257	Oct. 7	12 M.		0	Walnut Creek	Ocmulgee River	Jones County, lat 32°59′, long. 83°37′ at State Highway 18, 5½ miles southwest of Gray.
258	Oct. 7	1 P.M.		. 07	Bonner Creek	Walnut Creek	Jones County, lat 32°59′, long. 83°34′ at State Highway 11, 2½ miles southwest of Gray.
259	Nov. 4	2 P.M.		0	Walnut Creek	Ocmulgee River	Bibb County, lat 32°53′, long. 83°37′ at State Highway 11, 3 miles north of Macon.
260	Nov. 4	12 M.		6.35	Swift Creek	Ocmulgee River	Bibb County, lat 32°48′, long. 83°34′ at crossing of Macon, Dublin & Savannah Railroad, 4¼ miles east of Macon.
261	Nov. 4	1 P.M.		4.46	Stone Creek	Ocmulgee River	Bibb County, lat 32°48′, long. 83°32′ at county road, 5¾ miles east of Macon.
262	July 19 Aug. 5 Aug. 6	6 P.M. 10 A.M. 2 A.M.		747 711 541	Ocmulgee River	Altamaha River	Bibb County, lat 32°45′, long. 83°36′ at industrial water intake south of Macon.
263	Sept. 28	11 A.M.	5.5	1.49	Tobesofkee Creek	Ocmulgee River	Lamar County, lat 33°02′, long. 84°07′ at county road, 2½ miles east of Barnesville.
264	Oct. 6	6 P.M.		.03	Tobesofkee Creek	Ocmulgee River	Monroe County, lat 33°01', long. 84°01' at county road, 5 miles west of Forsyth.
265	Oct. 5	2 P.M.		.36	Todd Creek	Tobesofkee Creek	Monroe County, lat 33°01′, long. 83°58′ at State Highway 83, 1½ miles southwest of Forsyth.
266	Oct. 6	11 A.M.	17	.08	Little Tobesof- kee Creek	Tobesofkee Creek	Monroe County, lat 32°57′, long. 84°03′ at State Highway 83, 8½ miles southwest of Forsyth.
267	Oct. 6	2 P.M.	30.4	.82	Little Tobesof- kee Creek	Tobesofkee Creek	Monroe County, lat 32°55′, long. 83°58′ at State Highway 42, 8 miles south of Forsyth.
268	Oct. 6	3 P.M.	17.1	1.29	Yellow Creek	Little Tobesof- kee Creek	Monroe County, lat 32°56′, long. 83°57′ at State Highway 42, 6½ miles south of Forsyth.
270	Nov. 4	4 P.M.	20.7	0	Rocky Creek	Tobesofkee Creek	Bibb County, lat 33°52′, long. 83°45′ at county road, 2 miles southwest of Wesleyan College.
271	Nov. 4	5 P.M.	4.4	.19	Wolf Creek	Rocky Creek	Bibb County, lat 33°52′, long. 83°43′ at county road, ¾ miles south of Wesleyan College.
272	Nov. 4	6 P.M.	36.5	.48	Rocky Creek	Tobesofkee Creek	Bibb County, lat 32°49′, long. 83°42′ at State Highway 22, at Macon.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
273	Oct. 6	12 M.	19	0.83	Echeconnee Creek	Ocmulgee River	Monroe County, lat 32°54′, long. 84°05′ at State Highway 7, 2½ miles north of Culloden
274	Oct. 6	1 P.M.	49.5	2.65	Echeconnee Creek	Ocmulgee River	Monroe County, lat 32°53′, long. 83°59′ at State Highway 42, at Dyas.
275	Oct. 22	:		0	Little Eche- connee Creek	Echeconnee Creek	Crawford County, lat 32°48′, long. 83°57′ at State Highway 42, 6½ miles northeast of Roberta.
276	Nov. 5	4 P.M.		4.80	Echeconnee Creek	Ocmulgee River	Crawford-Bibb Counties, lat 32°46′, long. 83′ 50′ at county road, 10¾ miles east of Roberta
277	Nov. 4	1 P.M.		1.60	Flat Creek	Ocmulgee River	Twiggs County, lat 32°36′, long. 83°29′ at State Highway 87, 4¾ miles north of Tarversville
278	Nov. 4	2 P.M.		1.36	Savage Creek	Ocmulgee River	Twiggs County, lat 32°35′, long. 83°28′ at State Highway 87, 4 miles north of Tarversville.
279	Nov. 4	3 P.M.		. 63	Richland Creek	Savage Creek	Twiggs County, lat 32°34′, long. 83°27′ at State Highway 87, 1½ miles north of Tarversville
280	Nov. 4	4 P.M.		1.14	Shellstone Creek	Ocmulgee River	Twiggs County, lat 32°31′, long. 83°26′ at State Highway 87, 2½ miles south of Tarversville
281	Nov. 4			0	South Shell- stone Creek	Shellstone Creek	Bleckley County, lat 32°25′, long. 83°22′ at State Highway 87, 2½ miles north of Cochran
282	Oct. 20			0	Big Indian Creek	Ocmulgee River	Peach County, lat 32°21′, long. 83°55′ at State Highway 49, 3 miles southwest of Fort Valley
284	Oct. 20	2 P.M.		7.29	Mossy Creek	Big Indian Creek	Peach County, lat 32°35′, long. 83°51′ at State Highway 49, 3 miles northeast of Fort Valley
285	Oct. 20			0	Mule Creek	Mossy Creek	Peach County, lat 32°36′, long. 83°48′ at State Highway 49, 4½ miles southwest of Byron.
286	Oct. 20	4 P.M.		32.8	Mossy Creek	Big Indian Creek	Peach County, lat 32°33′, long. 83°46′ at county road, 7½ miles east of Fort Valley.
287	Nov. 4			0	Tributary to Jordan Creek	Jordan Creek	Bleckley County, lat 32°24′, long. 83°22′ at county road, at Cochran.
289	Nov. 4	11 A.M.		. 89	Tributary to Limestone Creek	Limestone Creek	Bleckley County, lat 32°20′, long. 83°19′ at State Highway 257, 4½ miles south of Cochran.
290	Sept. 20			0	Camp Creek	Big Creek	Dooly County, lat 32°16', long. 83°44' at State Highway 7, at Unadilla.
291	Sept. 22	12 M.		3.01	Prong Creek	Big Creek	Pulaski County, lat 32°15′, long. 83°37′ at county road, 9 miles southwest of Hawkinsville.
292	Aug. 24 Sept. 17	11 A.M. 5 P.M.		6.77	Big Creek	Ocmulgee River	Pulaski County, lat 32°14′, long. 83°30′ at State Highway 27, 3½ miles southwest of Hawkinsville.
293	Sept. 17	2 P.M.		5.57	Mock Spring	Cedar Creek	Pulaski County, lat 32°13′, long. 83°35′ at county road, 8½ miles southwest of Hawkins ville.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
294	July 19 Aug. 24 Sept. 17	12 M. 10 A.M. 11 A.M.		10.3 4.90 5.16		Big Creek	Pulaski County, lat 32°13', long. 83°30' at State Highway 27, 5 miles southwest of Haw- kinsville.
295	Sept. 16	12 M.		0	Brushy Creek	Cedar Creek	Wilcox County, lat 32°03′, long. 83°26′ at county road, 5½ miles southeast of Pineview.
296	Sept. 16	12 M.		2.75	Poor Robin Spring	Ocmulgee River	Wilcox County, lat 32°01′, long. 83°18′ at spring outlet at site north of Abbeville.
297	Sept. 16	4 P.M.		0	House Creek	Ocmulgee River	Wilcox County, lat 31°51′, long. 83°15′ at county road, 10 miles southeast of Abbeville.
298	Oct. 15			0	Horse Creek	Big Horse Creek	Telfair County, lat 31°52′, long. 82°58′ at State Highway 31, 5¾ miles north of Jacksonville.
299	Oct. 15			0	Boggy Creek	Horse Creek	Telfair County, lat 31°56′, long. 82°57′ at State Highway 31, 8½ miles northeast of Jackson- ville.
300	Oct. 15			0	Alligator Creek	Big Horse Creek	Telfair County, lat 31°52′, long. 82°59′ at State Highway 31, 3½ miles north of Jacksonville.
301	Oct. 15			0	Tributary to Big Horse Creek	Big Horse Creek	Telfair County, lat 31°58′, long. 82°56′ at State Highway 31, 8 miles south of McRae.
302	Oct. 15			0	Tributary to Big Horse Creek	Big Horse Creek	Telfair County, lat 31°57', long. 82°56' at State Highway 31, 8½ miles south of McRae
304	July 13 July 19 Aug. 24			0 0 0	Gum Swamp Creek	Little Ocmul- gee River	Bleckley County, lat 32°27′, long. 83°17′ at State Highway 26, 6¼ miles northeast of Cochran.
305	Aug. 23			0	Gum Swamp Creek	Little Ocmul- gee River	Dodge County, lat 32°15', long. 83°08' at State Highway 117, 4½ miles northeast of Eastman
306	Aug. 2 Aug. 23	11 A.M. 2 P.M.			Little Ocmul- gee River	Ocmulgee River	Wheeler-Telfair Counties, lat 32°00′, long. 82°45′ at State Highway 134, at Towns.
307	Aug. 24 Oct. 15			0	Alligator Creek	Little Ocmul- gee River	Laurens County, lat 32°11′, long. 82°54′ at State Highway 31, 8½ miles north of McRae
308	Aug. 2 Aug. 23			0	Little Creek	Alligator Creek	Wheeler County, lat 32°09′, long. 82°46′ at State Highway 3, 1¼ miles east of Alamo.
309	Aug. 2	1 P.M.		. 67	Alligator Creek	Little Ocmul- gee River	Wheeler County, lat 32°05′, long. 82°43′ at county road, 6 miles southeast of Alamo.
310	Aug. 2 Aug. 23	12 M. 1 P.M.		2.04 2.09	Alligator Creek	Little Ocmul- gee River	Wheeler County, lat 32°02′, long. 82°42′ at State Highway 134, 9½ miles southeast of Alamo.
311	Aug. 23			0	Sugar Creek	Turnpike Creek	Dodge County, lat 32°06', long. 83°05' at State Highway 165, 1 mile southwest of Chauncey
312	Aug. 2 Aug. 23 Oct. 15			0 0 0	Sugar Creek	Turnpike Creek	Telfair County, lat 32°03′, long. 82°55′ at State Highway 30, 1 mile south of McRae.
313	Oct. 15			0	Turnpike Creek	Little Ocmul- gee River	Telfair County, lat 31°59′, long. 82°55′ at State Highway 31, 5½ miles south of McRae.
314	Oct. 15	3 P.M.	13	5.85	Oconee River	Altamaha River	Hall County, lat 34°20′, long. 83°45′ at U. S. Highway 23, 5 miles northeast of Gainesville.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
315	Oct. 18	10 A.M.		15.6	Oconee River	Altamaha River	Jackson County, lat 34°14′, long. 83°34′ at county road, 1½ miles south of Maysville.
316	Oct. 18	12 M.		.74	Border Creek	Oconee River	Jackson County, lat 34°11′, long. 83°29′ at State Highway 15, 2 miles southwest of Com- merce.
317	Oct. 18			.78	Roger Creek	Border Creek	Jackson County, lat 34°09′, long. 83°28′ at county road, 3½ miles south of Commerce.
318	Oct. 18	2 P.M.	3.8	.82	Little Curry Creek	Big Curry Creek	Jackson County, lat 34°07′, long. 83°31′ at county road, 3 miles east of Jefferson.
319	Oct. 4	11 A.M.		2.55	Sandy Creek	Oconee River	Clarke County, lat 33°59′, long. 83°23′ at State Highway 24, at Athens.
320	Oct. 4	11 A.M.	4.5	. 58	West Fork Trail Creek	Trail Creek	Clarke County, lat 33°58′, long. 83°21′ at county road, at Athens.
321	Oct. 12	3 P.M.	283	21.8	Oconee River	Altamaha River	Clarke County, lat 33°57', long. 83°22', 1½ miles downstream from Seaboard Air Line Railroad bridge, at Athens.
322	Oct. 18	4 P.M.		3.70	Pond Fork	Middle Oconee River	Jackson County, lat 34°11′, long. 83°40′ at county road, 1¾ miles northeast of Pendergrass.
323	Oct. 15	12 M.	12	2.19	Allen Creek	Pond Fork	Hall County, lat 34°12′, long. 83°45′ at county road, 1½ miles east of Candler.
325	Oct. 15	11 A.M.	4.2	. 85	Tributary to Walnut Creek	Walnut Creek	Hall county, lat 34°10′, long, 83°47′ at county road, 23⁄4 miles south of Candler.
326	Oct. 18	3 P.M.		13.4	Middle Oconee River	Oconee River	Jackson County, lat 34°06′, long. 83°36′ at State Highway 11, 2½ miles southwest of Jefferson.
327	Oct. 15	10 A.M.	13	1.19	Mulberry River	Middle Oconee River	Hall County, lat $34^{\circ}07'$ , long. $83^{\circ}52'$ at county road, $5\frac{1}{2}$ miles southeast of Flowery Branch.
328	Oct. 15	9 A.M.	13	1.18	Mulberry Creek	Mulberry River	Hall County, lat 34°08′, long. 83°52′ at county road, 5 miles southeast of Flowery Branch.
329	Oct. 15	11 A.M.	42	3.82	Mulberry River	Middle Oconee River	Hall County, lat 34°08', long. 83°49' at State Highway 211, 7 miles southeast of Flowery Branch.
330	Oct. 1	9 A.M.	57	. 20	Rock Creek	Little Mulberry River	Barrow County, lat 34°02′, long. 83°50′ at county road, 1¼ miles north of Auburn.
331	Oct. 1	11 A.M.	164	9.36	Mulberry River	Middle Oconee River	Jackson-Barrow Counties, lat 34°03′, long. 83°43′ at State Highway 53, 4¼ miles north of Winder.
332	Oct. 1	12 M.		1.03	Bear Creek	Middle Oconee River	Barrow County, lat 33°59', long. 83°34' at county road, 2 miles northeast of Statham.
334	Oct. 1	1 P.M.		2.67	Barber Creek	Middle Oconee River	Barrow County, lat 33°56′, long. 83°36′ at county road, 1¾ miles south of Statham.
335	Oct. 1	12 M.	7.8	. 69	Shoal Creek	Oconee River	Clarke County, lat 33°56′, long. 83°17′ at State Highway 10, 2½ miles south of Winterville.
336	Oct. 4	3 P.M.	-	. 53	Greenbrier Creek	Oconee River	Oconee County, lat 33°48′, long. 83°25′ at county road, 1½ miles north of Farmington.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
338	Oct. 1	10 A.M.		1.11	Williamson Creek	Apalachee River	Barrow County, lat 33°58′, long. 83°48′ at county road, 2½ miles southeast of Carl.
339	Sept. 22 Oct. 1	12 M. 3 P.M.	53	8.13 8.77	Apalachee River	Oconee River	Barrow-Walton Counties, lat 33°54′, long. 83' 43' at State Highway 11, 2½ miles south of Bethlehem.
340	Oct. 4	4 P.M.		2.23	Big Robinson Creek	Apalachee River	Oconee County, lat 33°48′, long. 83°29′ at county road, 2½ miles west of Bishop.
341	Sept. 10 Sept. 23	12 M. 9 A.M.	6.7	.18 1.60	Jacks Creek	Apalachee River	Walton County, lat 33°48′, long. 83°41′ at U. S. Highway 78, 1¾ miles east of Monro
342	Sept. 22	4 P.M.	3.0	. 56	Tributary to Jacks Creek	Jacks Creek	Walton County, lat 33°48′, long. 83°37′ at State Highway 83, at Good Hope.
343	Sept. 10 Sept. 22	10 A.M. 5 P.M.	23	1.81	Jacks Creek	Apalachee River	Walton County, lat 33°48′, long. 83°37′ at county road, 1 mile northwest of Good Hop
344	Oct. 4	2 P.M.		. 22	Wolf Creek	Apalachee River	Oconee County, lat 33°44′, long. 83°25′ at county road, 3 miles south of Farmington.
345	Sept. 23	8 A.M.	0.6	. 01	Hard Labor Creek	Apalachee River	Walton County, lat 33°46′, long. 83°41′ at county road, 2½ miles southeast of Monro
346	Sept. 24	9 A.M.	2.0	. 10	Speeds Branch	Hard Labor Creek	Morgan County, lat 33°37′, long. 83°29′ at county road, 2 miles north of Madison.
347	Sept. 23	6 P.M.		2.80	Big Sandy Creek	Hard Labor Creek	Morgan County, lat 33°40′, long. 83°27′ at State Highway 24, 1½ miles southwest of Apalachee.
349	Sept. 23	4 P.M.		2.14	Sugar Creek	Oconee River	Morgan County, lat 33°33′, long. 83°22′ at county road, 1¾ miles south of Buckhead.
350	Oct. 12	3 P.M.		. 10	Shoulderbone Creek	Oconee River	Hancock County, lat 33°20', long. 83°05' State Highway 16, 7miles northwest of Spart
351	Sept. 9	8 A.M.		. 02	Rooty Creek	Oconee River	Putnam County, lat 33°20', long. 83°23' at State Highway 16, at Eatonton.
352	Sept. 24	10 A.M.		. 18	Big Indian Creek	Little River	Morgan County, lat 33°36′, long. 83°35′ at county road, 2¼ miles southeast of Rutledg
353	Sept. 23	12 M.		.77	Big Indian Creek	Little River	Morgan County, lat 33°32′, long. 83°32′ at State Highway 83, 5¾ miles southwest of Madison.
354	Sept. 23	2 P.M.		. 62	Little Indian Creek	Big Indian Creek	Morgan County, lat 33°31′, long. 83°30′ at county road, 5½ miles south of Madison.
355	Sept. 9	11 A.M.		. 02	Glady Creek	Little River	Putnam County, lat 33°21′, long. 83°26′ at county road, 3½ miles northwest of Eatonto
356	Sept. 9	9 A.M.		6.12	Little River	Oconee River	Putnam County, lat 33°19', long. 83°26' at State Highway 16, 3 miles west of Eatonto
357	Sept. 8	8 A.M.		. 26	Robinson Creek	Murder Creek	Jasper County, lat 33°24′, long. 83°42′ at county road, 6 miles northwest of Machen.
358	Sept. 8	9 A.M.		. 54	Sheppard Creek	Murder Creek	Jasper County, lat 33°25′, long. 83°42′ at county road, 6¼ miles northwest of Macher

