

Compilation of Records of Surface Waters of the United States through September 1950

Part 2-A. South Atlantic Slope Basins,
James River to Savannah River

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1303



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Prepared under the direction of J. V. B. WELLS, Chief, Surface Water Branch

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UNITED STATES DEPARTMENT OF THE INTERIOR

FRED A. SEATON, *Secretary*

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PREFACE

This report contains summaries of streamflow records in the South Atlantic slope basins, James River to Savannah River. It was prepared by the United States Geological Survey in the Water Resources Division, C. G. Paulsen, chief, succeeded by L. B. Leopold, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and B. J. Peterson, chief, Basic Records Section.

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COMPILATION OF RECORDS OF SURFACE WATERS OF SOUTH ATLANTIC SLOPE BASINS, JAMES RIVER TO SAVANNAH RIVER, THROUGH 1950

PURPOSE AND SCOPE

This volume is one of a series of reports presenting monthly and yearly summaries of streamflow and reservoir data collected by the Geological Survey. Included with these data are some records furnished by other Federal, State, and private agencies.

The purpose of this series of reports is to make available in summarized form all of the surface-water records collected up to September 30, 1950.

The first known streamflow records to be systematically collected in the United States are those for Eaton and Madison Brooks in Madison County, N. Y., by John B. Jervis during 1835. Stream gaging by the Geological Survey was begun in 1888. At that time the Congress authorized the Irrigation Survey to be conducted by the Geological Survey in connection with special studies relating to irrigation. The work consisted of the measurements of stage and discharge of a few streams in the West. Since that time the work has expanded so that measurements of stage and discharge of streams and of stage and contents of lakes and reservoirs have been made at more than 12,000 gaging stations in the 48 States and the territories of Hawaii and Alaska, of which about 6,400 were in operation on September 30, 1950. The details of the records collected at those stations are contained in annual reports, bulletins, and water-supply papers, which have been issued usually on an annual basis. Most of the records collected over the years are found only in numerous individual volumes, many of which are out of print and difficult to obtain.

The records have been collected mainly in cooperation with State, municipal, and other Federal cooperating agencies and published in annual reports by the Geological Survey. This series of compilation reports has been prepared by the Geological Survey as a special project not included in the cooperative program.

The data presented in this series of reports consist of records of discharge of streams and contents of reservoirs summarized on a monthly and yearly basis. Results of miscellaneous discharge measurements and, in general, stage records have been excluded. Also included are bar charts showing the period of record covered by each gaging station and a map of the area showing the location of each station (pl. 1). The reports of this series are uniform in the type of data they contain and in the form of presentation.

In compiling the data for these summary reports, one important feature of the project was to review the analyses and computations originally made on the basis of all information now available. For some stations additional base data, obtained subsequently, allowed for reinterpretation and recomputation of more accurate records of discharge. All records were examined for major computation errors and tested wherever possible by comparison with records of discharge at other stations and weather data. Records that were found to be in need of substantial revision were recomputed or omitted if revision was not feasible. Estimates of discharge were made to fill short gaps to complete the continuity of the record, whenever practical.

Records furnished by other agencies are incorporated in these reports when they supplement records collected by the Geological Survey, and appeared consistent and reliable. Furnished records were reviewed in the same manner as Geological Survey records whenever base data were available and detailed study was feasible.

STREAM-GAGING PROGRAM

The area covered by this report (fig. 1), includes streams along the South Atlantic slope from the James River to the Savannah River. From west to east, the area extends from the steep slopes of the eastern side of the Appalachian Mountains, through the rolling hills and low ridges of the Piedmont Belt, to the flat slopes of the Atlantic Coastal Plain and to the Atlantic Ocean. Navigation, water power, and the control of floods provided the impetus for the earliest observations of streamflow in the area.

The earliest record on the streams in the area covered by this report was begun sometime before 1875 by the Army Signal Corps as a record of stage on the Savannah River at Augusta, Ga. The first measurements of discharge recorded in the area were made at this original gage during the period 1884-91 by the Corps of Engineers, U. S. Army. From these early data, the Geological Survey later computed a record of discharge for the period 1884 to 1891. In 1891 the U. S. Weather Bureau established gages on several streams throughout the area to obtain gage-height records.

During 1891-92 the Georgia Geological Survey evidenced an early interest in the water resources of that State.

The Geological Survey began to collect records of streamflow in the area during the summer of 1895 when the first discharge measurement was made on the James River at Buchanan, Va. About seven stations were established during that year in Virginia, North Carolina, and South Carolina. One of these, a station on the Cape Fear River at Fayetteville, N. C., was located at a site where a gage-height record was available since 1889. At a later date the discharge record for this station was extended back to Jan. 1, 1889. Ten additional stations were established in 1896. Growth of the stream-gaging program during the years that immediately followed was generally very slow. The States of Georgia and North Carolina took a leading interest in the program.

During the latter part of the nineteenth century, water power became of major importance to the Southeastern States, and in 1895 the Geological Survey initiated the first State cooperative stream-gaging program in the area with the State of North Carolina. At that time the State of Georgia was actively engaged in water resources investigations, and a report on the water power of Georgia was being completed for the Georgia Geological Survey. Cooperation with the State of Georgia began in 1896. The rapid development of water power and the widespread movement for the acquisition by the Government of the forested lands within the Southern Appalachians for the conservation and regulation of the water supply and flow of streams resulted in the establishment of several stations in 1900 along the eastern slopes of the Blue Ridge Mountains. This expansion was augmented by cooperation with the U. S. Forest Service during 1907-9. Cooperation with Georgia decreased after a few years and that with North Carolina was continued through 1909. After a lapse of eight years the State of North Carolina resumed cooperation in October 1918. In 1925 the State of Virginia instituted a statewide cooperative program to investigate the streamflow of that State, in 1930 cooperation was begun with South Carolina, and in 1937 it was resumed with the State of Georgia.

As the result of Congressional authorization to make a comprehensive report on the rivers of the United States, the Corps of Engineers supported a considerable expansion of the stream-gaging work during 1928, and again in 1936 with the passage of the Flood Control Act. The initiation of these programs had a significant effect in advancing stream-gaging activities in the area.

Numerous municipal and private organizations have assisted the Geological Survey in the stream-gaging program, as have

several bureaus of the Federal Government. Details of their cooperation have been acknowledged in the annual water-supply papers.

DESCRIPTION OF DATA

The gaging-station records are arranged in downstream order. The order used in this report is the same as that adopted for use in the annual series of reports on surface-water supply beginning with the water year 1951. 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 bar chart (see p 15), 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 in the annual reports through the water year 1950 was different. In those reports all stations on the main stem are listed first in order, proceeding from the headwaters toward the mouth, then all stations on the uppermost tributary from its source to mouth, followed by all stations from source to mouth on the tributaries to the tributary.

The data presented for most of the gaging stations comprise a description of the station, tables of monthly discharge and runoff, and a yearly summary table. The station description gives the location of the gaging station, drainage area, supplemental records available (for some stations), types and datums of gages, average discharge, extremes of discharge, and general remarks concerning the data. When records were furnished by another agency the fact is so stated.

The location of the gaging station and the drainage area are obtained from the best available maps. When more than one site was used and the difference in drainage areas is significant, the area for the latest site is shown first followed by the areas for other sites in chronological order. In some instances drainage-area figures have not been obtained because of the lack of suitable maps or because the boundaries cannot be defined or the effective drainage area determined.

For some stations a paragraph headed "Supplemental records available" gives reference to records other than those given in the present report. Such records may consist of gage-height records for periods other than those for which discharge records are presented, records concerning quality of the water, or the results of periodic discharge measurements.

The gage described first is the present gage or the one used most recently. Information is then given in chronological order for all gages used earlier, giving changes in location, type of gage, or datum. The location or datum of all earlier gages is given with reference to the present or most recently used gage. The datum of the gage is the elevation of the zero of the gage above mean sea level. Where information as to datum is not available, the altitude of the gage is given. This may be determined from topographic maps, river-profile surveys, barometric levels or where nothing better is available, by estimates based on average fall between a known elevation and the gage or on other known factors. The degree of accuracy of an altitude determination is indicated by the source of the information and to some extent by the refinement to which the figure is given.

The average discharge for a station is the average of all complete water years and is published only if there are five or more complete water years of record. The years used to determine the average are not necessarily consecutive. The average discharge is not published for some stations because of extensive changes in diversion or storage, or other water development, that have occurred upstream.

In general, the momentary maximum and minimum discharges and stages for the entire period of record are published in the "Extremes" paragraph. These are qualified if necessary according to the type of gage used and the completeness of the record. Maximum and minimum discharges at nonrecording gaging stations are qualified as "observed" unless determined from a graph drawn through actual gage heights which approximates the actual hydrograph.

Under "Remarks" information is given on factors which effect the basin yield and runoff characteristics. These include upstream regulation, diversion, and utilization—a history of changes in these items is given when known. Also, references are made to the records of storage or diversion upstream, if published. When discharge records are furnished by another agency, credit is given under "Cooperation."

The streamflow data summarized in this paper are generally contained in two monthly tables and one yearly table. The first

monthly table is a tabulation of monthly and yearly mean discharge in cubic feet per second. These figures represent discharge passing the station; they are unadjusted for storage or diversion upstream. Each monthly figure is the mean flow for the entire month; generally no record for part of a month is tabulated. Likewise, each yearly figure is the mean flow for a full year, and no figure is shown for a partial year. Usually the months are arranged on a water-year basis. Exceptions to this rule are made in connection with seasonal records wherein the months are grouped to give a complete season for each calendar year.

The second monthly table is a tabulation of monthly and yearly runoff, in inches. For streams that are subject to considerable regulation, the second table contains adjusted runoff in inches. The table of runoff in inches is omitted if the data do not represent natural yield without a gross error, whether adjusted or unadjusted.

The third table contains a yearly summary of the streamflow data. The column headed "W. S. P. no." lists the number of the water-supply paper or other publication in which the figures of daily and monthly discharge are published; for early years for which daily discharges were not published, that column lists the report that contains daily gage heights, rating tables, and monthly discharges. If a part of the record has been revised and published, then reference is made to both the original report and the one containing the revised record; if the daily discharge record for the entire year has been republished to include revisions, then only the later report is listed. For some stations the third table is omitted, however the report containing records for any particular year can generally be found by reference to the tables given on p. 10, 11.

In the third table the momentary maximum discharge for each water year and the date of its occurrence is given whenever obtainable. This is maximum discharge for the water year unless otherwise qualified. For nonrecording gage records, momentary maximums were often obtained from graphs drawn through the gage readings. If a graph was not feasible, then the discharge was computed from the maximum gage height observed, provided it was believed to be of significant value. Momentary maximum discharge believed to be representative of the absolute maximum for the water year is not qualified in any way. Occasionally maximum daily discharges are tabulated, but only when it was not practicable to give momentary maximums and when figures may have general statistical value.

The minimum daily discharge for each water year is listed if known.

Other data listed in this table are the annual mean discharge and runoff for both the water year and the calendar year. The annual mean discharge listed for the water year is the same as that given in the yearly column in the first table.

Most canal and diversion records are given in a single table. There are some records for large canals, however, that are published in the same detail as those for streams. Records of reservoirs also are given in a single table which shows the contents at the end of each month.

Figures of discharge that have been revised as the result of the review made in connection with this compilation are so noted; however, revisions that have been previously published are not indicated as revisions in this report. Revised daily discharges made in connection with this compilation will be published in a later annual water-supply paper. If only annual maximum discharges are revised and no revision of daily discharge is made for a station, revised annual maximums are given only in this report and will not be republished in a later annual report. Revisions of figures of runoff in inches resulting solely from a revision of the drainage area are not noted as such. Figures that represent corrections of typographical or computational errors where no figures of daily discharge have been revised or changed are indicated as "corrected" in this report. Estimates of discharge made to complete months or years for this report are noted as estimates and as "not previously published."

For a few stations, after reviewing the past records, it was found that part or all of the previously published records was grossly in error, yet the base data were such that the record could not be improved or revised. For such stations a note listing the periods of records which have been discredited and not republished is given with the records published herein. Stations for which the entire period of records previously published has been discredited are omitted from this report. The following lists the stations so omitted.

Stations omitted from this report for which the entire record should not be used

Station	Period of record
Wreck Island Creek near Concord, Va.....	1926-28
Dan River near Pinnacles, Va.....	1920-21
Roanoke River at Neal, N. C.....	1896-1903
Rocky Creek near Bahama, N. C.....	1925-31
Neuse River at Selma, N. C.....	1896-1900
Moccasin Creek near Middlesex, N. C.....	1924-26
Reedy Fork near Summerfield, N. C.....	1925-28
Haw River at Moncure, N. C.....	1898-99
Yadkin River at Siloam, N. C.....	1900-1901
Yadkin River at Donaha, N. C.....	1913-18; 1920-23
Pee Dee River near Norwood, N. C.....	1896-99
Catawba River at Old Fort, N. C.....	1907
Linville River near Bridgewater, N. C.....	1900
Johns River at Collettsville, N. C.*.....	1907
Catawba Creek at Gastonia, N. C.....	1928-29
Second Broad River near Logans Store, N. C.....	1907-8

*Records below 150 cfs are usable.

In addition to the above, records for some other stations in the area, previously published by the Geological Survey in the annual series of reports, are omitted from this compilation. In general, the records of such stations either are too fragmentary to allow computation of monthly mean discharge, or are records that did not measure streamflow, total diversion, or return flow and were considered not important enough to warrant publication in this report. The only such station for which records are not compiled in this report is the following:

Dan River at Madison, N. C.....1903-8

PUBLICATIONS

To facilitate publication of streamflow records, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the annual series of water-supply papers on the surface-water supply of the United States was published in 14 volumes, one for each of the 14 parts. Beginning with the reports of 1951, the records are published in 18 volumes, including 2 volumes each for parts 1, 2, 3, and 6. This system is used in publishing the present series of compilation reports, except that the compilation report for part 11 is divided into 2 volumes. The boundaries of the various parts are indicated in the following list and on figure 1.

- Part 1. North Atlantic slope basins, in two volumes:
 - A, North Atlantic slope basins, Maine to Connecticut.
 - B, North Atlantic slope basins, New York to York River.
2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes.
 - A, South Atlantic slope basins, James River to Savannah River.

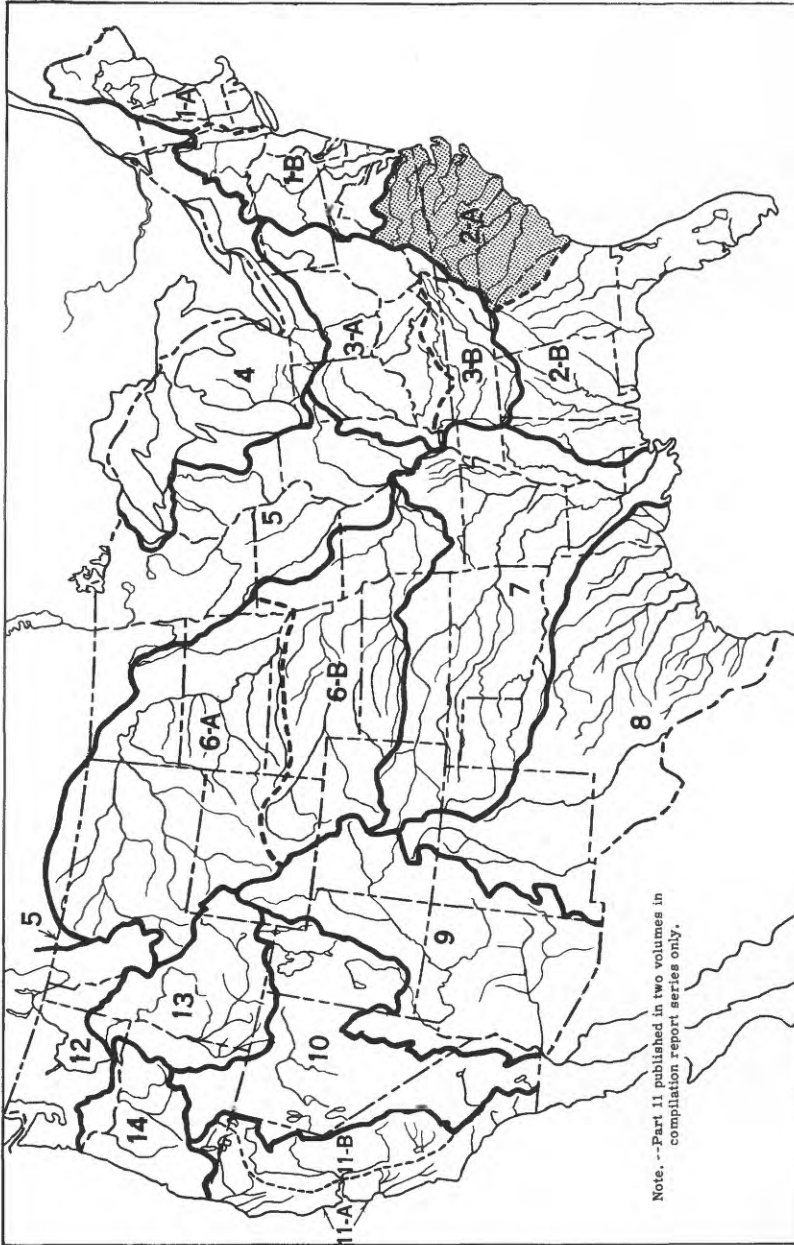


Figure 1. --Map of the United States showing areas covered by the annual reports on surface-water supply and also by the present series of compilation reports. The area covered by this report is shaded.

- B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.
3. Ohio River basin, in two volumes:
 - A, Ohio River basin except Cumberland and Tennessee River basins.
 - B, Cumberland and Tennessee River basins.
 4. St. Lawrence River basin.
 5. Hudson Bay and upper Mississippi River basins.
 6. Missouri River basin, in two volumes:
 - A, Missouri River basin above Sioux City, Iowa.
 - B, Missouri River basin below Sioux City, Iowa.
 7. Lower Mississippi River basin.
 8. Western Gulf of Mexico basins.
 9. Colorado River basin.
 10. The Great Basin
 11. Pacific slope basins in California:
 - A, Coastal basins (excluding Central Valley).
 - B, Central Valley.
 12. Pacific slope basins in Washington and upper Columbia River basin.
 13. Snake River basin.
 14. Pacific slope basins in Oregon and lower Columbia River basin.

Early records of the flow of streams in the United States are published in the reports listed below. In many of these reports records for years earlier than those indicated have been included for some streams.

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

(A = Annual Report; B = Bulletin; W = Water-Supply Paper)

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. 2do.....	1884 to June 30, 1891.
13th A, pt. 3do.....	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.
W 11.....	Gage heights.....	1896.
18th A, pt. 4.	Descriptions, measurements, ratings, and monthly discharge.	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 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.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.

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

Report	Character of data	Year
W 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.
W 35 to 39.	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52.	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901
W 75.....	Monthly discharge.....	1901.

Reports on surface-water supply containing records from 1899 to 1950 for drainage basins in this report are listed in the following table. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained.

Numbers of water-supply papers containing streamflow records in the South Atlantic slope basins, James River to Savannah River, 1899-1950

Year	W. S. P.	Year	W. S. P.	Year	W. S. P.	Year	W. S. P.	Year	W. S. P.
1899	^a 35, 36	1910	282	1921	522	1931	712	1941	922
1900	48	1911	302	1922	542	1932	727	1942	952
1901	65, 75	1912	322	1923	562	1933	742	1943	972
1902	^a 82, 83	1913	352	1924	582	1934	757	1944	1002
1903	^a 97, 98	1914	382	1925	602	1935	782	1945	1032
1904	^b 126, 127	1915	402	1926	622	1936	802	1946	1052
1905	^b 167, 168	1916	432	1927	642	1937	822	1947	1082
1906	^b 203, 204	1917	452	1928	662	1938	852	1948	1112
1907-8	242	1918	472	1929	682	1939	872	1949	1142
1909	262	1919-20	502	1930	697	1940	892	1950	1172

^aJames River only.

^bSusquehanna River to Yadkin River.

The records at most of the stations discussed in these reports extend over many years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report.

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 report for any part of the area covered by this report is Water-Supply Paper 197, "Water Resources of Georgia, 1895-1905".

Records of discharge have been published also in State reports. Some of these are not contained in the publications of the Geological

Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports for the area covered by this report.

State reports containing compilations of records of discharge

State	Period	Report	Issued by
Georgia.....	1895-1906	Bull. 16, Water powers of Georgia.....	Geological Survey of Georgia.
Do.....	1907-19	Bull. 38, Water powers of Georgia.....	Do.
North Carolina..	1889-1908	Bull. 20, Water powers of North Carolina...	North Carolina Geological and Economic Survey.
Do.....	1889-1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Do.....	1889-1936	Bull. 39, Discharge records of North Carolina streams. ¹	Do.
Do.....	1866-1945	Hydrologic data on the Neuse River basin...	Do.
Do.....	1820-1945	Hydrologic data on the Cape Fear River basin.	Do.
Do.....	1866-1945	Hydrologic data on the Yadkin-Pee Dee River basin.	Do.
Do.....	1872-1945	Hydrologic data on the Catawba and Broad River basins.	Do.
Do.....	1871-1945	Hydrologic data on the Roanoke and Tar River basins.	Do.
South Carolina..	1884-1946	Bull. 17, Summary of records of surface water supply of South Carolina.	South Carolina Research, Planning and Development Board.
Virginia.....	1895-1927	Bull. 31, Water resources of Virginia.....	Virginia Geological Survey.
Do.....	1927-42	Bull. 5, Surface water supply of Virginia (James River basin).	Virginia Conservation Commission.
Do.....	1927-42	Bull. 6, Surface water supply of Virginia (Roanoke and Chowan River basins).	Do.
Do.....	1942-50	Bull. 13, Surface water supply of Virginia (James River basin).	Virginia Department of Conservation and Development.
Do.....	1942-50	Bull. 14, Surface water supply of Virginia (Chowan and Roanoke River basins).	Do.

¹Contains records of maximum and minimum daily, weekly, and monthly discharge and yearly mean discharge.

Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey or other agencies. The more recent of these special reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier notable floods. The following is a list of these reports.

Reports

- W. S. P. 96: Destructive floods in the United States in 1903.
W. S. P. 771: Floods in the United States, magnitude and frequency.
W. S. P. 800: The floods of March 1936, Part 3, Potomac, James, and upper Ohio Rivers.
W. S. P. 846: Maximum discharges at stream-measurement stations through September 1938.
W. S. P. 1066: Floods of August 1940 in southeastern States.
W. S. P. 1137-I: Summary of floods in the United States during 1950.
Circular 100: Floods in Georgia, frequency, and magnitude.

HYDROLOGIC CONDITIONS

Streamflow, a residual of precipitation after other demands have been met, varies considerably from year to year and in different areas. Figure 2 (see following page) shows yearly discharge for three widely separated gaging stations in the South Atlantic Slope basins from James River to Savannah River. The pattern of yearly runoff shown by these streams is generally representative of hydrologic conditions in their part of the report area.

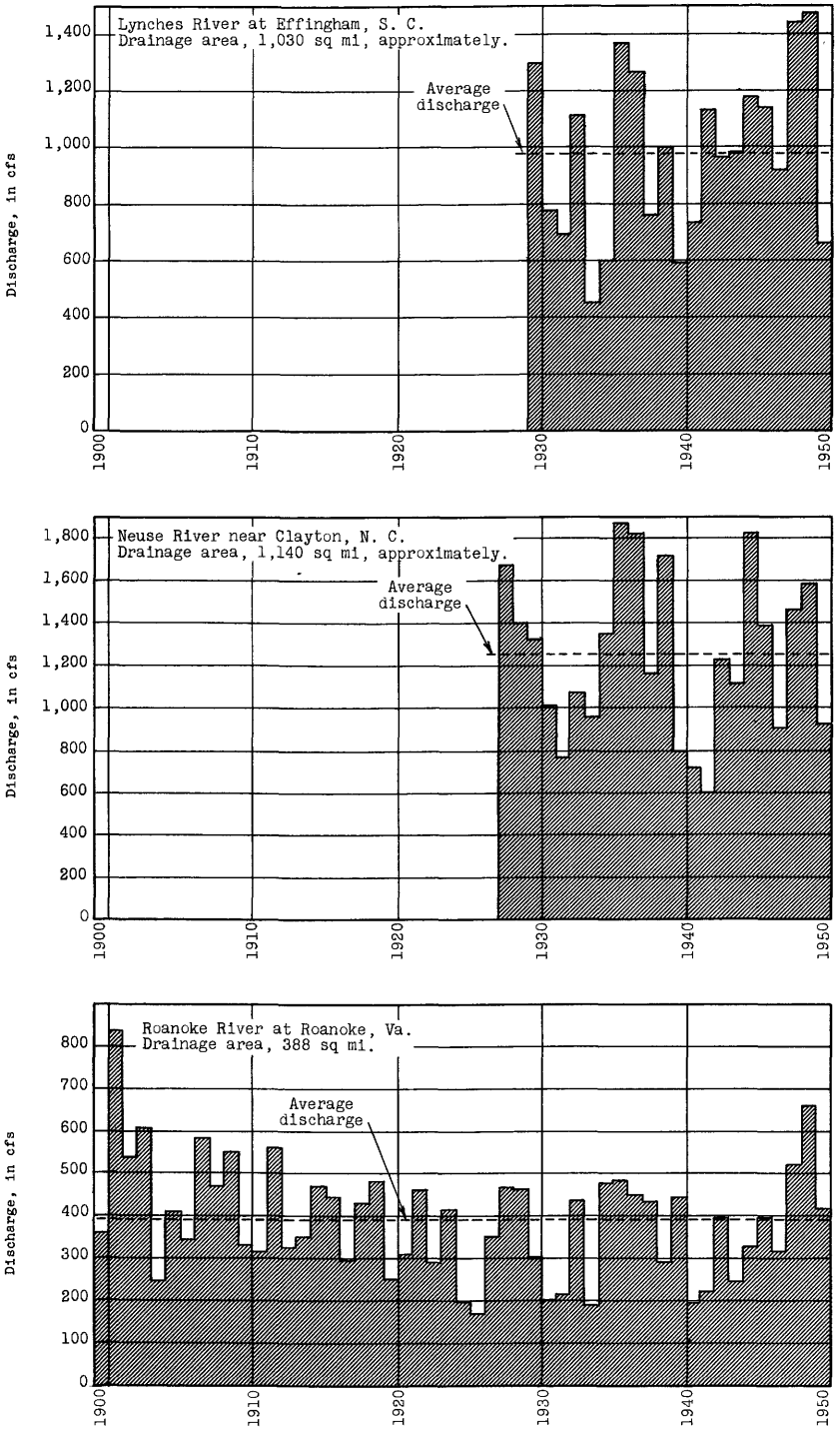



Figure 2.--Yearly discharge at three South Atlantic slope stations, James River to Savannah River.

BAR CHART

The following bar chart shows the period of record of discharge of streams and contents of reservoirs for all stations compiled in this report through September 30, 1950. Periods of record of stage only are not included. The stations are listed in downstream order (see p.) and are numbered consecutively. The number is used to identify the station on the map (pl. 1) showing location of gaging stations.

Bar chart of gaging-station records

Legend:  Streamflow  Reservoir contents

Period of record						Gaging station	Map no.	Page no.
1900	1910	1920	1930	1940	1950			
						James River basin:		
						Jackson River (head of James River):		
						Warm Springs Run:		
						Warm Springs at Warm Springs, Va.....	1	20
						Falling Springs Creek near Falling Spring, Va.....	2	20
						Jackson River at Falling Spring, Va.....	3	21
						Dunlap Creek near Covington, Va.....	4	22
						Jackson River at Covington, Va.....	5	24
						Potts Creek near Covington, Va.....	6	24
						Smith Creek above old dam, near Clifton Forge, Va.....	7	25
						Smith Creek near Clifton Forge, Va.....	8	26
						Cowpasture River near Clifton Forge, Va.....	9	27
						James River at Lick Run, Va.....	10	28
						Craig Creek:		
						Meadow Creek at Newcastle, Va.....	11	30
						Johns Creek at Newcastle, Va.....	12	31
						Craig Creek at Parr, Va.....	13	32
						Catawba Creek near Catawba, Va.....	14	34
						Catawba Creek near Fincastle, Va.....	15	35
						James River at Buchanan, Va.....	16	36
						Calfpasture River (head of Maury River) above Mill Creek, at Goshen, Va.....	17	38
						Calfpasture River at Goshen, Va.....	18	39
						Maury River at Rockbridge Baths, Va.....	19	40
						Kerrs Creek near Lexington, Va.....	20	41
						Maury River near Lexington, Va.....	21	43
						South River near Riverside, Va.....	22	44
						Maury River near Buena Vista, Va.....	23	45
						Maury River near Glasgow, Va.....	24	46
						Pedlar River near Pedlar Mills, Va.....	25	47
						James River at Holcombs Rock, Va.....	26	48
						James River at Bent Creek, Va.....	27	49
						Buffalo River:		
						Tye River at Roseland, Va.....	28	50
						Tye River near Lovingsston, Va.....	29	51
						Piney River at Piney River, Va.....	30	52
						Buffalo River near Norwood, Va.....	31	53
						Rockfish River near Greenfield, Va.....	32	54
						James River at Scottsville, Va.....	33	54
						Hardware River near Scottsville, Va.....	34	56
						Hardware River below Briery Run, near Scottsville, Va.....	35	57
						Slate River near Arvonnia, Va.....	36	58
						Mechum River (head of Rivanna River) near Ivy, Va.....	37	59
						Moormans River near Whitehall, Va.....	38	60
						Rivanna River near Charlottesville, Va.....	39	61
						Rivanna River below Moores Creek, near Charlottesville, Va.....	40	61
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JAMES RIVER BASIN

1. Warm Spring at Warm Springs, Va.

Location.--Lat 38°03'11", long 79°46'52", 200 ft downstream from Warm Spring in town of Warm Springs, Bath County.

Supplemental records available.--October 1944 to September 1950 (monthly readings only).

Gage.--Water-stage recorder just above V-shaped weir. Datum of gage is 2,316.18 ft (revised) above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--16 years (1928-44), 2.30 cfs.

Extremes.--1928-44: Maximum daily discharge recorded, 5.45 cfs Nov. 18, 1929 (flow probably increased somewhat by local surface runoff); minimum daily recorded, 1.35 cfs Feb. 25, 26, 1931.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	2.80	2.80	2.74	2.80	2.90	3.00	3.11	3.01	3.20	3.06	2.94	2.73	2.92
1930	2.53	2.73	2.60	2.60	2.58	2.72	2.68	2.64	2.50	2.42	2.20	2.01	2.51
1931	1.83	1.74	1.60	1.51	1.44	1.50	1.80	1.93	2.01	1.94	1.81	1.85	1.75
1932	1.71	1.65	1.57	1.56	1.70	1.78	1.99	2.18	2.15	2.19	2.11	1.97	1.88
1933	1.86	1.98	2.09	2.27	2.42	2.62	2.90	3.14	2.98	2.93	3.04	2.62	2.57
1934	2.42	2.22	2.15	1.99	1.95	1.99	2.11	2.12	2.01	1.92	1.79	1.73	2.03
1935	1.71	1.65	1.94	2.17	2.43	2.63	2.84	2.90	2.74	2.63	2.49	2.40	2.38
1936	2.30	2.29	2.34	2.45	2.66	2.88	3.14	3.00	2.84	2.66	2.61	2.45	2.63
1937	2.20	2.13	2.20	2.38	2.69	2.75	2.74	2.72	2.61	2.34	2.21	2.20	2.43
1938	2.11	2.16	2.23	1.93	2.22	2.24	2.31	2.31	2.29	2.33	2.24	2.15	2.21
1939	2.00	1.89	1.80	1.74	1.99	2.25	2.22	2.27	2.15	2.09	2.06	1.95	2.03
1940	1.88	1.80	1.69	1.60	1.63	1.73	1.83	2.10	2.40	2.40	2.50	2.70	2.02
1941	2.60	2.44	2.31	2.47	2.39	2.53	2.45	2.30	2.10	2.10	2.10	2.00	2.32
1942	1.77	1.66	1.60	1.51	1.56	1.66	1.77	1.95	2.23	2.35	2.43	2.29	1.90
1943	2.31	2.23	2.30	2.51	2.59	2.78	3.06	3.34	3.26	3.05	2.94	2.76	2.76
1944	2.61	2.41	2.25	2.19	2.23	2.59	2.62	2.55	2.59	2.40	2.37	2.26	2.42

* Not previously published; partly estimated from trend shown on hydrograph of adjacent records.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	697	-	-	-	-	-	-	-	-
1929	697	-	-	-	2.57	2.92	-	-	2.88
1930	697	-	-	-	1.90	2.51	-	-	2.28
1931	712	-	-	-	1.35	1.75	-	-	1.73
1932	727	-	-	-	1.42	1.88	-	-	1.96
1933	742	-	-	-	1.75	2.57	-	-	2.64
1934	757	-	-	-	1.68	2.03	-	-	1.91
1935	782	-	-	-	-	2.38	-	-	2.51
1936	802	-	-	-	2.21	2.63	-	-	2.60
1937	822	-	-	-	2.03	2.43	-	-	2.43
1938	852	-	-	-	1.72	2.21	-	-	2.14
1939	872	-	-	-	1.67	2.03	-	-	2.01
1940	892	-	-	-	-	2.02	-	-	2.19
1941	922	-	-	-	-	2.32	-	-	2.12
1942	952	-	-	-	1.46	1.90	-	-	2.05
1943	972	-	-	-	2.13	2.75	-	-	2.80
1944	1002	-	-	-	2.01	2.42	-	-	-

* Not previously published.

2. Falling Springs Creek near Falling Spring, Va.

Location.--Lat 37°52'05", long 79°56'45", at bridge on U. S. Highway 220, 0.7 mile downstream from Falling Spring (the main source), 2.1 miles southeast of town of Falling Spring, and 5 miles northeast of Covington, Alleghany County.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,150 ft (from topographic map).

Extremes.--1948-50: Maximum gage height, 3.0 ft Feb. 14, 1948, from recorded range in stage (discharge not determined); minimum discharge, 3.5 cfs Aug. 7, 1950 (gage height, 0.30 ft); minimum daily, 6.0 cfs Aug. 29, 1950.

Remarks.--Regulation at low flow by cross beds 2,000 to 3,000 ft above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1948	-	-	-	-	-	35.5	28.4	21.4	14.3	8.06	9.83	8.89	-
1949	14.5	23.0	46.0	35.7	26.8	20.6	39.9	24.6	12.5	12.8	16.8	15.1	24.0
1950	12.8	24.0	24.3	18.5	36.1	21.1	16.4	31.6	17.7	6.83	7.45	31.9	20.7

Yearly discharge, in cubic feet per second, of Falling Springs Creek near Falling Spring, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1948	1112	-	Feb. 14, 1948	-	-	-	-	-	-
1949	1142	304	Apr. 13, 1949	9.2	24.0	-	-	22.1	-
1950	1172	222	Sept. 13, 1950	6.0	20.7	-	-	-	-

3. Jackson River at Falling Spring, Va./

Location (revised).--Lat 37°52'36", long 79°58'39", on right bank 20 ft upstream from Smith Bridge, 0.8 mile south of town of Falling Spring, Alleghany County, 1.6 miles downstream from Falling Springs Creek, and 5.5 miles north of Covington.

Drainage area.--409 sq mi.

Supplemental records available.--Records of chemical analyses for 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3, and for the water year 1948 in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 1,333.49 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 25, 1934, chain gage at same site and datum.

Average discharge.--25 years (1925-50), 481 cfs.

