





























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 noncontributing areas, within the area unless otherwise noted.

WSP is used as an abbreviation for "Water-Supply Papers" in references to previously published reports.

#### DOWNSTREAM ORDER OF LISTING GAGING STATIONS

Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records was changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indentation in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indentation show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

The order of listing used before the publication of the 1951 report listed first all stations on the main stem from headwaters toward mouth, then all stations on the uppermost tributary to the main stem from the tributary's source to mouth, and then all stations from source to mouth of the uppermost tributary to the tributary.

#### EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter 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 are also outlined in standard textbooks on the measurement of stream discharge. Typical structures in use at gaging stations are shown in figure 1.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect determinations of peak discharge (such as slope-area or contracted-opening determinations, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors



**A. LITTLE MANATEE RIVER NEAR WIMAUMA, FLA.**



**B. CARTECAY RIVER NEAR ELLIJAY, GA.**

**FIGURE 1.—GAGING-STATION STRUCTURES.**









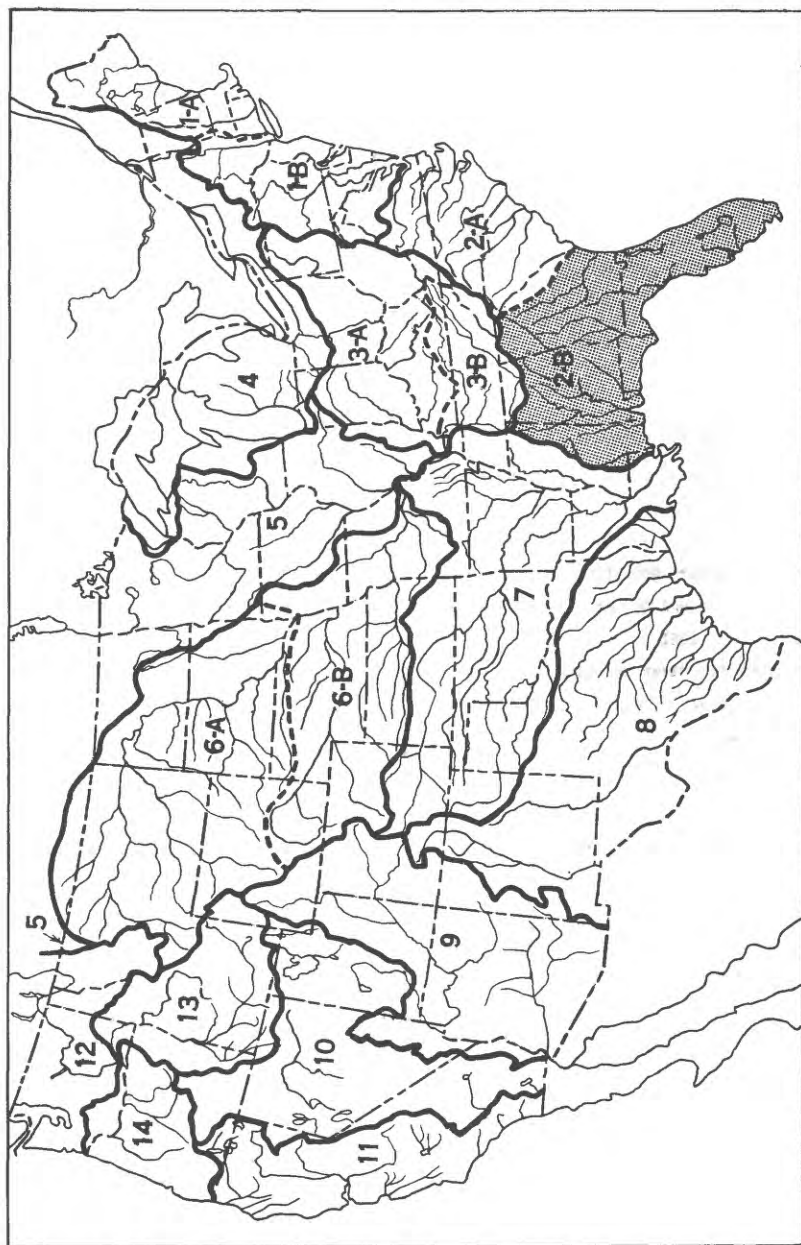


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

Streamflow data for the years 1884-1901, in reports of the Geological Survey

(A = Annual Report; B = Bulletin)