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
360	Sept. 7	4 P.M.		0.44	Pittman Creek	Murder Creek	Jasper County, lat 33°27′, long. 83°41′ at county road, 6½ miles northwest of Shady Dale.
361	Sept. 7	3 P.M.		. 96	Pittman Branch	Pittman Creek	Jasper County, lat 33°28′, long. 83°40′ at county road, 6½ miles northwest of Shady Dale.
362	Sept. 8	11 A.M.		. 55	Murder Creek	Little River	Jasper County, lat 33°22', long. 83°38' at State Highway 83, 2½ miles southwest of Machen.
363	Sept. 8			0	Pearson Creek	Shoal Creek	Jasper County, lat 33°19′, long. 83°42′ at State Highway 11, 1½ miles northwest of Monticello.
364	Sept. 8	5 P.M.		2.09	Murder Creek	Little River	Jasper County, lat 33°19′, long. 83°34′ at State Highway 16, 7 miles east of Monticello.
365	Oct. 11	1 P.M.		. 12	Hog Creek	Cedar Creek	Jones County, lat 33°07′, long. 83°31′ at county road, 7½ miles north of Gray.
	Sept. 9 Oct. 11	3 P.M. 2 P.M.		. 16 . 06	Cedar Creek	Little River	Putnam-Jones Counties, lat 33°11', long. 83° 26' at State Highway 44, 10 miles south of Eatonton.
367	Oct. 12	11 A.M.		. 14	Champion Creek	Oconee River	Baldwin County, lat $33^{\circ}07'$ , long. $83^{\circ}11'$ at county road, $3\frac{1}{4}$ miles northeast of Milledgeville.
368	Oct. 12	9 A.M.		. 02	Tributary to Tobler Creek	Tobler Creek	Baldwin County, lat 33°07′, long. 83°13′ at county road, near Milledgeville.
369	Oct. 12	10 A.M.		0	Tobler Creek	Oconee River	Baldwin County, lat 33°07′, long. 83°13′ at county road, at Milledgeville.
371	Oct. 11	4 P.M.		. 38	Fishing Creek	Oconee River	Baldwin County, lat 33°05′, long. 83°20′ at State Highway 22, 6½ miles west of Milledgeville.
372	Oct. 11	5 P.M.		. 03	Fishing Creek	Oconee River	Baldwin County, lat 33°05′, long. 83°16′ at county road, 2½ miles west of Milledgeville.
373	Oct. 11	6 P.M.		. 10	Fishing Creek	Oconee River	Baldwin County, lat 33°04', long. 83°15' at State Highway 49, at Milledgeville.
374	Oct. 12	8 A.M.		. 26	Camp Creek	Oconee River	Baldwin County, lat 33°02', long. 83°14' at State Highway 29, at Midway.
375	Oct. 12	1 P.M.		1.15	Buffalo Creek	Oconee River	Hancock-Washington Counties, lat 33°06′, long. 82°58′ at county road, 2 miles east of Linton.
376	Nov. 6	4 P.M.		2.30	Keg Creek	Buffalo Creek	Washington County, lat 33°01′, long. 82°54 at county road, 5¾ miles northwest of Sandersville.
377	Nov. 6	3 P.M.		. 84	Sandy Hill Creek	Buffalo Creek	Washington County, lat 32°51′, long. 82°56 at State Highway 24, 8½ miles west of Sandersville.
378	Oct. 7	1 P.M.		. 04	Wolf Creek	Commissioner Creek	Jones County, lat 33°01', long. 83°31' at State Highway 22, at Gray.
379	Oct. 7	2 P.M.		.46	Commissioner Creek	Oconee River	Jones County, lat 32°59′, long. 83°25′ at State Highway 49, 6¾ miles southeast of Gray.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
380	Oct. 11	11 A.M.		0.13	Sandy Creek	Big Sandy Creek	Jones County, lat 32°52′, long. 83°30′ at county road, 9½ miles south of Gray.
381	Nov. 6	1 P.M.		24.9	Big Sandy Creek	Oconee River	Wilkinson County, lat 32°46′, long. 83°20′ at county road, 7¾ miles south of Gordon.
382	Nov. 6	12 M.		0	Clear Creek	Big Sandy Creek	Wilkinson County, lat 32°50′, long. 83°21′ at State Highway 18, 3½ miles south of Gordon.
384	Oct. 15			0	Long Branch	Oconee River	Laurens County, lat 32°31', long. 82°55' at State Highway 31, south of Dublin.
385	Aug. 24			0	Pughes Creek	Oconee River	Laurens County, lat 32°30′, long. 82°46′ at State Highway 29, 8½ miles southeast of Dub- lin.
386	July 19 Aug. 24	4 P.M.		9.45 0	Turkey Creek	Oconee River	Laurens County, lat 32°32′, long. 83°03′ at State Highway 19, 8½ miles west of Dublin.
388	Aug. 24			0	Mercer Creek	Oconee River	Laurens-Treutlen Counties, lat 32°27', long. 82°42' at State Highway 29, 7¾ miles southwest of Soperton.
390	Aug. 2 Aug. 23			0 . 06	Ochwalkee Creek	Oconee River	Wheeler County, lat 32°11′, long. 82°39′ at State Highway 30, 1½ miles east of Glenwood.
391	July 14 July 22 Aug. 16 Sept. 14 Nov. 15	11 A.M. 11 A.M.		0 0 0 0	Cobb Creek	Altamaha River	Toombs County, lat 32°02′, long. 82°23′ at State Highway 56, 1¾ miles northeast of Cedar Crossing.
392	July 13 July 19			0	Ohoopee River	Altamaha River	Johnson County, lat 32°44′, long. 82°46′ at State Highway 57, 2¾ miles west of Wrightsville.
393	Oct. 15			0	Little Cedar Creek	Cedar Creek	Johnson County, lat 32°44′, long. 82°42′ at State Highway 78, 13⁄4 miles east of Wrights- ville.
394	Oct. 15			0	Cypress Creek	Ohoopee River	Johnson County, lat 32°44', long. 82°40' at State Highway 78, 3 miles east of Wrightsville.
395	June 8 July 21 Oct. 15 Nov. 18			0 0 0 0	Little Ohoopee River	Ohoopee River	Johnson County, lat 32°48′, long. 82°33′ at State Highway 78, 11 miles northeast of Wrightsville.
396	Oct. 15			0	Hurricane Branch	Little Ohoopee River	Johnson County, lat 32°47′, long. 82°35′ at State Highway 78, 9 miles northeast of Wrightsville.
397	Oct. 15			0	Smith Creek	Little Ohoopee River	Johnson County, lat 32°48′, long. 82°32′ at State Highway 78, 11¾ miles northeast of Wrightsville.
398	Oct. 15			0	Big Battle- ground Creek	Battleground Creek	Johnson County, lat 32°46′, long. 82°37′ at State Highway 78, 6½ miles northeast of Wrightsville.
399	Aug. 23	1 P.M.		8.16	Ohoopee River	Altamaha River	Emanuel County, lat 32°23′, long. 82°19′ at State Highway 4, 2¼ miles north of Oak Park.
400	Oct. 26			0	Pendleton Creek	Ohoopee River	Toombs County, lat 32°17′, long. 82°18′ at State Highway 4, 4¾ miles north of Lyons.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
401	Aug. 23			0	Swift Creek	Pendleton Creek	Toombs County, lat 32°14′, long. 82°22′ at State Highway 130, 3½ miles northeast of Vidalia.
402	Oct. 26			0	Swift Creek	Pendleton Creek	Toombs County, lat 32°14′, long. 82°20′ at State Highway 4, 1½ miles north of Lyons.
403	Aug. 25			0	Tributary to Swift Creek	Swift Creek	Toombs County, lat 32°13′, long. 82°20′ at State Highway 4, at Lyons.
405	Aug. 23			0	Rocky Creek	Ohoopee River	Toombs County, lat 32°12′, long. 82°25′ at county road, southwest of Vidalia.
	<u> </u>				SATILLA :	RIVER BASIN	
407	Nov. 4			0	Satilla River	Atlantic Ocean	Irwin County, lat 31°36′, long. 83°08′ at State Highway 32, 7½ miles east of Ocilla.
408	Nov. 4			0	Hunters Creek	Satilla River	Irwin County, lat 31°36′, long. 83°07′ at State Highway 32, 8¼ miles east of Ocilla.
409	Nov. 4			0	Wiggins Creek	Satilla River	Coffee County, lat 31°34′, long. 83°02′ at State Highway 32, 12 miles west of Douglas.
410	Nov. 4			0	Bear Creek	Satilla River	Coffee County, lat 31°34′, long. 83°00′ at State Highway 32, 9½ miles west of Douglas.
411	Oct. 18 July 12 Sept. 27			0 0 0	Satilla River	Atlantic Ocean	Coffee County, lat 31°25′, long. 82°51′ at State Highway 31, 6½ miles south of Douglas.
412	Oct. 18			0	Tributary to Satilla River	Satilla River	Coffee County, lat 31°26′, long. 82°51′ at State Highway 31, 5¾ miles south of Douglas.
413	Oct. 18			0	Tributary to Satilla River	Satilla River	Atkinson County, lat 31°24′, long. 82°51′ at State Highway 31, 6½ miles north of Pearson.
414	Oct. 19			0	Mose Smith Pond Creek	Pudding Creek	Atkinson County, lat 31°19′, long. 82°59′ at State Highway 50, 3¾ miles east of Willacoochee.
415	Oct. 18			0	Pudding Creek	Satilla River	Atkinson County, lat 31°22′, long. 82°50′ at State Highway 31, 4¾ miles north of Pearson.
416	Oct. 18			0	Sweetwater Creek	Satilla River	Atkinson County, lat 31°20′, long. 82°51′ at State Highway 31, 2½ miles north of Pearson.
417	Sept. 27	12 M.		.41	Satilla River	Atlantic Ocean	Atkinson County, lat 31°20′, long. 82°46′ at State Highway 64, 5¾ miles northeast of Pearson.
418	Oct. 19			0	Ricketson Bay Creek	Little Red Bluff Creek	Atkinson County, lat 31°17′, long. 82°48′ at State Highway 50, 3½ miles east of Pearson.
419	Oct. 19			0	Tributary to Red Bluff Creek	Red Bluff Creek	Atkinson County, lat 31°17′, long. 82°45′ at State Highway 50, 6½ miles east of Pearson.
420	Oct. 19			0	Red Bluff Creek	Satilla River	Atkinson County, lat 31°16′, long. 82°43′ at State Highway 50, 8½ miles east of Pearson.
421	July 12			0	Seventeen Mile Creek	Satilla River	Coffee County, lat 31°34′, long. 82°51′ at State Highway 31, 4 miles north of Douglas.

## SATILLA RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
422	Nov. 4			0	Seventeen Mile Creek	Satilla River	Coffee County, lat 31°31′, long. 82°50′ at State Highway 135, east of Douglas.
423	Nov. 4			0	Tributary to Seventeen Mile Creek	Seventeen Mile Creek	Coffee County, lat 31°33′, long. 82°48′ at State Highway 135, 3½ miles northeast of Douglas.
424	Nov. 4			0	Tributary to Seventeen Mile Creek	Seventeen Mile Creek	Coffee County, lat 31°33', long. 82°48' at State Highway 135, 4 miles northeast of Douglas.
425	Oct. 18 Nov. 4			0	Seventeen Mile Creek	Satilla River	Coffee County, lat 31°31', long. 82°45' at State Highway 32, 6 miles east of Douglas.
426	Nov. 4			0	Otter Creek	Seventeen Mile Creek	Coffee County, lat 31°35′, long. 82°45′ at Sta Highway 135, 8½ miles northeast of Dougla
427	Nov. 4			0	Tributary to Otter Creek	Otter Creek	Coffee County, lat 31°35′, long. 82°45′ at Sta Highway 135, 8 miles northeast of Douglas.
428	Nov. 4			0	Tiger Creek	Otter Creek	Coffee County, lat 31°35′, long. 82°46′ at Sta Highway 135, 6½ miles northeast of Dougla
429	Oct. 18 Nov. 4			0 0	Otter Creek	Seventeen Mile Creek	Coffee County, lat 31°31′ long. 82°45′ at Sta Highway 32, 6¼ miles east of Douglas.
430	Oct. 18			0	Hog Creek	Satilla River	Coffee County, lat 31°31′, long. 82°38′ at State Highway 32, east of Nicholls.
431	Oct. 18			0	Tributary to Hog Creek	Hog Creek	Coffee County, lat 31°31′, long. 82°37′ at State Highway 32, 1 mile east of Nicholls.
432	Oct. 18			0	Tributary to Hog Creek	Hog Creek	Coffee County, lat 31°32′, long. 82°36′ at State Highway 32, 2 miles east of Nicholls.
433	Oct. 18			0	Hurricane Creek	Hog Creek	Coffee County, lat 31°31′, long. 82°39′ at State Highway 32, west of Nicholls.
434	Oct. 18			0	Bear Creek	Hurricane Creek	Coffee County, lat 31°31′, long. 82°40′ at State Highway 32, 1½ miles west of Nichol
435	Oct. 18			0	Tributary to Bear Creek	Bear Creek	Coffee County, lat 31°31′, long. 82°40′ at State Highway 32, 2½ miles west of Nichol
437	Nov. 4	10 A.M.		0	Hurricane Creek	Alabaha River	Jeff Davis County, lat 31°48′, long. 82°40′ State Highway 135, 6½ miles southwest of Hazlehurst.
438	Nov. 4	10 A.M.		0	Tributary to Hurricane Creek	Hurricane Creek	Jeff Davis County, lat 31°48′, long. 82°40′ State Highway 135, 6¼ miles southwest of Hazlehurst.
439	Nov. 4	10 A.M.		0	Tributary to Hurricane Creek	Hurricane Creek	Jeff Davis County, lat 31°47′, long. 82°41′ State Highway 135, 8 miles southwest of Hazlehurst.
440	Nov. 4	10 A.M.		0	Burket Creek	Hurricane Creek	Jeff Davis County, lat 31°49′, long. 82°39′ : State Highway 135, 4½ miles southwest of Hazlehurst.
441	Nov. 4	9 A.M.		0	Whitehead Creek	Hurricane Creek	Jeff Davis County, lat 31°44′, long. 82°42′ ; State Highway 135, 11 miles southwest of Hazlehurst.

## SATILLA RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
443	Oct. 18			0	Hurricane Creek	Alabaha River	Bacon County, lat 31°32′, long. 82°27′ at State Highway 32, at Alma.
444	Nov. 4			0	Town Creek	Little Hurri- cane Creek	Jeff Davis County, lat 31°41', long. 82°43' a State Highway 135, 14½ miles southwest o Hazlehurst.
445	Nov. 4	9 A.M.		0	Tributary to Town Creek	Town Creek	Jeff Davis County, lat 31°42', long. 82°43' a State Highway 135, 13½ miles southwest o Hazlehurst.
446	July 12 Oct. 18			0	Little Hurri- cane Creek	Alabaha River	Bacon County, lat 31°33′, long. 82°33′ at State Highway 32, 5 miles west of Alma.
	June 8 July 12 Aug. 12 Oct. 18	10 A.M. 10 A.M. 4 P.M.		0 0 0 0	Little Hurri- cane Creek	Alabaha River	Bacon County, lat 31°30′, long. 82°32′ at State Highway 64, 5 miles southwest of Alma
448	Oct. 18			0	Mill Branch	Big Branch	Bacon County, lat 31°33′, long. 82°31′ at State Highway 32, 3½ miles west of Alma.
	July 12 Aug. 12 Oct. 18			0 0 0	Little Hurri- cane Creek	Alabaha River	Bacon County, lat 31°25′, long. 82°26′ at State Highway 4, 8½ miles south of Alma.
450	July 12	4 P.M.		2.44	Alabaha River	Satilla River	Pierce County, lat 31°19′, long. 82°14′ at Stat Highway 38, 1 mile northeast of Blackshear.
451	Nov. 4	10 A.M.		0	Big Satilla Creek	Little Satilla River	Jeff Davis County, lat 31°50', long. 82°37' a State Highway 135, 2½ miles southwest of Hazlehurst.
452	Nov. 4	10 A.M.		0	Tributary to Big Satilla Creek	Big Satilla Creek	Jeff Davis County, lat 31°51', long. 82°37' a State Highway 135, 2 miles southwest of Hazlehurst.
453	Oct. 18 Nov. 4	10 A.M.		0	Big Satilla Creek	Little Satilla Creek	Jeff Davis County, lat 31°47', long. 82°34' a State Highway 15, 6¾ miles south of Hazle hurst.
454	Nov. 4	10 A.M.		0	Tributary to Big Satilla Creek	Big Satilla Creek	Jeff Davis County, lat 31°46', long. 82°34' a county road at Spell's Still, 7¾ miles south o Hazlehurst.
455	Oct. 18			0	Tributary to Big Satilla Creek	Big Satilla Creek	Bacon County, lat 31°41', long. 82°30' at State Highway 15, 10 miles north of Alma.
456	June 8 July 12 Aug. 12 Oct. 18	12 M. 2 P.M.		0 0 0 0	Big Satilla Creek	Little Satilla River	Bacon County, lat 31°39′, long. 82°26′ at State Highway 4, 8¼ miles north of Alma.
457	July 2	3 P.M.		0	Little Satilla Creek	Little Satilla River	Wayne County, lat 82°03', long. 31°40' at State Highway 27, at Odum and 10 miles northwest of Jesup.
		ı			ST. MARY	S RIVER BASI	N
462	Oct. 4			0	Boone Creek	St. Marys River	Charlton County, lat 30°35′, long. 82°03′ at State Highway 23, 3¾ miles north of St. George.

## ST. MARYS RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
463	Oct. 4	3 P.M.		0.94	Harris Creek	St. Marys River	Charlton County, lat 30°38′, long. 82°03′ at State Highway 23, 8½ miles north of St. George.
464	Oct. 4			0	Tributary to St. Marys River	St. Marys River	Charlton County, lat 30°40′, long. 82°03′ at State Highway 23, 9¾ miles north of St. George.
465	Oct. 4			0	Tributary to St. Marys River	St. Marys River	Charlton County, lat 30°41′, long. 82°04′ at State Highway 23, 10¾ miles north of St. George.
466	Oct. 4			0	Tributary to St. Marys River	St. Marys River	Charlton County, lat30°42′, long. 82°04′ at State Highway 23, 12¾ miles north of St. George.
467	Oct. 4			0	Tributary to St. Marys River	St. Marys River	Charlton County, lat 30°43′, long. 82°04′ at State Highway 23, 13½ miles north of St. George.
468	Oct. 4			0	Cornhouse Creek	St. Marys River	Charlton County, lat 30°43′, long. 82°04′ at State Highway 23, 14 miles north of St. George.
469	Oct. 4			0	Tributary to St. Marys River	St. Marys River	Charlton County, lat 30°46′, long. 82°04′ at State Highway 23, 5½ miles southwest of Folkston.
470	Oct. 4			0	North Fork Spanish Creek	Spanish Creek	Charlton County, lat 30°55′, long. 82°05′ at State Highway 4, 7¾ miles northwest of Folkston
471	Oct. 4			0	East Fork Spanish Creek	Spanish Creek	Charlton County, lat 30°54′, long. 82°05′ at State Highway 4, 6½ miles northwest of Folkston
472	Oct. 4	1 P.M.		2.17	Spanish Creek	St. Marys River	Charlton County, lat 30°48′, long. 82°02′ at State Highway 23, 2 miles southwest of Folkston.
		<u></u>	1		SUWANNEI	E RIVER BASI	IN
475	July 20		48	0	Alligator Creek	Suwannee River	Ware County, lat 31°08′, long. 82°30′ at State Highway 38, 10½ miles southwest of Way- cross.
476	July 20		24	0	Suwannee Creek	Suwannee Lake	Ware County, lat 31°05', long. 82°37' at State Highway 38, 3 miles west of Manor.
477	July 12		29	0	Cane Creek	Suwannee River	Clinch County, lat 31°03′, long. 82°42′ at State Highway 38, 3½ miles west of Argyle.
478	July 12		35	0	Saviors Creek	Suwannee River	Clinch County, lat 31°03′, long. 82°44′ at State Highway 38, 1½ miles east of Homerville.
479	July 1 July 12 Oct. 20		39	0 0 0	Tatum Creek	Suwannee River	Clinch County, lat 30°54′, long. 82°40′ at State Highway 89, 11 miles southeast of Homerville
480	July 12			0	Tributary to Tatum Creek	Tatum Creek	Clinch County, lat 30°51′, long. 82°40′ at State Highway 89, 12½ miles northwest of Fargo.
481	July 12			0	Tributary to Tatum Creek	Tatum Creek	Clinch County, lat 30°50′, long. 82°39′ at State Highway 89, 11¾ miles northwest of Fargo.
483	July 1 July 12 Oct. 20		140	0 0 0	Suwannoochee Creek	Suwannee River	Clinch County, lat 30°59', long. 82°53' at State Highway 38, at DuPont.
484	July 12 July 20		450	0.5	Suwannoochee Creek	Suwannee River	Clinch-Echols Counties, lat 30°40′, long. 82° 35′ at State Highway 94, 1½ miles west of Fargo.

## SUWANNEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
485	July 20		26	0	Toms Creek	Suwannee River	Echols County, lat 30°41′, long. 82°52′ at State Highway 94, 4½ miles east of Tarver.
486	Aug. 23 Sept. 15	5 P.M.	38	0	Alapaha River	Suwannee River	Wilcox County, lat 31°57′, long. 83°34′ at State Highway 30, 1½ miles west of Pitts.
487	Aug. 23		7.0	0	Tributary to Alapaha River	Alapaha River	Crisp County, lat 31°57′, long. 83°37′ at State Highway 30, 9½ miles east of Cordele.
488	Aug. 23 Sept. 16	10 A.M.		0	Mill Creek	Alapaha River	Wilcox County, lat 31°57′, long. 83°29′ near Rochelle.
489	June 21 July 13 Aug. 23		110	0 0 0	Alapaha River	Suwannee River	Ben Hill-Turner Counties, lat 31°49', long. 82°28' at State Highway 90, 1 mile east of Rebecca.
490	Aug. 23		41	0	Double Run Creek	Alapaha River	Turner County, lat 31°47′, long. 83°30′ at State Highway 112, 1½ miles south of Re- becca.
491	Oct. 26			0	West Fork Deep Creek	Deep Creek	Turner County, lat 31°45′, long. 83°41′ at State Highway 7, 0.7 mile northwest of Worth.
492	Oct. 26			0	South Fork Deep Creek	Deep Creek	Turner County, lat 31°45′, long. 83°40′ at State Highway 7, at Worth.
493	June 21 July 13 Aug. 23		140	0 0 0	Deep Creek	Alapaha River	Turner County, lat 31°44′, long. 83°35′ at State Highway 112, 4½ miles east of Ashburn.
494	July 13 Aug. 23		430	0	Alapaha River	Suwannee River	Irwin County, lat 31°38′, long. 83°25′ at State Highway 32, 10½ miles west of Ocilla.
495	July 13 Aug. 23		14	0	Sand Creek	Alapaha River	Irwin County, lat 31°38′, long. 83°28′ at State Highway 32, 131⁄4 miles west of Ocilla.
496	Aug. 23		1.1	0	Hat Creek	Alapaha River	Turner County, lat 31°42′, long. 83°38′ at county road, southeast of Ashburn.
497	Nov. 4		570	0	Alapaha River	Suwannee River	Irwin-Tift Counties, lat 31°32′, long. 83°24′ at State Highway 35, 8½ miles northeast of Tifton.
499	Oct. 19			0	Tributary to Alapaha River	Alapaha River	Berrien County, lat 31°23', long. 83°10' at State Highway 50, 3 miles east of Alapaha.
500	Aug. 23		2.9	0	Tributary to Turkey Branch	Turkey Branch	Ben Hill County, lat 31°41′, long. 83°16′ at county road, $2\frac{3}{4}$ miles south of Fitzgerald.
501	Nov. 4			0	Willacoochee Creek	Alapaha River	Irwin County, lat 31°36′, long. 83°10′ at State Highway 32, 4¾ miles east of Ocilla.
502	June 30 Aug. 24	12 M.	90	0	Willacoochee Creek	Alapaha River	Irwin County, lat 31°30′, long. 83°10′ at county road, 8 miles southeast of Ocilla.
503	Aug. 23 Nov. 4	8 A.M.	29	0	Reedy Creek	Willacoochee Creek	Irwin County, lat 31°34′, long. 83°19′ at State Highway 35, 4½ miles southwest of Ocilla.
504	Nov. 4	8 A.M.		0	Stump Creek	Little Brushy Creek	Irwin County, lat 31°36′, long. 83°16′ at State Highway 32, 1 mile west of Ocilla.
505	Aug. 23			0	Stump Creek	Little Brushy Creek	Irwin County, lat 31°35′, long. 83°15′ at State Highway 11, 1 mile south of Ocilla.

# SUWANNEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
506	Nov. 4			0	Little Brushy Creek	Willacoochee Creek	Irwin County, lat 31°35', long. 83°12' at State Highway 32, 3 miles east of Ocilla.
507	Oct. 11 Oct. 19 July 13	3 P.M.	11	0 0 *	Willacoochee Creek	Alapaha River	Atkinson-Berrien Counties, lat $31^{\circ}22'$ , long. $83^{\circ}06'$ , at State Highway 50, $3\frac{1}{2}$ miles east of Willacoochee.
508	Oct. 19			0	Tributary to Alapaha River	Alapaha River	Atkinson County, lat $31^{\circ}21'$ , long. $83^{\circ}04'$ at State Highway 50, $1\frac{1}{2}$ miles west of Willacoochee.
509	July 13 Aug. 24	3 P.M. 11 A.M.	920	3.32 1.49	Alapaha River	Suwannee River	Atkinson-Berrien Counties, lat 31°20', long. 83°04' at State Highway 135, 1¼ miles southwest of Willacoochee.
510	July 21 Oct. 20	10 A.M. 2 P.M.	1060	14.0 5.98	Alapaha River	Suwannee River	Lanier County, lat 31°03′, long. 83°03′ at State Highway 37, 2 miles east of Lakeland.
511	Aug. 24	2 P.M.	23	. 60	Ten Mile Creek	Big Creek	Berrien County, lat 31°13′, long. 83°11′ at State Highway 76, 3½ miles east of Nashville.
512	Aug. 24		15	0	Fivemile Creek	Big Creek	Berrien County, lat 31°14′, long. 83°08′ at State Highway 76, 7½ miles east of Nashville
513	July 21	11 A.M.	140	.30	Big Creek	Alapaha River	Lanier County, lat 31°02′, long. 83°04′ at State Highway 11, at Lakeland.
514	July 20	4 P.M.	1250	18.5	Alapaha River	Suwannee River	Lowndes-Lanier Counties, lat 30°55′, long. 83°02′ at State Highway 38, 2½ miles southwest of Stockton.
516	July 19	2 P.M.	95	1.31	Grand Bay Creek	Little River	Lowndes-Echols Counties, lat $30^{\circ}47'$ , long. $83^{\circ}08'$ at State Highway 94, $5\frac{1}{2}$ miles southwest of Howell.
517	July 19	3 P.M.	200	6.98	Little River	Alapaha River	Echols County, lat 30°42′, long. 83°07′ at county road, 5½ miles west of Statenville.
518	Oct. 19			0	Tributary to Withlacoochee River	Withlacoochee River	Tift County, lat 31°25′, long. 83°22′ at State Highway 50, 8½ miles southeast of Tifton.
519	Oct. 19			0	Withlacoochee River	Suwannee River	Berrien County, lat 31°25', long. 83°21' at State Highway 50, 2 miles west of Enigma.
520	Oct. 19			0	Camp Creek	Withlacoochee River	Berrien County, lat 31°25', long. 83°21' at State Highway 50, at Enigma.
521	Oct. 19			0	Tributary to Withlacoochee River	Withlacoochee River	Tift County, lat 31°25′, long. 83°20′ at State Highway 50, 6½ miles southeast of Tifton.
522	Oct. 19			0	Tributary to Dry Creek	Dry Creek	Berrien County, lat 31°25′, long. 83°20′ at State Highway 50, at Enigma.
523	Oct. 19			0	Gum Creek	Dry Creek	Berrien County, lat 31°24′, long. 83°18′ at State Highway 50, 1½ miles east of Enigma.
524	Aug. 24		120	0	Withlacoochee River	Suwannee River	Berrien County, lat 31°13′, long. 83°16′ at State Highway 125, 1¾ miles west of Nash-ville.

<sup>\*</sup>Flow less than 0.005 cfs.

#### SUWANNEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
525	July 13		130	0.31	Withlacoochee River	Suwannee River	Berrien County, lat 31°12′ long., 83°16′ at State Highway 76, 1½ miles southwest of Nashville.
526	Oct. 11		10	0	Tributary to New River	New River	Tift County, lat 31°26', long. 83°26' at State Highway 50, 5 miles southeast of Tifton.
527	Oct. 19			0	Tributary to New River	New River	Tift County, lat 31°26', long. 83°25' at State Highway 50, 6 miles southeast of Tifton.
528	Oct. 19 Nov. 4			0	New River	Withlacoochee River	Tift County, lat 31°27′, long. 83°29′ at State Highway 35, 1½ miles east of Tifton.
529	Oct. 12			0	Tributary to New River	New River	Tift County, lat 31°23′, long. 83°30′ at State Highway 7, 5½ miles south of Tifton.
530	Aug. 24		150	0	New River	Withlacoochee River	Berrien-Cook Counties, lat 31°11′, long. 83° 19′ at State Highway 76, 4¾ miles southwes of Nashville.
531	Oct. 12			0	Bear Branch	Days Creek	Cook County, lat 31°08', long. 83°26' at State Highway 7, 1 mile north of Adel.
532	Aug. 24		9.7	0	Cat Creek	Withlacoochee River	Berrien County, lat 31°04′, long. 83°12′ at State Highway 37, at Ray City.
533	July 16		540	0	Withlacoochee River	Suwannee River	Lowndes County, lat 30°53′, long. 83°19′ at State Highway 7, 5 miles northwest of Val- dosta.
534	Aug. 23		20	0	Little River	Withlacooch <del>ee</del> River	Turner County, lat 31° 40′, long. 83° 42′ at Stat Highway 112, 3¼ miles southwest of Ashburn
535	Aug. 23			0	Tributary to Ashburn Branch	Ashburn Branch	Turner County, lat 31°43′, long. 83°40′ at county road at west city limits of Ashburn.
536	Aug. 23		5.7	0	Daniels Creek	Little River	Turner County, lat 31°38′, long. 83°43′ at Stat Highway 112, 6 miles southwest of Ashburn
537	June 6 June 29 July 16 Aug. 18		130	0 0 0 0	Little River	Withlacoochee River	Tift County, lat 31°26', long. 83°34' at Stat Highway 50, 3 miles west of Tifton.
538	Oct. 12			0	Little River	Withlacoochee River	Tift County, lat 31°24′, long. 83°32′ at Stat Highway 35, 4¾ miles south of Tifton.
539	Oct. 12			0	Arnold Creek	Little River	Tift County, lat 31°23′, long. 83°33′ at Stat Highway 35, 5¾ miles south of Tifton.
540	Oct. 12		4.8	0	Gum Creek	Little River	Tift County, lat 31°21', long. 83°35' at Stat Highway 35, 1 mile northeast of Omega.
541	June 24 July 16 Aug. 18		48	0 0	Ty Ty Creek	Warrior Creek	Tift County, lat 31°28', long. 83°40' at Stat Highway 50, 1 mile west of Ty Ty.
542	Oct. 12 Oct. 20		97	0	Ty Ty Creek	Warrior Creek	Colquitt County, lat 31°20′, long 83°37′ at State Highway 35, 1½ miles northeast of Crosland.
543	July 16		20	0	Warrior Creek	Little River	Worth County, lat 31°31′, long. 83°49′ at Stat Highway 50, 13⁄4 miles east of Sylvester.

#### SUWANNEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
544	Oct. 12 Oct. 20		160	0	Warrior Creek	Little River	Colquitt County, lat 31°18′, long. 83°40′ at State Highway 35, 3 miles northeast of Norman Park.
545	Oct. 12			0	Tributary to Warrior Creek	Warrior Creek	Colquitt County, lat 31°17′, long. 83°41′ at State Highway 31, 1 mile northeast of Norman Park.
547	Oct. 20		12	0	Bull Creek	Little River	Colquitt County, lat 31°09′, long. 83°37′ at State Highway 37, 2½ miles southwest of Ellenton.
548	Oct. 12 Oct. 20		10	0	Indian Creek	Little River	Colquitt County, lat 31°15′, long. 83°44′ at State Highway 35, 3 miles southwest of Nor man Park.
549	Oct. 12			0	Tributary to Indian Creek	Indian Creek	Colquitt County, lat 31°14′, long. 83°44′ at State Highway 35, 3½ miles southwest of Norman Park.
550	Oct. 20		21	0	Indian Creek	Little River	Colquitt County, lat 31°11′, long. 83°43′ at State Highway 37, 4 miles east of Moultrie.
551	Oct. 12 Oct. 20		4.1	0	Little Indian Creek	Indian Creek	Colquitt County, lat 31°13′, long. 83°45′ at State Highway 35, 4 miles northeast of Moultrie.
552	Oct. 20		8.8	0	Little Indian Creek .	Indian Creek	Colquitt County, lat 31°11', long. 83°44' at State Highway 37, 3½ miles east of Moultrie
553	Oct. 12			0	Bear Creek	Indian Creek	Colquitt County, lat 31°15′, long. 83°43′ at State Highway 35, 2½ miles southwest of Norman Park.
554	Oct. 20		17	0	Bear Creek	Indian Creek	Colquitt County, lat 31°11', long. 83°41' at State Highway 37, 6½ miles east of Moultrie
555	Oct. 20		8.0	0	Reedy Creek	Bear Creek	Colquitt County, lat 31°10', long. 83°39' at State Highway 37, 7¾ miles east of Moultrie
556	Oct. 12			0	Morrison Creek	Wells Mill Creek	Cook County, lat 37°07′, long. 83°26′ at Stat Highway 76, 2 miles south of Adel.
557	Oct. 12			0	Wells Mill Creek	Little River	Cook County, lat 31°04′, long. 83°28′ at Stat Highway 76, 5½ miles southwest of Adel.
558	Oct. 12		7.2	0	Slaughter Creek	Little River	Brooks County, lat 30°59′, long. 83°30′ at State Highway 76, 3 miles north of Morven.
559	Oct. 12			0	Tributary to Slaughter Creek	Slaughter Creek	Brooks County, lat 30°58', long. 83°30' at State Highway 76, 1 mile north of Morven.
560	Oct. 12			0	Downing Creek	Slaughter Creek	Brooks County, lat 30°54′, long. 83°30′ at State Highway 76, 3½ miles south of Morver
561	Oct. 12			0	Jones Creek	Downing Creek	Brooks County, lat 30°55′, long. 83°30′ at State Highway 76, 2 miles south of Morven.
562	July 16	2 P.M.	880	.86	Little River	Withlacoochee River	Brooks-Lowndes Counties, lat 30°51′, long. 83°21′ at county road, 13 miles northeast of Quitman.

#### SUWANNEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the drought 1954.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
563	Oct. 12	4 P.M.	1480	8.03	Withlacoochee River	Suwannee River	Brooks-Lowndes Counties, lat 30°47′, long. 83°27′ at State Highway 38, 6½ miles east of Quitman.
564	July 16 Oct. 12 Oct. 20		27	0 0 0	Okapilco Creek	Withlacoochee River	Colquitt County, lat 31°12′, long. 83°47′ at State Highway 35, 1½ miles north of Moul- trie.
565	Oct. 12			0	Coon Creek	Okapilco Creek	Brooks County, lat 30°52′, long. 83°31′ at State Highway 76, 6½ miles northeast of Quitman.
566	Oct. 12			0	Tributary to Coon Creek	Coon Creek	Brooks County, lat 30°50′, long. 83°31′ at State Highway 76, 4 miles northeast of Quit- man.
567	July 16	1 P.M.	280	. 86	Okapilco Creek	Withlacoochee River	Brooks County, lat 30°47′, long. 83°32′ at State Highway 38, 1¾ miles east of Quitman.
568	Oct. 12		84	0	Piscola Creek	Okapilco Creek	Brooks County, lat 30°47′, long. 83°41′ at State Highway 38, 1 mile southwest of Dixie.
569	Oct. 12			0	Tributary to Piscola Creek	Piscola Creek	Brooks County, lat 30°47′, long. 83°39′ at State Highway 38, 0.8 miles northeast of Dixie.
570	Oct. 12		15	0	Tributary to Piscola Creek	Piscola Creek	Brooks County, lat 30°47′, long. 83°36′ at State Highway 38, 2½ miles east of Quitman.
571	July 16	1 P.M.	150	0	Piscola Creek	Okapilco Creek	Brooks County, lat 30°45′, long. 83°32′ at State Highway 33, 3½ miles southeast of Quitman.
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573	Oct. 12	2 P.M.	1.5	*	Olive Creek	Aucilla River	Thomas County, lat 30°50′, long. 83°58′ at State Highway 38 east of Thomasville.
574	Oct. 12			0	Aucilla River	Gulf of Mexico	Thomas County, lat 30°49′, long. 83°52′ at State Highway 38, 7¼ miles east of Thomasville.
575	Oct. 12			0	Masse Branch	Olive Creek	Thomas County, lat 30°48', long. 83°50' at State Highway 38, 9 miles east of Thomasville.
576	Oct. 12		82	0	Aucilla River	Gulf of Mexico	Thomas County, lat 30°47′, long. 83°48′ at State Highway 133, southwest of Boston.
577	Oct. 12			0	Tributary to Aucilla Creek	Aucilla Creek	Thomas County, lat 30°47′, long. 83°46′ at State Highway 38, 2 miles east of Boston.
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578	Aug. 16 Oct. 20	5 P.M. 9 A.M.		0	Ochlockonee River	Gulf of Mexico	Colquitt County, lat 31°11′, long. 83°48′ at State Highway 37 west of Moultrie.
579	Oct. 14 Oct. 20		5.5	0	Little Creek	Ochlockonee River	Colquitt County, lat 31°12′, long. 83°53′ at State Highway 37, 1¼ miles west of Funston
580	Oct. 19			0	Tributary to Little Creek	Little Creek	Colquitt County, lat 31°12′, long. 83°54′ at State Highway 37, 1¾ miles west of Funston

<sup>\*</sup>Flow less than 0.005 cfs.

## OCHLOCKONEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
581	Oct. 14 Oct. 20		43	0	Bridge Creek	Ochlockonee River	Colquitt County, lat 31°12′, long. 83°56′ at State Highway 37, 3¾ miles west of Funston
582	Oct. 14			0	Tributary to Bridge Creek	Bridge Creek	Colquitt County, lat 31°12′, long. 83°56′ at State Highway , 4 miles west of Funston.
583	Oct. 12			0	Tributary to Big Creek	Big Creek	Thomas County, lat 31°00', long. 83°52' at State Highway 35 south of Coolidge.
584	Oct. 12			0	Tributary to Big Creek	Big Creek	Thomas County, lat 30°59′, long. 83°53′ at State Highway 35, 2½ miles southwest of Coolidge
585	Oct. 12		49	0	Big Creek	Ochlockonee River	Thomas County, lat 30°58′, long. 83°53′ at State Highway 35, 2¾ miles southwest of Coolidge
586	Oct. 12			0	Coon Creek	Ochlockonee River	Thomas County, lat 30°56′, long. 83°55′ at State Highway 35, 2 miles southwest of Merrillville
587	Oct. 12			0	Tributary to Coon Creek	Coon Creek	Thomas County, lat 30°55′, long. 83°55′ at Stat Highway 35, 3 miles southwest of Merrillville
588	Oct. 14 Oct. 20		20	0	Little Ochlock- onee River	Ochlockonee River	Colquitt County, lat 31°13′, long. 84°00′ at State Highway 37, 9¼ miles west of Funston
589	Oct. 14			0	Tributary to Little Ochlock- onee River	Little Ochlock- onee River	Colquitt County, lat 31°13′, long. 83°59′ at State Highway 37, 9 miles west of Funston.
590	Oct. 19			0	Lost Creek	Little Ochlock- onee River	Mitchell County, lat 31°14′, long. 84°03′ at State Highway 37, 2½ miles southwest of Sal City.
591	Oct. 20		21	0	Lost Creek	Little Ochlock- onee River	Mitchell County, lat 31°10′, long. 84°03′ at State Highway 93, 1¼ miles east of Cotton.
592	Oct. 20			0	Big Creek	Little Creek	Mitchell County, lat 31°08', long. 84°07' at State Highway 93, 2 miles east of Pelham.
593	Oct. 12			0	Goodwater Creek	Oquina Creek	Thomas County, lat 30°53′, long. 83°56′ at State Highway 35, 4½ miles northeast of Thomasville.
595	Sept. 27	4 P.M.	100	1.66	Barnetts Creek	Ochlockonee River	Thomas-Grady Counties, lat 30°54′, long. 84 05′ at county road, 7½ miles northwest of Thomasville.
596	Sept. 8	2 P.M.	31	.35	Tired Creek	Ochlockonee River	Grady County, lat 30°54′, long. 84°16′ at Stat Highway 38, 3¾ miles northwest of Cairo.
597	Sept. 7	4 P.M.	19	1.06	Wolf Creek	Tired Creek	Grady County, lat 33°54′, long. 84°18′ at Stat Highway 38, 2½ miles northwest of Whighan
599	Sept. 8		20	0	Little Tired Creek	Tired Creek	Grady County, lat 30°53', long. 84°11' at State Highway 38 east of Cairo.
600	Sept. 8		14	0	Turkey Creek	Tired Creek	Grady County, lat 30°49′, long. 84°15′ at Stat Highway 111, 4½ miles southwest of Cairo.
601	Sept. 8	12 M.		. 54	Maxwell Creek	Tired Creek	Grady County, lat 30°49', long. 84°15' at State Highway 111, 5 miles southwest of Cairo
602	Sept. 7 Oct. 21	2 P.M. 9 A.M.			Attapulgus Creek	Little River	Decatur County, lat 30°53′, long. 84°23′ at State Highway 38, 3¼ miles east of Climax.

#### OCHLOCKONEE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

	Т	ABLE 3.	Low-flov	v meası	irements at part	ial-record gaging	stations during the 1954 drought.
Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
603	Sept. 7	3 P.M.		0.13	Tributary to Attapulgus Creek	Attapulgus Creek	Decatur County, lat 30°53′, long. 84°23′ at State Highway 38, 2½ miles east of Climax.
604	Oct. 21	12 M.	54	5.82	Attapulgus Creek	Little River	Decatur County, lat 30°44′, long. 84°27′ at State Highway 1, 2 miles southeast of Atta- pulgus.
605	Oct. 21	1 P.M.	2.1	5.27	Little Attapul- gus Creek	Attapulgus Creek	Decatur County, lat 30°43′, long. 84°30′ at county road, 2½ miles south of Attapulgus.
606	Oct. 21	11 A.M.	39	.43	Swamp Creek	Attapulgus Creek	Decatur County, lat $30^{\circ}43'$ , long. $84^{\circ}25'$ at State Highway 1, $4\sqrt[3]{4}$ miles southeast of Attapulgus.
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607	Oct. 13	11 A.M.	8.78	8.47	Smith Creek	Chattahoochee River	White County, lat 34°43′, long. 83°44′ at county road, 1½ miles north of Helen.
608	Oct. 15	2 P.M.	45.0	24.4	Chattahoochee River	Apalachicola River	White County, lat 34°42′, long. 83°44′ at State Highway 75 at Helen.
609	Oct. 15	1 P.M.	13.0	7.76	Dukes Creek	Chattahoochee River	White County, lat 34°41′, long. 83°46′ at county road, 2½ miles west of Helen.
610	Oct. 18	4 P.M.	21.5	12.3	Dukes Creek	Chattahoochee River	White County, lat 34°40′, long. 83°43′ at State Highway 75 south of Nacoochee.
611	Oct. 18	3 P.M.	73.8	38.0	Chattahoochee River	Apalachicola River	White County, lat 34°41′, long. 83°41′ at county road (abandoned), ½ mile south of Sautee.
612	Oct. 18	1 P.M.	16.1	12.9	Chickamauga Creek	Sautee Creek	White County, lat 34°43′, long. 83°39′ at county road, 2½ miles northeast of Sautee.
613	Oct. 18	3 P.M.	33.4	21.8	Sautee Creek	Chattahoochee River	White County, lat 34°41′, long. 83°40′ at State Highway 105, 0.4 miles southeast of Sautee.
614	Oct. 19	10 A.M.	117	65.5	Chattahoochee River	Apalachicola River	White-Habersham Counties, lat $34^{\circ}38'$ , long $83^{\circ}39'$ at county road, $7\frac{1}{2}$ miles east of Cleveland.
616	Oct. 7	11 A.M.	6.33	2.49	Glade Creek	Soque River	Habersham County, lat 34°38′, long. 83°29′ at Anandale, 3 miles northeast of Clarkesville.
617	Oct. 7	1 P.M.	13.3	6.53	Beaverdam Creek	Soque River	Habersham County, lat 34°37′, long. 83°32′ at State Highway 115 near Clarkesville.
618	Oct. 7	2 P.M.	16.6	4.90	Hazel Creek	Soque River	Habersham County, lat 34°35′, long. 83°31′ at County road 1 mile south of Clarkesville.
619	Oct. 19	11 A.M.	5.12	1.26	Little Hazel Creek	Hazel Creek	Habersham County, lat 34°33′, long. 83°32′ at county road, 1½ miles south of Demorest.
620	Oct. 19	1 P.M.	154	134	Soque River	Chattahoochee River	Habersham County, lat 83°35′, long. 34°34′ at Cannon Bridge, 2½ miles west of Demorest.
621	Oct. 19	12 M.	5.02	3.12	Mossy Creek	Chattahoochee River	White County, lat 34°33′, long. 83°44′ at U.S. Highway 129, 3½ miles southeast of Cleveland.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
622	Oct. 19	12 M.	2.35	1.20	Dean Creek	Mossy Creek	White County, lat 34°32′, long. 83°44′ at U. S. Highway 129, 4¾ miles southeast of Cleveland.
623	Oct. 19		1	2.45	Little Mud Creek	Mud Creek	Habersham County, lat 34°30′, long. 83°35′ at county road, 2½ miles west of Baldwin.
624	Oct. 19	10 A.M.		.42	King Branch	Little Mud Creek	Habersham County, lat 34°27′, long. 83°37′, 1½′ miles west of Georgia State Industrial School and 2 miles southwest of Alto.
626	Oct. 14	11 A.M.	33.1	14.1	Chestatee River	Chattahoochee River	Lumpkin County, lat 34°40′, long. 83°55′ at U. S. Highway 19, 10 miles northeast of Dahlonega.
627	Oct. 14	1 P.M.	8.28	2,96	Tesnatee Creek	Chestatee River	White County, lat 34°40′, long. 83°51′ at U. S. Highway 129, 6¾ miles northwest of Cleveland.
628	Oct. 15	10 A.M.	9.89	4.44	Little Tes- natee Creek	Tesnatee Creek	White County, lat 34°37′, long. 83°47′ at U. S. Highway 129, northwest of Cleveland.
629	Oct. 14	2 P.M.	25.4	13.1	Little Tes- natee Creek	Tesnatee Creek	White County, lat 34°36′, long. 83°48′ at county road, 2½ miles west of Cleveland.
631	Oct. 14	9 A.M.	31.1	16.9	Yahoola Creek	Chestatee River	Lumpkin County, lat 34°33′, long. 83°58′ at State Highway 52 at Dahlonega.
632	Oct. 19	2 P.M.	21.9	6.91	Cane Creek	Chestatee River	Lumpkin County, lat 34°32', long. 84°00' at U. S. Highway 19 at Dahlonega.
633	Oct. 20	10 A.M.	290	108	Chestatee River	Chattahoochee River	Lumpkin County, lat 34°26′, long. 83°59′ at county road, 3¾ miles southeast of Auraria.
634	Oct. 14	10 A.M.	288	122	Chestatee River	Chattahoochee River	Hall-Dawson Counties, lat 34°20′, long. 83°58′ at State Highway 53, 8 miles west of Gainesville.
635	Oct. 13	3 P.M.	4.8	. 44	Mud Creek	Chattahoochee River	Hall County, lat 34°12′, long. 83°55′ at county road 1¾ miles north of Flowery Branch.
636	Oct. 13	2 P.M.	1.7	.46	Flowery Branch	Chattahoochee River	Hall County, lat 34°11′, long. 83°56′ at U. S. Highway 23 at Flowery Branch.
637	Oct. 13	3 P.M.	4.1	.76	Big Creek	Chattahoochee River	Hall County, lat 34°10′, long. 83°58′ at county road, 23⁄4 miles southwest of Flowery Branch.
638	Nov. 15	11 A.M.		. 99	Suwannee Creek	Ball Ridge Creek	Forsyth County, lat 34°14′, long. 84°08′ near State Highway 141, 1½ miles north of Cum- ming, and upstream from pumping plant.
639	Oct. 14	8 P.M.	11.9	3.00	Ball Ridge Creek	Chattahoochee River	Forsyth County, lat 34°12′, long. 84°06′ at county road, 2½ miles east of Cumming.
640	Oct. 6	1 P.M.	4.6	. 60	Richland Creek	Chattahoochee River	Gwinnett County, lat 34°08′, long. 84°03′ at State Highway 20, west of Buford.
642	Oct. 13	12 M.	13.9	3.24	Big Creek	Chattahoochee River	Forsyth County, lat 34°07′, long. 84°06′ at county road, ½ mile upstream from mouth.
643	Oct. 6	11 A.M.	.77	.04	Brush Creek	Chattahoochee River	Gwinnett County, lat 34°03′, long. 84°05′ at county road, at west city limits of Suwannee.
644	Oct. 6			0	Ivy Creek	Suwannee Creek	Gwinnett County, lat 34°04′, long. 84°00′ at State Highway 20, south of Buford.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
645	Sept. 9 Sept. 14	11 A.M. 9 A.M.		502 471	Chattahoochee River	River	Gwinnett-Fulton Counties, lat 34°00', long. 84°12' at crossing of State Highway 141, 4½ miles north of Norcross.
647	Oct. 13	11 A.M.	36.4	2.81	Big Creek	River	Forsyth County, lat 34°09', long. 84°13' at U. S. Highway 19, 6 miles southwest of Cumming.
648	Sept. 8	12 M.	67.4	3.93	Big Creek		Fulton County, lat 34°04′, long. 84°16′ at county road, 2½ miles east of Alpharetta.
649	Sept. 8	10 A.M.	4.8	.79	Four Killer Creek		Fulton County, lat $34^{\circ}04'$ , long. $84^{\circ}20'$ at U.S. Highway 19, $2\frac{1}{4}$ miles southwest of Alpharetta.
	Sept. 8 Oct. 6	11 A.M. 7 P.M.	96.4	7.17 $2.75$	Big Creek	Chattahoochee River	Fulton County, lat 34°02′, long. 84°20′ at Holcombs Bridge Road east of Roswell.
651	Sept. 8	2 P.M.	31.0	2.56	Soap Creek	Chattahoochee River	Cobb County, lat 33°57′, long. 84°26′ at South Roswell Road, east of Marietta.
652	Sept. 30	4 P.M.	6.01	.01	Long Island Creek	Chattahoochee River	Fulton County, lat 33°53′, long. 84°25′ at Northside Drive in Atlanta.
653	Sept. 27	12 M.	15	1.94	Rottenwood Creek	Chattahoochee River	Cobb County, lat 33°55′, long. 84°29′ at Terrell Mill Road near Marietta.
655	Sept. 28	9 A.M.	10.8	. 22	North Fork Peachtree Creek	Peachtree Creek	DeKalb County, lat 33°53′, long. 84°16′ at Tucker Road near Chamblee.
656	Sept. 28	10 A.M.	28.0	. 21	North Fork Peachtree Creek	Peachtree Creek	DeKalb County, lat 33°50′, long. 84°19′ at Clairmont Road near Atlanta.
657	Sept. 30	3 P.M.	38.8	. 13	North Fork Peachtree Creek	Peachtree Creek	Fulton County, lat 33°49′, long. 84°22′ at Lindbergh Drive, Atlanta.
658	Sept. 28	11 A.M.	6.25	. 02	South Fork Peachtree Creek	Peachtree Creek	DeKalb County, lat 33°49', long. 84°15' at Montreal Road at Clarkston.
659	Sept. 28		9.20	*	South Fork Peachtree Creek	Peachtree Creek	DeKalb County, lat 33°48', long. 84°17' at U. S. Highway 29 near Decatur.
660	Sept. 28		1.84	. 03	Montreal Branch	Burnt Fork Creek	DeKalb County, lat 33°50′, long. 84°16′ at Hudson Road near Montreal.
661	Sept. 28	11 A.M.	4.66	. 20	Burnt Fork Creek	South Prong Peachtree Creek	DeKalb County, lat 33°49′, long. 84°18′ at North Druid Hills Road, north of Decatur.
662	Sept. 28		28.2	0	South Fork Peachtree Creek	Peachtree Creek	DeKalb County, lat 33°48′, long. 84°20′ at Johnson Mill Road near Atlanta.
663	Sept. 30	2 P.M.	86.9	2.31	Peachtree Creek	Chattahoochee River	Fulton County, lat 33°49′, long. 84°25′ at Northside Drive, Atlanta.
664	Sept. 8	4 P.M.		8.34	Peachtree Creek	Chattahoochee River	Fulton County, lat 33°50′, long. 84°27′ at Ridgewood Road at Atlanta.
665	Sept. 8 Oct. 8	2 P.M. 9 A.M.		297 232	Chattahoochee River	Apalachicola River	Fulton-Cobb Counties, lat 33°50', long. 84°28' 50 feet upstream from out fall of Clayton Sewage Treatment Plant of the City of Atlanta.
666	Sept. 30	12 M.	15.5	. 9	5 Proctor Creek	Chattahoochee River	Fulton County, lat 33°48', long. 84°29' at Bolton Road, Atlanta.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
667	Sept. 30	11 A.M.	9.65	0.31	North Utoy Creek	Utoy Creek	Fulton County, lat 33°44', long. 84°31' at Fairburn Road, north of Ben Hill.
668	Sept. 30	11 A.M.	12.3	.70	South Utoy Creek	Utoy Creek	Fulton County, lat 33°44′, long. 84°31′ at Fairburn Road, north of Ben Hill.
669	Sept. 28	2 P.M.	2.6	0	Tributary to Mud Creek	Mud Creek	Carroll County, lat 33°46', long. 84°54' at State Highway 61, north of Villa Rica.
670	Sept. 29	9 A.M.	13	. 11	Mill Creek	Sweetwater Creek	Paulding County, lat 33°52', long. 84°46' a State Highway 92, south of Hiram.
671	Sept. 29	11 A.M.	13	. 01	Gothards Branch	Sweetwater Creek	Paulding County, lat 33°47', long. 84°45' a State Highway 92, south of Hiram.
672	Sept. 27	11 A.M.	17	. 51	Powder Springs Creek	Sweetwater Creek	Cobb County, lat 33°52′, long. 84°43′ at Stat Highway 6, west of Powder Springs.
673	Sept. 27	3 P.M.	6.3	. 04	Noses Creek	Sweetwater Creek	Cobb County, lat 33°57', long. 84°37' at Star Highway 120, west of Marietta.
674	Sept. 27	3 P.M.	5.7	. 07	Wards Creek	Noses Creek	Cobb County, lat 33°55′, long. 84°36′ at Wards Road, southwest of Marietta.
675	Sept. 27		46	0	Noses Creek	Sweetwater Creek	Cobb County, lat 33°50′, long. 84°39′ at Povder Springs-Mableton Road near Clarksdale
676	Sept. 27	10 A.M.	14	1.28	Olley Creek	Sweetwater Creek	Cobb County, lat 33°50', long. 84°38' at Pouder Springs-Mableton Road, north of Auste
678	Sept. 21	1 P.M.	4.5	. 14	Beaver Ruin Creek	Sweetwater Creek	Douglas County, lat 33°46′, long. 84°40′ at county road, 1½ miles southwest of Lithia Springs and upstream from Groovers Lake.
679	Sept. 27	12 M.	11	. 32	Deep Creek	Chattahoochee River	Fulton County, lat 33°38′, long. 84°36′ at Jones Road, north of Fairburn.
680	Sept. 27	1 P.M.	27	1.62	Deep Creek	Chattahoochee River	Fulton County, lat 33°40′, long. 84°38′ at Sta Highway 154, 7½ miles northeast of Fairbur
681	Sept. 27	2 P.M.	9.1	. 60	Pea Creek	Chattahoochee River	Fulton County, lat 35°37', long. 84°42' at Sta Highway 154, 634 miles northeast of Palmett
682	Sept. 29	4 P.M.	23	3.18	Bear Creek	Chattahoochee River	Douglas County, lat 33°38′, long. 84°45′ at State Highway 166, 8½ miles south of Dou lasville.
683	Sept. 27	3 P.M.	8.4	0	Big Bear Creek	Chattahoochee River	Fulton County, lat 33°34′, long. 84°40′ at county road, 3¼ miles north of Palmetto.
684	Sept. 27		24	. 04	Big Bear Creek	Chattahoochee River	Fulton County, lat 33°36′, long. 84°45′ at Woodruff Road, 7 miles northeast of Palmett
685	Sept. 29	12 M.	18	0	Dog River	Chattahoochee River	Douglas County, lat 33°41′, long. 84°53′ at county road, 5 miles south west of Winston.
686	Sept. 29	12 M.	43	. 75	Dog River	Chattahoochee River	Douglas County, lat 33°40′, long. 84°52′ at county road, 2½ miles north of Fair Play.
687	Sept. 29	2 P.M.	10	.38	Mobley Creek	Dog River	Douglas County, lat 33°41′, long. 84°50′ at county road, 2¾ miles south of Winston.
688	Sept. 28	8 A.M.	5.0	. 35	Snake Creek	Chattahoochee River	Carroll County, lat 33°37', long. 84°58' at State Highway 166, east of Carrollton.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
690	Sept. 24	4 P.M.		0.13	Alexander Creek	Cedar Creek	Coweta County, lat 33°29', long. 84°45' at county road, 8½ miles northeast of Newnan.
691	Sept. 15	3 P.M.	2430	461	Chattahoochee River	Apalachicola River	Carroll-Coweta Counties, lat 33°29', long. 84' 54' at State Highway 16 southeast of Whitesburg.
692	Sept. 24	2 P.M.	16	.44	Wahoo Creek	Chattahoochee River	Coweta County, lat 33°25', long. 84°50' at county road, 2 miles southwest of Sargent.
693	Sept. 20 Sept. 20	12 M. 1 P.M.	6.8	. 62	Acorn Creek	Chattahoochee River	Carroll County, lat 33°28', long. 84°57' at State Highway 5, southwest of Whitesburg.
694	Sept. 23	12 M.	4.5	. 05	Whooping Creek	Chattahoochee River	Carroll County, lat 33°31′, long. 85°03′ at county road, 4¾ miles southeast of Carrollton.
695	Sept. 20	2 P.M.	26	1.53	Whooping Creek	Chattahoochee River	Carroll County, lat 33°27′, long. 85°00′ at State Highway 5, southwest of Whitesburg.
696	Sept. 20	4 P.M.		.71	Dirt Creek	Chattahoochee River	Carroll County, lat 33°27′, long. 85°04′ at State Highway 5, 3½ miles east of Roopville.
697	Oct. 11	5 P.M.		2.70	Centralhatchee Creek	Chattahoochee River	Heard County, lat 33°24', long. 85°10' at county road, 4 miles northeast of Centralhatchee.
698	Oct. 11	3 P.M.	57	5.42	Centralhatchee Creek	Chattahoochee River	Heard County, lat 33°19', long. 85°06' at U. S. Highway 27, north of Franklin.
699	Aug. 25	4 P.M.	2680	1070	Chattahoochee River	Apalachicola River	Heard County, lat 33°17', long. 85°06' at State Highway 34 at Franklin.
700	Sept. 24	1 P.M.	3.6	1.01	Messiers Creek	New River	Coweta County, lat 33°16′, long. 84°49′ at county road, 2 miles northeast of Grantville.
701	Oct. 12			0	Caney Creek	New River	Heard County, lat 33°16′, long. 84°58′ at county road, 3 miles northwest of Corinth.
702	Sept. <b>24</b>	12 M.	8.3	. 40	Yellowjacket Creek	Chattahoochee River	Coweta County, lat 33°14′, long. 84°48′ at county road, 3 miles east of Grantville.
703	Oct. 12	10 A.M.	40	.40	Yellowjacket Creek	Chattahoochee River	Troup County, lat 33°11′, long. 84°55′ at U. S. Highway 27, north of Hogansville.
704	Oct. 19	6 P.M.	19	1.29	Flat Creek	Yellowjacket Creek	Meriwether County, lat 33°08', long. 84°51' at county road, 2 miles west of St. Marks.
705	Oct. 12	11 A.M.	27	. 89	Flat Creek	Yellowjacket Creek	Troup County, lat 33°08', long. 84°55' at U. S. Highway 29, south of Hogansville.
706	Oct. 19	4 P.M.	11	2.22	Beach Creek	Yellowjacket Creek	Meriwether County, lat 33°04′, long. 84°51′ at county road, 4½ miles northwest of Odessadale.
707	Oct. 19	5 P.M.	12	3.73	Bear Creek	Beach Creek	Meriwether County, lat 33°06′, long. 84°51′ at county road, 2¾ miles southwest of St. Marks.
708	Oct. 12	12 M.	45	2.70	Beach Creek	Yellowjacket Creek	Troup County, lat 33°06', long. 84°56' at U.S. Highway 29, northeast of LaGrange.
709	Oct. 20	8 A.M.	52	3.69	Beach Creek	Yellowjacket Creek	Troup County, lat 33°06′, long. 84°59′ at county road, 4½ miles northwest of LaGrange.
710	Oct. 20	10 A.M.	9.2	.90	Shoal Creek	Beach Creek	Troup County, lat 33°04', long. 84°58' at U. S. Highway 29, northeast of LaGrange.