Extremes.--1925-50; Maximum discharge, 24,700 cfs Mar. 17, 1936 (gage height, 14.74 ft), from rating curve extended above 9,000 cfs on basis of records for other stations in James River basin; minimum, 36 cfs Oct. 12, 1946 (gage height, 2.65 ft); minimum daily, 58 cfs Sept. 28-30, Oct. 1, 3, 5, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	*313	493	164	135	99.2	84.7	-
1926	130	370	183	735	945	623	691	291	182	114	306	155	390
1927	422	991	1,172	523	1,541	533	1,550	550	238	172	299	125	669
1928	341	452	640	527	559	547	818	670	494	363	525	369	525
1929	196	218	527	580	793	1,350	780	1,070	405	229	137	108	532
1930	466	965	480	359	558	597	378	162	125	70.2	70.8	62.5	356
1931	64.8	71.4	94.5	152	227	504	847	485	246	136	249	119	266
1932	78.1	66.8	163	499	781	1,058	826	805	224	527	90.7	72.3	416
1933	229	575	494	713	988	1,135	1,180	598	182	208	187	108	547
1934	78.8	78.1	134	215	86.4	1,280	511	235	117	93.9	111	166	261
1935	248	465*	885	1,325	822	1,304	1,212	585	258	224	272	438	669
1936	102	303	550	1,205	1,349	2,140	1,084	293	193	160	123	92.1	631
1937	275	125	807	1,883	1,095	523	728	460	153	144	230	260	555
1938	1,016	348	372	520	436	517	348	525	519	265	352	103	428
1939	76.6	107	199	678	1,525	989	611	375	177	436	237	85.9	452
1940	85.7	85.2	105	129	563	473	1,064	795	1,399	465	904	323	530
1941	119	181	330	430	266	458	535	171	203	264	86.1	82.9	261
1942	68.1	89.5	256	270	465	643	288	1,466	591	173	530	225	422
1943	451	417	907	695	888	1,382	876	795	473	502	137	93.5	634
1944	89.5	117	106	289	594	1,253	690	719	185	98.3	88.2	107	356
1945	151	144	465	570	719	969	410	464	193	256	173	375	406
1946	106	347	411	1,132	784	781	437	743	260	141	89.4	72.1	441
1947	84.5	86.0	104	711	242	825	505	383	225	146	124	119	297
1948	145	617	289	224	1,141	1,227	1,252	821	333	185	297	158	554
1949	373	734	1,426	1,312	1,074	729	1,343	733	585	820	450	251	818
1950	228	653	880	739	1,257	797	358	874	311	168	138	844	599

* Not previously published; partly estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	*0.85	1.40	0.45	0.38	0.28	0.23	-
1926	0.37	1.01	0.52	2.08	2.40	1.75	1.89	.82	.50	.32	.86	.42	12.94
1927	1.19	2.70	3.31	1.48	3.93	1.50	4.23	1.54	.65	.49	.84	.34	22.20
1928	.96	1.24	1.80	1.49	1.48	1.54	2.23	1.89	1.35	1.02	1.48	1.01	17.39
1929	.55	.60	1.49	1.64	2.02	3.80	2.13	3.02	1.10	.65	.39	.29	17.68
1930	1.31	2.63	1.55	1.01	1.42	1.68	1.03	.46	.34	.20	.20	.17	11.80
1931	.18	.20	.27	.43	.58	1.42	2.31	1.37	.67	.38	.70	.32	8.63
1932	.22	.18	.46	1.41	2.06	2.99	1.71	2.27	.61	1.49	.26	.20	13.86
1933	.65	1.57	1.40	2.01	2.52	3.20	3.22	1.68	.50	.59	.53	.29	18.16
1934	.22	.21	.58	.61	.22	3.61	1.40	.66	.32	.27	.31	.45	8.66
1935	.70	1.27	2.49	3.74	2.09	3.68	3.30	1.65	.70	.63	.77	1.19	22.21
1936	.29	.83	1.54	3.40	3.56	6.03	2.96	.83	.53	.45	.35	.25	21.02
1937	.77	.34	2.27	5.30	2.79	1.48	1.99	1.29	.42	.41	.65	.71	18.42
1938	2.86	.25	1.05	1.46	1.11	1.45	1.95	1.48	.87	.75	.99	.28	14.20
1939	.22	.29	.56	1.91	3.88	2.79	1.66	1.06	.48	1.23	.67	.23	14.98
1940	.24	.23	.30	.36	1.49	1.34	2.90	2.24	3.82	1.31	2.55	.88	17.66

* Not previously published; partly estimated on basis of records for nearby stations.

/ Published as "at Barber", prior to 1935.

Monthly and yearly runoff, in inches, of Jackson River at Falling Spring, Va.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.34	0.49	0.93	1.21	0.68	1.29	1.46	0.48	0.55	0.74	0.24	0.23	8.64
1942	.19	.24	.72	.76	1.19	1.81	.79	4.10	1.61	.49	1.50	.61	14.01
1943	1.27	1.14	2.56	1.96	2.26	3.90	2.39	2.24	1.29	1.42	.39	.26	21.08
1944	.25	.32	.30	.82	1.56	3.53	1.89	2.03	.50	.28	.25	.29	12.02
1945	.43	.39	1.31	1.60	1.83	2.73	1.12	1.30	.53	.72	.49	1.02	13.47
1946	.30	.95	1.15	3.19	2.00	2.20	1.19	2.10	.71	.40	.25	.20	14.68
1947	.24	.23	.29	2.01	.62	2.33	1.37	1.08	.61	.41	.35	.32	9.86
1948	.41	1.68	.82	.65	3.01	3.46	3.41	2.32	.91	.52	.84	.43	18.44
1949	1.05	2.00	4.02	3.70	2.74	2.05	3.66	2.06	1.60	2.31	1.27	.68	27.14
1950	.64	1.78	2.48	2.09	3.20	2.25	.98	2.47	.85	.47	.39	2.30	19.90

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	*6,680	Jan. 19, 1926	77	390	0.954	12.94	550	18.24
1927	642, 952	10,300	Nov. 16, 1926	91	669	1.64	22.20	572	19.00
1928	662	4,890	May 1, 1928	91	525	1.28	17.39	484	16.13
1929	682, 952	8,680	Feb. 28, 1929	94	532	1.30	17.68	613	20.33
1930	697, 952	*14,000	Nov. 18, 1929	58	356	.870	11.80	216	7.16
1931	712	*3,100	Mar. 29, 1931*	58	266	.650	8.83	273	9.04
1932	727, 952	*10,600	May 1, 1932	64	416	1.02	13.86	498	16.62
1933	742, 952	*7,500	Mar. 19, 1933	73	547	1.34	18.16	463	15.35
1934	757, 952	*8,980	Mar. 28, 1934	60	261	.638	8.66	371	12.31
1935	782, 952	15,100	Jan. 23, 1935	100	669	1.64	22.21	615	20.41
1936	802, 952	24,700	Mar. 17, 1936	82	631	1.54	21.02	653	21.74
1937	822, 952	11,300	Jan. 20, 1937	90	555	1.36	18.42	599	19.90
1938	852, 952	10,300	Oct. 28, 1937	86	428	1.05	14.20	314	10.41
1939	872, 952	11,600	Jan. 30, 1939	72	452	1.11	14.98	443	14.68
1940	892, 952	7,500	Apr. 20, 1940	66	530	1.30	17.66	560	18.65
1941	922	2,290	Apr. 5, 1941	64	261	.638	8.64	242	8.03
1942	952	20,100	May 16, 1942	61	422	1.03	14.01	537	17.83
1943	972	11,600	Mar. 13, 1943	84	634	1.55	21.08	511	16.98
1944	1002	4,000	Feb. 23, 1944	65	361	.883	12.02	399	13.28
1945	1032	4,000	Jan. 2, 1945	82	406	.993	15.47	414	13.74
1946	1052	10,900	Jan. 8, 1946	67	441	1.08	14.64	392	13.00
1947	1082	5,220	Mar. 15, 1947	68	297	.726	9.86	362	12.01
1948	1112	11,600	Feb. 14, 1948	74	554	1.35	18.44	679	22.60
1949	1142	17,800	Apr. 14, 1949	147	818	2.00	27.14	753	24.97
1950	1172	7,210	Feb. 2, 1950	108	599	1.46	19.90	-	-

* Revised.

4. Dunlap Creek near Covington, Va.

Location--Lat 37°48'10", long 80°02'50" on right bank 20 ft downstream from highway bridge on U.S. Highway 60, 2.2 miles (revised) downstream from Ogle Creek, and 3 miles west of Covington, Alleghany County.

Drainage area--166 sq mi.

Gage--Water-stage recorder. Datum of gage is 1,294.21 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 8, 1949, chain gage at same site and datum.

Average discharge--22 years (1928-50), 158 cfs.

Extremes--1928-50: Maximum discharge, 8,370 cfs Mar. 17, 1936 (gage height, 10.52 ft, from floodmarks), from rating curve extended above 4,500 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum observed, 8 cfs Aug. 27, 28, 30, 1932 (gage height, 0.88 ft).

Monthly and yearly mean discharge, in cubic feet per second, of Dumlup Creek near Covington, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	\$68.9	\$61.9	\$87.5	182	373	506	367	315	117	47.8	39.7	35.4	\$182
1930	218	351	156	105	257	154	129	43.7	27.2	15.7	15.4	14.8	123
1931	17.1	21.2	22.1	45.7	62.5	171	309	267	54.5	26.0	40.8	17.0	87.9
1932	13.9	15.7	37.8	143	273	411	238	412	39.9	22.3	12.5	12.5	136
1933	59.1	194	247	247	446	401	413	236	87.2	89.5	31.4	17.4	204
1934	20.1	27.3	33.4	37.0	21.5	586	202	51.5	24.3	36.2	44.5	35.4	94.1
1935	118	275	290	574	273	669	672	129	48.4	91.3	79.3	138	280
1936	31.2	216	195	698	586	771	333	56.3	32.1	23.3	21.8	22	247
1937	62.4	33.1	219	715	363	164	271	101	30.5	25.5	70.3	57.2	175
1938	290	101	128	187	139	255	126	226	196	83.3	136	22.0	158
1939	20.5	27.1	51.2	267	507	298	85.5	94.7	35.7	24.7	73.2	15.9	123
1940	17.8	24.5	25.3	27.0	137	103	439	355	280	99.0	396	55.3	163
1941	21.0	29.1	50.4	111	69.8	159	172	43.7	33.0	83.4	17.0	18.2	67.3
1942	13.4	19.3	61.7	61.0	106	170	70.1	492	282	54.3	240	49.3	136
1943	152	139	404	232	546	469	297	219	74.1	49.8	35.7	16.3	203
1944	22.5	29.9	27.7	108	251	471	206	193	42.1	18.8	18.7	15.5	117
1945	43.6	28.0	152	231	264	321	121	84.4	47.5	19.8	20.2	76.8	117
1946	21.5	53.0	117	367	286	299	164	289	85.4	91.5	20.7	15.2	150
1947	18.3	19.5	30.5	344	76.1	321	172	75.5	35.7	35.9	36.8	42.2	101
1948	75.7	568	95.2	70.8	536	502	469	266	94.5	69.2	58.1	26.2	217
1949	40.8	203	497	428	291	242	454	238	56.0	49.2	45.1	32.8	214
1950	61.6	164	245	244	478	281	98.8	517	114	48.4	33.5	83.8	179

* Not previously published; estimated or partly estimated on basis of records for Jackson River at Falling Spring and James River at Lick Run.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	\$0.48	\$0.42	\$0.61	1.27	2.34	3.52	2.47	2.19	0.79	0.33	0.28	0.24	\$14.94
1930	1.51	2.35	1.08	.73	1.61	1.07	.87	.30	.18	.11	.11	.10	10.02
1931	.12	.14	.15	.32	.39	1.20	2.08	1.86	.37	.18	.28	.11	7.20
1932	.10	.11	.26	.99	1.77	2.86	1.60	2.86	.27	.15	.09	.08	11.14
1933	.41	1.30	1.72	1.72	2.81	2.79	2.78	1.64	.69	.62	.22	.12	16.72
1934	.14	.18	.23	.26	.14	4.07	1.36	.36	.16	.25	.31	.24	7.70
1935	.82	1.85	2.02	3.99	1.71	4.65	4.52	.90	.33	.63	.55	.93	22.90
1936	.22	1.45	1.35	4.77	3.81	5.35	2.24	.39	.22	.16	.15	.15	20.26
1937	.43	2.22	1.52	4.97	2.28	1.14	1.82	.70	.21	.18	.49	.38	14.34
1938	2.02	.68	.89	1.30	.87	1.76	.85	1.57	1.32	.58	.94	.15	12.95
1939	.14	.18	.36	1.86	3.18	2.08	.57	.66	.24	.17	.31	.11	10.06
1940	.12	.17	.18	.19	.89	.71	2.94	2.47	1.89	.69	2.76	.37	13.38
1941	.15	.20	.35	.77	.44	1.10	1.16	.30	.22	.58	.12	.12	5.51
1942	.09	.13	.43	.42	.67	1.18	4.7	3.41	1.90	.38	1.67	.33	11.08
1943	1.06	.93	2.80	1.61	2.19	3.26	2.00	1.52	.50	.35	.25	.11	16.58
1944	.16	.20	.21	.75	1.63	3.27	1.38	1.34	.29	.13	.12	.10	9.58
1945	.50	.19	1.06	1.60	1.66	2.22	.81	.59	.32	.14	.14	.52	9.55
1946	.15	.36	.81	2.55	1.79	2.08	1.10	2.01	.57	.64	.14	.10	12.30
1947	.13	.13	.21	2.39	4.48	2.22	1.16	.52	.24	.25	.27	.28	8.28
1948	.53	2.48	.66	.49	3.48	3.48	3.16	1.84	.63	.48	.40	.18	17.81
1949	.28	1.36	3.45	2.97	1.82	1.68	3.05	1.65	.58	.34	.31	.22	17.51
1950	.43	1.10	1.71	1.70	3.00	1.95	.66	2.20	.77	.34	.23	.56	14.65

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682, 972	\$4,080	Feb. 27, 1929*	\$32	\$182	\$1.10	\$14.94	225	18.37
1930	697, 972	\$7,300	Nov. 18, 1929	13	123	.741	10.02	67.2	5.49
1931	712	\$2,140	Mar. 28, 1931*	\$10	87.9	.550	7.20	68.5	7.26
1932	727, 972	\$5,580	May 1, 1932	9	136	.619	11.14	172	14.10
1933	742, 972	\$5,300	Mar. 19, 1933	12	204	1.23	16.72	169	13.84
1934	757, 972	\$3,760	Mar. 8, 1934	12	94.1	.567	7.70	144	11.84
1935	782	\$7,900	Jan. 23, 1935	22	280	1.69	22.90	259	21.23
1936	802	8,370	Mar. 17, 1936	16	247	1.49	20.26	237	19.41
1937	822	\$6,200	Jan. 20, 1937	16	175	1.05	14.34	193	15.76
1938	852	\$4,660	Oct. 27, 1937	19	158	.952	12.65	123	10.04
1939	872	4,160	Jan. 30, 1939	11	123	.741	10.06	120	9.85
1940	892	8,050	Aug. 14, 1940	14	163	.982	13.38	166	13.61
1941	922	\$1,150	Mar. 12, 1941*	10	67.3	.405	5.51	66.8	5.46
1942	972	\$5,580	May 22, 1942*	10	136	.819	11.08	186	15.22
1943	972	\$5,440	Mar. 13, 1943	14	203	1.22	16.58	151	12.36
1944	1002	\$2,140	Mar. 24, 1944	10	117	.705	9.58	129	10.56
1945	1032	\$2,230	Jan. 1, 1945	14	117	.705	9.55	114	9.32
1946	1052	\$3,560	Jan. 8, 1946	13	150	.904	12.30	140	11.45
1947	1082	\$2,860	Mar. 14, 1947*	14	101	.608	8.28	140	11.48
1948	1112	\$8,300	Feb. 14, 1948	22	217	1.31	17.81	235	19.23
1949	1142	8,100	Apr. 13, 1949	22	214	1.29	17.51	192	15.66
1950	1172	4,030	Feb. 2, 1950	22	179	1.08	14.65	-	-

* Revised.

* Not previously published.

5. Jackson River at Covington, Va.

Location--Lat 37°47'50", long 79°59'40", at footbridge leading to the West Virginia Pulp and Paper Co's mill just above the Chesapeake & Ohio Railway bridge at Covington, Alleghany County, 0.2 mile upstream from Dunlap Creek.

Drainage area--440 sq mi.

Gage--Chain gage. Altitude of gage is 1,220 ft (from topographic map).

Extremes--1907-8: Maximum discharge, 23,600 cfs Feb. 15, 1908 (gage height, 10 ft, from graph based on gage readings), from rating curve extended above 1,900 cfs by logarithmic plotting; minimum daily discharge, about 170 cfs Sept. 26-28, 1908.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	+634	+1,898	380	320	+390	-
1908	314	+870	+1,253	+1,441	+1,543	+1,747	+1,172	+1,184	538	335	+388	+275	+921

* Not previously published; partly estimated from record for James River at Buchanan, or computed from rating curve extended above 1,900 cfs.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	-	-	-
1908	0.82	+2.21	+3.29	+3.78	+3.79	+4.58	+2.97	+1.66	+4.81	1.00	0.84	+0.99	+28.50
								+3.10	1.36	.88	1.02	+7.0	

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1907	242	-	-	-	-	-	-	-	-	-	-	-
1908	242	+23,600	Feb. 15, 1908	-	+170	+921	2.09	+28.50	-	-	-	-

* Not previously published.

6. Potts Creek near Covington, Va.

Location--Lat 37°44'10", long 80°01'55", at highway bridge, 0.2 mile upstream from Hays Creek and 3.2 miles (revised) southwest of Covington, Alleghany County.

Drainage area--158 sq mi.

Gage--Chain gage. Crest-stage indicator after March 1950. Datum of gage is 1,259.23 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--22 years (1928-50), 171 cfs.

Extremes--1928-50: Maximum discharge, 9,710 cfs Jan. 23, 1935 (gage height, 10.1 ft, from graph based on gage readings), from rating curve extended above 3,600 cfs on basis of velocity-area studies; minimum discharge, 13 cfs Nov. 29, 1930 (gage height, 1.30 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	+80	+60	+81.0	156	280	475	574	339	258	81.3	44.1	36.1	+188
1930	359	356	166	115	219	208	160	51.5	34.1	22.5	21.9	21.8	144
1931	22.3	27.6	31.9	73.5	65.0	164	359	311	85.0	50.6	133	39.0	114
1932	26.6	26.4	48.8	188	289	354	278	322	58.8	32.3	28.1	20.1	139
1933	90.2	198	242	256	373	309	485	213	97.0	55.3	37.2	27.9	197
1934	26.5	29.3	35.8	34.8	26.9	537	244	51.4	29.4	45.0	45.9	40.7	96.2
1935	248	327	361	663	256	538	669	142	60.0	50.0	37.5	208	297
1936	39.7	195	219	659	484	785	406	115	43.9	33.7	35.6	29.4	253
1937	177	45.8	255	788	390	172	237	156	49.0	43.3	86.3	78.8	206
1938	428	157	129	215	135	242	133	151	327	288	211	41.0	206
1939	34.4	39.9	62.0	245	534	293	86.3	59.4	37.3	35.5	43.6	21.5	122
1940	20.7	23.8	24.7	29.9	160	97.3	41.5	427	234	86.2	46.1	80.2	171
1941	34.1	39.4	65.8	103	59.7	134	162	53.6	51.5	191	26.2	25.4	79.1
1942	20.9	24.4	57.5	78.6	142	207	85.2	461	414	54.9	181	70.5	150
1943	164	141	329	252	373	397	319	229	105	128	52.8	27.8	209
1944	30.0	35.0	32.2	73.0	224	393	167	174	57.1	28.3	23.4	25.0	105
1945	52.3	39.4	98.4	246	265	284	142	145	77.0	40.5	33.6	115	127
1946	47.6	80.4	148	385	289	263	179	288	72.2	60.3	28.5	23.5	155
1947	28.6	30.3	38.3	322	76.9	322	199	89.4	35.0	34.2	60.4	40.5	107
1948	132	313	90.3	71.1	522	454	510	264	146	85.8	96.2	42.2	225
1949	68.8	297	643	430	368	264	559	365	120	190	119	86.9	291
1950	104	221	217	197	459	258	102	309	138	109	68.1	149	191

* Not previously published; estimated or partly estimated on basis of records for Craig Creek at Parr, and Johns Creek at Newcastle.

Monthly and yearly runoff, in inches, of Potts Creek near Covington, Va.

Water year	Monthly and yearly runoff, in inches, of Potts Creek near Covington, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.58	*0.42	*0.59	1.14	1.84	3.47	2.64	2.48	1.82	0.59	0.32	0.25	*16.14
1930	2.62	2.51	1.21	.84	1.45	1.52	1.13	.38	.24	.16	.16	.15	12.37
1931	.16	.20	.23	.54	.43	1.20	2.53	2.27	.60	.37	.97	.28	9.78
1932	.19	.19	.36	1.37	1.97	2.58	1.96	2.35	.42	.24	.21	.14	11.98
1933	.66	1.40	1.76	1.87	2.46	2.26	3.42	1.56	.68	.40	.27	.20	16.94
1934	.19	.21	.26	.25	.18	3.92	1.72	.37	.21	.33	.34	.29	8.27
1935	1.81	2.31	2.63	4.84	1.69	3.93	4.72	1.04	.42	.36	.27	1.47	25.49
1936	.29	1.37	1.60	4.81	3.30	5.73	2.87	.84	.31	.25	.26	.21	21.84
1937	1.29	.32	1.86	5.75	2.57	1.26	1.67	1.14	.35	.32	.63	.56	17.72
1938	3.12	1.11	.94	1.57	.89	1.76	.94	1.10	2.31	2.10	1.54	.29	17.67
1939	.25	.28	.45	1.79	3.52	2.13	.61	.43	.26	.26	.32	.15	10.45
1940	.15	.17	.18	.22	1.09	.71	2.93	3.11	1.65	.60	3.37	.57	14.75
1941	.25	.28	.48	.75	.39	.98	1.15	.39	.36	1.40	.19	.18	6.80
1942	.15	.17	.42	.57	.94	1.51	.59	3.37	2.92	.40	1.33	.50	12.87
1943	1.20	1.00	2.40	1.83	2.46	2.89	2.25	1.67	.74	.93	.39	.20	17.96
1944	.22	.25	.24	.53	1.53	2.87	1.18	1.27	.40	.21	.17	.18	9.05
1945	.38	.24	.72	1.80	1.75	2.08	1.00	1.08	.54	.30	.25	.81	10.93
1946	.35	.57	1.08	2.81	1.91	1.91	1.26	2.10	.51	.44	.21	.17	13.32
1947	.21	.21	.28	2.35	.51	2.35	1.41	.65	.25	.26	.44	.29	9.20
1948	.96	2.21	.66	.52	3.56	3.31	3.60	1.92	1.03	.61	.70	.30	19.38
1949	.50	2.03	4.69	3.14	2.43	1.92	3.95	2.66	.85	1.38	.87	.61	25.05
1950	.76	1.56	1.58	1.44	3.03	1.74	.72	2.26	.97	.80	.50	1.05	16.41

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	*2,230	Feb. 27, 1929*	32	*188	*1.19	*16.14	243	20.89
1930	697	*4,460	Nov. 18, 1929	20	144	.911	12.37	77.0	6.62
1931	727	*1,310	May 23, 1931	15	114	.722	9.78	115	9.93
1932	727	*2,230	May 1, 1932*	16	139	.880	11.98	175	15.06
1933	742	*1,870	Nov. 9, 1932*	20	197	1.25	16.94	160	13.78
1934	757	*3,270	Mar. 28, 1934	15	96.2	.609	8.27	167	14.36
1935	782	9,710	Jan. 23, 1935	25	297	1.88	25.49	256	22.00
1936	802	8,570	Mar. 17, 1936	23	253	1.60	21.84	256	22.05
1937	822	*4,330	Jan. 20, 1937	24	206	1.30	17.72	226	19.42
1938	852	*2,870	Oct. 28, 1937	32	206	1.30	17.67	157	13.48
1939	872	2,410	Jan. 30, 1939	16	122	.772	10.45	116	9.97
1940	892	5,800	Aug. 14, 1940	16	171	1.08	14.75	177	15.26
1941	922	2,140	July 7, 1941	17	79.1	.501	6.80	76.0	6.53
1942	952	6,960	May 16, 1942	18	150	.949	12.87	194	16.73
1943	972	*3,170	Dec. 30, 1942	24	209	1.32	17.96	164	14.07
1944	1002	*1,710	Feb. 29, 1944	17	105	.665	9.05	112	9.68
1945	1032	*2,410	Mar. 6, 1945	21	127	.804	10.93	135	11.59
1946	1052	*2,230	Jan. 8, 1946	21	155	.981	13.32	140	12.02
1947	1082	*2,590	Mar. 14, 1947	18	107	.677	9.20	143	12.33
1948	1112	5,320	Feb. 14, 1948	26	225	1.42	19.38	265	22.77
1949	1142	8,200	Apr. 13, 1949	39	291	1.84	25.03	253	21.71
1950	1172	2,590	Feb. 2, 1950	45	191	1.21	16.41	-	-

* Revised.

* Not previously published.

7. Smith Creek above old dam, near Clifton Forge, Va.

Location (revised).--Lat 37°51'10", long 79°50'50", on left abutment at bridge on city of Clifton Forge highway, 0.2 mile upstream from old water-supply dam, 0.8 mile upstream from new water-supply dam, 3.1 miles northwest of Clifton Forge, Alleghany County, and about 3.5 miles upstream from mouth.

Drainage area.--12.4 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 1,406 ft (by barometer).

Extremes.--1947-50: Maximum discharge, 752 cfs Apr. 13, 1949 (gage height, 6.00 ft); minimum observed, 2.1 cfs Sept. 4, 5, 1947; minimum gage height observed, 1.05 ft Aug. 29, Sept. 5, 1948.

Remarks.--No diversion at station. Records for this site are not equivalent to those for 1944-47 at site a quarter of a mile downstream and just downstream from old dam owing to diversion and spring inflow between stations.

Monthly and yearly mean discharge, in cubic feet per second, of Smith Creek above old dam, near Clifton Forge, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	-	-	-	-	*14.4	17.4	20.9	3.49	3.07	-
1948	13.6	41.5	11.0	8.98	44.3	50.6	33.9	26.6	9.69	3.82	4.72	3.95	20.9
1949	13.9	31.1	60.6	44.7	28.5	21.9	53.0	30.7	12.0	12.5	19.6	10.4	28.3
1950	14.5	26.3	27.4	20.7	43.0	21.8	11.9	45.4	13.3	4.43	3.36	22.3	21.0

* Not previously published; partly estimated on basis of records for Jackson River at Falling Spring.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	-	-	-	-	*1.54	1.56	1.95	0.32	0.28	-
1948	1.27	3.74	1.02	0.63	3.65	4.70	3.05	2.48	.87	.36	.44	.36	22.97
1949	1.29	2.80	5.64	4.15	2.40	2.04	4.78	2.86	1.08	1.16	1.82	.94	30.94
1950	1.35	2.36	2.55	1.92	3.61	2.03	1.07	4.22	1.19	.41	.31	2.01	23.03

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1947	1082	*342	July 18, 1947	-	-	-	-	-	-
1948	1112	*600	Nov. 3, 1947*	2.4	20.9	1.69	22.97	24.3	26.67
1949	1142	752	Apr. 13, 1949	3.9	28.3	2.28	30.94	1.62	27.47
1950	1172	214	May 15, 1950	2.9	21.0	1.69	23.03	-	-

* Revised.

8. Smith Creek near Clifton Forge, Va.

Location.--Lat 37°51', long 79°51', 125 ft downstream from old water-supply dam, 3 miles northwest of Clifton Forge, Alleghany County, and 3½ miles upstream from mouth.

Drainage area.--12.5 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 1,380 ft.

Extremes.--1944-47: Maximum discharge (revised), 340 cfs Jan. 7, 1946 (gage height, 1.80 ft, from graph based on gage readings), from rating curve extended above 47 cfs by logarithmic plotting; minimum daily observed, 1.1 cfs Sept. 18, 1946; minimum gage height observed, 0.28 ft June 2, 1946, occurred during filling of reservoir just above dam.

Remarks.--City of Clifton Forge diverts about 4 cfs from reservoir just above station. Records not equivalent to those for 1947-50 at site above old dam due to diversion and inflow from spring between stations.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	-	3.17	4.04	-
1945	5.28	*5.88	*13.9	*25.5	*24.9	*35.0	*22.0	*19.7	*9.07	-	3.02	6.89	*14.5
1946	3.12	*8.30	*15.7	*51.9	*34.0	*39.5	*21.7	*35.2	6.84	3.65	2.36	1.62	*18.6
1947	2.21	2.60	4.01	*50.5	*12.1	*43.3	*22.7	-	-	-	-	-	-

* Revised.

* Not previously published; estimated on basis of records for Jackson River at Falling Spring.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year						
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1944	1002	-	-	-	-	-	-	-	-	-	-	-	-
1945	1032, 1333	*149	Jan. 1, 1945	1.8	*14.5	-	-	-	-	-	-	*14.7	-
1946	1052, 1333	*340	Jan. 7, 1946	1.1	*18.6	-	-	-	-	-	-	*17.1	-
1947	1082, 1333	-	-	-	-	-	-	-	-	-	-	-	-

* Revised.

9. Cowpasture River near Clifton Forge, Va.

Location.--Lat 37°47'30", long 79°45'35", 100 ft downstream from highway bridge, 2.5 miles (revised) upstream from confluence with Jackson River, and 4.0 miles southeast of Clifton Forge, Alleghany County.

Drainage area.--456 sq mi.

Supplemental records available.--Records of chemical analyses for 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3, and for the water year 1948 in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 1,006.93 ft above mean sea level (levels by Corps of Engineers). May 1907 to August 1908, staff gage 100 ft upstream at different datum. March 1925 to October 1934, chain gage 100 ft upstream at present datum.

Average discharge.--25 years (1925-50), 517 cfs.

Extremes.--1907-8, 1925-50: Maximum discharge, 34,200 cfs Mar. 18, 1936 (gage height, 18.62 ft), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin; minimum, 38 cfs Sept. 2, 1932 (gage height, 1.70 ft). Flood in March 1913 reached a stage of 20.8 ft, from floodmarks (discharge, about 45,000 cfs), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	236	479	149	141	78.1	78.5	-
1926	114	296	204	953	1,135	597	777	228	132	91.8	226	127	401
1927	274	814	1,193	451	1,803	425	1,604	447	205	124	361	137	829
1928	576	490	808	494	597	573	956	761	465	476	748	594	628
1929	145	115	447	568	863	1,584	970	972	371	210	99.6	77.0	534
1930	527	966	472	341	582	562	339	147	112	64.9	64.9	60.0	351
1931	45.4	68.8	91.7	165	316	522	826	616	323	124	171	102	280
1932	74.3	62.8	165	561	1,132	1,162	632	827	160	248	69.9	60.3	428
1933	653	756	645	809	1,076	1,078	1,485	706	227	281	271	135	674
1934	81.5	82.4	125	201	89.8	1,511	538	198	136	84.4	156	187	285
1935	223	460	902	1,562	852	1,325	1,411	402	228	154	251	659	701
1936	90.7	382	574	1,452	1,358	2,394	1,171	222	164	134	92.3	74.2	673
1937	328	109	759	2,154	1,067	442	830	411	165	131	423	353	596
1938	1,474	418	383	640	376	451	365	401	400	417	941	111	535
1939	86.6	114	233	734	1,702	1,025	616	469	192	429	250	93.9	488
1940	116	123	133	212	700	441	923	854	1,394	316	988	376	545
1941	120	229	487	484	267	435	615	161	183	317	81.8	76.3	288
1942	66.2	87.8	286	260	458	580	269	1,770	691	163	855	286	484
1943	640	407	1,034	691	1,016	1,465	882	989	721	603	149	90.0	724
1944	90.7	123	113	286	575	1,314	560	955	182	94.7	78.2	125	373
1945	222	138	406	619	675	892	377	304	152	278	138	583	397
1946	107	324	505	1,216	820	805	458	791	231	137	82.5	66.6	461
1947	116	106	147	1,003	272	910	456	303	260	336	116	131	346
1948	133	586	254	227	1,247	1,468	1,232	797	289	199	310	153	571
1949	542	1,180	1,712	1,481	949	697	1,192	855	788	863	480	258	915
1950	273	660	790	592	1,358	715	321	848	301	150	136	1,244	609

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	0.58	1.21	0.36	0.36	0.20	0.19	-
1926	0.29	0.72	0.52	2.41	2.59	1.49	1.90	.58	.32	.23	.57	.51	11.93
1927	.69	2.00	3.02	1.14	3.66	1.07	3.93	1.13	.50	.31	.96	.33	18.74
1928	1.45	1.19	2.04	1.24	1.41	1.45	2.34	1.92	1.14	1.20	1.89	1.45	18.72
1929	.37	.28	1.13	1.44	1.97	4.00	2.38	2.46	.91	.53	.25	.19	15.91
1930	1.34	2.36	1.20	.86	1.33	1.42	.83	3.37	.47	.16	.16	.15	10.45
1931	.12	.17	.23	.42	.72	1.31	2.02	1.56	.79	.31	.43	.25	8.33
1932	.19	.15	.42	1.42	2.68	2.94	1.55	2.09	.39	.63	.18	.15	12.79
1933	1.65	1.85	1.63	2.04	2.46	2.72	3.64	1.79	.56	.71	.68	.33	20.06
1934	.21	.20	.32	.51	.21	3.82	1.32	.50	.33	.21	.40	.46	8.49
1935	.56	1.13	2.28	3.95	1.95	3.36	3.45	1.02	.56	.39	.63	1.62	20.90
1936	.23	.94	1.45	3.67	3.16	6.05	2.87	.56	.40	.34	.23	.18	20.08
1937	.85	.27	1.91	5.44	2.44	1.12	2.03	1.04	.40	.33	1.07	.86	17.74
1938	3.72	1.02	.97	1.81	.86	1.14	.98	1.01	.98	1.05	2.38	.27	15.90
1939	.22	.28	.59	1.86	3.88	2.59	1.51	1.19	.47	1.08	.63	.23	14.53
1940	.29	.30	.34	.54	1.66	1.11	2.25	2.16	3.41	.80	2.50	.92	16.28
1941	.30	.56	1.23	1.22	.61	1.10	1.51	.41	.45	.80	.21	.19	8.59
1942	.17	.22	.75	.66	1.04	1.46	.66	4.47	1.70	.41	2.17	.70	14.41
1943	1.61	1.00	2.62	1.75	2.32	3.70	2.15	2.50	1.76	1.52	.38	.22	21.55
1944	.23	.30	.29	.72	1.36	3.32	1.37	2.36	.45	.24	.20	.31	11.15
1945	.56	.34	1.03	1.57	1.54	2.26	.92	.77	.37	.70	.35	1.45	11.84
1946	.27	.79	1.28	3.08	1.87	2.04	1.12	1.99	.57	.35	.21	.16	13.73
1947	.29	.26	.37	2.54	.62	2.31	1.12	.77	.64	.80	.29	.32	10.33
1948	.34	1.44	.64	.57	2.94	3.71	3.01	2.02	.71	.50	.78	.37	17.03
1949	1.37	2.89	4.32	3.75	2.17	1.76	2.91	2.11	1.93	2.18	1.21	.63	27.23
1950	.69	1.62	1.99	1.50	3.10	1.81	.79	2.14	.74	.38	.34	3.05	18.15

Yearly discharge, in cubic feet per second, of Cowpasture River near Clifton Forge, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	-	*13,000	June 14, 1907	-	-	-	-	-	-
1908	-	*11,000	Jan. 12, 1908	-	-	-	-	-	-
1925	952	-	-	-	-	-	-	-	-
1926	952	7,610	Jan. 19, 1926	51	401	0.879	11.93	541	16.11
1927	952	9,240	Dec. 26, 1926	68	629	1.38	18.74	596	17.71
1928	952	8,680	Oct. 13, 1927	76	628	1.38	18.72	551	15.82
1929	952	7,440	Feb. 27, 1929	67	534	1.17	15.91	639	19.03
1930	952	9,050	Nov. 18, 1929	52	351	.770	10.45	204	6.07
1931	952	3,090	Mar. 29, 1931	42	280	.614	8.33	288	8.57
1932	952	9,050	Feb. 5, 1932	40	428	.939	12.79	574	17.16
1933	952	7,780	Apr. 17, 1933	49	674	1.48	20.06	526	15.66
1934	952	7,100	Mar. 28, 1934	47	285	.625	8.49	394	11.73
1935	952	17,700	Jan. 23, 1935	90	701	1.54	20.90	656	19.55
1936	952	34,200	Mar. 18, 1936	66	673	1.48	20.08	686	20.47
1937	952	12,500	Jan. 21, 1937	76	596	1.31	17.74	687	20.44
1938	952	12,500	Oct. 20, 1937	93	535	1.17	15.90	379	11.28
1939	952	11,400	Feb. 4, 1939	74	488	1.07	14.53	483	14.37
1940	952	11,400	May 31, 1940	87	545	1.20	16.28	584	17.44
1941	952	3,830	Apr. 6, 1941	60	288	.632	8.59	256	7.64
1942	952	18,500	May 17, 1942	58	484	1.06	14.41	621	18.50
1943	972	11,000	Mar. 14, 1943	81	724	1.59	21.53	576	17.12
1944	1002	6,280	May 7, 1944	63	373	.816	11.15	410	12.26
1945	1032	6,930	Sept. 19, 1945	68	397	.871	11.84	411	12.25
1946	1052	8,860	Jan. 8, 1946	58	461	1.01	13.73	414	12.31
1947	1082	7,780	Mar. 15, 1947	67	346	.759	10.33	396	11.83
1948	1112	7,610	Feb. 15, 1948	85	571	1.25	17.03	778	23.19
1949	1142	16,400	June 18, 1949	145	915	2.01	27.23	771	22.95
1950	1172	13,900	Sept. 13, 1950	108	609	1.34	18.15	-	-

* Not previously published.