| Report        | Character of data                                                                                                                                | Year                    |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 10th A, pt. 2 | Descriptive information only.                                                                                                                    |                         |
| 11th A, pt. 2 | Monthly discharge and descriptive information.....                                                                                               | 1884 to September 1890. |
| 12th A, pt. 2 | .....do.....                                                                                                                                     | 1884 to June 30, 1891.  |
| 13th A, pt. 3 | .....do.....                                                                                                                                     | 1884-92.                |
| 14th A, pt. 2 | Monthly discharge.....                                                                                                                           | 1888-93.                |
| B 131.....    | Descriptions, measurements, gage heights, and ratings.....                                                                                       | 1893-94.                |
| 16th A, pt. 2 | Descriptive information only.                                                                                                                    |                         |
| B 140.....    | Descriptions, measurements, gage heights, ratings, and monthly discharge.                                                                        | 1895.                   |
| WSP 11.....   | Gage heights.....                                                                                                                                | 1896.                   |
| 18th A, pt. 4 | Descriptions, measurements, ratings, and monthly discharge...                                                                                    | 1895-96.                |
| WSP 15.....   | Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.    | 1897.                   |
| WSP 16.....   | Descriptions, measurements, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries above Kansas River. | 1897.                   |
| 19th A, pt. 4 | Descriptions, measurements, ratings, and monthly discharge...                                                                                    | 1897.                   |
| WSP 27.....   | Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.                            | 1898.                   |
| WSP 28.....   | Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.                         | 1898.                   |
| 20th A, pt. 4 | Monthly discharge.....                                                                                                                           | 1898.                   |
| WSP 35 to 39. | Descriptions, measurements, gage heights, and ratings.....                                                                                       | 1899.                   |
| 21st A, pt. 4 | Monthly discharge.....                                                                                                                           | 1899.                   |
| WSP 47 to 52. | Descriptions, measurements, gage heights, and ratings.....                                                                                       | 1900.                   |
| 22d A, pt. 4. | Monthly discharge.....                                                                                                                           | 1900.                   |
| WSP 65, 66... | Descriptions, measurements, gage heights, and ratings.....                                                                                       | 1901.                   |
| WSP 75.....   | Monthly discharge.....                                                                                                                           | 1901.                   |

Reports on surface-water supply containing records from 1899 to date for drainage basins in this report are listed below. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained. Before 1951, records for the south Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River basins were included with those for the south Atlantic slope and eastern Gulf of Mexico basins.

Numbers of water-supply papers containing results of stream measurements in the South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River, 1899-1956

| Year   | WSP    | Year    | WSP | Year | WSP | Year | WSP  | Year | WSP  |
|--------|--------|---------|-----|------|-----|------|------|------|------|
| 1899   | 36     | 1912    | 322 | 1925 | 602 | 1937 | 822  | 1949 | 1142 |
| 1900   | 48     | 1913    | 352 | 1926 | 622 | 1938 | 852  | 1950 | 1172 |
| 1901   | 65, 75 | 1914    | 362 | 1927 | 642 | 1939 | 872  | 1951 | 1204 |
| 1902   | 83     | 1915    | 402 | 1928 | 662 | 1940 | 892  | 1952 | 1234 |
| 1903   | 98     | 1916    | 432 | 1929 | 682 | 1941 | 922  | 1953 | 1274 |
| 1904   | 127    | 1917    | 452 | 1930 | 697 | 1942 | 952  | 1954 | 1334 |
| 1905   | 168    | 1918    | 472 | 1931 | 712 | 1943 | 972  | 1955 | 1384 |
| 1906   | 204    | 1919-20 | 502 | 1932 | 727 | 1944 | 1002 | 1956 | 1434 |
| 1907-8 | 242    | 1921    | 522 | 1933 | 742 | 1945 | 1032 |      |      |
| 1909   | 262    | 1922    | 542 | 1934 | 757 | 1946 | 1052 |      |      |
| 1910   | 282    | 1923    | 562 | 1935 | 782 | 1947 | 1082 |      |      |
| 1911   | 302    | 1924    | 582 | 1936 | 802 | 1948 | 1112 |      |      |

The records at most of the stations discussed in these reports extend over many years. Discharge measurements at many points other than regular gaging stations have been made each year and are published at the end of each report. The streams and points of measurement are listed in the same order as the streams and gaging stations in the body of the report. An index of the records obtained before 1904 has been published in Water-Supply Paper 119.