## APALACHICOLA RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
711	Oct. 20	8 A.M.	16	2.03	Shoal Creek	Beach Creek	Troup County, lat 33°05′, long. 85°00′ at county road, 3¼ miles northeast of LaGrange.
713	Oct. 20	3 P.M.	27	. 24	Whitewater Creek	Chattahoochee River	Troup County, lat 33°06′, long. 85°08′ at State Highway 109, northwest of LaGrange.
714	Oct. 20	4 P.M.		. 20	Wehadkee Creek	Chattahoochee River	Troup County, lat 33°04′, long. 85°12′ at county road, 10½ miles west of LaGrange.
716	Oct. 20	11 A.M.	9.9	. 83	Long Cane Creek	Chattahoochee River	Troup County, lat 33°01′, long. 84°58′ at county road, 3½ miles east of LaGrange.
717	Oct. 20	12 M.	23	1.37	Long Cane Creek	Chattahoochee River	Troup County, lat 32°59′, long. 85°00′ at U. S. Highway 27, southeast of LaGrange.
718	Oct. 19	2 P.M.	24	. 34	Flat Shoal Creek	Chattahoochee River	Meriwether County, lat 32°59′, long. 84°51′ at county road, 3½ miles southwest of Odessadale.
719	Oct. 19	12 M.	7.3	0	Sulphur Creek	Flat Shoal Creek	Meriwether County, lat 32°56′, long. 84°47′ at county road, 1½ miles northwest of Durand.
720	Oct. 19	12 M.	. 65	0	Mill Creek	White Sulphur Creek	Harris-Meriwether Counties, lat 32°52′, long. 84°49′ at county road, 4½ miles east of Chipley.
721	Oct. 19	11 A.M.	22	1.04	White Sulphur Creek	Sulphur Creek	Meriwether County, lat 32°55′, long. 84°48′ at State Highway 18 at White Sulphur Springs.
722	Oct. 19	1 P.M.	43	1.06	Sulphur Creek	Flat Shoal Creek	Meriwether County, lat 32°57′, long. 84°50′ at county road, 1½ miles south of Stovall.
723	Oct. 19	10 A.M.	5.1	. 89	Tributary to Crawford Creek	Crawford Creek	Meriwether County, lat 32°54′, long. 84°50′ at State Highway 18, 1½ miles southwest of White Sulphur Springs.
724	Oct. 19	10 A.M.	2.7	. 51	Crawford Creek	Sulphur Creek	Meriwether County, lat 32°53′, long. 84°50′ at State Highway 18, northeast of Chipley.
725	Oct. 20	1 P.M.	119	6.80	Flat Shoal Creek	Chattahoochee River	Troup County, lat 32°57′, long. 84°55′ at U. S. Highway 27, southeast of LaGrange.
726	Oct. 20	6 P.M.		22.4	Flat Shoal Creek	Chattahoochee River	Troup County, lat 32°53', long. 85°05' at State Highway 18, 5½ miles east of West Point.
727	Oct. 21	9 A.M.	2.0	.30	Mountain Creek	Chattahoochee River	Harris County, lat 32°50′, long. 84°51′ at U. S. Highway 27, south of Chipley.
728	Oct. 21	10 A.M.	9.3	1.23	Mountain Creek	Chattahoochee River	Harris County, lat 32°48′, long. 84°53′ at county road, 4½ miles southwest of Chipley.
730	Oct. 21			0	Mulberry Creek	Chattahoochee River	Harris County, lat. 32°43′, long. 84°44′ at State Highway 85, 2 miles north of Waverly Hall.
731	Oct. 21	1 P.M.	28	8.54	Dowdell Creek	Mulberry Creek	Harris County, lat 32°45', long. 84°46' at county road, 5 miles northwest of Waverly Hall.
732	Oct. 21	11 A.M.	8.9	2.74	Palmetto Creek	Mulberry Creek	Harris County, lat 32°46′, long. 84°52′ at county road, 1½ miles northeast of Hamilton.
733	Oct. 21	2 P.M.		0	Ossahatchie Creek	-	Harris County, lat 32°39', long. 84°46' at State Highway 85, 234 miles southwest of Waverly Hall.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
734	Oct. 21	3 P.M.	41	0.15	Ossahatchie Creek	Mulberry Creek	Harris County, lat 32°41′, long. 84°52′ at U. S. Highway 27, south of Hamilton.
735	Oct. 21	4 P.M.		. 02	Standing Boy Creek	Chattahoochee River	Harris County, lat 32°38′, long. 84°54′ at U. S. Highway 27, 1 mile southwest of Rehobeth.
736	Oct. 21	4 P.M.		. 04	Heiferhorn Creek	Standing Boy Creek	Harris County, lat 32°37′, long. 84°55′ at U. S. Highway 27, 2½ miles southwest of Rehobeth.
738	Oct. 14			0	Bull Creek	Chattahoochee River	Muscogee County, lat 32°34', long. 84°51' at State Highway 85, 1½ miles southwest of Midland.
739	Oct. 14			0	Tributary to Bull Creek	Bull Creek	Muscogee County, lat 32°32′, long. 84°50′ at State Highway 22, 5¾ miles west of Upatoi.
740	Oct. 14	10 A.M.		. 90	Bull Creek	Chattahoochee River	Muscogee County, lat 32°32′, long. 84°51′ at State Highway 22, 6½ miles west of Upatoi.
741	Oct. 27			0	South Fork Upatoi Creek	Upatoi Creek	Talbot County, lat 32°26′, long. 84°33′ at State Highway 22, 1 mile north of Geneva.
742	Oct. 27			0	South Fork Upatoi Creek	Upatoi Creek	Talbot County, lat 32°34′, long. 84°37′ at State Highway 22, 3½ miles west of Geneva.
743	Oct. 14			0	Baker Creek	Upatoi Creek	Muscogee-Talbot Counties, lat 32°33′, long. 84°40′ at State Highway 22, 4 miles east of Upatoi.
744	Oct. 14			0	Tar River	Upatoi Creek	Muscogee County, lat 32°33′, long. 84°42′ at State Highway 22, 2¾ miles east of Upatoi.
745	Oct. 14	12 M.		. 18	Kendall Creek	Upatoi Creek	Muscogee County, lat 32°33′, long. 84°43′ at State Highway 22, 1½ miles east of Upatoi.
746	Oct. 14			0	Cox Creek	Upatoi Creek	Muscogee County, lat 32°33′, long. 84°44′ at State Highway 22, 0.6 mile east of Upatoi.
747	Oct. 13	10 A.M.		68.1	Pine Knot Creek	Eelbeck Creek	Chattahoochee County, lat 33°26′, long. 84°44′ at State Highway 103, 1¼ miles east of Eelbeck.
748	Oct. 14			0	Randall Creek	Upatoi Creek	Muscogee County, lat 32°35′, long. 84°48′ at county road, 2 miles east of Midland.
749	Oct. 14			0	Tributary to Randall Creek	Randall Creek	Muscogee County, lat 32°35′, long. 84°47′ at county road, 2½ miles east of Midland.
750	Oct. 14			0	Tributary to Randall Creek	Randall Creek	Muscogee County, lat 32°35′, long. 84°47′ at county road, 2½ miles east of Midland.
751	Oct. 14			0	Randall Creek	Upatoi Creek	Muscogee County, lat 32°33′, long. 84°47′ at State Highway 22, 2 miles west of Upatoi.
752	Oct. 14			0	Tributary to Randall Creek	Randall Creek	Muscogee County, lat 32°33′, long. 84°46′ at State Highway 22, 1½ miles west of Upatoi.
753	Oct. 14	10 A.M.		. 05	Dozier Creek	Randall Creek	Muscogee County, lat 32°32′, long. 84°49′ at State Highway 22, 4½ miles west of Upatoi.
754	Oct. 14			0	Tributary to Dozier Creek	Dozier Creek	Muscogee County, lat 32°32′, long. 84°49′ at State Highway 22, 4 miles west of Upatoi.