Note.--Records for May 1907 to August 1908 published in WSP 242 have been found in error on the basis of restudy of original data and comparison with records at nearby stations. Those records are not published herein and should not be used.

10. James River at Lick Run, Va.

Location (revised).--Lat 37°46'25", long 79°47'05", on right bank 10 ft downstream from old highway bridge at Lick Run, Botetourt County, 1,000 ft downstream from bridge on U. S. Highway 220, 0.9 mile downstream from confluence of Cowpasture and Jackson Rivers, 1.8 miles south of Iron Gate, and at mile 338.9.

Drainage area.--1,369 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 978.30 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1928, chain gage at same site and datum.

Average discharge.--25 years (1925-50), 1,559 cfs.

Extremes.--1925-50: Maximum discharge, 66,600 cfs Mar. 18, 1936 (gage height, 25.65 ft), from rating curve extended above 33,000 cfs on basis of records for other stations in James River basin; minimum, 153 cfs Oct. 11, 1930.

Flood in November 1877 reached a stage of about 33 ft (discharge, about 120,000 cfs). Flood in March 1913 reached a stage of 30.4 ft, from floodmarks (discharge, about 98,000 cfs). Flood in May 1924 reached a stage of 24.6 ft, from floodmarks (discharge, 57,500 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	*926	1,420	420	336	230	229	-
1926	353	936	559	2,450	3,260	1,880	2,090	719	411	276	653	343	1,150
1927	849	2,460	4,150	1,380	5,590	1,380	5,130	1,560	629	454	965	373	2,050
1928	1,280	1,420	2,280	1,720	1,660	1,640	2,610	2,130	1,120	1,130	1,750	1,720	1,700
1929	567	544	1,260	1,750	2,420	4,710	2,940	3,120	1,330	659	357	272	1,660
1930	1,790	2,900	1,550	1,080	1,890	1,870	1,220	503	368	209	204	183	1,140
1931	178	217	297	584	788	1,660	3,010	2,090	877	415	734	305	929
1932	225	209	429	1,600	2,830	3,430	2,160	2,720	610	972	249	205	1,300
1933	1,290	2,360	2,000	2,510	3,440	3,590	4,420	2,260	804	800	701	343	2,030
1934	246	257	418	600	277	4,726	1,884	662	378	302	411	559	900
1935	889	1,663	3,000	4,926	2,757	4,475	4,874	1,573	753	585	762	1,651	2,323
1936	335	1,370	2,007	4,947	4,632	6,968	3,472	827	498	383	510	255	2,164
1937	927	375	2,312	6,362	3,406	1,475	2,402	1,298	476	392	1,008	987	1,778
1938	3,670	1,275	1,247	1,861	1,308	1,780	1,173	1,567	1,558	1,240	1,959	355	1,591
1939	288	341	627	2,105	4,995	3,097	1,596	1,140	526	1,001	738	275	1,372
1940	305	309	321	461	1,847	1,264	3,430	2,864	3,783	1,115	3,258	1,005	1,657

* Not previously published; partly estimated from record for stations near Falling Spring.

Monthly and yearly mean discharge, in cubic feet per second, of James River at Lick Run, Va.--Con.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1941	329	557	1,056	1,291	777	1,349	1,703	476	508	999	245	232	794
1942	201	262	798	776	1,340	1,813	832	4,882	2,407	575	2,213	754	1,409
1943	1,661	1,311	2,960	2,272	3,024	4,148	2,742	2,633	1,519	1,467	448	261	2,035
1944	257	340	337	866	1,875	4,045	1,877	2,365	547	269	231	317	1,112
1945	548	548	1,234	1,917	2,128	2,844	1,236	1,107	538	629	430	1,288	1,187
1946	361	906	1,378	3,557	2,614	2,535	1,466	2,535	776	498	257	209	1,421
1947	298	265	378	2,637	771	2,678	1,573	1,032	700	732	438	391	1,014
1948	597	2,622	879	701	3,797	4,013	5,829	2,416	1,082	636	885	425	1,782
1949	1,196	2,751	5,102	4,361	2,867	2,140	4,041	2,502	1,683	2,137	1,332	762	2,573
1950	754	2,104	2,499	2,089	4,319	2,395	1,153	2,825	1,106	582	450	2,839	1,908

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1925	-	-	-	-	-	-	#0.75	1.20	0.34	0.28	0.19	0.19	-
1926	0.30	0.76	0.47	2.06	2.48	1.58	1.71	.61	.33	.23	.55	.28	11.36
1927	.71	2.01	3.49	1.16	4.25	1.16	4.18	1.31	.51	.36	.81	.30	20.27
1928	1.08	1.16	1.92	1.45	1.30	1.38	2.13	1.80	.91	.95	1.48	1.41	16.97
1929	.48	.44	1.06	1.48	1.84	3.97	2.40	2.63	1.08	.55	.30	.22	16.45
1930	1.51	2.36	1.30	.91	1.44	1.58	.99	.42	.30	.18	.17	.15	11.31
1931	.15	.18	2.50	.49	.60	1.40	2.46	1.76	.72	.35	.62	.25	9.23
1932	.19	.17	.36	1.35	2.23	2.89	1.76	2.29	.50	.82	.21	.17	12.94
1933	1.09	1.92	1.68	2.11	2.61	3.02	3.60	1.90	.65	.67	.59	.28	20.12
1934	.21	.21	.35	.50	.21	3.98	1.54	.56	.31	.25	.35	.46	8.93
1935	.75	1.35	2.52	4.15	2.09	3.77	3.97	1.33	.61	.49	.64	1.35	23.02
1936	.30	1.12	1.70	4.16	3.64	5.87	2.63	.70	.41	.32	.26	.21	21.52
1937	.78	.51	1.95	5.36	2.59	1.24	1.95	1.09	.39	.33	.85	.79	17.63
1938	5.09	1.04	1.05	1.57	.99	1.50	.96	1.31	1.27	1.04	1.65	.29	15.76
1939	.24	.28	.53	1.78	3.80	2.81	1.30	.96	.43	.84	.62	.22	13.61
1940	.26	.25	.27	.39	1.46	1.06	2.80	2.41	3.08	.94	2.74	.82	16.48
1941	.28	.45	.89	1.09	.59	1.14	1.38	.40	.41	.84	.21	.19	7.87
1942	.17	.21	.67	.65	1.02	1.52	.68	4.12	1.96	.48	1.87	.61	13.96
1943	1.40	1.07	2.49	1.91	2.30	3.49	2.23	2.21	1.24	1.23	.38	.21	20.16
1944	.22	.28	2.8	.75	1.48	3.40	1.53	1.99	.45	.23	.19	.26	11.06
1945	.46	.32	1.04	1.61	1.61	2.40	1.01	.93	.44	.53	.36	1.05	11.76
1946	.30	.74	1.16	3.00	1.99	2.13	1.19	2.13	.63	.42	.22	.17	14.08
1947	.25	.23	.32	2.39	.59	2.26	1.28	.87	.57	.62	.37	.32	10.07
1948	.50	1.84	.74	.59	2.99	3.38	3.12	2.03	.68	.54	.74	.35	17.70
1949	1.01	2.24	4.30	3.68	2.18	1.80	3.29	2.11	1.37	1.80	1.12	.62	25.52
1950	.64	1.72	2.11	1.76	3.28	2.02	.94	2.38	.90	.49	.38	2.31	16.93

* Not previously published; partly estimated from records for stations near Falling Spring.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	-	Jan. 19, 1926	204	1,150	0.840	11.36	1,620	16.04
1927	642, 972	*37,000	Dec. 26, 1926	265	2,050	1.50	20.27	1,840	18.23
1928	662	*17,000	Oct. 13, 1927	245	1,700	1.24	16.97	1,490	14.79
1929	682	21,800	Feb. 28, 1929	249	1,660	1.21	16.45	1,980	19.64
1930	697	31,400	Nov. 18, 1929	165	1,140	.833	11.31	677	6.72
1931	712	8,890	Mar. 29, 1931	156	929	.679	9.23	943	9.37
1932	727	32,300	Feb. 5, 1932	184	1,300	.950	12.94	1,700	16.81
1933	742	17,800	Mar. 20, 1933	193	2,030	1.48	20.12	1,640	16.20
1934	757	19,900	Mar. 28, 1934	186	900	.657	8.93	1,289	12.78
1935	782, 972	53,000	Jan. 23, 1935	262	2,323	1.70	23.02	2,169	21.52
1936	852, 972	66,600	Mar. 18, 1936	230	2,164	1.58	21.52	2,156	21.44
1937	852	28,700	Jan. 21, 1937	265	1,778	1.30	17.63	1,994	19.77
1938	852	24,800	Oct. 28, 1937	309	1,591	1.16	15.76	1,174	11.63
1939	872	27,700	Jan. 31, 1939	233	1,372	1.00	13.61	1,345	13.34
1940	892	25,500	May 31, 1940	249	1,657	1.21	16.48	1,742	17.32
1941	922	8,390	Apr. 6, 1941	183	794	.580	7.87	737	7.30
1942	952	43,500	May 17, 1942	179	1,409	1.03	13.96	1,602	17.87
1943	972	30,800	Mar. 14, 1943	239	2,035	1.49	20.16	1,613	15.98
1944	1002	12,000	May 25, 1944	190	1,112	.812	11.06	1,216	12.10
1945	1032	12,400	Sept. 19, 1945	220	1,187	.867	11.76	1,225	12.14
1946	1052	26,100	Jan. 8, 1946	192	1,421	1.04	14.08	1,280	12.68
1947	1082	18,200	Mar. 15, 1947	198	1,014	.741	10.07	1,245	12.35
1948	1112	26,400	Feb. 15, 1948	261	1,782	1.30	17.70	2,230	22.17
1949	1142	40,600	Apr. 14, 1949	414	2,573	1.88	25.52	2,261	22.44
1950	1172	24,600	Feb. 2, 1950	345	1,908	1.39	18.93	-	-

* Revised.

11. Meadow Creek at Newcastle, Va.

Location.--Lat 37°29'35", long 80°06'35", on left bank at southern town limits of Newcastle, Craig County, 800 ft upstream from Newcastle-Salem highway bridge and 0.6 mile upstream from mouth.

Drainage area.--13.8 sq mi.

Gage.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 1,337.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 21, 1937, water-stage recorder at site 400 ft downstream at different datum.

Average discharge.--21 years (1929-50), 16.2 cfs.

Extremes.--1929-50: Maximum discharge, 700 cfs Aug. 16, 1940 (gage height, 4.80 ft), from rating curve extended above 300 cfs on basis of records for Johns Creek at Newcastle and Craig Creek at Parr; minimum, 0.5 cfs July 1, 1945 (gage height, 1.27 ft); minimum daily, 1.3 cfs Sept. 4, 1930.

Remarks.--Flow of stream regulated to some extent by flow through underground channels 3 miles above station. Diurnal fluctuation at low flow after 1938, caused by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	36.8	33.6	19.0	15.8	24.8	14.3	12.6	6.62	5.45	3.05	1.95	2.08	14.6
1931	4.07	7.69	7.52	8.32	4.98	9.48	27.0	15.8	14.3	19.8	33.2	9.51	13.5
1932	5.76	6.06	8.10	27.0	25.9	30.3	26.5	21.3	9.61	5.70	4.37	3.51	14.5
1933	19.3	30.9	24.5	23.0	27.9	23.8	28.1	21.3	15.7	8.63	5.89	4.31	19.4
1934	6.75	10.3	8.21	3.23	2.54	29.2	25.8	7.01	4.32	6.35	10.2	11.5	10.5
1935	21.3	26.5	24.9	34.8	20.6	30.2	42.0	10.4	6.60	5.96	3.99	17.1	20.3
1936	5.41	9.60	14.6	38.5	31.6	47.6	28.5	17.1	6.29	5.80	4.25	4.31	17.8
1937	16.4	7.06	19.2	50.9	23.8	18.1	17.0	15.0	6.66	15.55	7.10	10.9	16.5
1938	30.2	17.5	12.5	20.6	11.9	17.4	14.4	18.9	27.6	25.0	31.3	7.79	19.7
1939	5.03	4.83	5.52	14.7	40.5	26.4	8.78	5.69	5.45	7.16	11.8	5.40	11.6
1940	3.83	3.59	3.23	4.76	19.7	13.0	29.7	26.8	25.2	8.32	80.8	19.7	19.9
1941	6.35	5.51	9.29	12.5	6.01	12.0	18.3	6.67	10.2	47.7	6.70	5.07	12.3
1942	3.47	3.34	6.05	7.12	11.4	18.8	7.72	51.0	19.8	7.78	21.1	9.04	13.9
1943	21.4	11.9	25.9	21.2	33.5	33.5	29.7	21.5	10.7	6.22	3.53	3.08	18.4
1944	2.73	3.05	3.15	6.52	21.1	37.3	15.6	9.85	5.14	3.57	2.94	3.34	9.48
1945	6.73	3.81	9.66	20.8	22.9	24.8	9.54	7.24	4.58	3.24	2.63	13.2	10.7
1946	5.04	6.09	14.5	36.1	27.1	22.4	13.9	20.9	7.50	5.55	3.64	3.12	13.8
1947	3.87	3.78	4.50	35.8	8.50	26.4	20.5	9.67	5.54	4.18	6.21	7.11	11.4
1948	32.6	35.6	8.46	9.11	41.0	31.7	40.5	26.8	14.8	11.3	23.5	9.17	23.6
1949	14.1	30.4	65.1	43.3	32.0	24.6	43.2	32.5	12.7	31.3	21.3	14.8	30.5
1950	9.40	22.8	16.0	14.2	36.3	16.1	10.3	39.7	20.0	14.0	10.7	15.0	18.6

* Not previously published; estimated or partly estimated on basis of record for Johns Creek at Newcastle.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	3.08	2.71	1.59	1.31	1.87	1.20	1.02	0.55	0.44	0.25	0.16	0.17	14.35
1931	.34	.62	.63	.70	.38	.79	2.19	1.31	1.16	1.65	2.78	.77	13.32
1932	.48	.49	.68	2.26	2.03	2.54	2.14	1.78	.78	.48	.37	.28	14.31
1933	1.61	2.50	2.05	1.92	2.10	1.98	2.28	1.78	1.27	.74	.49	.35	19.07
1934	.56	.83	.69	.27	.19	2.44	2.09	.59	.35	.53	.85	.93	10.32
1935	1.78	2.14	2.08	2.90	1.55	2.52	3.39	.87	.53	.50	.33	1.38	19.97
1936	.45	.78	1.22	3.22	2.47	3.98	2.31	1.43	.51	.48	.36	.35	17.56
1937	1.37	.57	1.60	4.25	1.79	11.51	11.37	11.26	4.54	4.46	4.59	4.88	16.19
1938	2.52	1.42	1.04	1.72	.90	11.45	11.16	11.58	2.23	2.09	2.62	.63	19.36
1939	.42	.39	.46	1.23	3.05	2.20	.71	.48	.44	.60	.99	.44	11.41
1940	.32	.29	.27	.40	1.54	1.09	2.40	2.24	2.04	.70	6.76	1.60	19.65
1941	.53	.45	.78	1.04	.45	1.00	1.48	.56	.82	3.99	.56	.41	12.07
1942	.29	.27	.50	.59	.86	1.57	.62	4.27	1.60	.65	1.76	.73	13.71
1943	1.79	.96	2.17	1.78	2.53	2.80	2.40	1.80	.86	.52	3.00	.25	18.16
1944	.23	.25	.26	.54	1.65	3.11	1.26	.82	.42	.30	.25	.27	9.36
1945	.56	.31	.81	1.74	1.73	2.08	.77	.61	.37	.27	.22	1.07	10.54
1946	.42	.49	1.21	3.02	2.04	1.87	1.13	1.74	.61	.46	3.00	.25	13.54
1947	.32	.31	.38	2.99	2.64	2.20	1.66	.81	.45	.35	.52	.57	11.20
1948	2.72	2.89	.71	.76	3.20	2.65	3.27	2.24	1.19	.94	1.95	.74	23.26
1949	1.18	2.46	5.44	3.62	2.42	2.05	3.49	2.72	1.03	2.62	1.80	1.19	30.02
1950	.79	1.84	1.34	1.19	2.74	1.35	.83	3.32	1.62	1.16	.89	1.22	18.29

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Meadow Creek at Newcastle, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	697	-	-	-	-	-	-	-	-
1930	697	242	Oct. 2, 1929	1.3	14.6	1.06	14.35	8.72	8.56
1931	712	130	Aug. 23, 1931	1.7	13.5	.978	13.32	13.6	13.38
1932	727	75	Mar. 28, 1932	2.8	14.5	1.05	14.31	19.1	18.82
1933	742	152	Oct. 17, 1932	2.6	19.4	1.41	19.07	15.3	14.99
1934	757	152	Mar. 4, 1934	1.5	10.5	.761	10.32	14.5	14.24
1935	782	200	Jan. 23, 1935	±2.8	20.3	1.47	19.97	16.7	16.42
1936	802	218	Mar. 17, 1936	1.9	17.8	1.29	17.56	18.9	18.65
1937	822	152	Jan. 20, 1937	4.2	±18.5	±1.20	±16.19	±17.9	±17.60
1938	1002	(a)	(a)	5.0	±19.7	±1.43	±19.36	±15.9	±15.65
1939	1002	106	Aug. 18, 1939	3.5	11.6	1.841	11.41	11.2	11.02
1940	1002	700	Aug. 19, 1940	2.8	19.9	1.44	19.65	20.8	20.53
1941	1002	284	July 8, 1941	3.5	12.3	.891	12.07	11.6	11.37
1942	1002	259	May 16, 1942	2.9	13.9	1.01	13.71	17.9	17.57
1943	1002	182	Dec. 30, 1942	2.4	18.4	1.33	18.16	14.2	13.98
1944	1002	100	Feb. 18, 23, 1944	1.6	9.48	.687	9.36	10.4	10.30
1945	1032	148	Sept. 18, 1945	1.7	10.7	.775	10.54	11.2	10.98
1946	1052	161	Jan. 8, 1946	2.6	13.8	1.00	13.54	12.6	12.43
1947	1082	128	Jan. 20, 1947	2.4	11.4	.826	11.20	16.8	16.51
1948	1112	277	Nov. 3, 1947	5.0	23.6	1.71	23.26	26.4	26.02
1949	1142	303	July 15, 1949	4	30.5	2.21	30.02	25.3	24.91
1950	1172	187	Nov. 2, 1949	4.3	18.6	1.35	18.29	-	-

* Not previously published.
 a Discharge and date unknown, but discharge believed to be higher than 90 cfs published in WSP 1002.

12. Johns Creek at Newcastle, Va.

Location (revised).--Lat 37°30'20", long 80°06'25", on right bank 20 ft downstream from highway bridge at Newcastle, Craig County, and 1,700 ft upstream from mouth.

Drainage area.--106 sq mi.

Gage.--Water-stage recorder. Datum of gage is 1,254.30 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1927, chain gage at same site and datum.

Average discharge.--24 years (1926-50), 126 cfs.

Extremes.--1926-50: Maximum discharge, 8,000 cfs Jan. 23, 1935 (gage height, 10.8 ft), from rating curve extended above 3,200 cfs on basis of velocity-area studies; minimum discharge, 6 cfs Dec. 5, 1946 (gage height, 2.72 ft), result of freezeup; minimum daily, 7 cfs Aug. 11, Sept. 3, 6, 7, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	-	45.2	20.0	16.2	15.0	11.6	-
1927	23.1	92.5	317	95.8	471	108	365	83.1	59.4	67.4	34.8	20.4	142
1928	73.3	121	241	157	127	133	191	146	62.0	47.4	*223	234	*146
1929	50.1	40.6	52.5	108	251	358	190	209	196	41.5	18.3	16.0	127
1930	396	283	134	89.7	145	127	111	33.5	20.3	8.9	9.4	8.1	114
1931	10.1	14.0	20.6	59.2	60.1	98.3	225	155	62.1	51.7	113	20.8	74.2
1932	12.8	14.7	39.9	177	237	286	195	217	46.4	19.7	14.5	11.8	106
1933	55.1	159	209	177	241	211	284	142	46.8	23.0	13.3	10.0	130
1934	11.0	15.0	23.4	25.0	18.0	434	209	35.9	25.4	31.2	26.1	62.0	76.8
1935	129	245	233	*486	159	363	442	83.5	32.4	36.3	20.7	187	*201
1936	18.5	80.7	118	455	361	421	262	72.8	22.5	13.4	15.2	20.1	155
1937	85.0	39.8	191	510	241	111	139	120	35.8	23.7	67.4	81.3	137
1938	359	123	105	158	94.2	185	146	141	253	222	141	20.2	163
1939	15.6	25.6	39.8	174	422	226	78.9	42.4	33.9	39.0	42.1	12.4	93.9
1940	12.2	14.4	15.7	26.9	122	95.7	314	318	199	47.9	364	43.5	131
1941	15.8	23.9	54.9	95.5	57.7	117	144	40.3	55.8	291	14.9	33.3	79.1
1942	10.9	14.6	47.0	55.2	101	163	254	331	212	32.8	92.2	37.0	97.0
1943	97.3	100	280	199	269	296	254	212	62.3	66.6	16.2	12.1	155
1944	13.8	21.6	23.4	68.4	229	318	127	204	36.8	12.5	9.48	11.1	89.3
1945	33.6	23.1	66.5	181	218	216	105	108	36.5	20.5	15.7	71.6	90.6
1946	23.0	59.5	128	308	216	184	128	222	31.7	28.5	11.5	10.3	112
1947	14.5	17.5	22.8	271	60.6	254	159	98.7	31.9	20.8	51.8	23.9	86.1
1948	122	221	68.9	65.9	384	294	335	189	59.8	40.1	148	22.8	161
1949	35.0	229	514	309	238	178	301	290	86.8	203	110	61.1	213
1950	67.0	178	161	138	296	147	77.7	312	117	47.0	33.4	41.0	134

* Revised.

Monthly and yearly runoff, in inches, of Johns Creek at Newcastle, Va.

Water year	Monthly and yearly runoff, in inches, of Johns Creek at Newcastle, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	-	0.49	0.21	0.18	0.16	0.12	-
1927	0.25	0.97	3.45	1.04	4.62	1.18	5.84	.90	.62	.75	.58	.21	18.19
1928	.80	1.27	2.62	1.71	1.29	1.45	2.01	1.59	.65	.52	*2.42	2.47	*18.80
1929	.55	.43	.57	1.18	2.47	3.90	2.00	2.27	2.06	.45	.20	.17	16.25
1930	4.31	2.98	1.45	.98	1.43	1.38	1.17	.56	.21	*1.0	.10	.10	14.57
1931	.11	.15	.22	.64	.59	1.07	2.36	1.68	.65	.56	1.23	.22	9.48
1932	.14	.16	.43	1.92	2.42	3.11	2.05	2.36	.49	.21	.16	.12	13.57
1933	.60	1.67	2.27	1.92	2.36	2.29	2.99	1.54	.49	.25	.14	.10	16.62
1934	.12	.16	.25	.27	.18	4.72	2.20	.39	.27	.54	.28	.65	9.85
1935	1.41	2.58	2.54	*5.28	1.56	3.94	4.65	.91	.34	.39	.22	1.96	*25.78
1936	.20	.85	1.28	4.95	3.68	4.58	2.76	.79	.24	.15	.16	.21	19.85
1937	.92	.42	2.08	5.54	2.36	1.21	1.46	1.30	.38	.26	.73	.86	17.52
1938	3.91	1.29	1.14	1.72	.93	2.02	1.54	1.53	2.67	2.41	1.53	.21	20.90
1939	.17	.27	.43	1.89	4.14	2.46	.83	.46	.36	.42	.46	.13	12.02
1940	.13	.15	.17	.29	1.24	1.04	3.30	3.46	2.10	.52	3.95	.46	16.81
1941	.17	.25	.60	1.04	.57	1.27	1.52	.44	.59	5.17	.16	.35	10.15
1942	.12	.15	.51	.60	.99	1.78	.70	3.60	2.23	.36	1.00	.39	12.43
1943	1.06	1.05	3.04	2.17	2.64	3.22	2.68	2.31	.66	.72	.18	.13	19.86
1944	.15	.23	.25	.74	2.33	3.46	1.34	2.21	.39	.14	.10	.12	11.46
1945	.37	.24	.72	1.97	2.14	2.35	1.11	1.18	.38	.22	.17	.75	11.60
1946	.25	.63	1.40	3.36	2.12	2.01	1.35	2.41	.33	.31	.12	.11	14.40
1947	.16	.18	.25	2.95	.60	2.77	1.67	1.07	.34	.23	.56	.25	11.05
1948	1.33	2.52	.75	.72	3.90	3.19	3.53	2.05	.63	.44	1.61	.24	20.71
1949	.38	2.41	5.59	3.37	2.34	1.94	3.17	3.16	.91	2.21	1.20	.64	27.32
1950	.73	1.87	1.75	1.50	2.90	1.60	.82	3.39	1.23	.51	.36	.43	17.09

* Revised.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622	-	-	-	-	-	-	-	-
1927	642	*4,510	Feb. 23, 1927	10	142	1.34	18.19	142	18.21
1928	662,1203	*6,290	Aug. 16, 1928	15	*146	*1.38	*18.80	*122	*15.66
1929	682	*1,790	Mar. 1, 1929*	11	127	1.20	16.25	163	23.44
1930	697	*4,510	Oct. 3, 1929*	7	114	1.08	14.57	49.3	6.31
1931	712	*1,240	May 8, 1931	8	74.2	.700	9.48	76.1	9.73
1932	727	*1,790	Mar. 28, 1932	9	106	1.00	13.57	135	17.38
1933	742	*1,880	Dec. 28, 1932	8	130	1.23	16.62	98.8	12.61
1934	757	*3,890	Mar. 27, 1934	9	76.8	.725	9.83	123	15.83
1935	782,1203	8,000	Jan. 23, 1935	12	*201	*1.90	*25.78	*169	*21.58
1936	802	5,000	Mar. 17, 1936	10	155	1.46	19.85	163	20.94
1937	822	2,150	Jan. 20, 1937	11	137	1.29	17.52	160	20.44
1938	852	3,180	Oct. 27, 1937	16	163	1.54	20.90	120	15.43
1939	872	2,370	Jan. 30, 1939	10	95.9	.886	12.02	90.7	11.60
1940	892	4,640	Aug. 15, 1940	10	131	1.24	16.61	135	17.38
1941	922	2,960	July 7, 1941	10	79.1	.746	10.13	77.2	9.89
1942	952	3,790	May 16, 1942	9	97.0	.915	12.43	151	16.80
1943	972	3,790	Dec. 30, 1942	11	155	1.46	19.86	120	15.34
1944	1002	2,530	May 28, 1944	8	89.3	.842	11.46	94.7	12.16
1945	1032	2,230	Mar. 6, 1945	10	90.6	.855	11.60	97.9	12.55
1946	1052	2,230	Jan. 8, 1946	8	112	1.06	14.40	99.2	12.71
1947	1082	2,020	Mar. 14, 1947	9	86.1	.812	11.03	116	14.84
1948	1112	3,890	Feb. 14, 1948	16	161	1.52	20.71	192	24.69
1949	1142	4,750	Dec. 4, 1948	24	213	2.01	27.32	182	23.29
1950	1172	3,050	May 3, 1950	23	134	1.26	17.09	-	-

* Revised.

13. Craig Creek at Parr, Va.

Location.--Lat 37°39'55", long 79°54'40", on right bank 12 ft upstream from Chesapeake & Ohio Railway bridge, 700 ft downstream from Stony Run, 0.2 mile northeast of Horton, 0.4 mile northwest of Parr, Botetourt County, and 12 miles from mouth.

Drainage area.--331 sq mi.

Supplemental records available.--Records of chemical analyses during 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3. Records of chemical analyses for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 992.50 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, chain gage at same site and datum.

Average discharge.--25 years (1925-50), 382 cfs.

Extremes.--1925-50: Maximum discharge, 19,100 (revised) cfs Jan. 23, 1935 (gage height, 17.0 ft, from graph based on gage readings), from rating curve extended above 11,000 cfs; minimum, 26 cfs Dec. 23, 1943 (gage height, 3.26 ft), result of freezeup.

JAMES RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Craig Creek at Parr, Va.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Craig Creek at Parr, Va.												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1925	-	-	-	-	-	-	+206	303	72.2	56.2	45.2	47.3	-
1926	75.7	179	106	522	837	500	505	144	66.2	64.9	97.3	52.2	258
1927	85.1	483	1,100	314	1,470	349	1,100	262	154	204	288	91.4	483
1928	232	357	814	599	420	431	619	426	177	130	974	974	511
1929	150	104	129	295	685	1,020	647	652	579	159	61.4	55.3	376
1930	728	778	383	262	486	307	286	93.2	67.2	37.6	36.7	36.4	290
1931	34.9	45.9	61.7	174	146	305	694	482	217	156	356	68.6	229
1932	44.8	47.9	109	514	654	762	640	604	116	52.3	42.7	34.1	301
1933	454	623	672	566	731	691	976	543	183	79.6	58.1	40.7	466
1934	39.7	46.5	69.9	67.1	55.6	1,355	681	124	77.9	91.9	99.7	206	244
1935	33.2	580	706	1,337	508	1,095	1,382	214	108	90.6	68.3	476	575
1936	72.3	216	417	1,532	983	1,440	776	258	78.5	52.2	58.2	57.1	495
1937	359	89.9	495	1,642	629	302	474	362	112	75.5	331	305	432
1938	1,093	370	286	486	266	445	365	390	658	859	700	79.9	502
1939	85.6	86.4	134	480	1,197	625	194	132	105	123	223	61.1	280
1940	50.2	59.2	59.0	89.5	472	262	951	936	568	116	1,290	216	422
1941	67.1	98.7	187	294	181	321	366	120	188	979	63.8	67.1	245
1942	41.6	51.6	140	156	294	415	181	2,202	711	104	467	156	327
1943	302	305	728	512	750	746	712	593	212	272	81.3	48.1	457
1944	50.5	67.0	73.1	197	617	949	383	388	116	46.1	36.7	55.9	247
1945	149	77.3	239	530	621	598	318	310	138	32.2	47.7	313	281
1946	67.9	180	354	875	707	565	374	647	108	111	44.9	39.5	338
1947	57.8	64.0	93.4	927	189	706	491	260	101	76.0	179	105	272
1948	543	793	207	205	1,056	829	896	637	284	141	429	88.8	506
1949	165	692	1,519	904	682	535	1,073	707	273	658	309	231	646
1950	167	489	408	298	776	368	222	1,007	394	170	112	218	383

* Not previously published; partly estimated on basis of record for Jackson River at Falling Spring.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1925	-	-	-	-	-	-	+0.69	1.05	0.20	0.24	0.15	0.16	-
1926	0.26	0.60	0.37	1.82	2.64	1.74	1.71	.50	.22	.23	.34	.18	10.61
1927	.30	1.63	3.83	1.09	4.62	1.21	3.70	.91	.52	.71	1.00	.31	19.83
1928	.81	1.14	2.84	2.09	1.37	1.50	2.09	1.49	.60	.45	3.39	3.28	21.05
1929	.52	.35	.45	1.03	2.16	3.55	2.18	2.27	1.95	.55	.21	.19	15.41
1930	2.54	2.62	1.34	.91	1.53	1.07	.96	3.23	.23	.13	.13	.12	11.91
1931	.12	.16	.21	.61	.46	1.06	2.34	1.68	.73	.54	1.24	.23	9.58
1932	.16	.16	.38	1.79	2.14	2.65	2.15	2.10	.39	.18	.15	.11	12.56
1933	1.58	2.10	2.34	1.97	2.30	2.41	2.19	1.89	.62	.28	.20	.14	19.12
1934	.14	.16	.24	.23	.17	4.72	2.30	.43	.26	.32	.35	.69	10.01
1935	1.15	1.95	2.46	4.66	1.59	3.82	4.66	.75	.36	.32	.24	1.61	23.57
1936	.25	.73	1.45	5.34	3.20	5.02	2.61	.90	.26	.18	.20	.19	20.33
1937	1.24	.30	1.73	5.72	1.98	1.05	1.60	1.26	.38	.26	1.15	1.03	17.70
1938	3.80	1.25	1.00	1.70	.84	1.54	1.23	1.36	2.22	2.92	2.43	.27	20.56
1939	.23	.29	4.47	1.67	3.77	2.18	.65	.46	.35	.43	.78	.21	11.49
1940	.18	.20	.21	.31	1.54	.91	3.20	3.26	1.92	.40	4.50	.73	17.36
1941	.23	.30	.65	1.02	.57	1.12	1.24	.42	.63	3.41	.22	.23	10.04
1942	.15	.17	.49	.54	.92	1.44	.61	4.18	2.40	.36	1.63	.53	13.42
1943	1.05	1.03	2.54	1.79	2.36	2.59	2.40	2.06	.71	.95	.28	.16	17.92
1944	.18	.23	.25	.69	2.01	3.31	1.29	1.35	.39	.16	.13	.19	10.18
1945	.52	.26	.83	1.84	1.96	2.09	1.07	1.08	.47	.18	.17	1.06	11.53
1946	.24	.61	1.23	3.04	2.23	1.97	1.26	2.25	.36	.39	.16	.13	15.87
1947	.20	.22	.33	3.23	.59	2.46	1.65	.90	.34	.27	.62	.35	11.16
1948	1.89	2.68	.72	.71	3.44	2.88	5.02	2.21	.96	.49	1.50	.30	20.80
1949	.57	2.33	5.29	3.15	2.14	1.87	3.62	2.47	.92	2.29	1.08	.78	26.51
1950	.58	1.65	1.42	1.04	2.44	1.28	.75	3.50	1.33	.59	.39	.74	15.71

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	5,820	Jan. 19, 1926	40	258	0.779	10.61	368	15.14
1927	642	11,200	Dec. 26, 1926	48	483	1.46	19.83	459	18.86
1928	662	16,900	Aug. 17, 1928	56	511	1.54	21.05	427	17.58
1929	682	4,650	Feb. 28, 1929*	47	376	1.14	15.41	502	20.59
1930	697	*8,660	Oct. 22, 1929	32	290	.876	11.91	144	5.90
1931	712	2,700	Aug. 23, 1931	29	229	.692	9.38	234	9.59
1932	727	*4,950	May 1, 1932	30	301	.909	12.36	430	17.68
1933	742	*8,830	Oct. 18, 1932	35	466	1.41	19.12	332	13.64
1934	757	*8,490	Mar. 28, 1934	35	244	.737	10.01	367	15.03
1935	782, 892	*19,100	Jan. 23, 1935	46	575	1.74	23.57	498	20.44
1936	802, 892	*14,000	Mar. 18, 1936	41	495	1.50	20.33	515	21.17
1937	852	7,400	Jan. 21, 1937*	52	432	1.31	17.70	500	20.48
1938	852	*9,000	Oct. 20, 1937	66	502	1.52	20.56	378	15.50
1939	872	5,330	Jan. 31, 1939	46	280	.846	11.49	270	11.09
1940	892	15,200	Aug. 15, 1940	44	422	1.27	17.36	437	17.95

* Revised.
† Corrected.