Each of the reports on the surface-water supply for the year 1939 (Water-Supply Paper 872 for the south Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River) contains, for the area included in that report, a summary of yearly discharge at gaging stations at which 10 or more complete years of record had been collected. These summaries were reprinted separately.

Reports also have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which may have been revised), as well as some records not contained in the annual series of water-supply papers. The only such reports for any part of the area







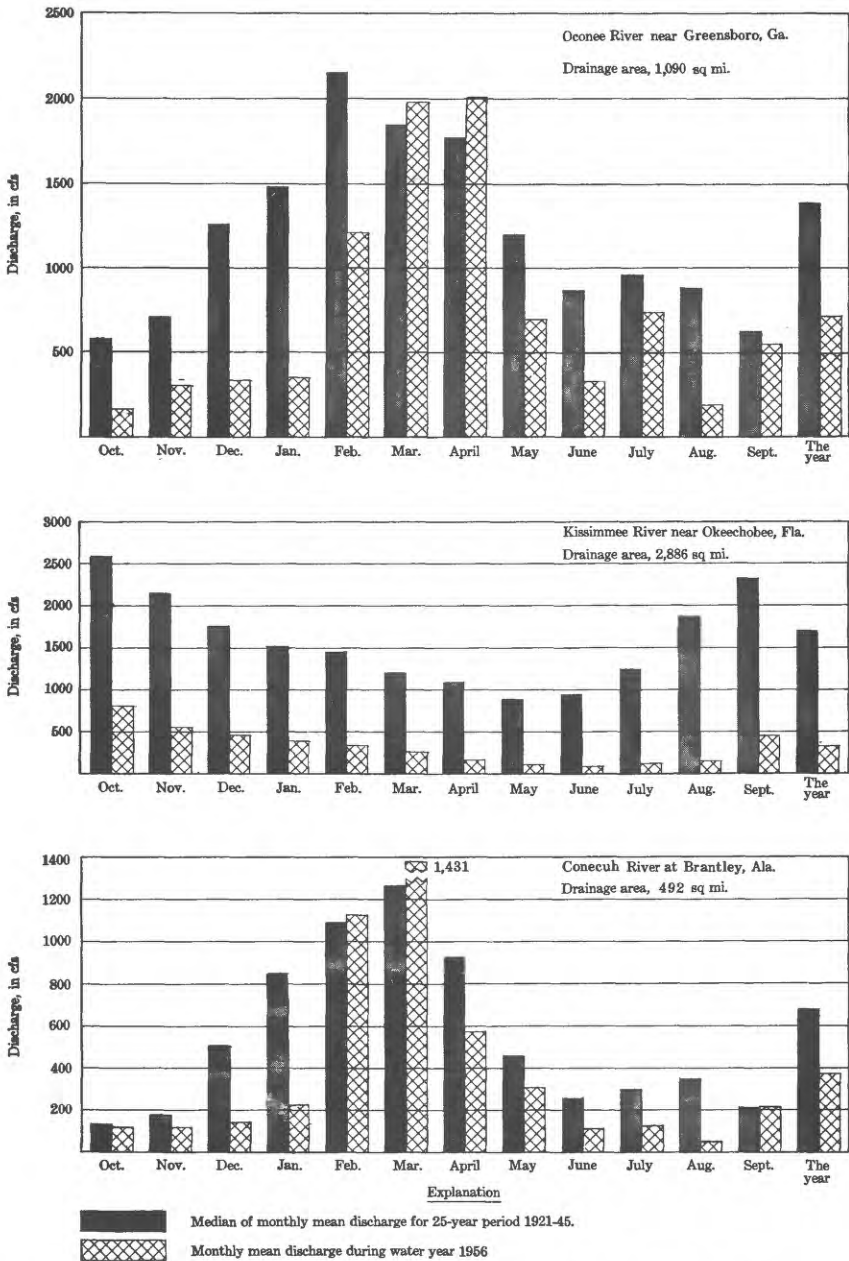


Figure 3. Comparison of discharge at three key gaging stations during 1956 water year with median discharge for 25-year period.