#### APALACHICOLA RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
755	Oct. 14			0	Tributary to Dozier Creek	Dozier Creek	Muscogee County, lat 32°33′, long. 84°48′ at State Highway 22, 3½ miles west of Upatoi.
756	Oct. 13			. 13	Randall Creek	Upatoi Creek	Muscogee County, lat 32°27′, long. 84°48′ at State Highway 103, 2½ miles northwest of Eelbeck.
757	Oct. 13	10 A.M.		. 33	Randall Creek	Upatoi Creek	Muscogee County, lat 32°25', long. 84°48' at 2nd Armored Division Road, 6 miles east of Sand Hill.
758	Aug. 25 Oct. 6	10 A.M. 11 A.M.		151 118	Upatoi Creek	Chattahoochee River	Muscogee County, lat 32°25′, long. 84°49′ at Red Arrow Road, 5 miles east of Sand Hill.
759	Oct. 13			0	Tributary to Long Branch	Long Branch	Muscogee County, lat 32°25′, long. 84°50′ at 2nd Armored Division Road, 4½ miles east of Sand Hill.
760	Oct. 13			0	Long Branch	Upatoi Creek	Muscogee County, lat 32°25', long. 84°50' at 2nd Armored Division Road, 4 miles east of Sand Hill.
761	Oct. 13			0	Wolf Creek	Upatoi Creek	Muscogee County, lat 32°28', long. 84°51' at State Highway 103, 5 miles northeast of Sand Hill.
762	Oct. 13			0	Tributary to Wolf Creek	Wolf Creek	Muscogee County, lat 32°28', long. 84°51' at State Highway 103, 5 miles northeast of Sand Hill.
763	Oct. 13			0	Wolf Creek	Upatoi Creek	Muscogee County, lat 32°26', long. 84°51' at Steam Mill Road, 4 miles northeast of Sand Hill.
764	Oct. 13	11 A.M.		. 22	Wolf Creek	Upatoi Creek	Muscogee County, lat 32°25', long. 84°50' at 2nd Armored Division Road, 4 miles east of Sand Hill.
765	Oct. 14	10 A.M.		3.43	Ochillee Creek	Upatoi Creek	Chattahoochee County, lat 32°19′, long. 84° 41′ at State Highway 26, at Ida Vesper.
766	Oct. 14			0	Tributary to Ochillee Creek	Ochillee Creek	Chattahoochee County, lat 32°19′, long. 84° 43′ at State Highway 26, 1½ miles west of Ida Vesper.
767	Oct. 14	10 A.M.		7.75	Ochillee Creek	Upatoi Creek	Chattahoochee County, lat 32°19′, long. 84° 44′ at Christopher Road, at Christopher.
768	Oct. 13	2 P.M.		11.4	Ochillee Creek	Upatoi Creek	Chattahoochee County, lat 32°22', long. 84° 49' at Hourglass Road, at Hurley.
769	Oct. 13			0	Steam Mill Creek	Upatoi Creek	Muscogee County, lat 32°26′, long. 84°53′ at St. Mary's Road, 1½ miles northeast of Sand Hill.
770	Oct. 13			0	Steam Mill Creek	Upatoi Creek	Muscogee County, lat 32°25', long. 84°53' at 2nd Armored Division Road, 0.8 mile east of Sand Hill.
771	Oct. 13			0	Tiger Creek	Upatoi Creek	Muscogee County, lat 32°27′, long. 84°54′ at Steam Mill Road, 2½ miles north of Sand Hill.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
772	Oct. 13			0	Tiger Creek	Upatoi Creek	Muscogee County, lat 32°26′, long. 84°54′ at St. Mary's Road, 1¼ miles north of Sand Hill.
773	Oct. 13	2 P.M.		.07	Tiger Creek	Upatoi Creek	Muscogee County, lat 32°24′, long. 84°53′ at road 0.2 mile upstream from mouth at Sand Hill.
774	Oct. 13	3 P.M.		. 93	Heriot Creek	Upatoi Creek	Chattahoochee County, lat 32°23′, long. 84° 53′ at Marne Road, 1½ miles southeast of Sand Hill.
775	Oct. 14			0	Opossum Creek	Upatoi Creek	Muscogee County, lat 32°24', long. 84°54' at State Highway 1, 0.6 mile southwest of Sand Hill.
776	Oct. 13	3 P.M.		.48	Hamel Creek	Upatoi Creek	Chattahoochee County, lat 32°23′, long. 84° 55′ at Marne Road.
777	Oct. 12	4 P.M.		121	Upatoi Creek	Chattahoochee River	Chattahoochee-Muscogee Counties, lat 32°23′, long. 84°57′ at water plant, 1 mile from out- post No. 1.
778	Oct. 13			. 22	Armory Creek	Upatoi Creek	Chattahoochee County, lat 32°22′, long. 84° 57′ at Marne Road.
779	Oct. 14	11 A.M.		3.07	Hichitee Creek	Chattahoochee River	Chattahoochee County, lat 32°16′, long. 84° 47′ at State Highway 1, 2½ miles south of Cusseta.
780	Oct. 26	4 P.M.		7.91	Hichitee Creek	Chattahoochee River	Stewart County, lat 32°14′, long. 84°51′ at county road, 4 miles north of Louvale.
781	Oct. 26	2 P.M.		1.24	Hannahatchee Creek	Chattahoochee River	Stewart County, lat 32°09′, long. 84°50′ at State Highway 1, 1½ miles south of Louvale.
782	Oct. 26	2 P.M.		. 25	Frog Bottom Creek	Colochee Creek	Stewart County, lat 32°06', long, 84°49' at State Highway 1, 3¾ miles north of Lumpkin.
783	Oct. 26	4 P.M.		17.7	Hannahatchee Creek	Chattahoochee River	Stewart County, lat 32°09′, long. 84°57′ at county road, 2½ miles southwest of Julia.
784	Aug. 24 Oct. 5	1 P.M. 1 P.M.		1900 877	Chattahoochee River	Apalachicola River	Barbour County, Alabama and Quitman County, Ga., lat 31°58′, long. 85°08′ at Georgia Highway 50, 1½ miles west of Georgetown.
785	Oct. 22	1 P.M.		3.44	Tobannee Creek	Chattahoochee River	Quitman County, lat 31°52′, long. 85°06′ at county road, 0.8 mile south of Georgetown.
786	Sept. 28	2 P.M.		12.0	Pataula Creek	Chattahoochee River	Stewart County, lat 31°56', long. 84°48' at State Highway 1, 8 miles south of Lumpkin.
787	Oct. 26	2 P.M.		4.3	Hodchodkee Creek	Pataula Creek	Stewart County, lat 32°03', long. 84°47' at State Highway 27, 1 mile east of Lumpkin.
788	Sept. 27	1 P.M		90.7	Pataula Creek	Chattahoochee River	Quitman County, lat 31°49′, long. 84°59′ at State Highway 50, 2½ miles northwest of Morris.
789	Oct. 22	11 A.M	•	.1	5 McCallop Creek	Holanna Creek	Randolph County, lat 31°49′, long. 84°52′ a State Highway 50, 5 miles northwest of Cuth bert.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
790	Oct. 22	3 P.M.		11.5	Holanna Creek	Pataula Creek	Quitman County, lat 31°47′, long. 84°57′ at county road, at Morris.
791	Oct. 21	5 P.M.		5.29	Hog Creek	Cemochechobee Creek	Clay County, lat 31°39′, long. 84°58′ at county road, 5½ miles northeast of Fort Gaines.
792	Oct. 21	2 P.M.		32.4	Cemochechobee Creek	Chattahoochee River	Clay County, lat 31°37′, long. 85°03′ at State Highway 39, north of Fort Gaines.
793	Aug. 24 Oct. 5	9 A.M. 10 A.M.		2440 955	Chattahoochee River	Apalachicola River	Clay County, Georgia-Henry County, Alabama, lat 31°36′, long, 85°04′ at Georgia Highway 37, at Fort Gaines.
794	Oct. 21	3 P.M.		55.5	Colomokee Creek	Chattahoochee River	Clay County, lat 31°31′, long. 85°01′ at State Highway 39, 6 miles south of Fort Gaines.
796	Oct. 23	8 A.M.		1.20	Sawhatchee Creek	Chattahoochee River	Early County, lat 31°17′, long. 85°02′ at county road, 9 miles southwest of Blakely.
797	Sept. 22	9 A.M.	3.1	. 69	Flint River	Apalachicola River	Clayton County, lat 33°37', long. 84°24' at county road, 2 miles west of Forest Park.
798	Sept. 21	11 A.M.	21	3.88	Flint River	Apalachicola River	Clayton County, lat 33°35′, long. 84°23′ at county road, 1¾ miles east of Jonesboro.
799	Sept. 21	1 P.M.	1.8	. 10	Jesters Creek	Flint River	Clayton County, lat 33°35′, long, 84°21′ at county road, 2¾ miles southeast of Forest Park.
800	Sept. 20 Sept. 24	3 P.M. 6 P.M.		1.83 1.41	Camp Creek	Flint River	Clayton County, lat 33°34′, long. 84°26′ at county road, 1¼ miles southwest of Riverdale
801	Sept. 22	10 A.M.	17.0	2.84	Camp Creek	Flint River	Clayton-Fayette Counties, lat 33°31′, long. 84°26′ at State Highway 85, north of Fayette ville.
802	Sept. 21		3.3	0	Swamp Creek	Flint River	Clayton County, lat 33°30′, long. 84°22′ at county road, 2 miles southwest of Jonesboro
803	Sept. 22	12 M.	37	1.02	2 Morning Creek	Flint River	Fayette County, lat 33°30′, long. 84°26′ at State Highway 85, north of Fayetteville.
804	Sept. 22	2 P.M.	40	. 38	Morning Creek	Flint River	Fayette County, lat 33°29', long. 84°25' at State Highway 54, northeast of Fayetteville.
805	Sept. 22	4 P.M	. 130	11.9	Flint River	Apalachicola River	Clayton County, lat $33^{\circ}25'$ , long. $84^{\circ}23'$ at county road, $4\frac{1}{2}$ miles southwest of Lovejoy
806	Sept. 22	5 P.M	8.2	.34	Shoal Creek	Flint River	Clayton County, lat 33°25′, long. 84°22′ at county road, 3½ miles southwest of Lovejoy and 1 mile upstream from mouth.
807	Sept. 22	7 P.M	9.2	0	Murphy Creek	Flint River	Fayette County, lat 33°25′, long. 84°24′ at county road, 3½ miles southeast of Fayette ville and 2 miles upstream from mouth.
808	Sept. 29	3 P.M		. 2	6 Little Chief Bear Creek	Bear Creek	Henry County, lat 33°23′, long. 84°18′ at State Highway 3, 1 mile west of Hampton.
809	Sept. 29	3 P.M	. 6.0	. 2'	7 Bear Creek	Flint River	Henry County, lat 33°23', long. 84°18' at county road, 1½ miles west of Hampton.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
810	Oct. 5 Oct. 12	9 A.M. 9 A.M.	194	6.05 6.31	Flint River	Apalachicola River	Fayette-Spalding Counties, lat 33°14′, long. 82°24′ at State Highway 92, 3¾ miles south of Woolsey.
811	Sept. 23 Oct. 5	10 A.M. 3 P.M.	2.9	. 44	Woolsey Creek	Horton Creek	Fayette County, lat 33°21′, long. 84°25′ at county road, ½ mile from Woolsey.
812	Oct. 1	4 P.M.		. 92	Flint River	Apalachicola River	Fayette-Spalding Counties, lat 33°16′, long, 84°26′ at county road, 9¾ miles west of Grif-fin.
813	Sept. 27 Oct. 5 Oct. 12	3 P.M. 3 P.M. 1 P.M.	10	. 52 . 46 . 98	Heads Creek	Wildcat Creek	Spalding County, lat 33°18', long. 84°21' at State Highway 92, 6 miles northwest of Grif- fin.
814	Oct. 12	2 P.M.		1.48	Heads Creek	Wildcat Creek	Spalding County, lat 33°17′, long. 84°23′ at county road, 7 miles west of Griffin.
815	Sept. 27 Oct. 5 Oct. 12	2 P.M. 2 P.M. 3 P.M.	21	1.40 1.33 1.41	Shoal Creek	Wildcat Creek	Spalding County, lat 33°16′, long. 84°23′ at county road, 7½ miles west of Griffin and 0.9 mile upstream from mouth.
816	Oct. 5 Oct. 12	10 A.M. 4 P.M.		4.11 2.79	Wildcat Creek	Flint River	Spalding County, lat 33°16′, long. 84°24′ at county road, 8¼ miles west of Griffin.
818	Sept. 23		4.0	. 09	Line Creek	Flint River	Fulton-Fayette Counties, lat 33°31′, long. 84° 36′ at county road, 3½ miles south of Fairburn.
819	Sept. 23	4 P.M.	38	4.16	Line Creek	Flint River	Coweta-Fayette Counties, lat 32°24', long. 84°37' at State Highway 54, 1 mile southwest of Aberdeen.
820	Sept. 23	5 P.M.	24	1.44	Shoal Creek	Line Creek	Coweta County, lat 33°23′, long. 84°37′ at State Highway 54, 3½ miles north of Sharpsburg.
821	Sept. 23	1 P.M.	15	1.08	Flat Creek	Line Creek	Fayette County, lat 33°24′, long. 84°35′ at State Highway 54, 1½ miles east of Aberdeen.
822	Sept. 23	6 P.M.	9.4	. 94	Keg Creek	Line Creek	Coweta County, lat 33°20′, long. 84°34′ at county road, 2½ miles north of Senoia.
823	Sept. 22	7 P.M.	6.6	.16	Ginger Cake Creek	Whitewater Creek	Fayette County, lat 33°27′, long. 84°29′ at State Highway 54, 1½ miles west of Fayette-ville.
824	Sept. 24	9 A.M.	9.4	1.15	Deadoak Creek	Line Creek	Coweta County, lat 33°16′, long. 84°32′ at county road, 3 miles south of Senoia.
825	Sept. 24	10 A.M.	57	1.08	Whiteoak Creek	Flint River	Coweta County, lat 33°17′, long. 84°43′ at county road, 8 miles southwest of Newnan.
826	Oct. 18	11 A.M.	146	3.89	Whiteoak Creek	Flint River	Meriwether County, lat 33°11′, long. 84°35′ at State Highway 85, 0.7 mile north of Avaton.
827	Sept. 29	5 P.M.	18	1.38	Birch Creek	Flint River	Pike County, lat 33°07', long. 84°27' at county road, 2½ miles north of Concord.
828	Oct. 18	3 P.M.	7.7	. 41	Coleman Creek	Redoak Creek	Meriwether County, lat 33°09′, long. 84°44′ at State Highway 41, 1 mile north of Primrose.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
829	Oct. 18	4 P.M.	8.6	0.80	Little Redoak Creek	Redoak Creek	Meriwether County, lat 33°08′, long. 84°44′ a State Highway 41, 1½ miles southeast of Primtose.
830	Oct. 21		4.5	.11	Walnut Creek	Bridge Creek	Meriwether County, lat 33°00', long. 84°43' a State Highway 41, 1 mile south of Greenville
831	Oct. 18	5 P.M.	8.70	. 92	Kendall Creek	Walnut Creek	Meriwether County, lat 32°59′, long. 84°43′ a State Highway 41, 2½ miles south of Green ville.
832	Sept. 30	8 A.M.	13	. 09	Elkins Creek	Flint River	Pike County, lat 33°07′, long. 84°21′ at county road, 1½ miles north of Zebulon.
833	Sept. 29		20	0	Elkins Creek	Flint River	Pike County, lat 33°06′, long. 84°22′ at State Highway 18, 1 mile west of Zebulon.
834	Sept. 29	3 P.M.	11	. 28	Powder Creek	Elkins Creek	Pike County, lat 33°03′, long. 84°23′ at county road, 4 miles west of Meansville.
835	Sept. 29		52	0	Elkins Creek	Flint River	Pike County, lat 33°04′, long. 84°24′ at county road, 2½ miles southeast of Concord.
836	Sept. 29	1 P.M.	101	3.09	Elkins Creek	Flint River	Pike-Upson Counties, lat 32°58', long. 84°31 at county road, 3 miles south of Molena and 1 mile upstream from mouth.
837	Oct. 6	5 P.M.	1.01	4.83	Cold Spring Branch	Cane Creek	Meriwether County, lat 32°54′, long. 84°40 at Government fish hatchery 0.7 mile north east of Warm Springs.
838	Oct. 27	9 A.M.	9.6	. 98	Edwards Creek	Lazar Creek	Talbot County, lat 32°43′, long. 84°33′ at Stat Highway 41, 2½ miles north of Talbotton.
839	Oct. 27	10 A.M.		3.03	Celeotchee Creek	Lazar Creek	Talbot County, lat 32°49′, long. 84°33′ at county road, 2 miles north of Woodland.
840	Sept. 28	3 P.M.	23.0	2.79	Grape Creek	Big Potato Creek	Lamar County, lat 33°08′, long. 84°14′ at county road, 2½ miles west of Milner.
841	Sept. 28	2 P.M.	2.26	. 03	Tributary to Grape Creek	Grape Creek	Lamar County, lat 33°07', long. 84°13' at county road, 1¼ miles west of Milner.
842	Sept. 28	12 M.	4.53	. 60	Little Potato Creek	Potato Creek	Lamar County, lat 33°03', long. 84°12' at county road, 1 mile south of State Highway 18, 2½ miles west of Barnesville.
843	Oct. 5	3 P.M.		3.01	Ten Mile Creek	Potato Creek	Upson County, lat 32°56′, long. 84°21′ at county road, 3½ miles northwest of Thomaston.
844	Oct. 5	5 P.M.		1.03	Basin Creek	Potato Creek	Upson County, lat 32°56′, long. 84°23′ at county road, 4 miles northwest of Thomaston.
846	Oct. 27	1 P.M.	12.1	. 92	Hackasofkee Creek	Flint River	Talbot County, lat 32°42′, long. 84°26′ at State Highway 22, 6¼ miles east of Talbotton
847	Oct. 6	11 A.M.	6.7	1.35	East Swift Creek	Swift Creek	Upson County, lat 32°52′, long. 84°15′ at county road, 4¾ miles southeast of Thomaston.
849	Oct. 6	12 M.		.03	Auchumpkee Creek	Flint River	Upson County, lat 32°45′, long. 84°13′ at State Highway 22, 11¾ miles southeast of Thomaston.

TABLE 3. Low-flow measurements at partial-record gaging stations during the drought 1954.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
850	Oct. 22			0	Ulcohatchee Creek	Flint River	Crawford County, lat 32°46′, long. 84°07′ at State Highway 22, 6½ miles northwest of Roberta.
851	Oct. 22			0	Spring Creek	Flint River	Crawford County, lat 32°42′, long. 84°03′ at State Highway 128, 2½ miles southwest of Roberta.
852	Oct. 22			0	Mathews Creek	Spring Creek	Crawford County, lat 32°42′, long, 84°02′ at State Highway 128, 1¾ miles southwest of Roberta.
853	Oct. 22	9 A.M.			Culpepper Creek	Spring Creek	Crawford County, lat 32°42′, long. 84°00′ at State Highway 7, 2 miles south of Roberta.
854	Oct. 22	10 A.M.		32.5	Patsiliga Creek	Flint River	Taylor County, lat 32°34', long. 84°05' at State Highway 128, 1 mile north of Reynolds.
855	Oct. 22			. 03	Tributary to Flint River	Flint River	Crawford County, lat 32°33′, long. 84°00′ at State Highway 96, at Nakomis.
856	Oct. 21	5 P.M.	11	31.6	Toteover Creek	Flint River	Macon County, lat 32°27′, long. 84°05′ at State Highway 128, 10½ miles north of Oglethorpe.
858	Oct. 20	1 P.M.	15	18.4	Cedar Creek	Whitewater Creek	Taylor County, lat 32°26′, long. 84°23′ at State Highway 137, 12½ miles southwest of Butler.
859	Oct. 20	11 A.M.	43	35.4	Shoal Creek	Buck Creek	Marion County, lat 32°23′, long. 84°27′ at State Highway 137, at Tazewell.
860	Oct. 19	3 P.M.	144	89.9	Buck Creek	Flint River	Schley County, lat 32°19′, long. 84°18′ at State Highway 3, 5½ miles north of Ellaville.
861	Oct. 21	11 A.M.	7.8	8.34	Mills Creek	Flint River	Macon County, lat 32°17', long. 84°05' at State Highway 49, 1½ miles southwest of Oglethorpe.
863	Oct. 21	10 A.M.	39	18.2	Beaver Creek	Flint River	Macon County, lat 32°18', long. 84°02' at State Highway 26, at Montezuma.
864	Oct. 21	12 M.	54	18.9	Camp Creek	Flint River	Macon County, lat 32°14′, long. 84°06′ at State Highway 49, 5½ miles southwest of Oglethorpe.
865	July 1 Sept. 20	3 P.M. 1 P.M.	29		Sweetwater Creek	Flint River	Macon-Sumter Counties, lat 32°11', long. 84° 08' at State Highway 49, southeast of Andersonville.
866	Oct. 21	9 A.M.		.75	Hogcrawl Creek	Flint River	Dooly-Macon Counties, lat 32°17', long. 83°54' at county road, 7½ miles east of Montezuma.
867	Oct. 21	10 A.M.		. 33	Horsehead Creek	Hogcrawl Creek	Macon County, lat 32°17', long. 83°56' at State Highway 26, 5¼ miles east of Monte- zuma.
868	Sept. 22	3 P.M.	76	16.9	Hogcrawl Creek	Flint River	Dooly-Macon Counties, lat 32°15′, long. 83°58′ at State Highway 90, 5½ miles southeast of Montezuma.
869	Sept. 20	2 P.M.		1.22	Turkey Creek	Flint River	Dooly County, lat 32°14′, long. 83°52′ at county road, 3 miles northeast of Byromville.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
870	July 7 Sept. 20	11 A.M. 1 P.M.	45	5.46 4.61	Turkey Creek	Flint River	Dooly County, lat 32°12′, long. 83°54′ at State Highway 90, at Byromville.
871	Sept. 20		21	0	Pennahatchee Creek	Turkey Creek	Dooly County, lat 32°05', long. 83°48' at State Highway 7, at Vienna.
872	Sept. 20	10 A.M.	28	1.27	Sandy Mount Creek	Pennahatchee Creek	Dooly County, lat 32°07′, long. 83°50′ at State Highway 90, 23⁄4 miles northwest of Vienna.
873	Sept. 22	6 P.M.	24	. 88	Little Penna- hatchee Creek	Pennahatchee Creek	Dooly County, lat 32°07′, long. 83°52′ at State Highway 90, 2¼ miles southeast of Lilly.
874	Sept. 20	11 A.M.	65	12.9	Lime Creek	Flint River	Sumter County, lat 32°02′, long. 84°00′ at county road, 5 miles north of Cobb.
875	Sept. 15	4 P.M.	37	. 64	Gum Creek	Flint River	Crisp County, lat 31°58′, long. 83°48′ at county road, northwest of Cordele.
876	Oct. 26			0	Tributary to Gulley Creek	Gulley Creek	Crisp County, lat 31°57', long. 83°50' at State Highway 30, 3 miles west of Cordele.
877	Sept. 15 Oct. 26	11 A.M.	13	0	Cedar Creek	Flint River	Crisp County, lat 31°56′, long. 83°47′ at State Highway 7, 2½ miles south of Cordele.
878	Sept. 15	1 P.M.	30	1.89	Cedar Creek	Flint River	Crisp County, lat 31°55′, long. 83°51′ at State Highway 133, 5½ miles southwest of Cordele.
879	Sept. 15	10 A.M.	10	0	Swift Creek	Flint River	Crisp-Worth Counties, lat 31°48', long. 83°48' at State Highway 33, 4 miles southwest of Arabi.
880	Sept. 20 Oct. 22		16	0	Chokee Creek	Flint River	Sumter County, lat 31°57', long. 84°03' at State Highway 30, at Desoto.
882	Oct. 19			0	Tributary to Flint River	Flint River	Dougherty County, lat 31°37′, long. 84°03′ at State Highway 257, 7½ miles northeast of Albany.
883	Oct. 19	8 A.M.	54	0	Piney Woods Creek	Flint River	Dougherty County, lat 31°34′, long. 84°02′ at State Highway 50, 7 miles east of Albany.
884	Oct. 19			0	Piney Woods Creek	Flint River	Dougherty County, lat 31°36′, long. 84°03′ at State Highway 257, 6½ miles east of Albany
885	Oct. 20	9 A.M.	34	13.2	Kinchafoonee Creek	Flint River	Marion County, lat 32°17′, long. 84°35′ at county road, 4½ miles southwest of Buena Vista.
887	Sept. 21	5 P.M.	490	105	Kinchafoonee Creek	Flint River	Lee-Terrell Counties, lat 31°52′, long. 84°18 at State Highway 118, 3¾ miles southwest of Smithville.
888	Oct. 21	3 P.M.	530	117	Kinchafoonee Creek	Flint River	Lee County, lat 31°46′, long. 84°15′ at State Highway 32, 5½ miles northwest of Leesburg
889	July 1 Sept. 20	10 A.M. 3 P.M.	31	2.98 1.96	Middle Creek	Kinchafoonee Creek	Lee County, lat 31°46', long. 84°16' at State Highway 32, 6½ miles northwest of Leesburg
890	Sept. 20	4 P.M.	5.9	. 18	Reedy Creek	Kinchafoonee Creek	Lee County, lat 31°45′, long. 84°16′ at county road, 6 miles west of Leesburg.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
891	Sept. 20	12 M.	590	135	Kinchafoonee Creek	Flint River	Lee County, lat 31°43', long. 84°11' at county road, 1 mile southwest of Leesburg.
892	Sept. 10	11 A.M.		2.37	Fowltown Creek	Kinchafoonee Creek	Lee County, lat 31°42′, long. 84°16′ at county road, 6½ miles southwest of Leesburg.
893	Oct. 19	1 P.M.	54	9.52	Muckalee Creek	Flint River	Schley County, lat 32°11′, long. 84°22′ at State Highway 153, 5½ miles southwest of Ellaville
894	Oct. 19	12 M.	9.2	1.62	Little Muck- alee Creek	Muckalee Creek	Schley County, lat 32°12′, long. 84°20′ at State Highway 153, 2¾ miles southwest of Ellaville
895	Sept. 21	2 P.M.	161	34.3	Muckalee Creek	Flint River	Sumter County, lat 32°04′, long. 84°15′ at State Highway 3, at Americus.
896	Oct. 26			0	Mill Creek	Muckalee Creek	Sumter County, lat 32°03′, long. 84°11′ at State Highway 30, 2½ miles east of Americus
897	Sept. 20	5 P.M.	11 .	2.88	Bear Branch	Muckalee Creek	Sumter County, lat 31°58′, long. 84°15′ at State Highway 3, 7 miles south of Americus.
898	Oct. 26			0	Phillema Creek	Muckalee Creek	Sumter County, lat 32°02′, long. 84°10′ at State Highway 30, 5¼ miles southeast of Americus.
899	Oct. 26			0	Boggy Branch	Phillema Creek	Sumter County, lat 32°00′, long. 84°07′ at State Highway 30, 4 miles north of Leslie.
900	Sept. 22	2 P.M.	265	62.3	Muckalee Creek	Flint River	Lee County, lat 31°54', long. 84°12' at State Highway 118, 3 miles east of Smithville.
901	Sept. 20	3 P.M.	6.4	2.82	Muckaloochee Creek	Muckalee Creek	Sumter County, lat 32°03′, long. 84°20′ at State Highway 27, 3½ miles east of Plains.
902	Sept. 22	12 M.	47	25.2	Muckaloochee Creek	Muckalee Creek	Lee County, lat 31°54′, long. 84°15′ at State Highway 118, at Smithville.
903	Sept. 21	12 M.	406	98.7	Muckalee Creek	Flint River	Lee County, lat 31°44′, long. 84°07′ at State Highway 32, 2¾ miles east of Leesburg.
905	Oct. 19	3 P.M.			Radium Springs	Flint River	Dougherty County, lat 31°31′, long. 84°08′ at mouth of outflow channel from springs.
906	Oct. 19	4 P.M.	68	0	Dry Creek	Flint River	Dougherty County, lat 31°27', long. 84°08' at State Highway 3, near Plant Mitchell.
907	Oct. 19	4 P.M.	93	0	Raccoon Creek	Flint River	Mitchell County, lat 31°22′, long. 84°10′ at State Highway 3, 1 mile south of Baconton.
908	Oct. 19			0	Cooleewahee Creek	Flint River	Dougherty County, lat 31°30′, long. 84°17′ at State Highway 62, 1½ miles east of Pretoria.
909	Oct. 20	12 M.	120	1.65	Cooleewahee Creek	Flint River	Baker County, lat 31°20', long. 84°20' at State Highway 91, at Newton.
910	Aug. 23 Oct. 4	4 P.M. 4 P.M.		1330 1190	Flint River	Apalachicola River	Baker and Mitchell Counties, lat 31°18', long 84°20' at State Highway 37, at Newton.
911	Sept. 27	11 A.M.	123	25.1	Little Nocha- way Creek	Ichawaynocha- way Creek	Terrell County, lat 31°46', long. 84°34' at State Highway 50, 6¾ miles west of Dawson