Yearly discharge, in cubic feet per second, of Craig Creek at Parr, Va.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	922	12,300	July 8, 1941	40	245	0.740	10.04	235	9.67
1942	952	12,300	May 16, 1942	37	327	.988	13.42	420	17.23
1943	972	7,030	Apr. 20, 1943	40	437	1.32	17.92	341	13.96
1944	1002	4,950	Feb. 18, 1944	30	247	.746	10.18	270	11.15
1945	1032	5,430	Sept. 18, 1945	33	281	.849	11.55	292	12.00
1946	1052	5,590	Jan. 8, 1946	35	358	1.02	13.87	306	12.54
1947	1082	5,110	Jan. 21, 1947	38	272	.822	11.16	383	15.70
1948	1112	9,510	Nov. 3, 1947	58	506	1.53	20.80	577	23.70
1949	1142	11,600	Dec. 4, 1948	75	646	1.95	26.51	535	21.97
1950	1172	6,710	May 3, 1950	80	383	1.16	15.71	-	-

14. Catawba Creek near Catawba, Va.

Location.--Lat 37°28'05", long 80°00'20", on left bank at highway bridge, 1 mile downstream from Little Catawba Creek, 1.9 miles west of Haymarketown, and 8.2 miles north-east of Catawba, Roanoke County.

Drainage area.--34 sq mi, approximately.

Gage.--Staff gage and crest-stage indicator. Datum of gage is 1,299.96 ft above mean sea level, datum of 1929. Crest-stage indicator installed Mar. 16, 1950.

Average discharge.--7 years (1943-50), 40.6 cfs.

Extremes.--1943-50: Maximum discharge, 3,000 cfs June 29, 1949 (gage height, 5.60 ft), from rating curve extended above 620 cfs by logarithmic plotting; minimum observed, 2.2 cfs Sept. 7-11, 1944 (gage height, 0.54 ft).
Flood in August 1940 reached a stage of 13.26 ft, from information by observer.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	5.06	5.89	7.70	20.8	52.3	88.1	37.9	22.0	7.93	4.95	3.91	12.2	22.3
1945	22.0	9.09	22.5	47.1	55.3	55.9	23.1	21.5	12.0	10.7	6.01	62.2	28.8
1946	11.5	21.5	49.1	78.4	77.0	53.9	32.8	53.0	13.6	22.0	8.52	6.83	35.5
1947	10.6	8.84	12.4	104.	20.0	65.5	56.5	21.8	14.4	8.12	37.4	21.1	31.9
1948	106	93.2	21.1	19.5	104	74.1	91.2	49.8	30.0	17.2	25.0	11.4	53.3
1949	21.9	55.8	134	88.9	74.3	61.7	118	64.3	108	207	46.5	25.6	75.5
1950	17.8	28.2	22.4	23.3	73.2	35.1	25.8	114	45.7	19.3	11.4	29.8	36.9

* Not previously published; partly estimated on basis of records for Johns Creek at Newcastle.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	0.17	0.19	0.26	0.71	1.66	2.99	1.24	0.75	0.26	0.17	0.13	0.19	8.93
1945	.75	.30	.76	1.60	1.70	1.89	.76	.73	.39	.36	.20	2.04	11.48
1946	.39	.71	1.66	2.66	2.35	1.85	1.08	1.80	.45	.75	.29	.22	14.19
1947	.38	.29	.42	3.53	.61	2.22	1.85	.74	.47	.28	1.27	.69	12.73
1948	3.60	3.06	.72	.68	3.30	2.51	2.99	1.68	.98	.58	.85	.37	21.30
1949	.74	1.83	4.54	3.01	2.28	2.09	3.87	2.18	3.55	3.63	1.58	.84	30.14
1950	.60	.92	.76	.79	2.24	1.19	.85	3.86	1.50	.65	.39	.98	14.73

* Not previously published; partly estimated on basis of records for Johns Creek at Newcastle.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	1032	-	-	-	-	-	-	-	-
1944	1032	*790	Feb. 18, 1944	2.2	22.3	0.656	8.93	25.3	10.12
1945	1032	*1,330	Sept. 18, 1945	3.2	28.8	.847	11.48	31.2	12.43
1946	1052	560	Mar. 15, 1946*	4.8	35.5	1.04	14.19	31.3	12.50
1947	1082	670	Jan. 20, 1947	4.8	31.9	.958	12.73	47.7	19.04
1948	1112	1,330	Nov. 3, 1947	7.4	53.3	1.57	21.30	52.7	21.03
1949	1142	3,000	June 29, 1949	8.6	75.5	2.22	30.14	65.4	25.31
1950	1172	1,090	May 31, 1950	7.9	36.9	1.09	14.73	-	-

* Revised.

15. Catawba Creek near Fincastle, Va.

Location.--Lat 37°33'00", long 79°50'05", at highway bridge at Kyles Mills, 4 miles north-east of Fincastle, Botetourt County.

Drainage area.--104 sq mi.

Gage.--Chain gage. Datum of gage is 994.05 ft above mean sea level.

Average discharge.--9 years (1928-37), 106 cfs.

Extremes.--1928-37: Maximum discharge (revised), 7,160 cfs Jan. 2, 1937 (gage height, 19.4 ft, from graph based on gage readings), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 4 cfs Sept. 30, Oct. 4-10, 24, 25, 1933.

Flood in August 1928 reached a stage of 20.0 ft, from information by local residents (discharge, 7,700 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*54.1	*38.9	*33.5	59.0	175	317	171	173	192	54.1	28.6	21.2	*109
1930	222	158	107	†84.7	137	63.3	49.7	24.6	17.2	9.8	8.8	8.0	73.9
1931	7.9	8.9	14.9	65.4	34.2	65.3	157	68.9	47.5	41.1	153	42.0	59.0
1932	20.0	15.3	28.0	152	144	222	155	113	38.8	17.8	13.2	11.0	77.3
1933	204	187	149	185	252	201	288	142	61.4	15.7	11.2	6.90	141
1934	5.4	8.3	21.5	15.1	15.2	185	136	61.0	47.1	60.7	52.1	59.6	55.8
1935	38.0	198	147	370	158	273	378	64.3	40.5	32.5	21.7	122	153
1936	27.0	35.7	91.8	413	306	295	212	68.5	33.1	20.7	18.0	25.6	128
1937	51.6	23.8	110	665	144	73.4	117	98.3	54.8	35.3	382	65.6	154

† Corrected.

* Not previously published; estimated or partly estimated on basis of records for Craig Creek at Parr.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.60	*0.42	*0.37	0.65	1.75	3.52	1.83	1.91	2.06	0.60	0.32	0.23	*14.26
1930	2.46	1.70	1.19	.94	1.38	.70	.53	.27	.18	.11	.10	.09	9.65
1931	.09	.10	.16	.73	.34	.72	1.68	.76	.51	.46	1.70	.45	7.70
1932	.22	.16	.31	1.68	1.49	2.46	1.66	1.26	.42	.20	.15	.12	10.13
1933	2.26	2.01	1.65	2.05	2.52	2.22	3.09	1.58	.66	.17	.12	.07	18.40
1934	.06	.09	.24	.17	.15	2.05	1.46	.68	.51	.67	.58	.64	7.30
1935	.42	2.12	1.63	4.10	1.58	3.02	4.05	.71	.43	.36	.24	1.30	19.96
1936	.30	.38	1.02	4.58	3.17	3.27	2.28	.76	.35	.23	.20	.27	16.61
1937	.57	.26	1.22	7.37	1.44	.81	1.25	1.09	.59	.39	4.23	.92	20.14

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	*1,550	Feb. 28, 1929*	†19	*109	*1.05	*14.26	140	18.27
1930	742	*3,750	Oct. 2, 1929	5	73.9	.711	9.65	35.6	4.65
1931	742	*1,430	Aug. 2, 1931*	6	59.0	.567	7.70	61.7	8.04
1932	742	*1,520	Mar. 6, 1932	9	77.3	.743	10.13	117	15.36
1933	742	*3,890	Oct. 17, 1932	5	141	1.36	18.40	98.7	12.87
1934	757	*1,330	Mar. 4, 1934	4	55.8	.537	7.30	84.8	11.08
1935	782	6,000	Jan. 23, 1935	15	153	1.47	19.96	134	17.49
1936	802	3,300	Mar. 17, 1936	11	128	1.23	16.81	131	17.16
1937	822	*7,160	Jan. 2, 1937	15	154	1.46	20.14	-	-

* Revised.

† Not previously published.

16. James River at Buchanan, Va.

Location.--Lat 37°31'50", long 79°40'45", at Chesapeake & Ohio Railway station at Buchanan, Botetourt County, 300 ft upstream from bridge on U. S. Highway 11, 1,000 ft upstream from Purgatory Creek, and 1½ miles downstream from Looney Mill Creek.

Drainage area.--2,084 sq mi.

Supplemental records available.--Gage-height records collected at this site since 1893 are contained in reports of U. S. Weather Bureau.

Records of chemical analyses for 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3. Records of chemical analyses and water temperatures for the water years 1948-49 are published in WSP 1132 and 1182.

Gage.--Water-stage recorder. Datum of gage is 802.89 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Aug. 18, 1895, to Nov. 21, 1903, wire gage at same site; datum 2 ft higher prior to Apr. 3, 1897. Nov. 21, 1903, to July 1, 1927, chain gage at same site and datum.

Average discharge.--52 years (1898-1950), 2,507 cfs.

Extremes.--1898-1950: Maximum discharge, about 105,000 cfs Mar. 27, 1913 (gage height, 31 ft, from floodmarks), from rating curve extended above 53,000 cfs by logarithmic plotting and records for other stations in James River basin; minimum, 255 cfs on several days in September 1932 (gage height, 1.60 ft).
Flood in November 1877 reached a stage of 34.9 ft, from floodmark (discharge, about 125,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1898	-	-	-	-	-	2,670	4,190	4,120	829	689	3,930	905	-
1899	4,050	2,560	2,570	3,940	7,150	9,380	3,160	3,440	1,360	508	463	684	3,240
1900	348	456	705	2,480	4,420	5,990	2,560	1,170	2,180	758	416	603	1,820
1901	1,590	3,900	2,950	2,730	1,210	3,790	8,920	6,020	5,540	2,510	4,720	1,610	3,800
1902	762	552	7,300	3,660	6,490	9,070	3,620	1,090	907	670	552	434	2,910
1903	611	949	3,330	4,330	7,400	8,020	5,520	1,810	3,360	2,060	1,010	1,820	3,320
1904	772	551	628	1,200	1,960	3,960	3,080	3,900	3,240	795	683	428	1,760
1905	363	418	513	1,200	1,060	5,450	1,670	3,920	1,730	5,080	1,060	724	1,950
1906	523	488	2,650	4,760	1,350	4,290	3,410	1,370	1,260	914	2,300	1,570	2,080
1907	6,980	2,620	2,710	4,510	2,480	4,940	5,570	2,730	6,670	1,210	905	2,100	3,820
1908	888	2,940	5,230	6,300	6,270	5,870	4,800	5,280	2,360	1,260	1,140	784	3,590
1909	1,560	1,510	2,260	5,640	4,830	4,220	4,940	5,670	2,540	1,210	698	787	2,980
1910	745	563	1,120	2,980	3,300	2,670	2,360	1,390	7,530	2,590	627	560	2,190
1911	530	429	664	4,780	3,120	4,390	7,710	1,270	848	621	677	1,040	2,160
1912	2,300	1,860	2,390	2,630	4,060	9,190	3,950	5,840	958	993	428	528	2,900
1913	447	981	778	2,950	2,190	8,758	5,267	3,300	2,280	2,020	1,350	618	2,584
1914	1,250	2,700	2,280	3,630	6,100	3,940	4,640	1,720	575	649	480	420	2,340
1915	762	606	4,750	8,570	7,970	2,620	1,100	1,000	2,190	1,990	593	747	1,170
1916	2,900	2,960	3,230	3,630	2,790	2,930	1,280	1,500	2,340	1,480	528	528	2,174
1917	788	466	808	2,790	3,420	9,680	3,520	2,520	1,200	695	540	449	2,240
1918	451	572	473	823	6,630	6,490	6,450	5,520	2,820	1,450	833	1,360	2,540
1919	1,950	2,110	5,750	6,170	2,070	4,330	3,280	4,520	3,710	3,950	1,150	693	3,320
1920	698	765	2,850	3,010	3,740	5,520	3,860	1,730	1,690	1,150	2,220	615	2,320
1921	540	1,430	3,450	4,390	3,630	2,610	1,170	1,530	839	702	513	474	1,770
1922	401	3,020	3,880	2,620	6,510	6,500	4,290	2,590	2,590	2,590	603	594	2,990
1923	545	406	1,470	2,720	2,760	4,990	3,060	1,660	1,550	522	2,280	773	1,890
1924	434	426	1,340	3,670	1,840	3,780	3,750	6,460	2,880	2,440	1,770	2,080	2,580
1925	2,340	1,180	2,340	4,040	2,640	1,810	1,140	1,770	700	525	418	318	1,600
1926	432	1,470	651	3,710	4,750	3,200	3,060	1,280	743	646	836	483	1,750
1927	*1,090	*3,920	*6,320	*2,270	*8,480	*2,170	*7,770	*2,390	1,050	947	2,060	745	*3,220
1928	1,820	2,140	3,760	2,940	2,660	2,480	3,690	3,320	1,580	1,500	4,040	3,820	2,810
1929	992	807	1,560	2,370	3,510	7,420	4,490	4,710	2,640	1,350	602	502	2,560
1930	3,390	4,560	2,420	1,750	2,970	2,600	1,750	685	542	317	303	289	1,790
1931	294	345	459	954	1,010	2,130	4,350	2,880	1,350	726	1,500	544	1,580
1932	348	329	635	2,570	4,110	5,170	3,430	3,970	851	1,070	367	295	1,920
1933	2,580	3,840	3,230	3,810	5,040	5,090	6,630	3,250	1,390	984	870	489	3,080
1934	357	373	560	735	412	7,452	3,377	968	662	634	712	1,053	1,450
1935	1,558	2,810	4,824	7,756	3,888	7,005	8,419	2,050	1,078	849	1,006	2,847	3,670
1936	470	1,792	2,768	8,294	6,892	10,100	5,448	1,403	752	550	479	405	3,272
1937	1,665	574	3,253	10,140	5,149	2,216	3,532	2,243	876	649	2,464	2,119	2,901
1938	6,386	2,224	1,924	2,993	1,895	2,603	1,906	2,196	2,808	2,939	3,971	614	2,720
1939	476	608	1,037	3,022	7,956	4,609	1,985	1,453	728	1,316	1,793	513	2,090
1940	568	481	503	741	2,919	1,779	5,223	4,427	5,456	1,516	6,184	1,799	2,616
1941	578	866	1,559	2,043	1,220	2,059	2,713	793	872	3,059	438	404	1,587
1942	303	589	1,094	1,086	1,857	2,597	1,195	7,186	3,921	883	3,657	1,322	2,131
1943	2,479	1,931	4,365	3,463	4,865	6,046	4,489	4,069	2,150	2,286	723	412	3,105
1944	390	515	516	1,294	3,000	6,294	2,695	3,218	802	413	339	816	1,689
1945	1,103	599	1,760	3,165	3,463	4,377	1,959	1,735	890	779	625	2,140	1,875
1946	514	1,220	2,203	5,530	4,161	3,821	2,198	3,986	1,078	788	406	330	2,181
1947	461	464	609	4,839	1,265	4,121	2,583	1,519	1,083	950	752	643	1,615
1948	1,469	3,996	1,342	1,104	6,194	6,229	6,180	3,972	1,775	1,002	1,838	714	2,965
1949	1,708	4,579	8,377	6,550	4,644	3,473	6,300	4,346	2,395	3,938	2,004	1,295	4,135
1950	991	3,191	3,270	2,418	6,361	3,103	1,623	4,545	1,939	955	721	4,156	2,742

* Revised.

† Not previously published; estimated on basis of record for station at Cartersville and partial flood graph.

‡ Only monthly figures revised; revised daily figures not available Nov. 18-30.

Monthly and yearly runoff, in inches, of James River at Buchanan, Va.

Water year	Monthly and yearly runoff, in inches, of James River at Buchanan, Va.											The year		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.	
1898	-	-	-	-	-	-	1.48	2.24	2.28	0.44	0.38	2.18	0.48	-
1899	2.24	1.26	1.42	2.18	3.57	5.19	1.70	1.90	.75	.28	.26	.37	21.10	
1900	.19	.24	.39	1.37	2.21	3.31	1.37	.65	1.17	.42	.23	.52	11.87	
1901	.88	2.09	1.64	1.51	.60	2.10	4.78	3.33	2.97	1.38	2.61	.86	24.75	
1902	.42	.30	4.04	2.03	3.24	5.02	1.94	.60	.49	.37	.31	.25	18.99	
1903	.34	.51	1.84	2.40	3.70	4.44	2.96	1.00	1.80	1.14	.56	.97	21.66	
1904	.43	.29	.35	.66	1.01	2.19	1.65	2.16	1.73	4.44	.38	.25	11.52	
1905	.20	.22	.28	.66	.53	3.02	.89	.217	.93	2.81	.59	.59	12.69	
1906	.29	.26	1.45	2.63	.67	2.38	1.83	.76	.68	.51	.17	.84	13.57	
1907	3.86	1.41	1.50	2.49	1.23	2.73	2.98	1.51	3.57	1.67	2.50	1.13	23.58	
1908	.49	1.57	2.89	3.48	3.25	3.25	2.57	2.92	1.27	.70	.63	.42	23.44	
1909	.86	.81	1.24	3.12	2.42	2.33	2.64	3.14	1.36	.67	.39	.42	19.40	
1910	.41	.30	.62	1.65	1.64	1.48	1.26	.77	4.03	1.43	.35	.30	14.24	
1911	.29	.23	.37	2.64	1.56	2.43	4.13	.70	.45	.34	.37	.56	14.07	
1912	1.27	1.00	1.33	1.45	2.10	5.08	2.12	3.03	.51	.55	.24	.28	18.96	
1913	.25	.53	.43	1.64	1.09	*4.84	*2.82	1.82	1.20	1.12	.75	.33	*16.82	
1914	.69	1.45	1.26	2.01	3.05	2.18	2.49	.95	.31	.36	.27	.23	15.25	
1915	.42	.32	2.63	4.74	3.98	1.45	.59	.55	1.17	.33	.41	.63	17.22	
1916	1.60	*.51	1.40	1.79	1.88	1.54	1.57	.71	.80	1.29	.82	.28	*14.19	
1917	.44	.25	.45	1.54	1.71	5.35	1.89	1.40	.64	.38	.30	.24	14.59	
1918	.25	.31	.26	.46	3.31	3.58	3.46	1.40	1.51	.80	.46	.75	16.53	
1919	1.08	1.13	3.18	5.41	1.03	2.40	1.75	2.50	1.99	2.19	.64	.37	21.67	
1920	.39	.41	1.58	1.66	1.93	3.06	2.06	.96	.90	.64	1.23	.33	15.15	
1921	.30	.77	1.91	2.43	1.81	1.44	.63	.85	.45	.39	.28	.25	11.51	
1922	.22	1.62	2.14	1.45	3.25	3.60	1.33	2.38	1.38	1.43	.33	.32	19.45	
1923	.30	.22	.81	1.51	1.38	2.76	1.64	.92	.83	.29	1.26	.42	12.33	
1924	.24	.23	.74	2.03	.95	2.09	2.01	3.57	1.54	1.35	.98	1.11	16.84	
1925	1.29	.63	1.29	2.24	1.32	1.00	.61	.98	.37	.29	.23	.17	10.42	
1926	.24	.79	.36	2.05	2.37	1.78	1.64	.71	.40	.36	.26	.46	26	
1927	*.60	*2.10	*3.49	*1.26	*4.23	*1.20	*4.16	*1.33	.56	.52	1.14	.40	*20.99	
1928	1.01	1.15	2.08	1.63	1.38	1.37	1.98	1.83	.85	.83	2.24	2.04	18.39	
1929	.55	.43	.86	1.51	1.75	4.10	2.40	2.61	1.42	.64	.33	.27	16.67	
1930	1.88	2.44	1.34	.97	1.49	1.44	.94	.38	.29	1.18	.17	.16	11.68	
1931	.16	.19	.25	.53	.50	1.18	2.33	1.59	.72	.40	.83	.29	8.97	
1932	.19	.18	.35	1.42	2.12	2.86	1.84	2.19	.46	.59	.20	.16	12.56	
1933	1.43	2.05	1.79	2.11	2.52	2.61	3.55	1.80	.74	.54	.48	.26	20.08	
1934	.20	.20	.31	.41	.21	4.13	1.81	.53	.35	.35	.39	.56	9.45	
1935	.86	1.50	2.66	4.29	1.95	3.87	4.51	1.13	.58	.47	.56	1.53	23.91	
1936	.26	.96	1.53	4.59	3.57	5.59	2.91	.78	.40	.30	.27	.22	21.38	
1937	.92	.31	1.80	5.62	2.57	1.22	1.89	1.24	.47	.36	1.36	1.14	18.90	
1938	3.53	1.19	1.06	1.66	.95	1.44	1.02	1.21	1.51	1.63	2.20	.33	17.73	
1939	.26	.33	.57	1.67	3.98	2.55	1.06	.80	.59	.73	.99	.27	13.60	
1940	.26	.26	.28	.41	1.51	.98	2.80	2.44	2.92	1.84	3.42	.96	17.08	
1941	.32	.46	.86	1.13	.61	1.14	1.45	.44	.47	1.70	.24	.22	9.04	
1942	.17	.21	.61	.60	.93	1.44	.64	3.98	2.10	4.49	2.02	.71	13.90	
1943	1.37	1.03	2.42	1.92	2.43	3.34	2.41	2.25	1.15	1.27	.40	.23	20.22	
1944	.22	.28	.29	.72	1.55	3.48	1.44	1.78	.43	.23	.19	.44	11.05	
1945	.61	.32	.97	1.75	1.73	2.42	1.05	.96	.48	.43	.35	1.15	12.22	
1946	.28	.65	1.22	3.06	2.08	2.11	1.17	2.20	.58	.44	.22	.18	14.19	
1947	.25	.25	.34	2.68	.63	2.28	1.36	.84	.58	.53	.42	.34	10.52	
1948	.61	2.14	.74	.61	3.20	3.45	3.31	2.20	.95	.55	1.02	.38	19.36	
1949	.95	2.46	4.64	3.62	2.32	1.92	3.37	2.43	1.28	2.18	1.11	.69	26.95	
1950	.55	1.71	1.81	1.34	3.18	1.72	.87	2.51	1.04	.52	.40	2.22	17.87	

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches	
		Discharge	Date						
1898	(a)	\$25,700	May 7, 1898	-	-	-	-	-	
1899	(a)	\$51,900	Mar. 5, 1899	360	3,240	1.55	21.10	2,610	17.00
1900	(a)	\$23,800	Mar. 20, 1900	275	1,820	.873	11.87	2,400	15.66
1901	(a)	\$59,800	Nov. 26, 1900	515	3,800	1.82	24.75	3,820	24.90
1902	(a)	\$76,000	Mar. 1, 1902	390	2,910	1.40	18.99	2,600	16.92
1903	(a)	\$45,800	Mar. 24, 1903	450	3,320	1.59	21.66	3,080	20.04
1904	(a)	\$20,500	May 19, 1904	382	1,760	.845	11.52	1,710	11.15
1905	(a)	\$36,800	July 13, 1905	350	1,950	.936	12.69	2,150	13.99
1906	(a)	\$24,000	Jan. 23, 1906	382	2,080	.998	13.57	2,810	18.34
1907	(a)	\$41,800	June 14, 1907	520	3,620	1.74	23.58	3,340	21.76
1908	(a)	\$49,800	Feb. 16, 1908	485	3,590	1.72	23.44	3,280	21.40
1909	(a)	\$35,500	Apr. 14, 1909	485	2,980	1.43	19.40	2,730	17.82
1910	(a)	\$38,800	June 14, 1910	415	2,190	1.05	14.24	2,120	13.80
1911	(a)	\$25,700	Jan. 3, 1911	350	2,160	1.04	14.07	2,580	16.78
1912	(a)	\$39,900	Mar. 30, 1912	330	2,900	1.39	18.96	2,540	16.57
1913	(a)	105,000	Mar. 27, 1913	*390	*2,584	*1.24	*16.82	*2,920	*19.01
1914	(a)	*17,900	Feb. 20, 1914	405	2,340	1.12	15.25	2,330	15.22
1915	(a)	56,100	Feb. 2, 1915*	405	2,640	1.27	17.22	*2,667	*17.36

* Revised.

* Not previously published.

a From Virginia Geological Survey, Bull. 31.

Yearly discharge, in cubic feet per second, of James River at Buchanan, Va.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1916	(a)	28,800	Dec. 30, 1915*	460	*2,174	*1.04	*14.19	1,810	11.82
1917	602	*44,600	Mar. 5, 1917	400	2,240	1.07	14.59	2,190	14.27
1918	602	*43,000	Mar. 14, 1918	*400	2,540	1.22	16.53	3,240	21.10
1919	602	*47,800	Jan. 3, 1919	555	3,320	1.59	21.67	2,850	18.66
1920	602	*26,800	Mar. 20, 1920	500	2,320	1.11	15.15	2,410	15.75
1921	602	24,400	Jan. 23, 1921	400	1,770	.849	11.51	1,920	12.51
1922	602	*24,200	Mar. 11, 1922	355	2,990	1.43	19.45	2,580	16.80
1923	602	*18,800	Mar. 7, 1923	378	1,890	.907	12.33	1,870	12.21
1924	602	*60,000	May 12, 1924*	400	2,580	1.24	16.84	2,890	18.84
1925	602	*11,700	Jan. 12, 1925	310	1,600	.768	10.42	1,320	8.60
1926	622	28,700	Jan. 19, 1926	310	1,750	.840	11.42	*2,490	*16.22
1927	642,1383	*38,000	Dec. 26, 1926*	400	*3,220	*1.55	*20.99	*2,920	*19.04
1928	682	39,000	Aug. 16, 1928	500	2,810	1.35	18.39	2,450	15.99
1929	682	30,000	Mar. 1, 1929	465	2,560	1.23	16.67	3,140	20.49
1930	697	39,000	Nov. 19, 1929	265	1,790	.859	11.68	1,010	6.62
1931	712	12,000	Mar. 30, 1931	265	1,380	.662	8.97	1,400	9.09
1932	727	35,000	Feb. 5, 1932	259	1,920	.921	12.56	2,620	17.11
1933	742	24,900	Oct. 17, 1932*	291	3,080	1.48	20.08	2,380	15.52
1934	757	32,000	Mar. 28, 1934	327	1,450	.696	9.45	2,114	13.76
1935	782, 972	70,400	Jan. 23, 1935	474	3,670	1.76	23.91	3,320	21.64
1936	802, 972	84,100	Mar. 18, 1936	334	3,272	1.57	21.38	3,315	21.66
1937	822	41,400	Jan. 21, 1937	428	2,901	1.39	18.90	3,324	21.65
1938	852	35,600	Oct. 20, 1937	534	2,720	1.31	17.73	2,010	13.11
1939	872	36,200	Jan. 31, 1939	411	2,090	1.00	13.60	2,033	13.24
1940	892	41,100	May 31, 1940	382	2,616	1.26	17.08	2,747	17.92
1941	922	23,300	July 8, 1941	292	1,587	.666	9.04	1,285	8.39
1942	952	52,300	May 17, 1942	279	2,151	1.02	13.90	2,722	17.73
1943	972	35,100	Mar. 14, 1943	355	3,105	1.49	20.22	2,482	16.19
1944	1002	17,900	Mar. 1, 1944	268	1,689	.810	11.05	1,862	12.16
1945	1032	21,700	Sept. 18, 1945	339	1,875	.900	12.22	1,914	12.47
1946	1052	33,700	Jan. 8, 1946	294	2,181	1.05	14.19	1,979	12.88
1947	1082	25,800	Mar. 15, 1947	292	1,615	.775	10.52	2,053	13.37
1948	1112	38,800	Feb. 15, 1948	395	2,965	1.42	19.36	3,629	23.72
1949	1142	54,800	Apr. 14, 1949	640	4,135	1.98	26.95	3,527	22.97
1950	1172	33,500	Feb. 2, 1950	535	2,742	1.32	17.87	-	-

* Revised.

* Not previously published.

a From Virginia Geological Survey, Bull. 31.

Note.--Records for August 1895, to Feb. 11, 1898, published in WSP 11, 15, and 27 have been found in error on the basis of a restudy of the data and comparisons with records at other stations. These records are not published herein and should not be used.

17. Calypasture River above Mill Creek, at Goshen, Va.

Location--Lat 37°59'15", long 79°29'40", on left bank 20 ft upstream from highway bridge at Goshen, Rockbridge County, 400 ft upstream from Mill Creek.

Drainage area--147 sq mi.

Gage--Water-stage recorder and concrete control. Datum of gage is 1,384.84 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944.

Average discharge--12 years (1938-50), 160 cfs.

Extremes--1938-50: Maximum discharge, 14,800 cfs June 18, 1949 (gage height, 12.14 ft), from rating curve extended above 9,200 cfs by logarithmic plotting; minimum, 1.8 cfs Oct. 9, 1941 (gage height, 1.22 ft).

Remarks--Discharge given herein includes diversion 50 ft above control by Stillwater Worst Mill.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*15.5	*22.1	*67.6	*228	536	338	223	113	36.6	98.6	68.0	32.6	*146
1940	41.1	19.0	39.0	65.2	236	140	277	339	599	71.8	458	125	200
1941	17.2	116	243	149	62.0	134	248	30.6	50.2	84.4	9.90	5.96	96.1
1942	3.90	6.21	67.8	60.5	131	199	91.5	638	273	39.0	227	47.5	149
1943	328	129	303	204	324	422	245	334	222	187	15.2	7.44	226
1944	6.97	17.6	11.0	66.9	177	439	198	304	40.3	12.2	5.96	23.0	109
1945	39.7	24.4	130	200	199	254	111	133	31.8	29.6	15.7	202	114
1946	18.5	111	209	369	285	260	151	218	59.5	35.0	14.2	5.00	144
1947	12.5	17.3	33.8	313	83.3	311	124	70.2	125	162	19.0	12.0	107
1948	13.7	139	64.6	67.0	372	447	424	271	68.2	38.8	65.2	22.7	165
1949	134	450	544	452	276	203	376	290	476	208	68.7	47.8	293
1950	35.7	157	166	167	400	224	84.0	321	128	18.5	11.5	427	176

* Not previously published; estimated or partly estimated on basis of record for Maury River at Rockbridge Baths.

Monthly and yearly runoff, in inches, of Calfpasture River above Mill Creek, at Goshen, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*0.12	*0.17	*0.55	*1.79	3.80	2.65	1.70	0.89	0.28	0.77	0.53	0.25	*13.48
1940	.32	.14	.31	.51	1.74	1.10	2.10	2.66	4.54	.56	3.60	.95	18.53
1941	.13	.88	1.90	1.16	.44	1.05	1.89	.24	.38	.66	.08	.05	8.86
1942	.03	.05	.45	.48	.93	1.56	.69	5.00	2.08	.31	1.78	.36	13.72
1943	2.57	.95	2.38	1.60	2.27	3.31	1.84	2.39	1.68	1.46	.12	.06	20.86
1944	.05	.13	.09	.52	1.29	3.45	1.51	2.39	.31	.10	.05	.17	10.06
1945	.31	.19	1.02	1.57	1.41	1.99	.84	1.04	.24	.23	.12	1.53	10.49
1946	.15	.84	1.64	2.89	2.02	2.04	1.15	1.71	.45	.27	.11	.04	13.31
1947	.10	.13	.27	2.46	.59	2.44	.94	.55	.95	1.27	.15	.09	9.94
1948	.11	1.06	.51	.53	2.73	3.50	3.21	2.12	.52	.30	.51	.17	15.27
1949	1.05	3.41	4.27	3.54	1.96	1.59	2.86	2.27	3.62	1.63	.54	.36	27.10
1950	.28	1.19	1.30	1.31	2.83	1.75	.64	2.51	.97	.15	.09	3.24	16.26

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	4,900	Feb. 4, 1939	7	*146	*0.993	*13.48	*145	*13.43
1940	892	7,010	May 31, 1940	9	200	1.36	18.53	223	20.67
1941	922	2,300	Apr. 5, 1941	3.0	96.1	.654	8.86	70.2	6.48
1942	952	10,200	May 16, 1942	2.4	149	1.01	13.72	207	19.09
1943	972	6,120	Oct. 16, 1942	5.8	226	1.54	20.86	165	15.23
1944	1002	3,110	May 7, 1944	2.6	109	.741	10.06	122	11.31
1945	1032	3,910	Sept. 18, 1945	4.5	114	.776	10.49	126	11.60
1946	1052	2,920	Jan. 8, 1946	3.9	144	.980	13.31	121	11.18
1947	1082	3,500	Mar. 14, 1947	3.6	107	.728	9.94	120	11.12
1948	1112	3,910	Feb. 14, 1948	8.7	165	1.12	15.27	241	22.32
1949	1142	14,800	June 18, 1949	15	293	1.99	27.10	229	21.14
1950	1172	7,240	Sept. 10, 1950	7.9	176	1.20	16.26	-	-

* Not previously published.

18. Calfpasture River at Goshen, Va. 1/

Location --Lat 37°59'10", long 79°29'38", at downstream side of highway bridge at Goshen, Rockbridge County, 500 ft downstream from Mill Creek.

Drainage area --190 sq mi.

Gage --Chain gage. Datum of gage is 1,381.69 ft above mean sea level (unadjusted).

Average discharge --13 years (1925-38), 212 cfs.

Extremes --1925-38: Maximum discharge, 20,000 cfs Mar. 17, 1936 (gage height, 11.71 ft, from floodmarks), from rating curve extended above 1,900 cfs on basis of logarithmic plotting and comparison with peak discharge at other stations in the James River basin; minimum, 8 cfs July 22, 1926, and many days in September and October 1930, September and October 1932, and July 1934.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	147	245	40.9	31.6	20.8	17.7	-
1926	24.4	84.5	70.0	355	469	259	316	114	45.7	15.2	59.4	25.6	151
1927	69.2	444	481	163	623	150	758	189	46.6	50.5	98.2	34.8	255
1928	196	206	316	182	256	216	450	325	155	89.3	242	218	237
1929	46.0	44.4	155	264	345	617	550	423	223	161	44.2	24.8	241
1930	209	*411	210	139	280	288	127	50.1	33.1	13.8	13.2	11.2	*148
1931	12.0	14.0	23.6	67.4	98.1	236	448	364	112	68.5	50.4	24.4	127
1932	16.3	15.6	27.2	188	325	560	241	340	42.8	85.3	14.8	8.3	155
1933	*326	385	303	339	497	435	775	314	79.4	196	109	56.8	*316
1934	17.9	18.2	31.5	59.4	23.2	613	238	107	41.2	18.9	94.4	70.3	112
1935	61.1	163	428	632	439	557	685	123	59.8	32.3	96.5	271	294
1936	18.4	294	262	645	582	1,065	465	90.0	39.3	33.9	17.0	15.4	293
1937	77.1	24.4	319	845	423	141	375	148	60.7	22.4	86.4	82.6	216
1938	622	165	142	231	115	148	140	143	145	174	441	24.6	209
1939	17.8	25.4	*85.1	-	-	-	-	-	-	-	-	-	-

* Revised.