## OGEECHEE RIVER BASIN

Ogeechee River at Scarboro, Ga.

Location.--Lat 32°42'40", long 81°52'45", on left bank 15 ft downstream from highway bridge at Scarboro, Jenkins County, 3½ miles downstream from Sculls Creek, 6½ miles upstream from Horse Creek, and 7½ miles southeast of Millen.

Drainage area.--1,940 sq mi, approximately.

Records available.--April 1937 to September 1956.

Gage.--Water-stage recorder. Datum of gage is 111.81 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Dec. 18, 1941, staff gage at same site and datum.

Average discharge.--19 years, 1,578 cfs.

Extremes.--Maximum discharge during year, 7,310 cfs Mar. 24 (gage height, 9.34 ft); minimum, 160 cfs Aug. 16.

1937-56: Maximum discharge, 24,600 cfs Aug. 17, 1940, Mar. 27, 1944 (gage height, 12.8 ft); minimum daily, 120 cfs Sept. 5-10, 1954.

Maximum stage known, 17.0 ft in October 1929, from information by local residents.

Remarks.--Records good.

Rating table, water year 1955-56 (gage height, in feet,  
and discharge, in cubic feet per second)  
(Shifting-control method used May 12-25)

|      |       |     |       |
|------|-------|-----|-------|
| -0.4 | 160   | 7.0 | 2,170 |
| 1.0  | 337   | 7.5 | 2,770 |
| 3.0  | 670   | 8.0 | 3,740 |
| 5.0  | 1,200 | 9.3 | 7,150 |
| 6.0  | 1,580 |     |       |