<sup>\*</sup>This flow was leakage through weir and did not necessarily represent entire flow at spring outlet.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
912	Sept. 27	11 A.M.	52	24.7	Nochaway Creek	Ichawaynocha- way Creek	Terrell-Randolph Counties, lat $31^{\circ}47'$ , long. $84^{\circ}36'$ at State Highway 41, $1\frac{1}{2}$ miles north of Shellman.
913	Oct. 22	10 A.M.	4.9	2.49	Town Branch	Carter Creek	Randolph County, lat 31°46′, long. 84°47′ at State Highway 50, east of Cuthbert.
914	Oct. 26	5 P.M.	32	5.59	Little Pachitla Creek	Pachitla Creek	Calhoun County, lat 31°35′, long. 84°44′ at county road, 1½ miles north of Edison.
915	Oct. 26	3 P.M.	190	62.0	Pachitla Creek	Ichawaynocha- way Creek	Calhoun County, lat 31°33′, long. 84°41′ at State Highway 37, west of Dickey.
916	July 7 Oct. 26	5 P.M. 11 A.M.	600	200 156	Ichawaynocha- way Creek	Flint River	Calhoun County, lat 31°28', long. 84°34' at State Highway 62, 3½ miles west of Leary.
918	Oct. 20		2.7	0	Alligator Creek	Ichawaynocha- way Creek	Baker County, lat 31°21', long. 84°34' at county road, 2½ miles southwest of Milford.
919	Oct. 20			0	Alligator Creek	Ichawaynocha- way Creek	Baker County, lat 31°22′, long. 84°33′ at county road, 1½ miles south of Milford.
920	Oct. 26	11 A.M.	24	1.13	Chickasaw- hatchee Creek	Ichawaynocha- way Creek	Terrell County, lat 31°44′, long. 84°23′ at State Highway 50, 4¾ miles southeast of Dawson.
921	July 1	12 M.		2.02	Brantley Creek	Chickasaw- hatchee Creek	Terrell County, lat 31°45', long. 84°26' at southwest corner of American Legion golf course, south of Dawson.
922	Oct. 26	12 M.	63	6.05	Chickasaw- hatchee Creek	Ichawaynocha- way Creek	Terrell County, lat 31°39′, long. 84°26′ at county road, 8½ miles south of Dawson.
923	Oct. 17	1 P.M.	67	0	Kiokee Creek	Chickasaw- hatchee Creek	Dougherty County, lat 31°30′, long. 84°22′ at State Highway 62, 3 miles west of Pretoria.
924	Oct. 19	1 P.M.		2.64	Tributary to Kiokee Creek	Kiokee Creek	Dougherty County, lat 31°30′, long. 84°24′ at State Highway 62, 5½ miles west of Pretoria.
925	Oct. 21			0	Keel Creek	Chickasaw- hatchee Creek	Calhoun County, lat 31°26′, long. 84°29′ at State Highway 37, 3½ miles south of Leary.
926	Oct. 21	10 A.M.	322	1.24	Chickasaw- hatchee Creek	Ichawaynocha- way Creek	Baker County, lat 31°21', long. 84°29' at State Highway 37, at Elmodel.
927	Oct. 25	4 P.M.	1050	215	Ichawaynocha- way Creek	Flint River	Baker County, lat 31°13′, long. 84°28′ at State Highway 91, 10½ miles southwest of Newton.
928	Oct. 20		12	0	Big Cypress Creek	Ichawaynocha- way Creek	Baker-Miller Counties, lat 31°15′, long. 84°36′ at county road, 9½ miles northeast of Colquitt.
929	Oct. 19		35	0	Big Slough	Flint River	Mitchell County, lat 31°15', long. 84°12' at State Highway 3, north of Camilla.
930	Oct. 20		6.7	0	Tributary to Big Slough	Big Slough	Mitchell County, lat 31°11′, long. 84°09′ at State Highway 3, 3½ miles north of Pelham.
931	Oct. 21		310	0	Big Slough	Flint River	Decatur County, lat 30°56′, long. 84°31′ at State Highway 97, 3¾ miles northeast of Bainbridge.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
933	July 8 Aug. 16 Aug. 20 Oct. 14 Oct. 21		54	0 0 0 0 0	Spring Creek	Flint River	Early County, lat 31°25′, long. 84°47′ at State Highway 62, 3¼ miles southwest of Arlington.
934	Oct. 14			0	Tributary to Spring Creek	Spring Creek	Early County, lat 31°25′, long. 84°47′ at State Highway 62, 3½ miles southwest of Arlington.
935	Oct. 21		14	. 03	Perry Creek	Spring Creek	Early County, lat 31°26′, long. 84°45′ at State Highway 62, southwest of Arlington.
936	Oct. 21		18	0	Long Branch	Spring Creek	Early County, lat 31°18′, long. 84°42′ at county road, at Damascus.
937	Sept. 10 Oct. 21	2 P.M. 4 P.M.	284	13.2 10.1	Spring Creek	Flint River	Miller County, lat 31°10′, long. 84°45′ at State Highway 1, at Colquitt.
938	Oct. 21		42	0	Big Drain Creek	Spring Creek	Miller County, lat 31°05′, long. 84°41′ at State Highway 1, 1 mile south of Boykin.
939	Oct. 21		61	0	Aycocks Creek	Spring Creek	Miller County, lat 31°09′, long. 84°48′ at State Highway 91, 4 miles west of Colquitt.
					MOBILE	RIVER BASIN	
942	Oct. 21	1 P.M.	89.2	57.6	Cartecay River	Coosawattee River	Gilmer County, lat 34°38′, long. 84°25′ at county road, 5½ miles southeast of Ellijay.
944	Oct. 21	9 A.M.	10.7	4.99	Rock Creek	Cherrylog Creek	Gilmer County, lat 34°47′, long. 84°24′ at State Highway 5, 7½ miles northeast of Ellijay.
946	Oct. 21	11 A.M.		19.2	Mountaintown Creek	Coosawattee River	Gilmer County, lat 34°45′, long. 84°33′ at State Highway 2, 5¾ miles northwest of Ellijay.
947	Oct.: 25	5 P.M.		3.26	Talking Rock Creek	Coosawattee River	Pickens County, lat 34°31', long. 84°30' at State Highway 5, at Talking Rock.
948	Oct. 25	2 P.M.		6.79	Talona Creek	Talking Rock Creek	Pickens County, lat 34°33′, long. 84°30′ at county road, at Whitestone and 3¼ miles north of Talking Rock.
949	Oct. 25	3 P.M.		9.29	Talona Creek	Talking Rock Creek	Pickens County, lat 34°32′, long. 84°31′ at county road, 1¼ miles north of Talking Rock.
950	Oct. 25	4 P.M.		11.45	Talking Rock Creek	Coosawattee River	Pickens County, lat 34°31′, long. 84°31′ at State Highway 5, 1½ miles northwest of Talking Rock.
951	Oct. 25	1 P.M.		3.56	Town Creek	Talking Rock Creek	Pickens County, lat 34°33′, long. 84°33′ at State Highway 5, 3 miles northwest of Talking Rock.
952	Oct. 26	9 A.M.		4.51	Scarecorn Creek	Talking Rock Creek	Pickens County, lat 34°29′, long. 84°35′ at State Highway 53, 5¼ miles southwest of Talking Rock.
953	Oct. 25	1 P.M.		26.5	Talking Rock Creek	Coosawattee River	Murray County, lat 34°35', long. 84°40' at State Highway 156, 2¼ miles southeast of Carters.

# MOBILE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
954	Oct. 25	2 P.M.		214	Coosawattee River		Murray County, lat 34°36', long. 84°42' at State Highway 61, at Carters.
955	Oct. 25	4 P.M.		1.08	Sugar Creek	Coosawattee River	Murray County, lat 34°40', long. 84°43' at State Highway 61, 2 miles southeast of Ram- hurst.
956	Oct. 22	1 P.M.		1.36	Sallacoa Creek	Coosawattee River	Gordon County, lat 34°26′, long. 84°43′ at State Highway 53, 0.8 mile west of Fairmount
957	Oct. 25	9 A.M.		. 53	Pinhook Creek	Sallacoa Creek	Gordon County, lat 34°28', long. 84°42' at State Highway 61, 2½ miles north of Fair- mount.
958	Oct. 11	12 M.		8.61	Pinelog Creek	Sallacoa Creek	Bartow County, lat 34°22′, long. 84°43′ at State Highway 61, 2 miles northeast of Pine Log.
959	Oct. 11	10 A.M.		1.56	Little Pinelog Creek	Pinelog Creek	Bartow County, lat 34°21′, long. 84°45′ at State Highway 140, 1¼ miles west of Pine Log
961	Oct. 25	11 A.M.		14.3	Pine Log Creek	Sallacoa Creek	Gordon County, lat 34°26′, long. 84°46′ at county road, 2 miles southeast of Sonoraville
962	Oct. 11	11 A.M.		.41	Cedar Creek	Pine Log Creek	Bartow County, lat 34°24′, long. 84°50′ at county road, 6½ miles east of Adairsville.
963	Oct. 25	10 A.M.		5.71	Cedar Creek	Pine Log Creek	Gordon County, lat 34°26′, long. 84°48′ at county road, 4½ miles west of Fairmount.
964	Oct. 22	12 M.		20.2	Pine Log Creek	Sallacoa Creek	Gordon County, lat 34°27′, long. 84°52′ at State Highway 53, 5½ miles west of Fair- mount.
965	Oct. 22	9 A.M.		8.48	Dews Lake Outflow	Pine Log Creek	Gordon County, lat 34°30', long. 84°49' at county road, 6½ miles west of Ranger.
967	Oct. 26	12 M.		20.0	Conasauga River	Oostanaula River	Polk County, Tennessee. Lat 35°00′, long. 84°44′ at U. S. Highway 411, 9½ miles north of Carndall.
968	Oct. 27	2 P.M.		28.2	Conasauga River	Oostanaula River	Whitfield-Murray Counties, lat 34°55′, long 84°50′ at county road, at Beaverdale and 6¾ miles northwest of Carndall.
969	Oct. 26	2 P.M.		1.25	Sumach Creek	Conasauga River	Murray County, lat 34°54', long. 84°45' at State Highway 61, 2 miles north of Crandall
970	Oct. 26	8 A.M.		2.14	Mill Creek	Conasauga River	Murray County, lat 34°49', long. 84°46' at State Highway 61, at Eton.
971	Oct. 27	4 P.M.		11.3	Coahulla Creek	Conasauga River	Whitfield County, lat 34°54′, long. 84°55′ a county road, 9 miles north of Dalton at Prate Mill.
972	Oct. 27	5 P.M.		2.86	Mill Creek	Coahulla Creek	Whitfield County, lat 34°48′, long. 85°01′ a State Highway 3, 3¾ miles northwest of Dal ton.
974	Oct. 25	6 P.M.		2.61	Holly Creek	Conasauga River	Murray County, lat 34°46', long. 84°46' at State Highway 2, at Chatsworth.
975	Oct. 25	5 P.M.		1.17	Rock Creek	Holly Creek	Murray County, lat 34°42', long. 84°44' at State Highway 61, at Ramhurst.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
978	Oct. 21	10 A.M.		20.1	Oothkalooga Creek	Oostanaula River	Gordon County, lat 34°30′, long. 84°58′ at State Highway 53, 1½ miles southwest of Calhoun.
979	Oct. 21	1 P.M.		1.56	Snake Creek	Oostanaula River	Gordon County, lat 34°34′, long. 85°01′ at county road, at Sugar Valley.
980	Oct. 5 Oct. 20	11 A.M. 4 P.M.		5.52 5.94	John Creek	Oostanaula River	Floyd-Gordon Counties, lat 34°26′, long. 85° 06′ at county road, 7 miles north of Shannon.
981	Oct. 20	4 P.M.		0	Rocky Creek	John Creek	Gordon County, lat 34°27′, long. 85°05′ at county road, at Curryville.
982	Oct. 5	12 M.		. 20	Lowry Branch	Oostanaula River	Floyd County, lat 34°26′, long. 85°07′ at county road, 2¾ miles west of Curryville.
983	Nov. 2	3 P.M.		. 29	Villanow Creek	East Armuchee Creek	Walker County, lat 34°41′, long. 85°07′ at State Highway 2, 9½ miles east of LaFayette.
984	Oct. 19	2 P.M.		5.40	West Armuchee Creek	Armuchee Creek	Chattooga County, lat 34°34′, long. 85°10′ at county road, 1¾ miles northeast of Subligna.
985	Oct. 5	2 P.M.		2.75	Woodward Creek	Oostanaula River	Floyd County, lat 34°23′, long. 85°02′ at State Highway 53, 4 miles northeast of Shan- non.
987	Oct. 20	1 P.M.		37.3	Etowah River	Coosa River	Lumpkin County, lat 34°31′, long. 84°04′ at State Highway 9, 4½ miles west of Dahlonega.
989	Oct. 13	12 M.		56.4	Etowah River	Coosa River	Dawson County, lat 34°21′, long. 84°07′ at State Highway 9, 4½ miles south of Dawson- ville.
990	Oct. 13	3 P.M.		13.2	Shoal Creek	Etowah River	Dawson County, lat 34°25′, long. 84°09′ at State Highway 53, 1½ miles west of Dawson-ville.
991	Oct. 22	11 A.M.		4.54	Cochrans Creek	East Amicalola Creek	Dawson County, lat 34°32′, long. 84°12′ at State Highway 52, 9¼ miles northwest of Dawsonville.
992	Oct. 22	12 M.		20.6	Cochrans Creek	East Amicalola Creek	Dawson County, lat 34°30′, long. 84°12′ at State Highway 136, 6¾ miles northwest of Dawsonville.
993	Oct. 13	4 P.M.		20.6	East Amicalola Creek	Amicalola Creek	Dawson County, lat 34°29', long. 84°12' at State Highway 183, 6¼ miles northwest of Dawsonville.
994	Oct. 22	1 P.M.		42.8	Amicalola Creek	Etowah River	Dawson County, lat 34°27′, long. 84°13′ at county road, 5½ miles west of Dawsonville.
995	Oct. 20	3 P.M.		50.3	Amicalola Creek	Etowah River	Dawson County, lat 34°26′, long. 84°13′ at State Highway 53, 5¼ miles west of Dawsonville.
996	Oct. 13	4 P.M.		4.38	Settingdown Creek	Etowah River	Cherokee County, lat 34°18′, long. 84°16′ at county road, 7 miles southeast of Ball Ground.
997	Oct. 26	10 A.M.		1.12	Hinton Creek	Long Swamp Creek	Pickens County, lat 34°29′, long. 84°25′ at State Highway 108, 1¼ rniles north of Jasper.
998	Oct. 26	12 M.		. 58	Darnell Creek	Long Swamp Creek	Pickens County, lat 34°26′, long. 84°22′ at State Highway 53, 2 miles northeast of Tate.