* Not previously published; partly estimated from record for Maury River at Rockbridge Baths.

1/ Published as North River, 1925-34.

Monthly and yearly runoff, in inches, of Calfpasture River at Goshen, Va.

Water year	Monthly and yearly runoff, in inches, of Calfpasture River at Goshen, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	0.86	1.49	0.24	0.19	0.13	0.10	-
1926	0.15	0.50	0.42	2.16	2.57	1.57	1.85	.69	.27	.09	.36	.15	10.78
1927	.42	2.61	2.92	.99	3.42	.91	4.45	1.15	.27	.31	.60	.20	18.25
1928	1.19	1.20	1.91	1.10	1.46	1.31	2.64	1.97	.91	.54	1.46	1.28	16.97
1929	.28	.26	.94	1.60	1.90	3.75	3.22	2.57	1.31	.98	.27	.15	17.23
1930	1.27	*2.41	1.28	1.84	1.53	1.75	.75	.30	.19	.08	.08	.07	*10.55
1931	.07	.08	.14	.41	.54	1.43	2.63	2.21	.66	.42	.31	.14	9.04
1932	.10	.09	.16	1.14	1.84	3.40	1.42	2.06	.25	.52	.09	.05	11.12
1933	*1.98	2.26	1.85	2.05	2.75	2.64	4.55	1.90	.47	1.19	.66	.33	*22.59
1934	.11	.11	.19	.36	.13	3.72	1.40	.65	.24	.11	.57	.41	8.00
1935	.37	.96	2.59	3.84	2.40	3.38	4.03	.78	.35	.20	.59	1.60	21.06
1936	.11	1.73	1.59	3.91	3.30	6.47	2.73	.55	.23	.21	.10	.09	21.02
1937	.47	.14	1.94	5.13	2.32	.86	2.20	.90	.36	.14	.52	.49	15.47
1938	3.77	.96	.86	1.41	.62	.90	.82	.87	.85	1.06	2.68	.14	14.94
1939	.11	.15	*.52	-	-	-	-	-	-	-	-	-	-

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	*5,980	Jan. 19, 1926*	9	151	0.795	10.79	219	15.66
1927	642	*11,600	Nov. 16, 1926	15	255	1.34	18.25	233	16.60
1928	662	*4,380	Oct. 13, 1927	14	237	1.25	16.97	198	14.15
1929	682	*6,930	Apr. 16, 1929	14	241	1.27	17.23	*290	*20.71
1930	697,1333	*7,500	Nov. 18, 1929	8	*148	*.779	*10.55	82.6	5.88
1931	712	*2,190	Mar. 29, 1931	8	127	.668	9.04	127	9.10
1932	727	*6,670	Feb. 4, 1932	8	155	.816	11.12	*235	*16.84
1933	742,1333	*11,600	Oct. 17, 1932	8	*316	*1.66	*22.59	237	16.93
1934	757	3,140	Mar. 28, 1934	8	112	1.589	8.00	161	11.51
1935	782	*11,200	Jan. 23, 1935	18	294	1.55	21.06	288	20.57
1936	802	20,000	Mar. 17, 1936	11	293	1.54	21.02	281	20.14
1937	822	*5,570	Apr. 26, 1937	13	219	1.14	15.47	259	18.51
1938	852	*10,900	Oct. 19, 1937	18	206	1.10	14.94	*142	*10.15
1939	852	-	-	-	-	-	-	-	-

* Revised.

* Not previously published.

19. Maury River at Rockbridge Baths, Va.1/

Location.--Lat 37°54'26", long 79°25'20", on right bank at Rockbridge Baths, Rockbridge County, 700 ft upstream from highway bridge and 1 mile upstream from Hays Creek.

Drainage area.--329 sq mi.

Gage.--Water-stage recorder. Datum of gage is 1,100.33 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--22 years (1928-50), 356 cfs.

Extremes.--1928-50: Maximum discharge, 33,000 cfs Mar. 17, 1936 (gage height, 13.07 ft), from rating curve extended above 16,000 cfs by logarithmic plotting; minimum, 9 cfs (revised) Nov. 28, 1930 (gage height, 0.76 ft), flow retarded by freezing.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*85.5	75.6	248	480	559	1,099	826	607	359	230	54.7	35.6	*587
1930	315	618	314	210	475	511	208	81.0	54.1	20.2	19.2	16.1	235
1931	16.5	24.1	42.4	109	165	377	670	626	180	95.5	86.5	44.2	204
1932	25.3	25.7	50.0	359	572	857	430	515	69.2	107	23.1	16.3	252
1933	529	676	484	595	834	760	1,295	596	151	217	171	147	535
1934	37.7	37.9	59.1	101	50.9	1,023	421	180	89.5	42.9	129	103	191
1935	105	271	687	1,154	643	901	1,122	222	107	65.0	158	519	495
1936	44.0	408	426	1,104	941	2,017	835	155	72.3	65.5	35.0	29.0	511
1937	176	44.9	485	1,540	793	296	690	313	106	47.5	141	144	396
1938	1,127	294	252	398	208	267	252	237	251	367	681	49.0	368
1939	35.8	50.8	156	509	1,201	741	454	248	84.2	151	157	60.2	315
1940	73.9	60.4	78.5	143	531	288	619	742	1,255	183	954	302	432
1941	53.2	231	475	586	175	331	593	83.7	104	214	28.8	20.5	225
1942	19.7	26.5	121	129	279	398	183	356	607	101	543	156	326
1943	777	352	749	492	739	923	574	620	487	364	42.8	30.6	512
1944	28.0	47.4	43.6	144	337	928	438	649	83.7	40.1	22.5	78.6	237
1945	116	71.3	271	467	435	563	278	257	71.2	81.8	44.3	367	251
1946	52.0	212	433	826	664	587	338	652	269	94.5	43.8	22.1	348
1947	36.5	42.0	71.6	623	163	685	306	172	211	284	54.0	39.3	225
1948	46.1	309	153	154	795	979	923	542	156	119	205	55.7	368
1949	244	945	1,209	1,047	627	460	345	674	435	185	107	37	615
1950	100	375	423	360	876	520	219	713	276	56.3	44.0	954	405

* Not previously published; partly estimated from record for Calfpasture River at Goshen.

1/ Published as North River, 1928-45.

Monthly and yearly runoff, in inches, of Maury River at Rockbridge Baths, Va.

Water year	Monthly and yearly runoff, in inches, of Maury River at Rockbridge Baths, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	#0.29	0.26	0.87	1.68	1.77	3.85	2.80	2.12	1.22	0.81	0.19	0.12	#15.98
1930	1.10	2.10	1.10	.74	1.50	1.79	.71	.28	.18	.07	.05		9.69
1931	.06	.08	.15	.38	.52	1.33	2.28	2.19	.61	.33	.54	.15	8.42
1932	.09	.09	.18	1.19	1.88	3.00	1.46	1.81	.23	.37	.08	.06	10.44
1933	1.82	2.29	1.70	2.09	2.64	2.66	4.40	2.09	.51	.76	.68	.50	22.06
1934	.13	.13	.21	.35	.16	3.58	1.43	.63	.30	.15	.45	.35	7.87
1935	.37	.92	2.41	4.05	2.03	3.16	3.80	.78	.36	.23	.55	1.76	20.42
1936	.15	1.38	1.49	3.87	3.08	7.07	2.83	.54	.25	.23	.12	.10	21.11
1937	.62	.15	1.70	5.40	2.51	1.04	2.34	1.10	.36	.17	.49	.49	16.37
1938	3.95	1.00	.88	1.40	.66	.94	.85	.83	.85	1.29	2.39	.17	15.21
1939	.13	.17	.55	1.79	3.80	2.59	1.54	.87	.29	.53	.55	.20	13.01
1940	.26	.21	.28	.50	1.74	1.01	2.10	2.61	4.18	.64	3.34	1.02	17.89
1941	.19	.78	1.66	1.35	.55	1.16	2.01	.29	.35	.75	.10	.07	9.26
1942	.07	.09	.42	.45	.88	1.40	.62	4.75	2.05	.35	1.90	.46	13.44
1943	2.72	1.19	2.63	1.73	2.34	3.24	1.94	2.17	1.65	1.28	.15	.10	21.14
1944	.10	.16	.15	.50	1.10	3.25	1.48	2.27	.28	1.14	.08	.27	9.78
1945	.41	.24	.95	1.64	1.38	1.97	.94	.90	.24	.29	.16	1.25	10.37
1946	.18	.72	1.52	2.89	2.10	2.05	1.15	2.28	.91	.33	.15	.07	14.35
1947	.13	.14	.25	2.18	.52	2.40	1.04	.60	.72	.99	.19	.13	9.29
1948	.16	1.05	.54	5.44	2.61	3.44	3.14	1.90	.53	.42	.72	.19	15.24
1949	.86	3.20	4.23	3.67	1.99	1.61	2.72	2.26	2.30	1.52	.65	.36	25.37
1950	.35	1.27	1.49	1.26	2.77	1.82	.74	2.50	1.94	.20	.15	3.24	16.73

* Not previously published; partly estimated from record for Calipasture River at Goshen.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	972	9,550	Apr. 16, 1929	#30	#387	\$1.18	\$15.98	457	18.86
1930	972	9,909	Nov. 18, 1929	11	235	.714	9.69	138	5.68
1931	972	2,600	Mar. 29, 1931	12	204	.620	8.42	205	8.49
1932	972	8,600	Feb. 4, 1932	14	252	.766	10.44	384	15.89
1933	972	11,300	Oct. 17, 1932	16	535	1.63	22.06	405	16.72
1934	972	5,400	Mar. 3, 1934	21	191	.581	7.87	269	11.10
1935	972	15,600	Jan. 23, 1935	36	495	1.50	20.42	479	19.74
1936	972	33,000	Mar. 17, 1936	22	511	1.55	21.11	497	20.56
1937	972	9,200	Jan. 20, 1937	29	396	1.20	16.37	478	19.73
1938	972	12,800	Oct. 19, 1937	35	368	1.12	15.21	247	10.23
1939	972	8,600	Feb. 4, 1939	27	315	.957	13.01	313	12.91
1940	972	11,600	May 31, 1940	36	432	1.31	17.89	478	19.77
1941	922	5,000	Apr. 5, 1941	18	225	.684	9.26	175	7.21
1942	952	17,500	May 22, 1942	16	326	.991	13.44	471	19.40
1943	972	11,000	Oct. 16, 1942	25	512	1.56	21.14	364	15.01
1944	1002	6,290	May 7, 1944	14	237	.720	9.78	266	10.97
1945	1032	6,060	Sept. 18, 1945	18	251	.763	10.37	271	11.19
1946	1052	4,700	Jan. 8, 1946	18	348	1.06	14.35	302	12.45
1947	1082	6,900	Mar. 14, 1947	18	225	.684	9.29	255	10.52
1948	1112	7,280	Feb. 14, 1948	28	368	1.12	15.24	526	21.78
1949	1142	15,600	June 18, 1949	47	615	1.87	25.37	489	20.19
1950	1172	11,600	Sept. 10, 1950	33	405	1.23	16.73	-	-

* Not previously published.

20. Kerrs Creek near Lexington, Va.

Location (revised).--Lat 37°49'33", long. 79°26'28", near center of span on downstream side of highway bridge, 1.2 miles upstream from mouth and 2.8 miles north of Lexington, Rockbridge County.

Drainage area.--34 sq mi, approximately.

Gage.--Wire-weight gage. Crest-stage indicator after March 1950. Datum of gage is 972.04 ft above mean sea level (levels by Corps of Engineers). Prior to Apr. 12, 1942, chain gage at same site and datum.

Average discharge.--24 years (1926-50), 38.1 cfs.

Extremes.--1926-50: Maximum discharge, 23,000 cfs Sept. 10, 1950 (gage height, 13.8 ft, from crest-stage gage), from rating curve extended above 800 cfs on basis of one contracted-opening and one slope-area determination at gage height 13.8 ft; minimum, 4 cfs on many days in August and September 1932, Sept. 12, 1934, July 17, Nov. 21, 1936.

Monthly and yearly mean discharge, in cubic feet per second, of Kerrs Creek near Lexington, Va.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1927	14	40	74	27	122	23.4	93.6	24.8	16.4	12.2	15.8	12.1	38.9
1928	44.4	24.5	52.5	30.8	38.9	29.7	58.9	30.0	13.7	13.1	123	69.1	44.1
1929	23.5	18.1	21.2	44.2	67.5	98.3	102	77.5	31.3	23.1	12.1	10.9	44.0
1930	42.5	54.3	31.7	22.7	49.6	58.8	20	15	10	9	6.65	6.20	26.9
1931	6.9	8.1	9.2	9.9	8.9	19.7	41.7	45.1	32.6	14.4	36.3	9.5	20.3
1932	8.9	8.7	11.0	40.4	47.2	83.6	40.0	27.7	13.1	8.4	5.9	5.6	25.0
1933	55.6	60.9	45.0	49.2	64.4	67.8	109	67.7	27.2	25.8	24.9	14.8	50.7
1934	11.3	10.9	12.4	12.2	9.3	82.5	50.1	15.2	21.8	13.0	6.9	7.8	21.2
1935	20.8	43.1	*56.7	89.0	47.9	89.5	127	22.3	15.0	13.5	12.0	57.1	*49.4
1936	13.7	24.3	38.5	124	110	*357	103	37.7	46.6	18.8	19.6	10.6	*75.5
1937	23.3	13.3	40.3	*163	74.8	42.0	64.5	35.1	24.0	14.9	49.2	36.4	*48.3
1938	*41	41.0	30.4	47.5	27.5	31.7	25.4	17.4	14.5	48.0	102	10.9	*45.2
1939	9.1	10.4	15.9	*51.3	98.8	60.6	21.2	20.2	10.0	16.2	27.0	9.2	*28.8
1940	9.8	11.7	11.3	14.4	57.1	21.2	53.0	*60.7	56.1	17.2	157	40.5	*42.4
1941	11.4	14.7	27.1	28.4	15.7	19.2	48.9	12.3	11.2	41.7	7.92	7.04	20.5
1942	6.90	7.21	14.0	11.0	14.9	22.7	10.3	*125	33.6	15.2	107	28.1	*33.1
1943	71.5	36.1	66.3	50.3	73.5	75.5	53.6	34.7	19.6	15.3	9.50	7.11	42.6
1944	8.74	9.36	7.97	17.6	29.6	72.6	30.6	33.0	10.3	8.91	9.54	17.8	21.3
1945	22.4	11.8	19.7	49.6	46.2	46.5	22.9	16.5	8.59	10.9	6.51	31.6	24.3
1946	10.1	16.5	40.1	70.2	52.8	48.5	26.5	64.5	26.5	13.8	9.55	7.59	32.2
1947	8.20	6.71	8.63	63.5	15.8	61.5	28.7	14.4	15.5	19.8	11.0	14.5	22.5
1948	17.1	36.2	18.0	18.2	140	125	73.7	48.0	28.6	19.7	49.9	14.3	48.7
1949	33.0	90.7	129	130	89.7	49.4	*99.1	42.6	32.4	63.8	22.3	15.0	*66.3
1950	19.9	21.8	27.3	27.8	60.1	47.3	26.2	41.2	25.1	15.6	12.1	188	42.3

* Revised.

Note.--Records for 1927-30 not previously published; estimated or partly estimated on basis of record for Maury River near Lexington.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1927	0.47	1.32	2.51	0.91	3.74	0.79	3.07	0.84	0.54	0.41	0.54	0.40	15.54
1928	1.51	.80	1.78	1.04	1.23	1.01	1.93	1.02	0.45	4.41	4.17	2.28	17.64
1929	.80	.59	.72	1.50	2.07	3.33	3.35	2.63	1.03	.78	.41	.36	17.57
1930	1.44	1.78	1.07	.77	1.52	1.99	.66	.44	.32	.30	.23	.20	10.72
1931	.23	.27	.31	.34	.27	.67	1.37	1.53	1.08	.49	1.23	.31	8.10
1932	.50	.29	.37	1.37	1.50	2.84	1.32	.94	.43	.28	2.20	.18	10.02
1933	1.82	2.00	1.52	1.67	1.97	2.29	3.58	2.29	.89	.88	.84	.49	20.24
1934	.38	.36	.42	.41	.29	2.80	1.64	.52	.72	.44	.23	.26	8.47
1935	.71	1.42	*1.92	3.02	1.47	3.03	4.17	.76	.49	.46	.41	1.87	*19.73
1936	.46	.80	1.30	4.21	3.49	*12.11	3.38	1.28	1.53	.64	.86	.35	*30.21
1937	.79	.44	1.37	*5.52	2.29	1.43	2.12	1.19	.79	.50	1.87	1.19	*19.30
1938	*4.78	1.35	1.03	1.61	1.84	1.07	.83	.59	.48	1.63	3.46	.36	*18.03
1939	.51	.34	.54	*1.74	3.03	2.05	.70	.68	.33	.55	.92	.30	*11.49
1940	.33	.38	.38	.49	1.01	.72	1.74	*2.06	1.84	.58	5.33	1.33	*16.99
1941	.39	.48	.92	.96	.48	.65	1.61	.42	.37	1.42	.27	.23	8.20
1942	.23	.24	.48	.37	.46	.77	.34	*4.24	1.10	.45	3.63	.92	*13.23
1943	2.42	1.18	2.25	1.71	2.25	2.56	1.76	1.18	.64	.52	.32	.23	17.02
1944	.30	.31	.27	1.60	.94	2.47	1.00	1.12	.54	.30	.32	.58	8.55
1945	.76	.39	.67	1.68	1.42	1.58	.75	.58	.28	.37	.22	1.04	9.72
1946	.54	.54	1.36	2.38	1.61	1.65	.87	2.19	.87	.47	.32	.25	12.85
1947	.28	.22	.29	2.16	.48	2.09	.94	.49	.51	.67	.37	.48	8.98
1948	.58	1.18	.61	.62	4.44	4.24	2.42	1.63	.94	.67	1.70	.47	19.50
1949	1.12	2.98	4.37	4.40	2.75	1.67	*3.25	1.44	1.06	2.17	.76	.49	*26.46
1950	.67	.72	.93	.94	1.84	1.60	.86	1.40	.82	.53	.41	6.17	16.89

* Revised.

Note.--Records for 1927-30 not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642,1203	a1,500	Feb. 23, 1927	-	*38.9	*1.14	*15.54	*38.4	*15.34
1928	662,1203	b2,090	Aug. 16, 1928	99	*44.1	*1.30	*17.64	*39.2	*15.66
1929	682,1203	b1,200	Apr. 16, 1929	88	*44.0	*1.30	*17.57	*49.5	*19.75
1930	697	b1,820	Mar. 6, 1930	-	*26.9	*.791	*10.72	*18.2	*7.25
1931	712	*1,130	Aug. 2, 1931	5	20.3	.597	8.10	20.6	8.25
1932	727	*1,780	Mar. 6, 1932	4	25.0	.735	10.02	35.9	14.40
1933	742	*3,320	Apr. 16, 1933	5	50.7	1.49	20.24	40.2	16.06
1934	757	*1,780	June 18, 1934	5	21.2	.624	8.47	*28.4	*11.36
1935	782,1203	*3,320	Dec. 1, 1934*	8	*49.4	*1.45	*19.73	45.7	18.24
1936	802,1203	7,600	Mar. 17, 1936	8	*75.5	*2.22	*30.21	*75.6	*30.25
1937	822,1203	*2,300	Apr. 25, 1937*	6	*48.3	*1.42	*19.30	*59.8	*23.86
1938	832,1203	*4,380	Oct. 19, 1937	5	*45.2	*1.33	*18.03	30.3	12.06
1939	872,1203	*2,460	Jan. 30, 1939	4	*28.8	*.847	*11.49	*28.5	*11.39
1940	(c)	*7,100	Aug. 31, 1940	8	*42.4	*1.25	*16.99	*44.1	*17.69
1941	922	*1,060	Apr. 5, 1941*	6.4	20.5	.603	8.20	18.4	7.36
1942	952,1203	*5,660	May 22, 1942*	5.8	*33.1	*.974	*13.23	*45.4	*18.13
1943	972	*1,060	Oct. 14, 1942*	6.6	42.6	1.25	17.02	30.2	12.05
1944	1002	*765	Mar. 7, 1944*	5.0	21.3	.626	8.55	23.7	9.49
1945	1032	*940	Oct. 20, 1944	5.0	24.3	.715	9.72	25.4	10.14

* Revised.

† Not previously published.

a Maximum observed during period January to September.

b Maximum observed.

c WSP 892, 1052, 1203.

Yearly discharge, in cubic feet per second, of Kerrs Creek near Lexington, Va.--Continued

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1052	*820	Jan. 7, 1946*	6.6	32.2	0.947	12.85	28.6	11.40
1947	1082	*1,130	Mar. 14, 1947	5.0	22.5	.662	8.98	26.4	10.56
1948	1112	*4,860	Mar. 31, 1948*	11	48.7	1.43	19.50	63.8	25.60
1949	1142,1203	*5,660	Apr. 13, 1949	11	*66.3	*1.95	*26.46	*50.9	*20.31
1950	1172	23,000	Sept.10, 1950	9.6	42.3	1.24	16.89	-	-

* Revised.

21. Maury River near Lexington, Va./

Location (revised).--Lat 37°48'49", long 79°26'42", 900 ft upstream from Lime Kiln highway bridge, 0.2 mile downstream from Kerrs Creek, and 2.8 miles upstream from Lexington, Rockbridge County.

Drainage area.--487 sq mi.

Gage.--Water-stage recorder. Datum of gage is 906.56 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--25 years (1925-50), 509 cfs.

Extremes.--1925-50: Maximum discharge, 40,000 cfs Mar. 18, 1936 (gage height, 23.58 ft, from floodmarks), from rating curve extended above 9,000 cfs by logarithmic plotting and on basis of records for other stations in James River basin; minimum, 34 cfs Sept. 6, 1930, Sept. 18, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	-	-	57.0
1926	*80.8	*240	*160	739	1,120	633	*804	*310	*140	*79.7	*180	*90	*376
1927	*152	*645	1,060	422	1,490	459	1,650	578	181	160	304	132	*595
1928	496	514	885	*602	*764	547	1,050	771	365	269	884	799	*661
1929	187	145	321	683	751	1,540	1,100	903	599	354	131	121	569
1930	372	796	449	296	698	680	269	133	97.8	72.0	49.4	45.4	327
1931	48.0	60.8	77.5	150	211	448	814	763	277	172	180	111	276
1932	62.8	54.5	91.6	504	699	1,140	578	627	124	142	58.7	41.6	343
1933	673	918	681	817	1,080	955	1,710	797	268	304	252	242	721
1934	86.4	82.3	103	151	82.4	1,328	588	241	151	87.7	179	153	274
1935	175	368	1,043	1,362	861	1,248	1,703	337	192	143	250	900	713
1936	129	615	851	1,698	1,385	2,438	1,238	305	196	144	104	86.6	746
1937	310	104	628	2,135	1,171	476	876	460	215	153	315	295	592
1938	1,561	499	398	619	331	387	362	328	339	597	1,119	123	560
1939	83.2	105	243	654	1,636	1,027	591	355	150	237	256	106	446
1940	115	106	123	205	714	376	779	853	1,426	269	1,323	543	567
1941	137	337	633	533	256	437	800	148	160	369	72.6	56.2	329
1942	56.7	65.6	175	180	360	511	244	1,687	747	166	943	265	452
1943	1,042	453	985	754	1,076	1,260	763	755	624	486	97.4	75.6	698
1944	79.2	96.8	88.6	203	433	1,218	572	793	142	85.2	56.9	171	328
1945	193	119	360	677	602	768	363	339	120	138	85.3	515	357
1946	109	282	586	1,123	945	807	467	833	429	182	98.4	65.8	492
1947	84.2	83.1	119	858	257	876	425	246	300	401	127	95.0	324
1948	99.6	412	219	219	1,050	1,269	1,300	752	267	227	471	144	533
1949	398	1,274	1,805	1,524	1,016	713	1,087	857	804	642	288	190	883
1950	170	516	564	458	1,193	711	348	876	426	129	103	1,321	562

* Not previously published; partly estimated from record for Calpasture River at Goshen.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	-	-	0.13
1926	*0.19	*0.55	*0.38	1.75	2.40	1.50	*1.84	*0.74	*0.32	*0.19	*0.43	*.21	*10.50
1927	*3.56	*1.47	2.51	1.00	3.19	1.09	3.78	1.37	.42	.58	.72	.30	*16.59
1928	1.18	1.18	2.10	*1.43	*1.69	1.29	2.41	1.82	.84	.64	2.10	1.83	*18.51
1929	.44	.33	.76	1.81	1.60	2.64	2.52	2.13	1.37	.84	.31	.28	15.83
1930	.88	1.82	1.06	.70	1.49	1.61	.62	.31	.22	.17	.12	.10	9.10
1931	.11	.14	.18	.36	.45	1.06	1.86	1.81	.63	.41	.43	.25	7.69
1932	.15	.12	.22	1.19	1.55	2.70	1.33	1.49	.28	.34	.14	.09	9.60
1933	1.59	2.11	1.61	1.94	2.31	2.26	3.92	1.89	.61	.72	.60	.55	20.11
1934	.20	.19	.24	.36	.18	3.15	1.35	.57	.35	.21	.42	.35	7.57
1935	.41	.84	2.47	3.23	1.84	2.95	3.90	.80	.44	.34	.59	2.06	19.87
1936	.31	1.41	1.50	4.02	3.06	5.78	2.83	.72	.45	.34	.25	.20	20.87
1937	.73	.24	1.48	5.05	2.50	1.13	2.01	1.09	.50	.36	.75	.68	16.52
1938	3.70	1.14	.94	1.46	.71	.92	.83	.77	1.78	1.42	2.65	.28	15.60
1939	.20	.24	.58	1.54	3.50	2.43	1.35	.84	.34	.56	.61	.24	12.43
1940	.27	.24	.29	4.99	1.58	.89	1.78	2.02	3.27	.64	3.14	1.24	15.85
1941	.32	.77	1.50	1.26	.55	1.03	1.83	.35	.37	.87	.17	.13	9.15
1942	.35	.15	.41	.43	.77	1.21	.56	3.98	1.71	.39	2.24	.61	12.60
1943	2.47	1.04	2.35	1.79	2.30	2.99	1.75	1.79	1.43	1.15	.23	.17	19.46
1944	.19	.22	.21	.48	.96	2.88	1.30	1.88	.33	.20	.13	.39	9.17
1945	.46	.27	.85	1.60	1.29	1.82	.88	.80	.27	.33	.20	1.18	9.95

* Not previously published; partly estimated from record for Calpasture River at Goshen.

1/ Published as North River, 1925-45.

Monthly and yearly runoff, in inches, of Maury River near Lexington, Va.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	0.26	0.65	1.38	2.66	2.02	1.91	1.07	1.97	0.98	0.43	0.23	0.15	13.71
1947	.20	.19	.28	2.03	.55	2.08	.97	5.58	.69	.95	.30	.22	9.04
1948	.24	.94	.52	.52	2.33	3.01	2.98	1.78	.61	.54	1.11	.33	14.91
1949	.94	2.92	4.28	3.61	2.18	1.68	2.49	2.03	1.84	1.52	.68	.44	24.61
1950	.40	1.18	1.34	1.08	2.55	1.68	.80	2.08	.98	.31	.24	3.02	15.66

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year						
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1925	622	-	-	-	-	-	-	-	-	-	-	-	-
1926	622	6,730	Jan. 18, 1926	-	*376	*0.772	*10.50	*492	*13.72				
1927	642	9,150	Nov. 16, 1926	†85	*595	*1.22	*16.59	598	16.71				
1928	662	6,310	Aug. 17, 1928	72	*661	*1.36	*18.51	*557	*15.58				
1929	682	10,000	Apr. 16, 1929	95	569	1.17	15.83	649	18.06				
1930	697	*15,000	Nov. 18, 1929	36	327	.671	9.10	208	5.77				
1931	712	2,950	May 21, 1931	40	276	.567	7.69	278	7.75				
1932	727	8,650	Feb. 5, 1932	35	343	.704	9.60	516	14.42				
1933	742	11,100	Oct. 18, 1932	40	721	1.48	20.11	553	15.43				
1934	757	6,360	Mar. 3, 1934	49	271	.556	7.57	382	10.66				
1935	782	13,800	Dec. 1, 1934	75	713	1.46	19.87	694	19.37				
1936	802, 972	40,000	Mar. 18, 1936	68	746	1.53	20.87	719	20.10				
1937	822	10,200	Jan. 21, 1937	92	592	1.22	16.52	712	19.85				
1938	852	13,400	Oct. 19, Aug. 7	75	560	1.15	15.60	389	10.84				
1939	872	8,950	Feb. 4, 1939	60	446	.916	12.43	439	12.21				
1940	892	11,900	May 31, 1940	64	567	1.18	15.85	651	17.64				
1941	922	5,840	Apr. 5, 1941	49	329	.676	9.15	261	7.25				
1942	952	20,700	May 22, 1942	50	452	.928	12.60	637	17.77				
1943	972	12,300	Oct. 16, 1942	66	698	1.43	19.46	510	14.22				
1944	1002	6,680	May 7, 1944	43	328	.674	9.17	363	10.13				
1945	1032	6,540	Sept. 18, 1945	50	357	.733	9.95	382	10.66				
1946	1052	5,560	Jan. 8, 1946	60	492	1.01	13.71	454	12.09				
1947	1082	7,700	Mar. 14, 1947	57	324	.665	9.04	361	10.07				
1948	1112	8,630	Feb. 14, 1948	71	533	1.09	14.91	763	21.35				
1949	1142	14,500	June 18, 1949	109	883	1.81	24.61	696	19.39				
1950	1172	23,700	Sept. 10, 1950	86	562	1.15	15.66	-	-				

* Revised.

† Not previously published.

22. South River near Riverside, Va.

Location.--Lat 37°40'00", long 79°21'35", at highway bridge, 1.1 miles southwest of Riverside, Rockbridge County, 1.9 miles upstream from mouth, and 4 miles east of Lexington.

Drainage area.--111 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 910 ft (from topographic map).

Extremes.--1949-50: Maximum discharge, 1,360 cfs June 10 (gage height, 6.14 ft); minimum, 24 cfs Sept. 6-9 (gage height, 2.20 ft).

Flood in March 1936 reached a stage of about 13.7 ft, from information by local residents.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	45.2	78.6	95.5	93.8	230	158	105	143	163	55.8	32.6	103	108

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	0.47	0.79	0.99	0.97	2.16	1.64	1.06	1.49	1.64	0.58	0.34	1.04	13.17

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year						
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1950	1172	1,360	June 10, 1950	24	108	0.973	13.17	-	-				

23. Maury River near Buena Vista, Va.1/

Location.--Lat 37°45'45", long 79°23'130", on right bank 0.5 mile downstream from South River and 2.8 miles (revised) northwest of Buena Vista, Rockbridge County.

Drainage area.--649 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 846.58 ft above mean sea level, datum of 1929.

Average discharge.--12 years (1938-50), 661 cfs.

Extremes.--1938-50: Maximum discharge, 22,400 cfs Sept. 10, 1950 (gage height, 16.2 ft); minimum, 20 cfs Oct. 10, 1941 (gage height, 1.23 ft), occurred during filling of a small reservoir 2 miles upstream.

Flood of Mar. 18, 1936, reached a stage of about 22 ft, from information by local residents.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*120	*151	*340	*946	*2,334	*1,443	747	456	215	302	374	161	*622
1940	157	160	175	280	938	501	997	1,026	1,777	366	1,765	708	735
1941	198	424	752	698	361	561	1,057	224	232	511	106	79.2	434
1942	72.1	67.3	221	225	428	612	302	2,077	977	223	1,163	364	567
1943	1,453	615	1,210	968	1,350	1,558	1,048	1,016	857	641	147	118	914
1944	115	140	144	291	548	1,499	796	1,050	210	124	86.9	339	446
1945	343	198	524	981	822	1,022	550	488	185	185	130	744	513
1946	188	365	638	1,538	1,255	1,043	646	1,115	632	253	144	95.2	674
1947	112	116	169	1,152	366	1,160	662	332	449	492	171	137	445
1948	142	545	298	318	1,343	1,572	1,746	1,022	382	298	922	218	731
1949	527	1,634	2,430	2,113	1,350	980	1,407	1,062	975	663	354	264	1,163
1950	224	633	656	567	1,465	915	491	1,046	607	200	147	1,445	692

* Not previously published; estimated on basis of records for station near Lexington.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*0.21	*0.26	*0.60	*1.68	*3.75	*2.56	1.28	0.81	0.37	0.54	0.66	0.28	*13.00
1940	.28	.26	.31	.50	1.56	.69	1.72	1.82	3.06	.65	3.14	1.22	15.43
1941	.35	.73	1.34	1.24	.58	1.00	1.82	.40	.40	.91	.19	.14	9.10
1942	.13	.15	.39	.40	.69	1.09	.52	3.89	1.68	.40	2.06	.66	11.86
1943	2.58	1.06	2.14	1.72	2.17	2.77	1.80	1.81	1.47	1.14	.26	.20	19.12
1944	.20	.24	.26	.52	.91	2.66	1.37	1.87	.36	.22	.16	.58	9.35
1945	.61	.34	.93	1.74	1.32	1.81	.94	.87	.32	.33	.23	1.28	10.72
1946	.33	.63	1.49	2.73	2.01	1.86	1.11	1.98	1.09	.45	.26	.16	14.10
1947	.20	.20	.30	2.05	.59	2.06	1.14	.59	.77	.87	.30	.24	9.31
1948	.25	.94	.53	.56	2.23	2.79	3.00	1.81	.66	.53	1.64	.37	15.31
1949	.94	2.61	4.31	3.76	2.17	1.71	2.42	1.92	1.67	1.53	.63	.45	24.32
1950	.40	1.09	1.16	1.01	2.35	1.63	.84	1.86	1.04	.36	.26	2.49	14.49

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	*11,000	Feb. 4, 1939*	103	*622	*0.958	*13.00	*612	*12.60
1940	892, 952	14,700	Aug. 16, 1940	100	755	1.13	15.43	609	16.98
1941	922, 952	6,790	Apr. 5, 1941	30	434	.669	9.10	351	7.35
1942	952	21,700	May 22, 1942	22	567	.874	11.86	611	16.97
1943	872	15,200	Oct. 16, 1942	100	914	1.41	19.12	671	14.04
1944	1002	8,300	May 7, 1944	62	446	.587	9.35	502	10.53
1945	1032	8,480	Sept. 18, 1945	78	513	.790	10.72	540	11.29
1946	1052	6,630	Jan. 8, 1946	82	674	1.04	14.10	590	12.35
1947	1082	9,020	Mar. 14, 1947	76	445	.686	9.31	494	10.33
1948	1112	10,700	Feb. 14, 1948	97	731	1.13	15.31	1,033	21.65
1949	1142	15,600	Dec. 4, 1948	156	1,163	1.79	24.32	904	18.91
1950	1172	22,400	Sept. 10, 1950	113	692	1.07	14.49	-	-

* Not previously published.

1/ Published as North River, 1938-45.

24. Maury River near Glasgow, Va. 1/

Location.--Lat 37°38', long 79°27', at highway bridge three-quarters of a mile from post office at Glasgow, Rockbridge County, and 1 mile above mouth.

Drainage area.--831 sq mi.

Gage.--Chain gage. Altitude of gage is 710 ft (from topographic map). Prior to Nov. 24, 1903, wire or staff gage at same site and datum.

Average discharge.--10 years (1895-1905), 963 cfs.