Discharge, in cubic feet per second, water year October 1955 to September 1956

| Day                     | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July  | Aug.  | Sept. |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1                       | 555    | 316    | 710    | 611    | 955    | 1,950  | 2,490  | 1,680  | 380    | 519   | 309   | 246   |
| 2                       | 592    | 350    | 755    | 592    | 955    | 2,020  | 2,260  | 1,580  | 395    | 537   | 323   | 267   |
| 3                       | 1,070  | 330    | 805    | 575    | 950    | 2,090  | 2,090  | *1,580 | 395    | 555   | *337  | 267   |
| 4                       | 1,160  | 350    | 830    | 555    | 905    | 2,170  | 1,950  | 1,620  | 425    | 519   | 351   | 246   |
| 5                       | 1,010  | 330    | 905    | 537    | 905    | 2,320  | 1,890  | 1,720  | 470    | 470   | 365   | 233   |
| 6                       | 905    | 330    | 1,010  | 537    | 1,070  | 2,430  | 1,840  | 1,780  | 519    | 380   | 365   | 226   |
| 7                       | 805    | 330    | *1,070 | 519    | 1,530  | 2,560  | 1,780  | 1,720  | 537    | 323   | 351   | 239   |
| 8                       | 690    | *330   | 1,070  | 502    | 2,020  | 2,620  | 1,780  | 1,840  | 519    | 295   | 323   | 239   |
| 9                       | 611    | 330    | 1,040  | 502    | 2,090  | 2,700  | 1,840  | 2,090  | 486    | 281   | 281   | 226   |
| 10                      | 537    | 337    | 955    | 502    | 2,170  | 2,700  | 1,840  | 2,260  | 470    | 288   | 246   | 226   |
| 11                      | *502   | 337    | 905    | *502   | 2,260  | 2,620  | 2,020  | 2,320  | 425    | 295   | 220   | 226   |
| 12                      | 470    | 351    | 855    | 502    | 2,370  | 2,490  | 2,320  | 2,170  | 380    | 281   | 208   | 260   |
| 13                      | 440    | 365    | 830    | 502    | 2,430  | 2,370  | 2,560  | 2,020  | 337    | 274   | 202   | 295   |
| 14                      | 425    | 380    | 805    | 502    | 2,370  | 2,260  | 2,700  | 1,890  | 309    | 295   | 186   | 309   |
| 15                      | 395    | 395    | 755    | 502    | 2,490  | 2,260  | 2,860  | 1,720  | 302    | 216   | 170   | 274   |
| 16                      | 372    | 425    | 732    | 502    | 3,320  | 2,560  | 3,030  | 1,620  | 309    | 330   | 160   | 239   |
| 17                      | 358    | 440    | 690    | 502    | 4,080  | 2,940  | 3,320  | 1,450  | 330    | 302   | 170   | 220   |
| 18                      | 358    | 455    | 670    | 502    | 3,850  | 3,120  | 3,420  | 1,300  | 337    | 267   | 186   | 202   |
| 19                      | 330    | 470    | 670    | 519    | 3,220  | 3,120  | 3,640  | 1,100  | *344   | 239   | 180   | 191   |
| 20                      | 323    | 486    | 650    | 555    | 2,940  | 3,220  | 4,420  | 930    | 365    | 233   | 186   | 180   |
| 21                      | 309    | 470    | 630    | 575    | 2,620  | 3,530  | 4,540  | 780    | 380    | 233   | *202  | 170   |
| 22                      | 302    | 440    | 630    | 592    | 2,430  | 4,190  | 3,960  | *670   | 372    | 260   | 202   | 165   |
| 23                      | 295    | 440    | 630    | 630    | 2,260  | 5,830  | 3,220  | 592    | 351    | 281   | 214   | 165   |
| 24                      | 295    | 440    | 650    | 690    | 2,090  | 7,150  | 2,700  | 519    | 337    | 267   | 208   | 170   |
| 25                      | 288    | 440    | 670    | 755    | 1,950  | 6,540  | 2,320  | 470    | 351    | *220  | 202   | 186   |
| 26                      | 281    | 470    | 670    | 830    | 1,890  | 5,420  | 2,170  | 537    | 395    | 208   | 208   | 233   |
| 27                      | 274    | 519    | 670    | 880    | 1,840  | 4,420  | 2,090  | 592    | 455    | 202   | 208   | *288  |
| 28                      | 267    | 575    | 670    | 905    | 1,890  | 3,530  | 2,020  | 519    | 537    | 202   | 208   | 372   |
| 29                      | 274    | 630    | 650    | 955    | 1,950  | 3,030  | 1,890  | 455    | 537    | 233   | 202   | 440   |
| 30                      | 281    | 670    | 630    | 955    | -----  | 2,860  | 1,780  | 425    | 519    | 288   | 202   | 455   |
| 31                      | 295    | -----  | 630    | 955    | -----  | 2,700  | -----  | 410    | -----  | 302   | 226   | ----- |
| Total                   | 15,069 | 12,489 | 23,842 | 19,240 | 61,780 | 99,720 | 76,740 | 40,359 | 12,268 | 9,695 | 7,401 | 7,455 |
| Mean                    | 486    | 416    | 769    | 621    | 2,330  | 3,217  | 2,558  | 1,302  | 409    | 313   | 239   | 248   |
| Cfs/m                   | 0.251  | 0.214  | 0.396  | 0.320  | 1.10   | 1.66   | 1.32   | 0.671  | 0.211  | 0.161 | 0.123 | 0.128 |
| In.                     | 0.29   | 0.24   | 0.46   | 0.37   | 1.19   | 1.91   | 1.47   | 0.77   | 0.24   | 0.19  | 0.14  | 0.14  |
| Calendar year 1955: Max | 6,110  |        |        | Min    | 237    | Mean   | 959    | Cfs/m  | 0.494  | In.   | 6.72  |       |
| Water year 1955-56: Max | 7,150  |        |        | Min    | 160    | Mean   | 1,055  | Cfs/m  | 0.544  | In.   | 7.41  |       |

\* Discharge measurement made on this day.























































































































































































































































































































































































































































































































































































































































































































































































































