#### MOBILE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
999	Oct. 26	2 P.M.		14.1	Long Swamp Creek	Etowah River	Pickens County, lat 34°25', long. 84°22' at State Highway 53, 1¼ miles east of Tate.
1000	Oct. 13	11 A.M.		17.9	Long Swamp Creek	Etowah River	Cherokee County, lat 34°20', long. 84°21' at county road, 2 miles east of Ball Ground.
1001	Oct. 13	2 P.M.		2.08	Smithwick Creek	Etowah River	Cherokee County, lat 34°18', long. 84°21' at county road, 3½ miles southeast of Ball Ground.
1002	Oct. 26	12 M.		5.76	Sharp Moun- tain Creek	Etowah River	Pickens County, lat 34°24′, long. 84°26′ at State Highway 143, 4½ miles south of Jasper
1003	Oct. 12	4 P.M.		13.0	Sharp Moun- tain Creek	Etowah River	Cherokee County, lat 34°20′, long. 84°24′ at county road, 1¾ miles west of Ball Ground.
1004	Oct. 13	9 A.M.		17.0	Sharp Moun- tain Creek	Etowah River	Cherokee County, lat 34°19', long. 84°24' at State Highway 5, 2½ miles southwest of Bal Ground.
1005	Oct. 13	10 A.M.		198	Etowah River	Coosa River	Cherokee County, lat 34°18′, long. 84°24′ at county road, 3 miles south of Ball Ground.
1007	Oct. 12	1 P.M.	22	1.49	Canton Creek	Etowah River	Cherokee County, lat 34°14′, long. 84°30′ at State High 5 spur, at Canton.
1008	Oct. 11	2 P.M.		2.75	Shoal Creek	Etowah River	Cherokee County, lat 34°20', long. 84°34' at State Highway 140, 0.8 mile northwest of Waleska.
1009	Oct. 11	4 P.M.		3.64	Shoal Creek	Etowah River	Cherokee County, lat 34°18′, long. 84°34′ at county road, 13⁄4 miles southwest of Waleska
1011	Oct. 12	10 A.M.	14	*	Rubes Creek	Little River	Cherokee County, lat 34°06′, long. 84°30′ at county road, 1 mile east of Woodstock.
1012	Oct. 12	11 A.M.	137	1.91	Little River	Etowah River	Cherokee County, lat 34°07′, long. 84°30′ at State Highway 5, 1¾ miles north of Woodstock.
1013	Sept. 27	2 P.M.	4.1	.09	Noonday Creek	Little River	Cobb County, lat 33°59′, long. 84°36′ at State Highway 29, 3¾ miles northwest of Marietta.
1014	Oct. 12	9 A.M.	43	1.00	Noonday Creek	Little River	Cherokee County, lat 34°05′, long. 84°32′ at county road, 1 mile south of Woodstock.
1015	Sept. 27		7.9	0	Proctor Creek	Etowah River	Cobb County, lat 34°02′, long. 84°40′ at State Highway 3, 3 miles west of Kennesaw.
1016	Sept. 27		2.2	0	Tanyard Creek	Etowah River	Cobb County, lat 34°04', long. 84°41' at State Highway 92, at Acworth.
1018	Sept. 28	3 P.M.	40	. 29	Pumpkinvine Creek	Etowah River	Paulding County, lat 33°55′, long. 84°53′ at State Highway 6, 2½ miles west of Dallas.
1019	Oct. 11	8 A.M.	2.6	0	Pettit Creek	Etowah River	Bartow County, lat 34°16′, long. 84°45′ at State Highway 61, 1¾ miles south of White.
1020	Oct. 8	4 P.M.	38	6.78	Pettit Creek	Etowah River	Bartow County, lat 34°11′, long. 84°49′ at southeast of Atco.

<sup>\*</sup>Flow less than 0.005 cfs.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
1021	Oct. 8	3 P.M.	11	1.78	Nancy Creek	Pettit Creek	Bartow County, lat 34°11′, long. 84°50′ at county road, 2½ miles northwest of Cartersville.
1022	Oct. 14	10 A.M.	55	4.98	Raccoon Creek	Etowah River	Bartow County, lat 34°07', long. 84°53' at State Highway 113, 13/4 miles east of Stiles- boro.
1023	Oct. 14	3 P.M.	24	. 37	Euharlee Creek	Etowah River	Polk County, lat 33°59′, long. 85°05′ at county road, 2 miles southwest of Rockmart.
1024	Oct. 14	2 P.M.	7.9	. 45	Tributary to Alin Creek	Alin Creek	Polk County, lat 33°59′, long. 85°03′ at county road, 1 mile south of Rockmart.
1025	Oct. 14	1 P.M.		0	Tributary to Euharlee Creek	Euharlee Creek	Polk County, lat 34°01′, long. 85°03′ at State Highway 101, 1¼ miles north of Rockmart.
1026	Oct. 14	5 P.M.	15	.12	Fish Creek	Euharlee Creek	Polk County, lat 34°01′, long. 85°07′ at State Highway 6, 4 miles west of Rockmart.
1027	Oct. 14	12 M.	88	27.8	Euharlee Creek	Etowah River	Polk County, lat 34°02′, long. 85°03′ at State Highway 101, at Aragon.
1028	Oct. 15	2 P.M.		0	Tributary to Euharlee Creek	Euharlee Creek	Polk County, lat 34°05′, long. 85°07′ at county road, 4 miles northwest of Aragon.
1029	Oct. 15	2 P.M.		0	Hill Creek	Euharlee Creek	Polk County, lat 33°59', long. 84°59' at Southern Railway Bridge, 3½ miles east of Rockmart.
1031	Oct. 8	12 M.		7.67	Two Run Creek	Etowah River	Bartow County, lat 34°15′, long. 84°54′ at State Highway 20, 3 miles east of Kingston.
1032	Oct. 7	4 P.M.		10.0	Two Run Creek	Etowah River	Bartow County, lat 34°13′, long. 84°58′ at county road, 2 miles southwest of Kingston.
1033	Oct. 7	3 P.M.		3.23	Barnsley Creek	Etowah River	Bartow County, lat 34°15′, long. 85°01′ at State Highway 20, 4½ miles west of Kingston.
1034	Oct. 5	4 P.M.		3.25	Dykes Creek	Etowah River	Floyd County, lat 34°15′, long. 85°05′ at State Highway 20, 5¼ miles east of Rome.
1036	Oct. 7	12 M.		9.03	Tributary to Silver Creek	Silver Creek	Floyd County, lat 34°11′, long. 85°10′ at county road, southeast of Lindale.
1038	Oct. 5	6 P.M.		. 22	Beach Creek	Coosa River	Floyd County, lat 34°16′, long. 85°16′ at State Highway 20, 5½ miles west of Rome.
1039	Oct. 15	12 M.	9.8	2.05	Cedar Creek	Big Cedar Creek	Polk County, lat 33°57′, long. 85°13′ at county road, 4¾ miles south of Cedartown.
1040	Oct. 15	10 A.M.	7.6	. 55	Lime Branch	Cedar Creek	Polk County, lat 33°56′, long. 85°18′ at county road, 6 miles southwest of Cedartown.
1041	Oct. 15	11 A.M.	5.8	.38	Tributary to Lime Branch	Lime Branch	Polk County, lat 33°56′, long. 85°17′ at State Highway 100, 5½ miles south of Cedartown
1042	Oct. 15	9 A.M.	16	. 01	Tributary to Lime Branch	Lime Branch	Polk County, lat 33°58′, long. 85°19′ at county road, 5 miles southwest of Cedartown.
1043	Oct. 15	9 A.M.	41	6.74	Lime Branch	Cedar Creek	Polk County, lat 33°58′, long. 85°16′ at county road, 2¾ miles south of Cedartown.

# MOBILE RIVER BASIN

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

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Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
1044	Oct. 14	6 P.M.	73	17.6	Cedar Creek	Big Cedar Creek	Polk County, lat 34°01′, long. 85°16′ at State Highway 6, at Cedartown.
1046	Oct. 7	9 A.M.	160	62.5	Cedar Creek	Big Cedar Creek	Floyd County, lat 34°08′, long. 85°18′ at State Highway 53, 2½ miles northeast of Cave Springs.
1047	Oct. 6	2 P.M.	18	13.1	Little Cedar Creek	Big Cedar Creek	Floyd County, lat 34°06′, long. 85°20′ at county road, at Cave Springs.
1048	Oct. 6	3 P.M.		6.58	Tributary to Little Cedar Creek	Little Cedar Creek	Floyd County, lat 34°06′, long. 85°20′ at foot bridge 75 feet above mouth, at Cave Springs.
1049	Aug. 19 Sept. 27 Oct. 6 Nov. 25	11 A.M. 8 A.M. 5 P.M. 10 A.M.		25.4 26.1 24.8 25.4	Little Cedar Creek	Big Cedar Creek	Floyd County, lat 34°07′, long. 85°20′ at State Highway 53, at Cave Springs.
1050	Oct. 6	12 M.	28	24.4	Little Cedar Creek	Big Cedar Creek	Floyd County, lat 34°08′, long. 85°20′ at county road, 1¾ miles north of Cave Springs.
1051	Nov. 1	3 P.M.		. 88	Chattooga River	Coosa River	Walker County, lat 34°42', long. 85°16' at State Highway 2, at LaFayette.
1052	Nov. 1	4 P.M.		1.60	Duck Creek	Chattooga River	Walker County, lat 34°40′, long. 85°20′ at county road, 4½ miles southwest of LaFayette.
1053	Nov. 1	5 P.M.		0	Allen Creek	Chattooga River	Walker County, lat 34°36′, long. 85°23′ at county road, 9½ miles southwest of LaFayette.
1054	Oct. 19	5 P.M.		. 25	Chelsea Creek	Teloga Creek	Chattooga County, lat 34°31′, long. 85°26′ at county road, 3½ miles northeast of Menlo.
1055	Oct. 19	11 A.M.		. 29	Cane Creek	Chattooga River	Chattooga County, lat 34°34′, long. 85°19′ at county road, 13⁄4 miles north of Trion.
1057	Oct. 20	2 P.M.		1.17	Wickers Creek	Chattooga River	Chattooga County, lat 34°22′, long. 85°22′ at county road, 3½ miles southeast of Lyerly.
1058	Oct. 1	8 A.M.	12	0	Bear Creek	Tallapoosa River	Haralson County, lat 33°50', long. 85°04' at State Highway 120, 7¾ miles east of Buchan- an.
1059	Sept. 18	10 A.M.		1.36	Little River	Tallapoosa River	Haralson County, lat 33°48′, long. 85°09′ at State Highway 120, 2½ miles east of Buchanan.
1060	Sept. 18	11 A.M.	152	0	Tallapoosa River	Alabama River	Haralson County, lat 33°52′, long. 85°13′ at State Highway 1, 4½ miles north of Buchanan.
1061	Oct. 1	10 A.M.	27	2.46	Beach Creek	Tallapoosa River	Haralson County, lat 33°46′, long. 85°13′ at State Highway 120, 3½ miles southwest of Buchanan.
1062	Oct. 1	1 P.M.	11	9.29	Duncan Creek	Tallapoosa River	Haralson County, lat 33°46′, long. 85°20′ at county road, 3½ miles northwest of Tallapoosa.
1063	Oct. 1	3 P.M.	15	2.13	Walker Creek	Tallapoosa River	Haralson County, lat 33°42′, long. 85°16′ at State Highway 100, 2¾ miles south of Tallapoosa.

TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
1064	Sept. 28	2 P.M.	14	0,	Little Talla- poosa River	Tallapoosa River	Carroll County, lat 33°44′, long. 84°58′ at State Highway 8, 3½ miles west of Villa Rica
1065	Sept. 28	1 P.M.	6.8	. 15	Hill Creek	Little Talla- poosa River	Carroll County, lat 33°44′, long. 85°00′ at State Highway 8, 1½ miles east of Temple.
1066	Sept. 28	12 M.	. 90	. 06	Webster Creek	Bethel Creek	Carroll County, lat 33°44′, long. 85°03′ at State Highway 8, at Temple.
1067	Sept. 28	11 A.M.	44	0	Little Talla- poosa River	Tallaposa River	Carroll County, lat 33°41′, long. 85°01′ at county road, 3¾ miles south of Temple.
1068	Sept. 28	11 A.M.	8.2	. 11	Sharpe Creek	Little Talla- poosa River	Carroll County, lat 33°38', long. 85°03' at State Highway 113, 41/4 miles north of Carrollton.
1069	Sept. 28	10 A.M.	80	0	Little Talla- poosa River	Tallapoosa River	Carroll County, lat 33°38′, long. 85°03′ at county road, 3½ miles north of Carrollton.
1070	Aug. 18	1 P.M.	6.7	. 53	Curtis Creek	Little Talla- poosa River	Carroll County, lat 33°36', long, 85°03' at State Highway 8 Alt., 1¾ miles east of Carrollton.
1072	Sept. 23	4 P.M.	21	. 64	Buck Creek	Little Talla- poosa River	Carroll County, lat 33°38', long. 85°06' at State Highway 1, 3¾ miles northwest of Carrollton.
1073	Sept. 23	4 P.M.	30	. 28	Buck Creek	Little Talla- poosa River	Carroll County, lat 33°37′, long. 85°07′ at county road, 3½ miles northwest of Carrollton.
1074	Sept. 23	2 P.M.	4.6	. 11	Buffalo Creek	Little Talla- poosa River	Carroll County, lat 33°34′, long. 85°04′ at county road, 1½ miles southeast of Carrollton
1075	Sept. 22	11 A.M.	13	. 26	Indian Creek	Little Talla- poosa River	Carroll County, lat 33°29', long. 85°10' at county road, $2\frac{1}{2}$ miles northwest of Roopville.
1076	Sept. 22	12 M.	157	3.66	Little Talla- poosa River	Tallapoosa River	Carroll County, lat 33°31', long. 85°14' at State Highway 5, 2½ miles southeast of Bowdon.
1077	Sept. 22			.01	Little Turkey Creek	Turkey Creek	Carroll County, lat 33°38′, long. 85°11′ at county road, 0.8 mile northwest of Mt. Zion
1078	Sept. 22			0	Turkey Creek	Indian Creek	Carroll County, lat 33°34′, long. 85°15′ at State Highway 100, 2 miles north of Bowdon
	1				TENNESSE	E RIVER BAS	IN
1085	Nov. 2	10 A.M.		2.14	West Chicka- mauga Creek	South Chicka- mauga Creek	Walker County, lat 34°44′, long. 85°24′ at county road, 6½ miles west of LaFayette.
1086	Nov. 2	11 A.M.		6.58	West Chicka- mauga Creek	South Chicka- mauga Creek	Walker County, lat 34°48′, long. 85°21′ at State Highway 2, 5¾ miles southwest of Chickamauga.
1087	Oct. 27			0	Tiger Creek	South Chicka- mauga Creek	Whitfield County, lat 34°59′, long. 84°58′ at county road, 14¾ miles north of Dalton and 0.7 mile south of GaTenn. line.

# TENNESSEE RIVER BASIN

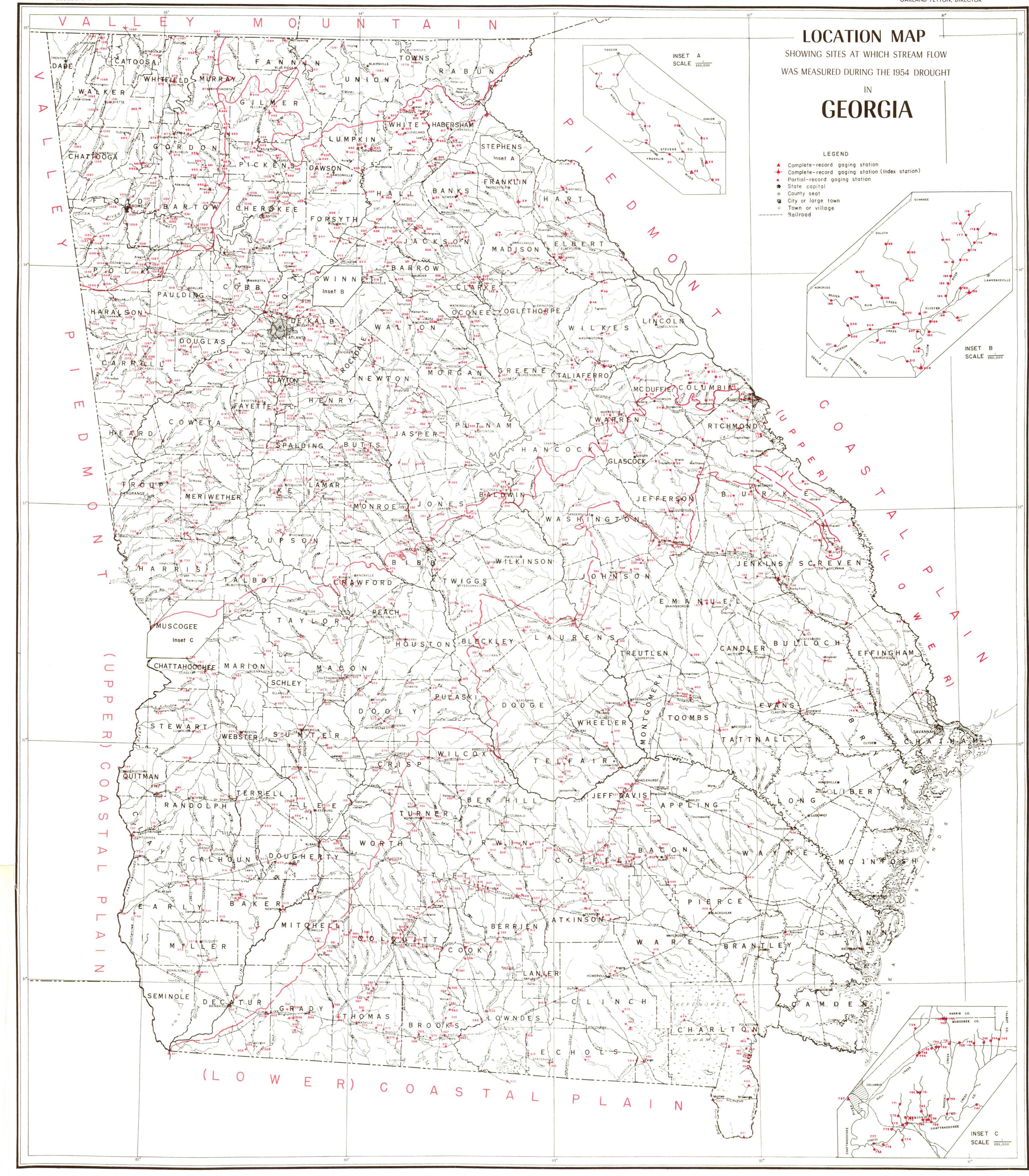
TABLE 3. Low-flow measurements at partial-record gaging stations during the 1954 drought.

Map No.	Date	Time	Drainage Area (sq mi)	Flow cfs	Stream	Tributary to	Location
1088	Oct. 27	12 M.		10.2	Tiger Creek	South Chicka- mauga Creek	Catoosa County, lat 34°54′, long. 85°05′ at State Highway 3, 2 miles southeast of Ring gold.
1090	Nov. 2	1 P.M.		1.44	Chattanooga Creek	Tennessee River	Walker County, lat 34°55′, long. 85°21′ at State Highway 193, 4½ miles northwest of Chickamauga.
1091	Nov. 2	12 M.		1.35	Rock Creek	Chattanooga River	Walker County, lat 34°57′, long. 85°21′ at county road, 1 mile north of Flintstone.

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