Extremes.--1895-1905: Maximum discharge, 42,000 cfs Dec. 29, 1901 (gage height, 16.0 ft, from floodmark); minimum, 105 cfs many days in September 1900, August and September 1902.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1895	-	-	-	-	-	-	-	-	-	-	-	-	185
1896	185	*231	*364	701	1,653	*1,750	1,080	*699	480	1,470	*480	*1,069	*846
1897	*812	*1,131	*731	*403	*3,202	*1,732	*805	*1,856	*414	*327	*210	*176	*969
1898	197	*230	*467	*664	*376	*850	*1,412	1,711	*526	*475	*1,563	*266	*732
1899	*1,474	*822	*955	1,477	*2,627	*3,579	*1,054	*816	*313	*169	*213	*272	*1,140
1900	178	*265	*315	1,010	*2,010	*2,276	960	594	*1,083	350	*177	*218	*778
1901	*379	*842	882	751	339	1,757	*3,236	*2,056	2,246	647	1,793	724	*1,325
1902	395	289	3,240	1,666	2,628	2,681	1,519	419	340	*182	*170	*110	*1,148
1903	*199	324	1,140	2,013	3,076	2,788	2,014	664	1,371	770	395	821	*1,285
1904	413	308	330	646	*920	1,218	890	1,175	974	404	370	170	*651
1905	158	183	222	705	543	1,928	596	1,049	834	2,032	431	294	752
1906	240	250	949	-	-	-	-	-	-	-	-	-	-

* Only monthly figures revised; revised daily figures not available.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1895	-	-	-	-	-	-	-	-	-	-	-	-	0.25
1896	0.26	*0.31	*0.53	0.98	2.15	*2.43	1.45	*0.97	0.64	2.04	*0.67	*1.44	*13.87
1897	*1.15	*1.52	*1.01	*.56	*4.01	*2.40	*1.08	*2.57	*.56	*.45	*.29	*.24	*15.92
1898	*.27	*.31	*.65	*.92	*.47	*1.18	*1.90	2.38	*.71	*.66	*2.17	*.36	*11.98
1899	*2.04	*1.10	*1.30	2.05	*3.29	*4.97	*1.42	*1.13	*.42	*.23	*.30	*.36	*18.61
1900	.24	*.36	*.44	1.41	*2.52	*3.16	1.29	.82	*1.45	.46	*.25	*.29	*12.71
1901	*.53	*1.14	1.22	1.04	.43	2.44	*4.34	*2.86	3.00	1.18	2.49	.97	*21.64
1902	.55	.39	4.50	2.31	3.29	4.00	2.04	.58	.46	*.25	*.24	*.15	*18.76
1903	*.28	.44	1.58	2.79	3.85	3.66	2.70	.92	1.84	1.07	.55	1.10	*20.98
1904	.58	.41	.46	.90	*1.20	1.69	1.19	1.63	1.31	.56	.51	.23	*10.67
1905	.22	.24	.31	.98	.68	2.68	.80	1.45	1.12	2.82	.60	.40	*12.30
1906	.33	.34	1.31	-	-	-	-	-	-	-	-	-	-

* Only monthly figures revised; revised daily discharges not available.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1895	(a)	-	-	-	-	-	-	-	-
1896	(a)	*37,200	Sept. 30, 1896	*125	*846	*1.02	*13.87	*1,002	*16.43
1897	(b)	*16,900	Feb. 23, 1897	150	*969	*1.17	*15.82	*820	*13.39
1898	(c)	*16,300	Aug. 11, 1898	*138	*732	*.881	*11.98	*929	*15.19
1899	(d)	*30,000	Mar. 5, 1899	*125	*1,140	*1.37	*18.61	*931	*15.21
1900	(e)	*12,600	Feb. 22, 1900	*105	*778	*.936	*12.71	*891	*14.55
1901	75	*16,100	June 16, 1901	*135	*1,325	*1.59	*21.64	*1,461	*24.20
1902	82	*42,000	Dec. 29, 1901	*105	*1,148	*1.38	*18.76	*955	*15.62
1903	97	*19,500	Feb. 17, 1903	*110	*1,265	*1.55	*20.98	1,233	20.13
1904	126	*7,400	May 19, 1904	125	*651	*.783	*10.67	*610	*9.99
1905	167	*17,600	July 13, 1905	125	752	.905	12.30	827	13.51
1906	167	-	-	-	-	-	-	-	-

* Revised.

† Not previously published.

a 18th Ann. Rept., Pt. 4.

b 19th Ann. Rept., Pt. 4.

c 20th Ann. Rept., Pt. 4.

d 21st Ann. Rept., Pt. 4.

e 22nd Ann. Rept., Pt. 4.

1/ Published as North River at Glasgow.

25. Pedlar River near Pedlar Mills, Va.

Location (revised).--Lat 37°32'35", long 79°15'10", on right bank 6 ft downstream from highway bridge, 1.2 miles south of Pedlar Mills, Amherst County, 1.5 miles downstream from Horsley Mill Creek, and 3.7 miles upstream from mouth.

Drainage area.--91 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 656 ft (by barometer).

Average discharge.--8 years (1942-50), 120 cfs (adjusted).

Extremes.--1942-50: Maximum discharge, 11,200 cfs Aug. 8, 1942 (gage height, 14.1 ft, from floodmark in gage well), from rating curve extended above 2,200 cfs by logarithmic plotting; minimum, 2.3 cfs Sept. 8, 1944 (gage height, 1.83 ft).
Maximum stage known 22.6 ft (from floodmarks), date unknown.

Remarks.--Diversion above station for municipal supply of Lynchburg.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	-	-	274	73.5	-
1943	338	76.4	193	161	209	186	160	206	93.0	95.4	19.7	14.5	146
1944	14.2	16.8	33.1	49.5	102	212	108	137	31.7	24.1	13.3	145	73.8
1945	87.8	42.2	68.6	120	107	96.0	91.3	75.8	32.8	24.5	30.1	99.0	72.8
1946	30.1	58.5	149	211	194	127	92.6	144	106.	48.7	30.5	14.6	100
1947	14.5	17.1	37.1	173	52.7	135	160	66.5	67.6	33.7	32.5	13.4	67.1
1948	42.5	103	49.5	72.7	199	242	285	163	87.7	39.0	180	43.7	126
1949	76.5	225	444	298	199	224	198	176	134	221	89.5	64.7	195
1950	44.6	60.4	70.4	66.6	170	107	66.6	149	99.8	46.7	24.5	95.2	82.7

Monthly and yearly runoff, in inches (adjusted)^{a/}

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	-	-	3.58	1.03	-
1943	4.40	1.06	2.58	2.18	2.52	2.49	2.09	2.73	1.27	1.34	.39	.28	23.33
1944	.31	.35	.55	.75	1.33	2.81	1.45	1.87	.51	.43	.26	1.98	12.60
1945	1.26	.65	1.01	1.66	1.35	1.36	1.25	1.10	.54	.47	.53	1.42	12.60
1946	.53	.85	2.03	2.81	3.33	1.75	1.26	1.96	1.45	.77	.54	.51	16.59
1947	.35	.39	.63	2.35	.75	1.88	2.12	1.00	.98	.59	.57	.53	11.94
1948	.70	1.41	.78	1.07	2.50	3.22	3.64	2.22	1.25	.67	2.58	.70	20.74
1949	1.14	2.92	5.79	3.94	2.43	3.00	2.59	2.40	1.82	2.96	1.05	.96	51.00
1950	.73	.90	1.06	1.01	2.09	1.52	.98	2.06	1.40	.77	.49	1.34	14.35

^a Adjusted for diversion by city of Lynchburg and change in contents of Lynchburg Reservoir.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30												
		Observed					Adjusted ^{a/}							
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Observed		Adjusted ^{a/}			
		Discharge	Date						Mean	Mean	Mean	Mean	Runoff in inches	
1942	972	11,200	Aug. 8, 1942	-	-	-	-	-	-	-	-	-	-	-
1943	972	10,400	Oct. 15, 1942	8.5	146	156	1.71	23.33	100	111	16.50	-	-	
1944	1002	6,080	Sept. 19, 1944	2.6	73.8	84.1	.924	12.60	85.1	95.8	14.31	-	-	
1945	1032	926	Oct. 20, 1944	8.0	72.8	84.5	.929	12.60	76.1	87.4	13.09	-	-	
1946	1052	1,320	Dec. 5, 1945	8.2	100	111	1.22	16.59	85.9	97.5	14.55	-	-	
1947	1082	1,650	June 14, 1947	7.0	67.1	79.8	.877	11.94	77.5	90.2	13.46	-	-	
1948	1112	4,860	Apr. 1, 1948	10	126	139	1.53	20.74	172	185	27.70	-	-	
1949	1142	7,060	Dec. 4, 1948	34	195	208	2.29	31.00	147	160	23.84	-	-	
1950	1172	2,740	Sept. 10, 1950	12	82.7	96.2	1.06	14.35	-	-	-	-	-	

^a Adjusted for diversion by city of Lynchburg and change in contents of Lynchburg Reservoir.

^b Maximum during August and September.

26. James River at Holcombs Rock, Va./

Location (revised).--Lat 37°30'04", long 79°15'46", at Holcombs Rock, Bedford County, 0.9 mile downstream from Pedlar River and at mile 263.2.

Drainage area.--3,250 sq mi.

Supplemental records available.--January 1900 to September 1915 gage heights only. Records of chemical analyses for the period Apr. 1, 1930, to Mar. 31, 1931, are published in Virginia Division of Water Resources and Power, Bull. 3, and for the water year 1948 in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 548.53 ft above mean sea level, datum of 1929. January 1900 to September 1915, float gage in powerhouse of Virginia Electrolytic Co., 1,000 ft upstream at different datum. December 1926 to June 10, 1931, water-stage recorder at site 2 miles downstream at different datum.

Average discharge.--24 years (1926-50), 3,663 cfs.

Extremes.--1926-50: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 30.78 ft), from rating curve extended above 57,000 cfs on basis of records for other stations in James River basin; minimum, 100 cfs Sept. 21, 1941 (gage height, 3.02 ft); minimum daily, 223 cfs July 28, 1930.

Flood in March 1913 reached a stage of 31.3 ft, from floodmarks (discharge, 118,000 cfs, from rating curve extended above 57,000 cfs on basis of records for other stations in James River basin).

Remarks.--Low flow regulated by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*1,200	*3,800	*7,800	3,110	10,600	3,410	9,850	3,250	1,490	1,280	2,930	1,140	*4,104
1928	3,150	3,270	6,010	4,230	4,310	3,580	5,800	4,950	2,370	2,280	6,440	6,220	4,390
1929	1,790	1,370	2,210	3,710	5,120	10,900	6,940	6,630	3,970	2,070	1,080	751	3,860
1930	4,650	5,930	3,420	2,740	4,440	4,530	2,640	1,190	957	503	458	421	2,630
1931	432	536	729	1,380	1,470	3,020	5,910	4,280	*2,130	*1,100	*2,630	942	*2,050
1932	560	511	901	3,800	5,600	7,390	4,990	4,910	1,460	1,460	552	439	4,390
1933	4,140	5,870	4,650	5,640	7,280	7,100	10,500	5,170	2,560	1,480	1,450	893	4,680
1934	573	598	872	1,135	6,980	9,388	4,812	1,606	1,332	943	1,205	1,745	2,086
1935	2,187	3,538	7,491	10,480	5,557	9,028	11,580	2,828	1,678	1,289	1,586	*4,611	5,149
1936	838	2,951	4,277	12,850	9,806	15,510	8,358	2,276	1,446	925	779	633	5,030
1937	2,435	848	4,451	14,490	7,825	3,552	5,843	3,563	1,531	1,188	2,971	3,215	4,323
1938	10,050	4,070	3,050	4,289	2,841	3,584	2,905	2,860	3,953	4,185	6,490	976	4,135
1939	707	1,052	1,917	3,977	11,260	6,899	3,238	2,323	1,253	1,864	3,085	905	3,158
1940	804	857	885	1,243	4,851	2,741	6,965	5,504	8,457	2,154	9,834	3,265	3,948
1941	1,069	1,730	2,865	3,445	2,050	3,177	4,572	1,323	1,339	4,064	709	600	2,249
1942	466	594	1,560	1,580	2,634	3,621	1,798	10,020	5,649	1,395	6,132	2,211	3,149
1943	5,157	3,028	6,078	5,433	7,234	8,345	6,362	5,875	3,539	3,524	1,049	664	4,684
1944	640	836	875	2,007	3,938	8,844	4,152	4,893	1,271	740	540	1,845	2,547
1945	2,129	1,087	707	5,001	4,639	5,772	2,990	1,596	1,115	991	591	3,371	2,816
1946	959	1,826	3,762	7,785	6,408	5,572	3,348	5,516	2,293	1,408	719	561	3,336
1947	724	762	988	6,279	2,036	5,772	4,148	2,228	1,865	1,745	1,237	956	2,406
1948	2,049	5,227	2,091	1,845	8,112	8,341	9,055	5,868	2,602	1,623	3,636	1,202	4,281
1949	2,676	6,734	12,750	10,560	7,162	5,475	8,630	6,318	3,762	5,655	2,256	2,038	6,215
1950	1,355	4,089	4,475	3,188	8,689	4,770	2,607	6,514	3,234	1,508	1,142	6,505	3,967

† Corrected.

* Not previously published; estimated or partly estimated on basis of records for stations at Buchanan and at Bent Creek.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*0.43	*1.30	*2.77	1.10	3.40	1.21	3.38	1.15	0.51	0.45	1.04	0.39	*17.13
1928	1.12	1.13	2.13	1.50	1.43	1.27	1.99	1.75	.81	.81	2.28	2.13	16.35
1929	.64	.47	.78	1.31	1.64	3.86	2.39	2.35	1.36	.73	.38	.26	16.17
1930	1.61	2.03	1.21	.97	1.43	1.60	.91	.42	.33	.18	.16	.14	11.00
1931	.15	.18	.26	.49	.47	1.07	2.03	1.52	*.74	*.39	*.93	.32	*8.55
1932	.20	.18	.32	1.35	1.86	2.62	1.72	1.74	.42	.52	.20	.15	11.28
1933	1.46	2.02	1.65	2.01	2.33	2.51	3.60	1.63	.81	.52	.51	.31	19.56
1934	.20	.21	.31	.40	.22	3.33	1.65	.57	.46	.33	.43	1.60	8.71
1935	.78	1.22	2.65	3.71	1.78	3.20	3.97	1.00	.58	.46	.56	1.58	21.49
1936	.30	1.01	1.52	4.48	3.26	5.50	2.87	.81	.50	.33	.28	.22	21.08
1937	.86	.29	1.58	5.14	2.51	1.27	2.01	1.27	.56	.42	1.05	1.10	18.06
1938	3.56	1.40	1.09	1.51	.91	1.30	1.00	1.01	1.36	1.49	2.31	.33	17.27
1939	.25	.36	.68	1.41	3.60	2.44	1.11	.82	.43	.66	1.09	.31	13.16
1940	.28	.29	.31	.44	1.61	.97	2.39	1.95	2.90	.76	3.49	1.12	16.51
1941	.38	.59	1.02	1.22	.66	1.13	1.57	.47	.46	1.44	.25	.21	9.40
1942	.16	.20	.55	1.56	.84	1.28	.62	3.55	1.94	.50	2.18	.76	13.14
1943	1.83	1.04	2.16	1.92	2.32	2.36	2.19	2.09	1.22	1.24	.37	.23	19.57
1944	.23	.29	.31	.71	1.30	3.14	1.43	1.74	.44	.26	.19	.63	10.67
1945	.73	.37	.96	1.78	1.49	2.05	1.03	.96	.48	.40	.35	1.16	11.79
1946	.34	.63	1.34	2.77	2.05	1.97	1.15	1.96	.79	.50	.25	.19	13.94
1947	.26	.26	.35	2.22	.65	2.05	1.43	.79	.64	.62	.45	.33	10.05
1948	.73	1.80	.74	.65	2.70	2.96	3.11	2.09	.89	.58	1.29	.41	17.95
1949	.95	2.31	4.52	3.75	2.29	1.94	2.97	2.24	1.29	2.01	.99	.70	25.96
1950	.48	1.41	1.59	1.13	2.78	1.70	.89	2.51	1.11	.53	.40	2.23	16.56

* Not previously published; see footnote to preceding table.

/ Published as "at Salt Creek", 1927-31.

Yearly discharge, in cubic feet per second, of James River at Holcombs Rock, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642	45,000	Dec. 27, 1926	584	\$4,104	\$1.26	\$17.13	4,070	17.01
1928	662	*65,000	Aug. 16, 1928	676	4,390	1.35	18.35	3,790	15.86
1929	682	37,500	Mar. 1, 1929	552	3,880	1.19	16.17	4,590	19.13
1930	697	46,800	Nov. 19, 1929	225	2,630	.809	11.00	1,610	6.73
1931	712	14,600	Feb. 30, 1931	266	\$2,050	\$.631	\$8.55	\$2,070	\$8.66
1932	727, 972	38,700	Mar. 5, 1932	288	2,690	.828	11.28	3,750	15.71
1933	742, 972	45,300	Oct. 17, 1932	404	4,680	1.44	19.56	3,630	15.15
1934	757	35,700	Mar. 29, 1934	358	2,086	.642	8.71	3,027	12.64
1935	782	86,300	Jan. 23, 1935	581	5,149	1.58	21.49	4,714	19.67
1936	802, 972	115,000	Mar. 18, 1936	422	5,030	1.55	21.08	5,009	20.98
1937	822	53,100	Jan. 21, 1937	518	4,323	1.33	18.06	5,117	21.38
1938	852	59,000	Oct. 20, 1937	716	4,135	1.27	17.27	2,995	12.51
1939	872	41,600	Jan. 31, 1939	553	3,158	.972	13.16	3,063	12.75
1940	892	66,800	Aug. 16, 1940	583	3,948	1.21	16.51	4,210	17.62
1941	922	25,000	July 8, 1941	379	2,249	.692	9.40	1,993	8.32
1942	952	68,700	May 22, 1942	287	3,149	.969	13.14	4,131	17.26
1943	974	41,200	Dec. 31, 1942	540	4,684	1.44	19.57	3,678	15.37
1944	1002	33,300	Sept. 19, 1944	390	2,547	.784	10.67	2,849	11.93
1945	1032	29,800	Sept. 18, 1945	475	2,816	.866	11.79	2,867	12.01
1946	1052	38,700	Jan. 8, 1946	452	3,336	1.03	13.94	2,993	12.50
1947	1082	30,600	Mar. 15, 1947	489	2,406	.740	10.05	2,979	12.45
1948	1112	47,600	Feb. 15, 1948	645	4,281	1.32	17.95	5,361	22.46
1949	1142	63,300	Apr. 14, 1949	1,040	6,215	1.91	25.96	5,183	21.66
1950	1172	69,900	Sept. 10, 1950	800	3,967	1.22	16.56	-	-

* Revised.
 † Not previously published.

27. James River at Bent Creek, Va. 1/

Location.--Lat 37°32', long 78°50', 100 ft downstream from highway bridge at town of Bent Creek, Appomattox County, 150 ft downstream from Bent Creek and 1 mile downstream from Gladstone.

Drainage area.--3,671 sq. mi.

Supplemental records available.--Records of chemical analyses and water temperatures for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 381.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 13, 1930, chain gage at same site and datum.

Average discharge.--26 years (1924-50), 4,100 cfs.

Extremes.--1924-50: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 23.02 ft), from rating curve extended above 74,000 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum, 222 cfs Oct. 13, 14, 1930 (gage height, 2.21 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	\$6,200	\$2,500	\$3,800	\$8,200	\$7,400	\$3,212	2,110	3,530	1,270	1,090	799	748	\$3,392
1926	996	2,150	1,670	5,540	7,380	4,690	5,280	1,820	1,250	1,060	1,470	940	2,820
1927	1,500	4,420	8,650	3,600	11,500	3,840	11,000	3,870	1,850	1,690	3,390	1,340	4,670
1928	4,070	3,950	6,920	4,850	5,090	4,080	6,460	5,570	2,580	2,580	8,050	7,570	5,150
1929	2,120	1,630	2,680	4,150	5,540	12,300	8,410	7,440	4,960	2,630	1,320	1,010	4,510
1930	5,530	5,880	3,760	3,330	5,040	5,060	3,000	1,510	1,170	607	519	450	2,980
1931	424	581	823	1,510	1,540	3,270	6,420	4,670	2,440	1,350	2,710	1,070	2,240
1932	667	616	1,040	4,080	6,160	8,470	5,620	5,680	1,260	1,510	631	478	3,010
1933	5,020	6,600	5,080	6,390	6,260	8,190	11,900	6,010	2,960	1,990	1,730	1,100	5,410
1934	742	801	1,165	1,394	989	10,470	5,789	1,879	1,584	1,091	1,433	2,188	2,463
1935	2,415	3,732	9,495	11,690	6,308	10,270	13,490	3,477	2,364	1,775	1,921	6,291	6,096
1936	1,174	3,441	4,775	14,760	11,160	17,410	9,546	2,965	2,062	1,319	1,197	950	5,889
1937	2,886	1,167	4,894	15,920	8,640	4,031	6,547	4,064	2,018	1,740	3,196	3,602	4,878
1938	11,090	4,918	3,837	5,099	3,586	4,500	3,541	3,334	5,123	4,706	7,140	1,191	4,861
1939	914	1,251	2,260	4,062	12,630	7,887	3,854	2,788	1,688	2,266	4,254	1,223	3,703
1940	1,051	1,148	1,152	1,772	5,539	3,227	8,085	5,597	9,611	2,611	11,540	4,154	4,606
1941	1,394	2,215	3,248	4,187	2,480	3,735	5,078	1,591	1,555	4,521	834	676	2,630
1942	522	655	1,696	1,741	2,878	3,859	1,893	10,570	5,951	1,542	7,077	2,503	3,419
1943	6,063	3,367	6,325	5,960	8,171	8,806	6,912	6,095	3,850	3,641	1,183	768	5,085
1944	731	1,976	1,024	2,209	4,163	10,100	4,868	5,290	1,577	877	633	2,998	2,951
1945	2,503	1,306	3,047	5,353	5,039	6,223	3,328	2,951	1,575	1,338	1,330	4,222	3,176
1946	1,150	2,041	4,418	8,386	7,066	6,149	3,996	6,413	2,678	1,775	990	874	3,819
1947	842	995	1,255	7,212	2,371	6,339	4,693	2,482	2,159	1,957	1,419	1,085	2,741
1948	2,259	5,739	2,291	2,310	9,234	9,398	10,500	6,504	2,987	1,881	4,368	1,472	4,866
1949	2,879	7,303	13,990	11,390	8,179	6,825	9,995	7,261	4,076	6,847	2,967	2,346	6,953
1950	1,597	4,323	4,442	3,446	9,414	5,036	3,065	6,454	3,761	1,986	1,516	7,098	4,301

† Corrected.
 ‡ Not previously published; estimated or partly estimated from record for stations at Cartersville and Scottsville.

1/ Published as "at Bent Creek, near Gladstone" prior to 1926.

Monthly and yearly runoff, in inches, of James River at Bent Creek, Va.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	*1.95	*0.76	*1.20	*2.57	*2.10	*1.01	0.64	1.11	0.39	0.34	0.25	0.23	*12.55
1926	.31	.65	.52	1.74	2.09	1.48	1.61	.57	.38	.33	.46	.29	10.43
1927	.47	1.34	2.72	1.15	5.26	1.21	3.35	1.21	.56	.53	1.06	.41	17.25
1928	1.28	1.20	2.18	1.52	1.50	1.29	1.96	1.75	.78	.81	2.52	2.30	19.08
1929	.67	.50	.84	1.30	1.57	3.66	2.56	2.34	1.51	.83	.42	.31	16.71
1930	1.74	1.78	1.18	1.05	1.43	1.59	.91	.47	.36	.19	.16	.14	11.00
1931	.13	.18	.26	.47	.44	1.03	1.95	1.46	.74	.42	.85	.32	8.25
1932	.21	.19	.33	1.28	1.81	2.68	1.71	1.78	.38	.47	.20	.14	11.16
1933	1.58	2.01	1.59	2.01	2.34	2.57	3.62	1.89	.90	.62	.54	.33	20.00
1934	.23	.24	.37	.44	.25	3.29	1.76	.59	.48	.34	.45	.66	9.10
1935	.76	1.14	2.99	3.67	1.79	3.23	4.10	1.09	.72	.56	.60	1.91	22.56
1936	.37	1.05	1.50	4.44	3.28	5.46	2.90	.93	.63	.41	.38	.29	21.84
1937	.91	.35	1.53	5.00	2.45	1.27	1.99	1.28	.61	.55	1.00	1.09	18.03
1938	3.48	1.50	1.21	1.60	1.02	1.42	1.08	1.05	1.56	1.48	2.24	.36	18.00
1939	.29	.38	.71	1.28	3.58	2.48	1.17	.88	.51	.71	1.34	.37	13.70
1940	.33	.35	.36	.56	1.63	1.01	2.46	1.75	2.92	.82	3.62	1.26	17.07
1941	.44	.67	1.02	1.31	.70	1.16	1.54	.50	.47	1.42	.26	.21	9.72
1942	.16	.20	.53	1.55	.82	1.21	.58	3.32	1.81	.48	2.22	.76	12.64
1943	1.90	1.02	1.98	1.87	2.32	2.77	2.10	1.91	1.17	1.14	.37	.23	18.78
1944	.23	.30	.32	.69	1.22	3.17	1.48	1.66	.48	.28	.20	.91	10.94
1945	.79	.40	.96	1.68	1.43	1.96	1.01	.93	.48	.42	.42	1.28	11.76
1946	.36	.62	1.38	2.63	2.01	1.94	1.22	2.02	.81	.56	.31	.27	14.13
1947	.26	.30	.39	2.26	.67	1.99	1.43	.78	.66	.61	.45	.33	10.13
1948	.71	1.74	.72	.75	2.72	2.95	3.19	2.04	.91	.59	1.37	.45	18.12
1949	.90	2.22	4.39	3.57	2.32	2.08	3.04	2.28	1.24	2.02	.93	.71	25.70
1950	.50	1.32	1.40	1.08	2.67	1.58	.93	2.03	1.14	.62	.48	2.15	15.90

* Not previously published; see footnote to preceding table.

Year	W.S.P. no.	Yearly discharge, in cubic feet per second						Calendar year	
		Water year ending Sept. 30		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	*3,392	*0.924	*12.55	*2,739	*10.12
1926	622	35,000	Jan. 20, 1926*	426	2,820	.768	10.43	3,640	13.48
1927	642	48,800	Dec. 27, 1926	728	4,670	1.27	17.25	4,700	17.38
1928	662	74,000	Aug. 17, 1928	828	5,150	1.40	19.08	4,430	16.43
1929	682	39,800	Mar. 1, 1929*	717	4,510	1.23	16.71	5,240	19.40
1930	697	48,800	Nov. 19, 1929	258	2,980	.812	11.00	1,860	6.87
1931	712	15,200	Aug. 23, 1931	222	2,240	.610	8.25	2,280	6.41
1932	727	41,000	Feb. 6, 1932	264	3,010	.820	11.16	4,210	15.61
1933	742	51,300	Oct. 18, 1932	360	5,410	1.47	20.00	4,240	15.66
1934	757	35,800	Mar. 29, 1934	397	2,463	.671	9.10	3,540	13.15
1935	782, 972	91,000	Jan. 24, 1935	764	6,096	1.66	22.56	5,566	20.59
1936	802, 972	115,000	Mar. 18, 1936	613	5,889	1.60	21.84	5,858	21.71
1937	822	53,100	Jan. 21, 1937	756	4,878	1.33	18.03	5,793	21.43
1938	852	60,700	Oct. 20, 1937	865	4,861	1.32	18.00	3,562	13.19
1939	872	50,700	Aug. 19, 1939	709	3,703	1.01	13.70	3,612	13.36
1940	892	86,200	Aug. 16, 1940	590	4,606	1.25	17.07	4,901	18.16
1941	922	*25,200	July 8, 1941	297	2,630	.716	9.72	2,296	8.48
1942	952	70,400	May 23, 1942	368	3,419	.931	12.64	*4,505	*16.65
1943	972	43,200	Dec. 31, 1942	568	5,085	1.39	18.78	3,985	14.73
1944	1002	73,500	Sept. 19, 1944	407	2,951	.804	10.94	3,300	12.24
1945	1032	36,500	Sept. 18, 1945	550	3,176	.865	11.76	3,238	11.97
1946	1052	39,500	Jan. 9, 1946	544	3,819	1.04	14.13	3,438	12.72
1947	1082	30,800	Mar. 16, 1947	408	2,741	.747	10.13	3,339	12.35
1948	1112	49,500	Feb. 15, 1948	691	4,886	1.33	18.12	6,057	22.46
1949	1142	76,400	Dec. 4, 1948	1,060	6,953	1.89	25.70	5,788	21.41
1950	1172	69,200	Sept. 10, 1950	868	4,301	1.17	15.90	-	-

* Revised.

† Corrected.

* Not previously published.

28. Tye River at Roseland, Va.

Location.--Lat 37°45', long 78°59', at highway bridge, three-quarters of a mile southwest of Roseland, Nelson County, and three-quarters of a mile upstream from Hat Creek.

Drainage area.--68 sq mi, approximately.

Gage.--Chain gage. Datum of gage is 643.3 ft (revised) above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--10 years (1927-37), 131 cfs.

Extremes.--1927-38: Maximum discharge, 6,000 cfs Sept. 16, 1934 (gage height, 10.02 ft, from floodmarks), from rating curve extended above 600 cfs on basis of velocity-area studies; minimum, 2 cfs Sept. 30, Oct. 1, 1930.

JAMES RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Tye River at Roseland, Va.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Tye River at Roseland, Va.											The year		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.	
1927	-	-	-	-	-	175	109	208	92.1	42.3	33.6	64.7	53.9	-
1928	280	158	217	105	184	104	198	137	50.9	139	210	241	169	169
1929	67.0	39.1	58.2	142	132	305	251	266	190	108	40.7	25.9	134	134
1930	120	95.9	82.2	88.4	104	178	93.0	57.1	38.6	11.6	5.68	3.97	73.1	73.1
1931	8.0	12.0	19.5	38.7	38.8	113	153	143	143	87.4	155	50.6	80.5	80.5
1932	25.0	23.0	36.7	230	138	226	167	115	40.1	15.3	5.8	4.7	188	188
1933	195	323	121	167	202	195	484	172	61.0	31.4	30.7	25.7	188	188
1934	17.2	17.5	27.0	47.0	22.7	170	150	59.1	99.1	50.1	72.9	243	81.3	81.3
1935	68.0	211	367	246	163	251	316	80.2	48.4	56.1	115	225	179	179
1936	47.5	129	162	427	228	467	289	79.4	37.9	18.5	13.0	10.7	159	159
1937	83.1	25.5	192	498	362	135	351	175	85.3	63.2	128	49.8	178	178
1938	462	254	135	138	94.5	100	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches											The year		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.	
1927	-	-	-	-	2.68	1.84	3.41	1.56	0.69	0.57	1.10	0.88	-	-
1928	4.75	2.59	3.68	1.78	2.92	1.76	3.25	2.32	.84	2.35	3.56	3.95	33.75	33.75
1929	1.14	.64	.99	2.41	2.02	5.18	3.79	4.51	3.11	1.83	.69	.43	26.74	26.74
1930	2.03	1.57	1.40	1.50	1.59	3.02	1.53	.97	.63	.20	.10	.07	14.61	14.61
1931	.14	.20	.33	.66	.59	1.91	2.51	2.42	2.34	1.49	2.63	.83	16.05	16.05
1932	.42	.38	.62	3.90	2.19	3.83	2.74	1.95	.66	.26	.10	.08	17.13	17.13
1933	3.31	5.30	2.05	2.84	3.09	3.31	7.94	2.92	1.00	.53	.52	.39	33.20	33.20
1934	.29	.29	.46	.80	.35	2.88	2.47	1.00	1.63	.85	1.23	3.98	16.23	16.23
1935	1.15	3.46	6.23	4.17	2.50	4.25	5.19	1.36	.79	.95	1.95	3.69	35.69	35.69
1936	.81	2.12	2.74	7.24	3.61	7.92	4.74	1.35	.62	.31	.22	.18	31.86	31.86
1937	1.41	.42	3.25	8.44	5.54	2.29	5.76	2.96	1.40	1.07	2.17	.82	35.53	35.53
1938	7.83	4.17	2.29	2.34	1.45	1.70	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1927	642	-	-	-	-	169	2.49	33.75	127	25.50
1928	662	*3,490	Aug. 16, 1928	26	169	1.97	2.49	26.74	145	29.97
1929	682	*1,760	May 2, 1929*	18	134	1.08	1.08	14.61	51.4	10.28
1930	697	*1,920	Mar. 7, 1930	2	73.1	-	-	-	-	-
1931	712	*1,280	Aug. 22, 1931	3	80.3	1.18	1.18	16.05	84.1	16.80
1932	727	*1,040	Mar. 6, 1932	3	85.4	1.26	1.26	17.13	132	26.37
1933	742	*4,310	Oct. 17, 1932	4	166	2.44	2.44	33.20	118	23.58
1934	757	6,000	Sept. 16, 1934	11	81.3	1.20	1.20	16.23	130	26.03
1935	782	*4,140	Dec. 1, 1934	28	179	2.63	2.63	35.69	153	30.52
1936	802	3,970	Mar. 17, 1936	7	159	2.34	2.34	31.86	156	31.27
1937	822	*2,410	Feb. 22, 1937	11	178	2.62	2.62	35.53	224	44.74
1938	852	*5,210	Oct. 19, 1937	-	-	-	-	-	-	-

* Revised.

29. Tye River near Lovingsston, Va.

Location.--Lat 37°43', long 78°58', at highway bridge, 2 miles downstream from Hat Creek, 4 miles upstream from Piney River, and 6 miles southwest of Lovingsston, Nelson County.

Drainage area.--92 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 578.39 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--12 years (1938-50), 149 cfs.

Extremes.--1938-50: Maximum discharge, 9,670 cfs Sept. 19, 1944 (gage height, 13.7 ft); minimum, 4.5 cfs Oct. 9, 1941.

Monthly and yearly mean discharge, in cubic feet per second.

Water year	Monthly and yearly mean discharge, in cubic feet per second.											The year		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.	
1938	-	-	-	-	-	-	-	-	-	-	-	-	46.5	-
1939	31.6	68.0	151	147	342	228	124	90.7	63.6	82.2	248	59.2	135	135
1940	39.6	50.3	45.6	86.9	186	123	215	97.8	127	65.1	647	159	154	154
1941	56.3	99.2	194	178	91.9	96.9	173	53.1	45.0	134	22.9	10.7	96.4	96.4
1942	8.69	15.3	82.3	73.9	120	139	73.6	480	249	53.0	320	120	145	145
1943	550	135	236	225	259	214	212	257	134	61.5	17.9	14.4	193	193
1944	17.8	25.9	34.6	70.0	101	260	170	209	45.3	27.5	26.6	300	107	107
1945	131	74.4	131	172	137	144	135	132	63.8	53.3	35.3	345	129	129
1946	110	100	214	299	227	205	126	187	125	61.9	34.1	20.6	142	142
1947	31.3	34.9	52.1	203	95.9	193	201	97.8	150	193	98.6	56.2	117	117
1948	122	246	115	121	236	311	408	260	103	48.1	241	84.2	191	191
1949	144	253	461	398	240	242	259	228	359	252	112	94.4	253	253
1950	79.7	128	119	110	224	170	123	149	125	62.4	38.5	213	127	127

Monthly and yearly runoff, in inches, of Tye River near Lovingson, Va.

Water year	Monthly and yearly runoff, in inches, of Tye River near Lovingson, Va.													The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1938	-	-	-	-	-	-	-	-	-	-	-	0.56	-	
1939	0.40	0.82	1.89	1.84	3.87	2.86	1.51	1.14	0.77	1.03	3.11	.72	19.96	
1940	.50	.61	.57	1.09	2.18	1.54	2.61	1.22	1.54	.82	8.10	1.93	22.71	
1941	.71	1.20	2.43	2.22	1.04	1.21	2.10	.67	.55	1.68	.29	.13	14.23	
1942	.11	.19	1.03	.93	1.35	1.74	.89	6.02	3.02	.66	4.01	1.45	21.40	
1943	6.89	1.64	2.96	2.82	2.94	2.69	2.57	3.22	1.63	.77	.22	.18	28.53	
1944	.22	.31	.43	.88	1.19	3.26	2.06	2.62	.55	.34	.33	3.64	15.83	
1945	1.64	.90	1.64	2.16	1.55	1.81	1.64	1.65	.77	.67	.44	4.18	19.05	
1946	1.38	1.22	2.69	3.75	2.57	2.57	1.53	2.34	1.52	.78	.43	.25	21.03	
1947	.39	.42	.65	2.55	1.08	2.42	2.43	1.22	1.82	2.42	1.23	.68	17.31	
1948	1.53	2.98	1.44	1.52	2.77	3.90	4.94	3.26	1.25	.60	3.02	1.02	28.23	
1949	1.80	3.07	5.78	4.86	2.72	3.03	3.15	2.86	4.35	3.16	1.41	1.15	37.34	
1950	1.00	1.55	1.49	1.38	2.53	2.13	1.50	1.87	1.52	.78	.48	2.59	18.82	

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	892	-	-	-	-	-	-	-	-
1939	892	6,900	Aug. 19, 1939	26	135	1.47	19.96	125	18.53
1940	892	7,700	Aug. 16, 1940	25	154	1.67	22.71	172	25.37
1941	922	1,740	July 7, 1941	6.9	96.4	1.05	14.23	76.1	11.22
1942	952	7,910	May 16, 1942	5.4	145	1.58	21.40	214	31.56
1943	972	9,230	Oct. 15, 1942	9	193	2.10	28.53	122	18.00
1944	1002	9,870	Sept. 19, 1944	9.5	107	1.16	15.83	129	19.05
1945	1032	5,700	Sept. 18, 1945	11	129	1.40	19.05	136	20.16
1946	1052	776	Mar. 15, 1946	13	142	1.54	21.03	117	17.20
1947	1082	1,690	June 14, 1947	13	117	1.27	17.31	148	21.80
1948	1112	3,510	Apr. 1, 1948	29	191	2.08	28.23	222	32.93
1949	1142	5,900	June 18, 1949	51	253	2.75	37.34	208	30.73
1950	1172	3,870	Sept. 10, 1950	28	127	1.38	18.82	-	-

30. Piney River at Piney River, Va.

Location.--Lat 37°42'10", long 79°01'40", at bridge on State Highway 151, half a mile south of Piney River Post Office, Nelson County, and 1.3 miles upstream from Maple Run.

Drainage area.--48 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 633.58 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Extremes.--1949-50: Maximum discharge, 1,710 cfs Sept. 10, 1950 (gage height, 5.00 ft); minimum, 13 cfs Sept. 7, 8, 1950 (gage height, 1.06 ft).
Flood in June 1949 reached a stage of 9.9 ft, from floodmarks.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly and yearly mean discharge, in cubic feet per second													The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	
1950	48.2	74.2	73.8	68.7	148	97.5	71.4	114	94.2	*201	95.3	84.4	80.1	

* Not previously published; partly estimated on basis of records for Buffalo River near Norwood.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches													The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	
1950	1.15	1.73	1.78	1.65	3.21	2.34	1.66	2.74	2.19	*4.85	2.29	1.96	22.68	

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1949	1142	-	-	-	-	-	-	-	-
1950	1172	1,710	Sept. 10, 1950	14	80.1	1.67	22.68	-	-

31. Buffalo River near Norwood, Va.

Location.--Lat 37°38', long 78°53', on right bank 1 mile downstream from Tye River, 3 miles upstream from Rucker Run, and 4½ miles upstream from mouth and Norwood, Nelson County.

Drainage area.--360 sq mi.

Gage.--Water-stage recorder. Datum of gage is 400.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1940-50), 495 cfs.

Extremes.--1940-50: Maximum discharge, 33,500 cfs Oct. 15, 1942, Sept. 19, 1944 (gage height, 18.1 ft, from floodmarks), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 30 cfs Oct. 10, 1941 (gage height, 1.64 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	*388	726	371	464	265	2,090	525	-
1941	205	352	591	570	309	330	548	198	184	565	135	64.5	338
1942	47.6	74.0	256	251	352	388	228	1,077	713	181	995	322	408
1943	1,820	455	726	791	954	733	698	862	474	340	111	83.0	672
1944	65.9	112	145	281	384	960	544	598	172	119	82.91	1,025	375
1945	416	271	437	581	483	465	428	437	229	198	174	837	412
1946	299	328	687	848	747	583	411	628	446	243	154	96.2	455
1947	116	141	211	780	341	581	691	315	403	395	277	156	368
1948	320	651	315	395	777	963	1,259	899	335	254	902	235	608
1949	436	858	1,502	1,310	915	1,087	846	848	1,070	928	462	396	889
1950	294	348	345	336	728	501	363	666	501	259	178	634	426

* Not previously published; partly estimated from record for Tye River near Lovingson.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	*1.24	2.25	1.19	1.44	0.85	6.70	1.63	-
1941	0.66	1.09	1.89	1.82	0.89	1.06	1.70	.63	.57	1.81	.43	.20	12.75
1942	.15	.23	.82	.80	1.02	1.24	.71	3.45	2.21	.58	3.18	1.00	15.39
1943	5.83	1.41	2.33	2.54	2.76	2.35	2.16	2.92	1.47	1.09	.36	.26	25.38
1944	.28	.35	.46	.90	1.15	3.08	1.68	1.91	.53	.38	.27	3.18	14.17
1945	1.34	.84	1.40	1.86	1.40	1.49	1.33	1.40	.71	.63	.56	2.59	15.55
1946	.96	1.02	2.20	2.72	2.17	1.87	1.27	2.01	1.38	.78	.49	.30	17.17
1947	.37	.44	.68	2.50	.99	1.86	2.14	1.01	1.25	1.27	.89	.48	13.88
1948	1.02	2.02	1.01	1.27	2.33	3.08	3.90	2.88	1.04	.81	2.89	.73	22.98
1949	1.40	2.66	4.81	4.20	2.64	3.48	2.82	2.72	3.31	2.97	1.48	1.24	33.53
1950	.94	1.08	1.10	1.08	2.10	1.60	1.13	2.13	1.55	.83	.57	1.96	16.07

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1940	952	25,600	Aug. 16, 1940	-	-	-	-	-
1941	952	4,220	Dec. 29, 1940	40	338	0.939	12.75	274
1942	952	13,500	May 16, 1942	32	408	1.13	15.39	630
1943	972	33,500	Oct. 15, 1942	58	672	1.87	25.38	448
1944	1002	33,500	Sept. 19, 1944	33	375	1.04	14.17	440
1945	1032	12,800	Sept. 18, 1945	76	412	1.14	15.55	428
1946	1052	2,260	Dec. 6, 1945	62	455	1.26	17.17	384
1947	1082	3,810	June 14, 1947	76	368	1.02	13.88	436
1948	1112	14,600	Aug. 4, 1948	118	608	1.69	22.98	735
1949	1142	23,200	Mar. 23, 1949	220	889	2.47	33.53	737
1950	1172	11,900	Sept. 10, 1950	118	426	1.18	16.07	-

32. Rockfish River near Greenfield, Va.

Location (revised).--Lat 37°52'10", long 78°49'25", at bridge on State Highway 634, 2.8 miles downstream from confluence of North and South Forks and 4.1 miles south of Greenfield, Nelson County.

Drainage area.--96 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 530.29 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943. Prior to Aug. 21, 1943, wire-weight gage at same site and datum.

Average discharge.--7 years (1943-50), 137 cfs.

Extremes.--1943-50: Maximum discharge, 13,700 cfs Sept. 19, 1944 (gage height, 17.2 ft), from rating curve extended above 8,200 cfs on basis of slope-area determinations at gage heights 17.2 and 23.4 ft and peak runoff comparison with nearby stations; minimum, 3.0 cfs July 30, 1944; minimum gage height, 1.25 ft Sept. 17, 18, 19, 1946. Flood of Oct. 15, 1942, reached a stage of 23.4 ft, from floodmarks (discharge, about 30,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	*214	184	109	46.9	13.6	7.95	-
1944	13.3	21.3	26.5	49.6	62.0	188	117	158	29.0	13.2	18.5	437	94.0
1945	163	75.4	118	153	133	111	110	112	50.4	52.8	44.6	260	115
1946	68.7	92.2	192	251	179	163	130	194	121	61.6	39.6	19.1	126
1947	34.1	31.6	48.2	175	87.2	177	154	86.9	104	190	60.8	44.1	99.5
1948	110	241	101	115	205	242	370	240	79.9	45.6	191	76.3	168
1949	152	280	435	358	220	208	209	274	324	274	144	101	248
1950	72.2	99.3	79.1	80.1	180	128	97.1	188	144	49.7	29.8	187	110

* Not previously published; partly estimated from record for Tye River near Lovingson.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	*2.49	2.21	1.27	0.56	0.16	0.09	-
1944	0.16	0.25	0.32	0.60	0.70	2.26	1.36	1.90	.34	.16	.22	5.08	13.35
1945	1.96	.88	1.42	1.83	1.45	1.34	1.28	1.35	.59	.63	.54	3.02	16.29
1946	.83	1.07	2.31	3.01	1.94	1.96	1.51	2.33	1.41	.74	.48	.22	17.81
1947	.41	.37	.58	2.10	.95	2.12	1.78	1.04	1.20	2.28	.73	.51	14.07
1948	1.33	2.80	1.21	1.38	2.31	2.90	4.30	2.88	.93	.55	2.29	.89	23.77
1949	1.82	3.26	5.20	4.30	2.38	2.50	2.43	3.29	3.77	3.29	1.73	1.17	35.14
1950	.87	1.15	.95	.96	1.96	1.53	1.13	2.26	1.67	.60	.36	2.18	15.62

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1944	1002	13,700	Sept. 19, 1944	3.9	94.0	0.979	13.35	119	16.88
1945	1032	4,780	Sept. 18, 1945	8	115	1.20	16.29	115	16.24
1946	1052	635	Dec. 6, 1945	12	126	1.31	17.81	106	14.96
1947	1082	1,320	July 21, 1947	15	99.5	1.04	14.07	128	18.05
1948	1112	3,050	Apr. 1, 1948	28	168	1.75	23.77	202	28.71
1949	1142	4,450	Dec. 4, 1948	58	248	2.58	35.14	197	27.83
1950	1172	2,440	Sept. 10, 1950	21	110	1.15	15.62	-	-

33. James River at Scottsville, Va.

Location (revised).--Lat 37°47'50", long 78°29'30", on left bank 50 ft downstream from highway bridge at Scottsville, Albemarle County, 6.8 miles upstream from Hardware River, and at mile 184.6.

Drainage area.--4,571 sq mi.

Supplemental records available.--Records of chemical analyses for the water years 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3, and for the water year 1948 in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 253.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 28, 1928, chain gage at same site and datum.

Average discharge.--26 years (1924-50), 5,126 cfs.

33. James River at Scottsville, Va.--Continued

Extremes.--1924-50: Maximum discharge, 133,000 cfs Sept. 19, 1944 (gage height, 26.0 ft); minimum, 302 cfs Oct. 1, 1930 (gage height, 1.46 ft); minimum daily, 307 cfs Oct. 15, 1930.

Data for some outstanding floods prior to the establishment of this station are given in the following table:

Date	Gage height (feet)	Discharge (cubic feet per second)	Remarks
October 1870.....	30.7	-	Gage height from information by local resident.
November 1877.....	27.9	About 160,000	do.
March 1913.....	25.16	121,000	Gage height from floodmarks.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	#7,952	#3,553	#5,239	#11,220	#10,000	3,940	2,850	4,200	1,680	1,240	914	805	#4,445
1926	1,180	2,700	2,460	6,820	9,980	5,570	6,470	2,490	1,570	1,280	1,690	1,150	3,570
1927	1,820	5,860	9,820	4,350	12,200	4,730	11,700	4,150	2,160	1,990	3,740	1,690	5,320
1928	5,170	4,660	7,990	5,300	6,280	4,660	7,380	6,400	3,040	3,110	10,100	9,030	6,090
1929	2,970	2,220	3,260	5,030	6,190	14,300	10,300	8,950	6,740	4,050	1,830	1,370	5,600
1930	6,120	7,800	4,530	4,220	6,070	6,430	3,790	2,010	1,540	746	594	502	3,630
1931	499	792	1,130	2,010	2,000	4,000	7,560	5,640	3,420	1,920	3,470	1,390	2,820
1932	825	801	1,400	5,250	6,700	9,420	6,770	6,460	1,820	1,860	745	572	3,550
1933	6,340	8,860	6,680	8,140	9,550	9,240	15,100	7,020	3,680	2,430	2,230	1,450	6,700
1934	958	1,005	1,500	1,904	1,335	12,240	7,122	2,584	2,677	1,494	2,109	3,711	3,231
1935	2,929	4,152	11,490	13,270	7,681	12,210	16,600	4,458	3,218	2,880	2,765	8,738	7,524
1936	1,596	4,503	6,124	18,870	13,340	20,320	11,960	3,903	2,650	1,579	1,389	1,062	7,265
1937	3,637	1,499	5,812	19,350	11,270	5,598	10,060	6,160	3,200	2,931	4,215	4,841	6,527
1938	14,550	6,476	4,893	6,315	4,759	5,654	4,436	3,883	6,528	6,374	9,560	1,867	6,286
1939	1,431	2,001	3,879	4,930	15,810	9,808	4,760	3,476	2,235	2,741	5,658	1,562	4,792
1940	1,319	1,582	1,503	2,440	7,077	4,023	9,637	5,567	10,980	3,008	14,910	5,314	5,592
1941	1,800	3,014	4,423	5,505	3,200	4,354	6,585	2,088	2,087	5,884	1,172	830	3,417
1942	636	845	2,202	2,240	3,512	4,465	2,571	12,480	6,978	1,957	8,644	3,149	4,171
1943	9,684	4,341	7,751	8,043	10,290	10,290	8,349	7,491	4,757	4,252	1,371	223	6,451
1944	912	1,242	1,343	2,809	4,784	11,350	5,995	6,289	1,925	1,151	891	9,900	3,798
1945	3,606	1,890	4,133	6,537	6,075	7,163	4,133	3,736	1,947	1,634	1,709	5,917	4,029
1946	1,792	2,588	5,885	10,070	8,762	7,079	4,644	8,217	3,532	2,279	1,406	1,194	4,775
1947	1,194	1,393	1,759	8,737	3,116	6,605	6,305	3,234	3,005	2,679	1,860	1,425	3,533
1948	2,708	6,923	3,011	3,282	10,930	11,020	13,390	8,111	3,672	2,425	5,946	1,829	6,074
1949	3,850	6,358	18,620	14,250	9,852	9,070	11,240	8,785	5,799	8,240	4,453	5,269	8,825
1950	2,150	5,246	5,136	4,128	11,040	6,124	3,924	8,330	5,028	2,496	1,878	8,382	5,271

* Not previously published; estimated or partly estimated from record for station at Cartersville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	#2.01	#0.87	#1.33	#2.82	#2.28	0.99	0.70	1.06	0.41	0.31	0.23	0.20	#13.21
1926	.30	.66	.62	1.72	2.27	1.41	1.58	.63	.38	.32	.43	.28	10.60
1927	.46	1.43	2.48	1.10	2.78	1.19	2.86	1.05	.53	.50	.94	.41	15.73
1928	1.30	1.14	2.02	1.34	1.48	1.18	1.80	1.61	.74	.78	2.55	2.21	18.15
1929	.75	.54	.82	1.27	1.41	3.61	2.51	2.26	1.64	1.02	.46	.33	16.62
1930	1.54	1.75	1.14	1.06	1.38	1.63	.92	.51	.38	.19	.15	.12	10.77
1931	.13	.19	.28	.51	.46	1.01	1.84	1.42	.83	.48	.88	.34	8.37
1932	.21	.20	.35	1.33	1.58	2.38	1.65	1.63	.44	.47	.19	.14	10.57
1933	1.60	2.16	1.68	2.05	2.18	2.33	3.68	1.78	.90	.61	.56	.35	19.88
1934	.24	.25	.38	.48	.30	3.09	1.74	.65	.65	.38	.53	.91	9.60
1935	.74	1.01	2.89	3.34	1.75	3.08	4.05	1.12	.79	.73	.70	2.13	22.33
1936	.40	1.10	1.54	4.76	3.15	5.13	2.92	.98	.65	.40	.35	.26	21.64
1937	.92	.37	1.46	4.88	2.57	1.41	2.46	1.56	.78	.74	1.06	1.18	19.39
1938	3.67	1.58	1.23	1.59	1.08	1.43	1.08	.98	1.60	1.60	2.36	.46	18.66
1939	.36	.49	.98	1.24	3.60	2.48	1.16	.88	.55	.69	1.43	.38	14.24
1940	.33	.39	.38	.62	1.67	1.01	2.35	1.41	2.68	.76	3.76	1.29	16.65
1941	.45	.74	1.12	1.38	.73	1.10	1.61	.53	.51	1.49	.30	.20	10.16
1942	.16	.21	.56	.56	.80	1.13	.63	5.15	1.71	.49	2.22	.77	12.39
1943	2.44	1.06	1.96	2.03	2.34	2.59	2.04	1.89	1.16	1.07	.35	.23	19.16
1944	.23	.30	.34	.71	1.13	2.86	1.46	1.59	.47	.29	.22	1.71	11.31
1945	.91	.46	1.04	1.65	1.38	1.81	1.01	.94	.46	.41	.43	1.44	11.96
1946	.45	.63	1.49	2.54	2.00	1.79	1.14	2.08	.86	.58	.36	.29	14.21
1947	.30	.34	.44	2.20	.71	1.91	1.54	.82	.73	.68	.47	.35	10.49
1948	.68	1.68	.76	.83	2.58	2.78	3.27	2.04	.90	.61	1.50	.45	18.08
1949	.97	2.04	4.69	3.60	2.25	2.28	2.74	2.21	1.42	2.08	1.12	.80	26.20
1950	.54	1.28	1.29	1.04	2.52	1.54	.96	2.10	1.23	.63	.47	2.04	15.64

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of James River at Scottsville, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	Oct. 1, 1924*	460	4,445	0.972	13.21	3,564	10.58
1926	622	42,300	Jan. 20, 1926	510	3,570	.781	10.60	4,506	13.59
1927	642	41,900	Feb. 20, 1927	908	5,320	1.16	15.73	5,350	15.82
1928	662	75,600	Aug. 17, 1928	960	6,090	1.33	18.15	5,310	15.80
1929	682	44,700	Feb. 28, 1929	1,180	5,600	1.23	16.62	6,380	18.94
1930	697	45,800	Nov. 19, 1929	346	3,630	.794	10.77	2,340	6.94
1931	712	21,100	Aug. 23, 1931	307	2,820	.617	8.37	2,870	8.53
1932	727	31,400	Mar. 30, 1932	356	3,550	.777	10.57	5,120	15.25
1933	742	59,500	Oct. 18, 1932	492	6,700	1.47	19.88	5,160	15.31
1934	757	36,800	Mar. 29, 1934	582	3,231	.707	9.60	4,506	13.37
1935	782	93,400	Sept. 6, 1935	1,140	7,524	1.65	22.33	6,984	20.73
1936	802	126,000	Mar. 19, 1936	704	7,265	1.59	21.64	7,166	21.35
1937	822	62,200	Apr. 26, 1937	1,060	6,527	1.43	19.39	7,795	23.12
1938	852	87,400	Oct. 20, 1937	1,440	6,286	1.38	18.65	4,717	14.01
1939	872	66,400	Aug. 19, 1939	975	4,792	1.05	14.24	4,546	13.51
1940	892	130,000	Aug. 16, 1940	770	5,592	1.22	16.65	5,998	17.86
1941	922	27,100	July 9, 1941	411	3,417	.748	10.16	2,951	8.78
1942	952	80,600	May 23, 1942	474	4,171	.912	12.39	5,698	16.92
1943	972	95,200	Oct. 16, 1942	686	6,451	1.41	19.16	4,907	14.57
1944	1002	133,000	Sept. 19, 1944	569	3,798	.851	11.31	4,316	12.85
1945	1032	57,000	Sept. 18, 1945	725	4,029	.881	11.96	4,082	12.12
1946	1052	41,200	Jan. 9, 1946	878	4,775	1.05	14.21	4,273	12.72
1947	1082	33,200	Mar. 16, 1947	786	3,533	.773	10.49	4,224	12.53
1948	1112	59,600	Apr. 1, 1948	930	6,074	1.33	18.08	7,610	22.66
1949	1142	94,200	Dec. 4, 1948	1,650	8,825	1.93	26.20	7,280	21.61
1950	1172	73,300	Sept. 11, 1950	1,260	5,271	1.15	15.64	-	-

* Not previously published.

34. Hardware River near Scottsville, Va.

Location.--Lat 37°50', long 78°29', at bridge on Woodridge-Scottsville Highway, 2 miles upstream from Briery Run, 3 miles north of Scottsville, Albemarle County, and 1½ miles upstream from mouth.

Drainage area.--104 sq mi.

Gage.--Chain gage. Datum of gage is 308.50 ft above mean sea level.

Average discharge.--13 years (1925-38), 116 cfs.

Extremes.--1925-38: Maximum discharge, 6,440 cfs Apr. 25, 26, 1937 (gage height, 20.1 ft, from floodmarks), from rating curve extended above 4,000 cfs by logarithmic plotting; minimum, 1.5 cfs Sept. 2, 22, 1932 (gage height, 1.20 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	38.5	15.9	-	-	-
1926	19.0	46.0	120	155	178	90.4	105	52.7	33.7	27.2	47.6	31.9	74.9
1927	37.9	117	172	110	150	85.5	152	64.2	38.4	87.5	65.4	21.6	91.4
1928	165	193	253	122	163	105	172	122	50.6	34.0	440	334	179
1929	93.1	151.1	42.0	49.8	109	147	295	132	396	356	89.0	52.9	151
1930	119	90.8	81.3	82.4	128	134	101	57.6	32.8	23.4	16.4	23.2	73.8
1931	15.5	16.8	20.5	27.6	29.0	77.6	90.0	90.6	119	58.2	55.9	32.3	52.8
1932	24.0	22.2	27.8	96.3	63.7	177	109	160	51.0	30.0	13.5	12.4	65.8
1933	144	247	106	159	162	123	318	165	76.8	81.2	77.3	59.6	143
1934	42.6	39.2	55.8	70.3	46.5	176	119	66.2	91.1	49.9	28.6	56.6	70.1
1935	42.5	59.7	227	165	183	216	295	103	90.9	151	89.4	253	156
1936	73.5	134	149	474	229	384	260	91.5	44.4	24.5	27.2	26.5	160
1937	99.4	33.8	112	371	208	140	452	223	107	110	83.2	85.6	168
1938	331	164	115	132	124	138	102	75.1	86.8	112	100	53.9	128
1939	38.6	57.4	153	-	-	-	-	-	-	-	-	-	-

* Not previously published; estimated or partly estimated on basis of records for Rivanna River below Moores Creek, near Charlottesville and Tye River at Roseland.

Monthly and yearly runoff, in inches, of Hardware River near Scottsville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	0.41	0.18	-	-	-
1926	#0.21	#0.49	#1.33	#1.72	1.78	1.00	1.13	0.58	.36	.30	0.53	0.34	#9.77
1927	.42	1.25	1.90	1.22	1.50	.95	1.63	.71	.41	.97	.73	.23	11.92
1928	1.83	2.08	2.80	1.35	1.69	1.16	1.84	1.35	.54	.38	4.88	3:58	23.48
1929	#1.03	#.55	.47	.55	1.09	1.63	3.17	1.46	4.25	3.94	.99	.57	#19.70
1930	1.31	.97	.90	.91	1.28	1.49	1.08	.64	.35	.26	.18	.25	9.62
1931	.17	.18	.23	.31	.29	.86	.97	1.00	1.27	.65	.62	.35	6.90
1932	.27	.24	.33	1.07	.66	1.96	1.17	1.78	.55	.33	.15	.13	8.62
1933	1.59	2.66	1.18	1.76	1.62	1.36	3.41	1.83	.82	.90	.86	.64	18.63
1934	.47	.42	.60	.78	.47	1.95	1.27	.73	.98	.55	.32	.61	9.15
1935	.47	.64	2.51	1.83	1.83	2.40	3.17	1.14	.98	1.67	.99	2.71	20.34
1936	.82	1.44	1.65	5.26	2.37	4.25	2.79	1.01	.48	.27	.30	.28	20.92
1937	1.10	.56	1.24	4.12	2.08	1.56	4.85	2.47	1.15	1.22	.92	.92	21.99
1938	3.67	1.76	1.28	1.46	1.24	1.53	1.09	.83	.93	1.24	1.11	.58	16.72
1939	.43	.62	#1.70	-	-	-	-	-	-	-	-	-	-

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	-	-	-	#74.9	#0.720	#9.77	#86.8	#11.31
1927	642	1,510	Dec. 26, 1926	7	91.4	.879	11.92	115	15.06
1928	662	4,690	Aug. 26, 1928	10	179	1.72	23.48	#144	#18.82
1929	682	4,510	June 24, 1929	16	#151	#1.45	#19.70	160	20.83
1930	697	1,300	Mar. 8, 1930	2	73.8	.710	9.62	53.8	7.02
1931	712	952	June 1, 1931	2	52.8	.508	6.90	54.6	7.14
1932	727	*2,600	May 12, 1932	2	65.8	.633	8.62	101	13.23
1933	742	*4,470	Oct. 17, 1932	5	143	1.38	18.63	113	14.69
1934	757	1,150	June 19, 1934	15	70.1	.874	9.15	86.5	11.28
1935	782	6,150	Sept. 5, 6, 1935	27	156	1.50	20.34	158	20.63
1936	802	4,550	Mar. 17, 1936	11	160	1.54	20.92	151	19.71
1937	822	6,440	Apr. 25, 26, 1937	22	168	1.62	21.99	199	26.00
1938	852	*4,350	Oct. 19, 1937	41	128	1.23	16.72	#97.9	#12.76

* Revised.

* Not previously published.

35. Hardware River below Briery Run, near Scottsville, Va.

Location (revised).--Lat 37°48'45", long 78°27'20", on left bank 75 ft upstream from highway bridge, 0.8 mile downstream from Briery Run, 2.4 miles northeast of Scottsville, Albemarle County, and 10.8 miles upstream from mouth.

Drainage area.--116 sq mi.

Gage.--Water-stage recorder. Datum of gage is 294.96 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Average discharge.--12 years (1938-50), 123 cfs.

Extremes.--1938-50: Maximum discharge, 23,000 cfs Sept. 19, 1944 (gage height, 23.8 ft, from floodmark in gage house), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow; minimum, 2.8 cfs Oct. 1, 1941 (gage height, 1.34 ft); minimum daily, 4.8 cfs Oct. 5, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	#42.1	#63.3	#170	136	307	193	130	82.0	68.1	61.1	77.9	28.8	#112
1940	36.6	69.9	47.2	87.6	252	98.7	190	81.5	129	78.4	364	90.1	127
1941	56.4	113	140	151	99.2	119	197	64.8	58.1	102	28.1	15.8	95.3
1942	11.4	17.5	44.2	49.5	71.3	104	59.4	71.7	46.7	29.8	21.6	76.8	66.7
1943	329	109	202	154	224	171	154	113	94.8	52.7	24.2	22.3	137
1944	21.7	44.5	52.5	91.3	81.0	204	117	77.2	32.7	32.9	33.3	750	127
1945	144	85.5	125	168	141	109	88.9	88.1	50.4	41.5	43.6	115	99.9
1946	44.6	59.2	153	149	198	166	143	75.8	138	82.7	64.7	39.4	124
1947	47.0	47.6	80.2	180	80.0	166	144	29.8	99.5	119	47.6	40.8	92.8
1948	44.0	116	71.6	111	192	203	373	206	98.5	58.3	21.6	65.6	146
1949	128	221	541	323	230	260	218	177	110	153	354	132	236
1950	108	105	91.7	91.2	172	150	94.4	189	99.5	67.6	43.7	180	116

* Not previously published; estimated or partly estimated from record for station near Scottsville.

Monthly and yearly runoff, in inches, of Hardware River below Briery Run, near Scottsville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	+0.42	+0.61	+1.70	1.35	2.76	1.91	1.25	0.82	0.65	0.61	0.77	0.28	+13.13
1940	.36	.67	.47	.87	2.34	.98	1.83	.81	1.24	.78	3.62	.87	14.84
1941	.56	1.09	1.40	1.50	.89	1.19	1.90	.64	.56	1.01	.28	.15	11.17
1942	.11	.17	.44	.49	.64	1.03	.57	.71	.45	.30	2.14	.74	7.79
1943	3.27	1.05	2.01	1.55	2.01	1.70	1.48	1.12	.91	.52	.24	.21	16.05
1944	.22	.43	.32	.91	.75	2.03	1.13	.77	.31	.33	.33	.72	14.95
1945	1.43	.82	1.24	1.67	1.27	1.08	.85	.68	.48	.41	.43	1.11	11.67
1946	.44	.57	1.52	1.48	1.78	1.65	1.37	2.52	1.33	.82	.64	.38	14.50
1947	.47	.46	.60	1.79	.72	1.65	1.38	.79	.96	1.19	.47	.39	10.87
1948	.44	1.12	.71	1.10	1.79	2.02	3.59	2.05	.95	.58	2.14	.63	17.12
1949	1.27	2.13	5.11	3.20	2.06	2.58	2.10	1.76	1.06	1.52	3.52	1.27	27.58
1950	1.07	1.01	.91	.91	1.54	1.49	.91	1.88	.96	.67	.43	1.73	13.51

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	1,370	Feb. 11, 1939	19	+112	+0.966	+13.13	102	11.90
1940	892,1032	4,250	Aug. 16, 1940	25	127	1.09	14.84	140	16.39
1941	922	1,740	Apr. 5, 1941	11	95.3	.822	11.17	75	8.84
1942	952	1,880	Aug. 9, 1942	4, 8	66.7	.575	7.79	115	13.40
1943	972,1002	4,250	Oct. 15, 1942	12	137	1.18	16.05	93.1	10.89
1944	1002,1032	23,000	Sept. 19, 1944	12	127	1.09	14.95	147	17.27
1945	1032	1,600	Sept. 18, 1945	21	99.9	.861	11.67	91.6	10.71
1946	1052	913	May 18, 1946	28	124	1.07	14.50	115	13.50
1947	1082	1,080	June 14, 1947	20	92.8	.800	10.87	99.1	11.61
1948	1112	5,200	Apr. 3, 1948	30	146	1.28	17.12	199	23.56
1949	1142	11,100	Aug. 15, 1949	57	236	2.03	27.58	189	22.06
1950	1172	1,660	Sept. 11, 1950	30	116	1.00	13.51	-	-

* Not previously published.

36. Slate River near Arvonnia, Va.

Location (revised).--Lat 37°42'10", long 78°22'40", at Bumpers Bridge, 1.8 miles northwest of Arvonnia, Buckingham County, 2.9 miles upstream from Hunt Creek, and 3.8 miles upstream from mouth.

Drainage area.--235 sq mi.

Gage.--Water-stage recorder. Datum of gage is 238.78 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 18, 1935, chain gage at same site and datum. Sept. 18, 1935, to Feb. 14, 1936, staff gage at same site and datum.

Average discharge.--24 years (1926-50), 234 cfs.

Extremes.--1926-50: Maximum discharge, 13,600 cfs Sept. 6, 1935 (gage height, 22.18 ft, from floodmarks), from rating curve extended above 5,500 cfs on basis of velocity-area studies; minimum, 2 cfs Sept. 28 to Oct. 2, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	+191	88.1	63.5	53.2	74.2	54.5	-
1927	55.6	153	318	132	283	151	334	121	78.0	77.5	120	46.8	155
1928	266	221	359	198	336	225	423	166	156	128	575	513	297
1929	142	121	134	173	354	453	538	215	205	191	87.6	71.4	223
1930	240	191	199	239	322	238	209	97.9	76.9	32.0	14.7	7.43	155
1931	11.8	40.3	54.8	70.0	66.9	194	229	256	165	98.7	217	46.8	121
1932	34.2	43.3	77.3	263	128	465	180	269	76.6	42.7	15.4	18.3	135
1933	228	414	433	316	326	246	571	275	125	107	100	51.7	265
1934	42.7	54.1	107	102	76.2	499	237	131	135	48.4	69.0	263	147
1935	75.8	257	437	422	342	427	723	196	272	277	125	720	355
1936	115	260	252	1,013	*519	*600	*370	*138	*168	*93.0	*150	*75.0	*313
1937	87.8	61.9	169	814	368	212	895	293	193	445	164	154	521
1938	608	218	167	262	236	307	183	120	551	386	270	115	286
1939	103	144	330	317	623	565	273	138	222	276	272	76.4	277
1940	82.2	178	107	203	669	231	488	172	193	110	611	95.3	260
1941	87.7	261	222	281	157	228	424	116	103	140	51.9	32.9	175
1942	22.4	40.1	81.9	112	155	205	98.9	109	83.6	84.2	298	95.1	116
1943	589	136	305	242	493	318	262	178	130	141	32.6	37.3	221
1944	37.1	207	109	214	264	593	348	210	66.8	71.0	86.9	87.2	255
1945	201	147	253	348	306	204	226	204	95.7	213	89.4	424	225
1946	106	155	410	283	446	274	249	399	177	182	109	87.4	239
1947	90.5	106	126	382	122	357	292	143	116	73.6	49.4	69.5	161
1948	96.0	264	121	280	535	455	712	276	178	150	394	81.1	294
1949	200	461	998	556	492	484	380	305	163	256	245	125	389
1950	250	246	187	192	350	365	184	388	141	166	126	236	235

* Not previously published; estimated or partly estimated on basis of records for Appomattox River at Farmville.

Monthly and yearly runoff, in inches, of Slate River near Arvonja, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	+0.91	0.43	0.50	0.26	0.36	0.26	-
1927	0.27	0.73	1.56	0.65	1.25	0.74	1.58	.59	.37	.38	.59	.22	8.93
1928	1.30	1.05	1.76	.97	1.54	1.10	2.01	.81	.74	.63	2.82	2.43	17.16
1929	.70	.57	.66	.85	1.57	2.22	2.56	1.06	.97	.94	.43	.34	12.87
1930	1.18	.91	.98	1.18	1.43	1.16	.99	.48	.36	1.16	.07	.04	8.94
1931	.06	.19	.27	.54	.30	.95	1.09	1.26	.78	.48	1.06	.22	7.00
1932	.17	.21	.38	1.29	.59	2.28	.85	1.31	.38	.21	.08	.09	7.82
1933	1.12	1.96	2.12	1.54	1.45	1.21	2.71	1.35	.59	.52	.49	.25	15.31
1934	.21	.26	.52	.50	.34	2.44	1.13	.64	.64	.24	.34	.15	8.51
1935	.37	1.22	2.14	2.08	1.52	2.10	3.44	.96	1.29	1.36	.61	3.41	20.50
1936	.56	1.24	1.23	4.97	#2.38	#2.94	#1.75	#.68	\$.80	\$.46	\$.74	\$.36	#18.11
1937	.43	.29	.83	3.99	1.64	1.04	4.25	1.44	.92	2.18	.80	.73	18.54
1938	2.99	1.04	.82	1.28	1.04	1.51	.87	.59	2.61	1.89	1.35	.55	16.52
1939	.50	.68	1.61	1.56	2.76	2.77	1.29	.68	1.05	1.35	1.34	.36	15.95
1940	.40	.84	.52	1.00	3.07	1.13	2.32	.84	.92	.54	3.00	.45	15.03
1941	.43	1.24	1.09	1.58	.70	1.12	2.01	.57	.49	.69	.25	.16	10.13
1942	.11	.19	.40	.55	.69	1.01	.47	.53	.40	.41	1.46	.45	6.67
1943	1.91	.65	1.50	1.19	2.19	1.56	1.24	.87	.62	.69	.16	.18	12.76
1944	.18	.98	.53	1.05	1.21	2.90	1.65	1.03	.32	.35	.43	4.14	14.77
1945	.99	.70	1.24	1.71	1.35	1.00	1.07	1.00	.45	1.04	.44	2.01	13.00
1946	.52	.74	2.01	1.36	1.98	1.35	1.18	1.96	.84	.89	.53	.42	13.80
1947	.44	.50	.62	1.88	.54	1.75	1.38	.70	.55	.36	.22	.33	9.27
1948	.47	1.25	.59	1.37	2.46	2.24	3.58	1.35	.84	.74	1.94	.38	17.01
1949	.98	2.19	4.90	2.73	2.18	2.38	1.81	1.50	.77	1.26	1.20	.59	22.49
1950	1.22	1.17	.92	.94	1.55	1.79	.87	1.90	.67	.81	.62	1.13	13.59

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622	-	-	-	-	-	-	-	-
1927	642	2,940	Dec. 26, 1926	22	155	0.660	8.93	182	10.84
1928	662, 972	6,280	Aug. 12, 1928	23	297	1.26	17.16	259	14.98
1929	682, 972	4,720	Apr. 17, 1929	45	223	.949	12.87	242	14.01
1930	697	2,310	Mar. 8, 1930	2	155	.660	8.94	111	6.39
1931	712	1,570	Aug. 1, 1931	2	121	.515	7.00	125	7.24
1932	972	3,700	Mar. 7, 1932	3	135	.574	7.82	212	12.26
1933	742	3,560	Oct. 17, 1932	6	265	1.13	15.31	192	11.10
1934	757	3,700	Mar. 5, 1934	22	147	.626	8.51	195	11.25
1935	782, 972	13,600	Sept. 6, 1935	53	355	1.51	20.50	343	19.80
1936	802	7,980	Mar. 17, 18, 1936	-	#313	#1.33	#18.11	#287	#16.63
1937	822	12,300	Apr. 26, 1937	46	321	1.37	18.54	378	21.84
1938	852	4,650	Oct. 19, 1937	81	266	1.22	16.52	251	14.46
1939	872	3,700	Aug. 20, 1939	53	277	1.18	15.95	259	14.92
1940	892	5,880	Aug. 16, 1940	51	260	1.11	15.03	277	16.03
1941	922	3,560	Apr. 6, 1941	17	175	.745	10.13	140	8.07
1942	952	2,100	Aug. 12, 1942	15	116	.494	6.67	173	10.03
1943	972	3,560	Oct. 16, 1942	21	221	.940	12.76	180	10.39
1944	1002	10,500	Sept. 20, 1944	19	255	1.09	14.77	276	16.01
1945	1032	5,400	Sept. 19, 1945	45	225	.957	13.00	231	13.34
1946	1052	2,280	Feb. 11, Mar. 4	51	239	1.02	13.80	210	12.09
1947	1082	2,460	Mar. 14, 1947	24	161	.685	9.27	174	10.02
1948	1112	5,180	Aug. 4, 1948	45	294	1.25	17.01	393	22.77
1949	1142	9,780	Dec. 4, 1948	70	389	1.66	22.49	307	17.73
1950	1172	2,800	Sept. 10, 1950	61	235	1.00	13.59	-	-

* Not previously published.

37. Mechum River near Ivy, Va.

Location.--Lat 38°06'15", long 78°35'35", at Stage Highway 614, 2.6 miles downstream from Spring Creek, 3.3 miles north of town of Ivy, Albemarle County, and 4.7 miles upstream from confluence with Moormans River.

Drainage area.--97 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 440 ft (from topographic map).

Average discharge.--8 years (1942-50), 103 cfs.

Extremes.--1942-50: Maximum discharge, 20,000 cfs Oct. 15, 1942 (gage height, 30.3 ft, from floodmark), from rating curve extended above 8,000 cfs by logarithmic plotting; minimum, 0.6 cfs Sept. 9, 1944 (gage height, 0.51 ft).

Remarks.--During 1943-46 city of Charlottesville diverted about 3 cfs 2 miles above station during periods of low flow to augment municipal water supply.

JAMES RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Mechum River near Ivy, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	606	89.8	150	122	151	139	143	104	79.8	61.3	13.2	8.29	140
1944	8.85	19.7	29.7	48.6	56.9	140	82.6	86.4	23.9	8.95	16.0	409	76.3
1945	129	55.8	90.2	106	92.6	79.5	63.6	88.9	36.8	41.7	31.4	117	77.7
1946	38.1	50.2	136	137	128	121	102	137	93.9	53.0	30.3	17.5	66.9
1947	29.5	27.1	34.9	111	55.4	109	85.6	47.2	60.5	83.1	48.0	30.0	60.2
1948	37.4	119	53.7	63.5	153	135	229	193	105	57.5	222	53.4	118
1949	99.8	158	329	222	169	158	138	162	119	165	245	95.9	172
1950	90.3	86.8	69.5	69.7	145	101	70.7	123	82.3	45.1	25.7	219	93.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	7.21	1.03	1.79	1.45	1.62	1.65	1.64	1.23	0.92	0.73	0.16	a0.13	a19.56
1944	a.13	.23	a.28	.58	.63	1.66	.95	1.03	a.28	a.13	a.20	a4.72	a10.82
1945	1.53	.64	1.07	1.26	.99	.95	.73	1.06	.42	a.51	a.39	a1.36	a10.91
1946	.45	.58	1.61	1.63	1.58	1.44	1.17	1.63	1.08	.63	.36	a.23	a12.19
1947	.35	.31	.42	1.31	.59	1.29	.98	.56	.70	.99	.57	.34	8.41
1948	.44	1.37	.64	.76	1.70	1.60	2.63	2.29	1.20	.68	2.64	.61	16.56
1949	1.19	1.82	3.91	2.64	1.81	1.88	1.58	1.92	1.37	1.96	2.92	1.10	24.10
1950	1.07	1.00	.83	.83	1.55	1.20	.81	1.46	.95	.54	.31	2.52	13.07

a Adjusted for diversion by city of Charlottesville.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted a/			Observed	Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1943	972	20,000	Oct. 15, 1942	1.8	140	140	1.44	19.56	72.1	72.7	10.17
1944	1002	10,600	Sept. 19, 1944	.7	76.3	77.1	.795	10.82	95.4	95.8	13.42
1945	1032	2,360	Sept. 18, 1945	6.8	77.7	778.0	.804	10.91	73.4	73.7	10.31
1946	1052	686	Dec. 6, 1945	12	86.9	87.1	.898	12.19	75.7	75.7	10.63
1947	1082	878	July 9, 1947	12	60.2	60.2	.621	8.41	70.0	70.0	9.78
1948	1112	3,490	Aug. 4, 1948	22	118	118	1.22	16.56	150	150	21.03
1949	1142	5,340	Dec. 4, 1948	50	172	172	1.77	24.10	144	144	20.08
1950	1172	6,330	Sept. 13, 1950	16	93.3	93.3	.962	13.07	-	-	-

† Corrected.

a/ Adjusted for diversion by city of Charlottesville during September, October, and December, 1943, June to September 1944, July to September 1945, and September 1946.

38. Moormans River near Whitehall, Va.

Location.--Lat 38°08'05", long 78°44'10", 0.2 mile downstream from Charlottesville Reservoir, 4 miles west of Whitehall, Albemarle County, and 4.2 miles upstream from Doyles River.

Drainage area.--18 sq mi, approximately.

Gage.--Staff gage. Altitude of gage is 890 ft (from topographic map).

Extremes.--1943-46: Maximum discharge, 1,990 cfs (revised) Sept. 19, 1944 (gage height, 4.65 ft, revised, from graph based on gage readings); no flow on many days. Flood in October 1942 reached a stage of 9.3 ft, from floodmarks (discharge, 10,000 cfs, from rating curve extended above 1,500 cfs on basis of two slope-area determinations and two determinations of flow over dam at gage height, 9.3 ft).

Remarks.--City of Charlottesville diverted available flow up to about 5 cfs for municipal use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	0	0	0	0	-
1944	0.02	0.37	0.17	2.31	11.8	41.3	22.3	32.9	0.06	0	0.16	81.0	16.8
1945	53.9	5.79	25.9	29.9	21.6	17.8	15.7	22.1	1.61	1.58	.28	66.0	21.8
1946	1.97	7.24	37.8	46.5	28.2	33.2	23.7	29.9	18.7	1.09	.0516	.0033	19.0

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year						
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1943	1002	-	-	-	-	-	-	-	-	-	-	-
1944	1002	-	-	-	-	-	-	-	-	-	-	-
1945	1032	*1,990	Sept. 19, 1944	0	16.8	-	-	-	-	-	24.0	-
1946	1052	*1,700	Sept. 18, 1945	0	21.8	-	-	-	-	-	18.6	-
	1052	*190	Jan. 1, 1946	0	19.0	-	-	-	-	-	-	-

* Revised.

39. Rivanna River near Charlottesville, Va.

Location.--Lat 38°02'05", long 78°27'30", at highway bridge 1 mile from Charlottesville, Albemarle County, on main road between Charlottesville and Richmond, 0.5 mile above Moores Creek.

Drainage area.--473 sq mi.

Gage.--Chain gage. Altitude of gage is 304 ft above mean sea level, by levels to water surface Mar. 25, 1943.

Extremes.--February to August 1925: Maximum discharge, 800 cfs Apr. 30 (gage height, 4.27 ft, from graph based on gage readings); minimum, 39 cfs July 29.
Flood in October 1942 reached a stage of 29.6 ft from floodmarks (discharge, 59,000 cfs, on basis of peak flow at station at Palmyra).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	374	294	311	140	94.1	#67	#60	-

* Not previously published; estimated from records for station below Moores Creek, near Charlottesville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	0.91	0.69	0.76	0.33	0.23	#0.16	#0.14	-

* Not previously published; see footnote to preceding table.

40. Rivanna River below Moores Creek, near Charlottesville, Va.

Location.--Lat 38°01'09", long 78°27'13", 200 ft downstream from Moores Creek and 500 ft upstream from Virginia Public Service Co. powerplant near Charlottesville, Albemarle County.

Drainage area.--507 sq mi.

Supplemental records available.--Records of chemical analyses for 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 292.90 ft above mean sea level, adjustment unknown.

Average discharge.--9 years (1925-34), 459 cfs.

Extremes.--1925-34: Maximum discharge (revised), 18,000 cfs (estimated) Sept. 17, 1934, on basis of peak flow for station at Palmyra; minimum, 2 cfs Oct. 1, 1930 (gage height, 1.19 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	#75.5	64.1	-
1926	98.4	242	621	800	990	409	537	272	206	151	467	213	414
1927	252	1,090	846	520	787	432	1,030	432	226	375	330	206	541
1928	1,020	635	825	341	608	404	840	512	338	#290	#1,190	#935	#661
1929	252	211	275	508	558	891	1,120	699	#895	#527	153	131	#517
1930	638	385	381	349	555	534	302	149	125	62.9	29.8	17.3	293
1931	36.5	51.7	62.0	101	106	248	406	327	419	344	395	113	218
1932	70.1	70.7	102	458	301	768	437	748	171	100	34.9	26.9	275
1933	1,110	1,360	565	867	776	679	1,920	657	343	648	473	229	802
1934	192	170	220	275	197	912	657	#240	#510	#210	#265	#1,080	#410

* Not previously published; estimated or partly estimated from nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	#0.17	0.14	-
1926	0.22	0.53	1.41	1.82	2.03	0.93	1.18	0.62	0.45	0.34	1.06	.47	11.06
1927	.57	2.40	1.92	1.19	1.61	.98	2.26	.98	.50	.85	.75	.45	14.46
1928	2.32	1.40	1.88	.78	1.29	.92	1.85	1.16	.74	#.86	#2.71	#2.05	#17.76
1929	.57	.46	.62	1.15	1.14	2.03	2.47	1.59	#1.98	#1.20	.35	.29	#13.85
1930	1.45	.85	.87	.79	1.14	1.21	.66	.34	.28	.14	.07	.04	7.84
1931	.08	.11	.14	.23	.22	.56	.89	.74	.92	.78	.90	.25	5.82
1932	.16	.16	.23	1.04	.64	1.74	.96	1.71	.38	.23	.08	.06	7.39
1933	2.52	3.04	1.28	1.97	1.59	1.54	4.23	1.50	.76	1.48	1.08	.50	21.49
1934	.44	.37	.50	.62	.41	2.08	1.45	#.55	#1.13	#.48	#.60	#2.38	#11.01

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Rivanna River below Moores Creek, near Charlottesville, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	622	-	-	-	-	-	-	-	-
1926	622	8,390	Aug. 25, 1926	33	414	0.817	11.06	516	13.79
1927	642	8,790	Nov. 16, 1926	108	541	1.07	14.46	567	15.17
1928	662	8,570	Oct. 4, 1927	†119	†661	†1.30	†17.76	†515	†13.81
1929	682	11,200	Apr. 16, 1929	†82	†517	†1.02	†13.85	†573	†15.37
1930	697	7,290	Oct. 22, 1929	4	293	.578	7.84	187	5.00
1931	712	7,690	July 25, 1931	4	218	.430	5.82	226	6.04
1932	727	7,100	Mar. 8, 1932	19	275	.542	7.39	509	13.68
1933	742	13,600	Apr. 17, 1933	20	802	1.58	21.49	596	15.96
1934	757	†a18,000	Sept. 17, 1934	-	†410	†.809	†11.01	-	-

† Not previously published.

a Estimated on basis of record for station at Palmyra.

41. Rivanna River at Palmyra, Va.

Location.--Lat 37°51'28", long 78°15'58", on left bank 10 ft upstream from highway bridge at Palmyra, Fluvanna County, 0.5 miles upstream from Cunningham Creek and 15 miles upstream from mouth.

Drainage area.--675 sq. mi.

Supplemental records available.--Records of chemical analyses for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 210.39 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943. Prior to Oct. 24, 1942, water-stage recorder at site 200 ft downstream at same datum. Oct. 24, 1942, to Dec. 18, 1947, wire-weight gage on upstream side of highway bridge 10 ft downstream at same datum.

Average discharge.--17 years (1933-50), 743 cfs.

Extremes.--1933-50: Maximum discharge, 78,000 cfs Oct. 16, 1942 (gage height, 36.5 ft at site then in use, 37.4 ft at present site); minimum, 19 cfs Oct. 9, 1941 (gage height, 1.53 ft at site then in use).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	†260	†230	†295	†360	†260	†1,200	†860	335	694	281	353	1,564	†557
1935	368	656	1,444	1,598	1,086	1,267	1,892	620	556	750	729	1,966	1,076
1936	274	623	866	2,620	1,817	3,192	1,208	455	324	276	181	184	1,002
1937	719	213	884	2,425	1,868	787	3,682	986	694	604	754	811	1,176
1938	2,414	1,215	785	933	971	870	570	361	449	762	427	227	833
1939	157	268	890	655	1,650	1,056	632	339	256	406	408	119	563
1940	229	322	218	414	1,320	472	1,018	394	609	746	1,774	417	650
1941	250	700	898	899	471	610	1,031	264	218	461	113	70.8	499
1942	46.4	79.8	277	261	584	721	330	603	299	175	1,213	522	411
1943	5,535	554	1,106	807	1,144	961	900	757	402	255	90.3	80.5	885
1944	74.0	191	126	475	492	1,377	761	640	190	137	160	2,374	580
1945	797	390	744	901	708	544	497	671	254	646	414	793	616
1946	266	310	920	971	981	928	650	1,018	644	307	211	156	613
1947	251	231	325	1,151	392	945	704	540	513	310	187	149	459
1948	196	551	322	528	1,142	906	1,722	1,217	617	564	1,504	324	782
1949	871	1,326	2,667	1,938	†1,203	1,313	1,088	1,223	784	1,181	1,521	664	1,308
1950	510	616	496	480	1,091	747	498	1,071	654	316	170	861	624

† Corrected.

‡ Not previously published; estimated from record for station near Charlottesville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	†0.44	†0.38	†0.50	†0.61	†0.40	†2.05	†1.42	0.57	1.15	0.48	0.60	2.59	†11.19
1935	.63	1.08	2.47	2.73	1.68	2.17	3.12	1.06	.92	1.28	1.24	3.25	†11.63
1936	.47	1.03	1.48	4.47	2.90	5.45	2.00	.78	.54	.47	.31	.30	20.20
1937	1.23	.35	1.51	4.14	2.57	1.31	6.06	1.68	2.15	1.03	1.29	1.34	23.66
1938	4.13	2.01	1.34	1.59	1.50	1.49	.94	.62	.74	1.30	.73	.37	16.76
1939	.27	.44	1.52	1.12	2.54	1.80	1.04	.58	.42	.69	.70	.20	11.32
1940	.22	.53	.37	.71	2.11	.81	1.68	.87	1.01	1.28	3.05	.69	13.11
1941	.43	1.16	1.53	1.53	.73	1.04	1.71	.45	.36	.79	.19	.12	10.04
1942	.08	.13	.47	.45	.59	1.23	.55	1.03	.49	.30	2.08	.86	8.26
1943	6.04	.92	1.89	1.38	1.76	1.64	1.48	1.29	.66	.44	.15	.13	17.78
1944	.13	.32	.22	.81	.79	2.35	1.26	1.09	.31	.23	.27	3.93	11.71
1945	1.36	.64	1.33	1.53	1.09	.95	.82	1.15	.42	1.10	.71	1.30	12.38
1946	.46	.51	1.57	1.66	1.51	1.58	1.07	1.74	1.06	.52	.36	.26	12.30
1947	.43	.38	.55	1.97	.60	1.81	1.16	.58	.85	.53	.32	.25	9.23
1948	.33	.91	.55	.90	1.82	1.54	2.84	2.08	1.02	.86	2.57	.54	15.76
1949	1.42	2.19	4.55	3.31	1.85	2.25	1.80	1.91	1.29	2.02	2.59	1.10	26.28
1950	.87	1.02	.85	.82	1.69	1.28	.82	1.83	1.08	.54	.29	1.46	12.55

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Rivanna River at Palmyra, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	757, 892	24,000	Sept. 17, 1934	*129	*557	*0.825	*11.19	*699	*14.05
1935	782, 892	29,000	Sept. 6, 1935	222	1,076	1.59	21.63	1,016	20.43
1936	802	39,900	Mar. 18, 1936	96	1,002	1.48	20.20	1,007	20.31
1937	852	56,700	Apr. 26, 1937	165	1,176	1.74	23.66	1,394	28.05
1938	852	20,000	Oct. 20, 1937	150	833	1.23	16.76	573	11.51
1939	872	6,800	Feb. 11, 1939	87	563	.834	11.32	509	10.21
1940	892	16,300	Aug. 17, 1940	98	650	.965	13.11	749	15.11
1941	922	7,560	Apr. 6, 1941	36	499	.739	10.04	378	7.60
1942	952	11,400	Aug. 9, 1942	24	411	.609	8.26	816	16.43
1943	972	78,000	Oct. 16, 1942	38	885	1.31	17.78	478	9.60
1944	1002	39,600	Sept. 19, 1944	42	580	.859	11.71	713	14.37
1945	1032	*8,270	Sept. 18, 1945	95	616	.913	12.38	577	11.59
1946	1052	*4,940	Mar. 20, 1946	82	613	.908	12.50	554	11.12
1947	1082	6,140	Mar. 14, 1947	80	459	.680	9.23	481	9.66
1948	1112	19,800	Aug. 4, 1948	64	782	1.16	15.76	1,098	22.13
1949	1142	28,800	Dec. 4, 1948	294	1,308	1.94	26.28	1,038	20.86
1950	1172	8,060	Sept. 14, 1950	130	624	.924	12.55	-	-

* Revised.

* Not previously published.

42. Willis River at Flanagan Mills, Va.

Location.--Lat 37°40', long 78°11', at highway bridge a quarter of a mile downstream from Flanagan Mills, Cumberland County, half a mile downstream from Trices Lake, and 4 miles downstream from Reynolds Creek.

Drainage area.--247 sq mi.

Gage.--Water-stage recorder. Datum of gage is 178.98 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 3, 1935, chain gage at site a quarter of a mile upstream at same datum.

Average discharge.--24 years (1926-50), 261 cfs.

Extremes.--1926-50: Maximum discharge, 9,580 cfs Apr. 27, 1937 (gage height, 23.86 ft from floodmarks), from rating curve extended above 5,800 cfs on basis of velocity-area studies, with backwater correction; minimum, 2 cfs Sept. 30, Oct. 1, 4, 12, 1930.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	*188	62.8	43.0	85.2	93.4	53.7	-
1927	57.0	21.0	37.4	138	258	159	282	98.9	60.2	102	181	48.1	164
1928	204	254	395	252	261	259	469	165	142	78.9	855	492	318
1929	144	108	126	177	298	*505	388	200	160	200	100	60	*205
1930	280	200	200	210	311	207	269	97.2	91.5	41.9	14.7	7.03	160
1931	8.1	33.9	47.3	74.4	93.6	214	280	425	89.0	120	136	42.9	131
1932	24.0	32.2	82.6	280	147	540	257	417	58.5	37.6	16.0	20.4	160
1933	273	646	445	448	395	229	610	201	155	82.9	110	138	309
1934	42.9	61.3	108	97.5	80.3	540	328	128	142	66.1	94.4	348	170
1935	174	139	529	*480	*450	*525	*980	*198	*220	*260	*150	*640	*394
1936	*84.0	*315	*240	*1,380	*720	*850	*425	*128	*164	*79.0	*140	*60.0	*382
1937	88.4	86.3	170	906	478	271	1,117	351	192	368	363	401	398
1938	691	317	232	390	319	485	258	151	485	274	198	72.7	323
1939	69.0	121	286	242	669	584	302	119	185	164	200	56.6	247
1940	80.4	201	96.2	210	790	307	675	191	253	185	908	106	331
1941	93.4	342	246	362	197	266	450	122	80.3	144	43.3	28.2	198
1942	15.6	31.4	82.8	115	161	236	99.5	112	110	186	532	96.5	149
1943	457	201	355	356	624	435	282	180	100	51.7	34.7	25.3	257
1944	27.4	80.8	100	231	332	852	441	166	53.8	73.7	66.8	743	263
1945	219	146	306	420	391	234	315	230	126	214	49.8	491	261
1946	109	180	577	435	599	374	285	552	181	147	105	81.0	301
1947	83.8	105	144	467	141	474	335	143	80.7	55.9	36.9	76.2	179
1948	89.7	298	129	302	633	611	835	256	130	93.0	529	65.1	329
1949	244	328	1,073	713	559	391	322	344	109	304	119	106	385
1950	154	389	187	183	360	407	167	381	149	161	115	293	244

* Revised.

* Not previously published; estimated or partly estimated from record for Appomattox River at Farmville.

Monthly and yearly runoff, in inches, of Willis River at Flanagan Mills, Va.

Water year	Monthly runoff, in inches											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1926	-	-	-	-	-	-	0.85	0.29	0.19	0.40	0.44	0.24	-
1927	0.27	0.95	1.74	0.64	1.08	0.74	1.27	0.46	0.27	0.48	0.85	0.22	8.97
1928	0.95	1.15	1.84	1.18	1.14	1.21	2.12	0.77	0.64	0.37	3.99	2.22	17.58
1929	0.67	0.49	0.59	0.83	1.26	*2.35	1.75	0.93	0.72	0.93	0.47	0.27	*11.26
1930	1.30	0.90	0.93	0.98	1.31	0.97	1.22	0.45	0.41	0.20	0.07	0.03	8.77
1931	0.04	0.15	0.22	0.35	0.40	1.00	1.26	1.98	0.40	0.56	0.64	0.19	7.19
1932	0.11	0.14	0.39	1.30	0.84	2.52	1.16	1.95	0.26	0.18	0.07	0.09	8.81
1933	1.28	2.92	2.08	2.09	1.66	1.07	2.76	0.94	0.70	0.39	0.51	0.62	17.02
1934	0.20	0.28	0.50	0.46	0.34	2.52	1.48	0.60	0.64	0.31	0.44	1.57	9.34
1935	0.81	0.63	2.47	*2.24	*1.90	*2.46	*4.43	*0.92	*0.99	*1.21	*0.70	*2.89	*21.85
1936	*0.39	*1.43	*1.12	*6.44	*3.14	*3.97	*1.92	*0.60	*0.74	*0.37	*0.65	*0.27	*21.04
1937	0.41	0.39	0.79	4.23	2.02	1.27	5.04	1.64	0.87	1.72	1.70	1.81	21.89
1938	3.23	1.43	1.08	1.82	1.34	2.26	1.16	0.70	2.19	1.28	0.92	0.33	17.74
1939	0.32	0.55	1.34	1.13	2.82	2.72	1.36	0.56	0.84	0.77	0.93	0.26	13.80
1940	0.38	0.91	1.45	0.98	3.45	1.43	3.05	0.89	1.14	0.86	4.24	0.48	18.26
1941	0.44	1.54	1.15	1.70	0.83	1.24	2.03	0.57	0.36	0.67	0.20	0.13	10.86
1942	0.07	0.14	0.39	0.54	0.68	1.10	0.45	0.52	0.50	0.87	2.48	0.44	8.18
1943	2.13	0.91	1.66	1.66	2.64	2.03	1.27	0.84	0.45	0.24	0.16	0.11	14.10
1944	0.13	0.36	0.47	1.08	1.44	3.98	2.00	0.77	0.24	0.34	0.31	3.36	14.48
1945	1.02	0.66	1.43	1.96	1.64	1.09	1.43	1.07	0.57	1.00	0.23	2.22	14.32
1946	0.51	0.81	2.70	2.03	2.53	1.74	1.28	2.57	0.82	0.69	0.49	0.37	16.54
1947	0.39	0.47	0.67	2.18	0.59	2.21	1.52	0.67	0.36	0.26	0.17	0.34	9.83
1948	0.42	1.35	0.60	1.41	2.76	2.85	3.77	1.20	0.59	0.43	2.47	0.28	18.14
1949	1.14	1.49	5.00	3.33	2.35	1.82	1.45	1.60	0.49	1.42	0.56	0.48	21.12
1950	0.72	1.75	0.87	0.55	1.52	1.90	0.75	1.78	0.67	0.75	0.54	1.33	13.43

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622	-	-	-	-	-	-	-	-
1927	642	1,600	Dec. 28, 1926	33	164	0.664	8.97	180	9.95
1928	892	*7,350	Aug. 13, 1928*	33	318	1.29	17.58	279	15.39
1929	(a)	*1,790	Mar. 1, 1929*	-	*205	*0.850	*11.26	*250	*12.64
1930	697	*1,620	Feb. 5, 1930*	2	160	0.648	8.77	110	6.05
1931	712	1,760	May 23, 1931	2	131	0.530	7.19	135	7.42
1932	727	2,310	Mar. 28, 1932	9	180	0.648	8.81	262	14.45
1933	742	2,000	Oct. 19, 1932	12	309	1.25	17.02	213	11.72
1934	757	2,000	Mar. 6, 1934	24	170	0.688	8.77	223	12.27
1935	782, 892	b6,000	Sept. 6, 1935	-	*394	*1.60	*21.65	*376	*20.68
1936	872	b5,300	Mar. 19, 1936	-	*382	*1.55	*21.04	*357	*19.69
1937	872, 972	9,580	Apr. 27, 1937	60	398	1.61	21.89	473	26.04
1938	872	2,680	Oct. 21, 1937	47	323	1.31	17.74	259	14.21
1939	872	2,160	Feb. 13, 1939	45	247	1.00	13.60	239	13.13
1940	892, 972	7,380	Aug. 17, 1940	53	351	1.34	18.26	357	19.65
1941	922	2,080	Apr. 7, 1941	11	198	0.802	10.86	152	8.33
1942	952	2,800	Aug. 10, 1942	10	149	0.603	8.18	223	12.28
1943	972	2,510	Oct. 17, 1942	15	257	1.04	14.10	189	10.36
1944	1002	7,500	Sept. 20, 1944	10	263	1.06	14.48	302	16.63
1945	1032	3,300	Sept. 20, 1945	28	261	1.06	14.32	277	15.23
1946	1052	1,720	Dec. 28, 1945	43	301	1.22	16.54	256	14.05
1947	1082	1,690	Mar. 16, 1947	20	179	0.725	9.83	194	10.67
1948	1112	5,840	Aug. 6, 1948	34	329	1.35	18.14	425	23.39
1949	1142	6,800	Dec. 5, 1948	69	385	1.56	21.12	507	16.84
1950	1172	1,690	Nov. 3, 1949	57	244	0.988	13.43	-	-

* Revised.

* Not previously published.

a WSP 682, 892, 1203.

b Not previously published; estimated on basis of comparison with nearby stations.

43. James River at Cartersville, Va.

Location--Lat 37°40', long 78°05', on left bank 200 ft downstream from highway bridge between Pemberton and Cartersville, Cumberland County, 2 miles downstream from Willis River and at mile 152.4.

Drainage area--6,242 sq mi.

Supplemental records available--Records of chemical analyses for 1929-30 published in Virginia Division of Water Resources and Power, Bull. 3, and for the water year 1948 published in WSP 1132.

Gage--Water-stage recorder. Datum of gage is 161.57 ft above mean sea level (levels by Corps of Engineers). Prior to June 4, 1927, wire or chain gage at site 200 ft upstream, same datum.

Average discharge--52 years (1898-1950), 7,212 cfs.

Extremes--1898-1950: Maximum discharge, 180,000 cfs Sept. 20, 1944 (gage height, 29.6 ft, from floodmark in gage well); minimum, 320 cfs Sept. 22, 1932; minimum daily, 348 cfs Oct. 5, 1930; minimum gage height, 0.10 ft Oct. 2, 1941.

Monthly and yearly runoff, in inches, of James River at Cartersville, Va.--Continued

Water year	Monthly and yearly runoff, in inches, of James River at Cartersville, Va.--Continued												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	0.55	1.12	2.36	2.62	1.74	1.48	0.94	1.26	0.53	0.57	0.26	0.20	15.83
1922	.14	.66	1.22	1.14	2.79	3.99	1.38	1.87	1.19	1.09	.47	.29	16.23
1923	.48	.29	.78	1.43	1.52	2.94	1.48	.92	.53	.33	.86	.48	12.04
1924	.28	.41	.90	2.36	1.08	2.21	1.93	3.53	1.56	1.37	1.00	.61	17.44
1925	1.92	.80	1.21	2.57	2.10	.97	.68	1.00	.56	.26	.19	.17	12.23
1926	.25	.62	.69	1.63	2.28	1.33	1.55	.64	.37	.32	.50	.29	10.47
1927	.42	1.57	2.25	1.07	2.30	1.15	2.77	1.06	.50	.56	.94	.40	14.99
1928	1.53	1.25	2.20	1.33	1.61	1.23	2.05	1.64	.75	.80	3.03	2.47	19.89
1929	.71	.51	.76	1.19	1.30	3.68	2.64	2.18	1.66	1.12	.45	.33	16.53
1930	1.59	1.56	1.10	1.14	1.49	1.60	.99	.50	.36	.18	.12	.10	10.73
1931	.10	.17	.25	.45	.39	.91	1.71	1.37	.83	.51	.85	.50	7.84
1932	.16	.18	.32	1.27	1.41	2.42	1.54	1.64	.59	.41	.15	.12	10.03
1933	1.53	2.25	1.71	2.06	2.02	2.09	3.56	1.61	.87	.66	.63	.58	19.37
1934	.27	.26	.42	.53	.34	2.89	1.72	.66	.74	.38	.54	1.15	9.90
1935	.72	.87	2.87	3.06	1.66	2.79	3.90	1.03	.78	.76	.68	2.46	21.60
1936	.39	1.03	1.43	4.89	2.99	4.82	2.63	.93	.59	.39	.36	.27	20.72
1937	.87	.36	1.34	4.60	2.40	1.36	3.16	1.53	.76	.88	1.03	1.16	19.45
1938	3.53	1.51	1.16	1.50	1.10	1.44	1.04	.86	1.45	1.48	1.92	4.43	17.42
1939	.34	.47	1.05	1.13	3.28	2.36	1.16	.80	.55	.70	1.26	.55	13.45
1940	.32	.47	.40	.66	1.87	1.02	2.28	1.22	2.29	.90	3.56	1.32	16.11
1941	.44	.85	1.10	1.42	.72	1.08	1.65	.52	.49	1.22	.26	.18	9.93
1942	.14	.20	.52	.56	.78	1.18	.62	2.43	1.33	.48	2.19	.74	11.17
1943	2.71	.97	1.75	1.91	2.29	2.35	1.89	1.66	1.06	.93	.31	.21	18.04
1944	.20	.36	.33	.74	1.06	2.86	1.52	1.45	.45	.28	.27	2.28	11.80
1945	.92	.48	1.07	1.64	1.32	1.58	.99	.98	.45	.61	.52	1.41	11.97
1946	.48	.62	1.60	2.33	1.97	1.78	1.22	2.11	.94	.62	.38	.28	14.33
1947	.31	.36	.47	2.03	.62	1.81	1.50	.82	.72	.64	.43	.52	10.03
1948	.57	1.50	.69	.90	2.36	2.56	3.34	1.99	.90	.61	1.75	.41	17.58
1949	1.09	2.04	4.80	3.76	2.27	2.36	2.50	2.13	1.29	1.99	1.36	.83	26.42
1950	.62	1.27	1.18	1.02	2.30	1.61	.97	2.02	1.17	.66	.49	1.89	15.20

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1899	(a)	#111,000	Mar. 6, 1899	#1,140	#10,050	#1.61	#21.82	8,459	18.39
1900	(a)	#49,200	Mar. 2, 1900	842	#6,244	1.00	13.58	7,149	15.54
1901	(a)	#134,000	May 23, 1901	1,417	#11,040	1.77	24.00	11,500	25.00
1902	(a)	#130,000	Dec. 30, 1901	900	#8,621	1.38	18.74	8,667	18.84
1903	(a)	#82,800	June 7, 1903	1,670	#11,340	1.82	24.68	9,888	21.52
1904	(a)	#40,200	Mar. 8, 1904	1,125	#4,889	#.783	10.69	4,668	10.20
1905	(a)	#54,200	July 14, 1905	900	#6,078	#.974	#13.21	#6,747	#14.66
1906	203	#54,700	Jan. 4, 1906	1,590	#7,291	1.17	15.84	#9,276	20.15
1907	262	#97,200	Oct. 21, 1906	2,080	#9,990	1.60	21.72	#9,020	19.63
1908	262	#69,100	Feb. 17, 1908	1,730	#9,630	1.54	20.97	#8,870	19.33
1909	282	#48,200	Apr. 16, 1909	1,330	#8,260	1.32	17.96	#7,500	16.31
1910	282	#72,000	June 17, 1910	1,070	5,940	.952	12.91	5,900	12.84
1911	302	#50,700	Jan. 4, 1911	800	4,960	.795	10.80	5,880	12.78
1912	322	#86,400	May 13, 1912	860	8,820	1.41	19.23	8,110	17.70
1913	352	#93,600	Mar. 29, 1913	1,220	7,150	1.15	15.56	7,930	17.27
1914	382	#9,000	Nov. 10, 1913	920	6,700	1.07	14.61	6,490	14.13
1915	402	#9,300	Feb. 4, 1915	815	7,760	1.24	16.86	7,850	17.07
1916	432	59,000	Oct. 2, 1915	1,290	6,580	1.05	14.40	5,780	12.64
1917	452	66,300	Mar. 6, 1917	974	6,170	.988	13.41	5,990	13.03
1918	472	52,800	Apr. 22, 1918	1,020	6,620	1.06	14.42	7,770	16.92
1919	502	82,900	Jan. 4, 1919	990	8,780	1.41	19.12	7,890	17.18
1920	502	67,300	Feb. 4, 1920	910	6,790	1.09	14.79	7,910	17.23
1921	522	43,300	Dec. 1, 1920	600	6,350	1.02	13.83	5,430	11.82
1922	542	46,600	Mar. 16, 1922	444	7,470	1.20	16.25	7,250	15.76
1923	582	60,200	Mar. 17, 1923	910	5,530	.866	12.04	5,560	12.08
1924	582	#106,000	May 13, 1924*	1,060	8,010	1.28	17.44	9,080	19.78
1925	602	#103,000	Oct. 1, 1924	564	5,620	.900	12.23	4,530	9.86
1926	622	45,300	Jan. 20, 1926	648	4,830	.774	10.47	6,060	13.15
1927	642	49,800	Dec. 28, 1926	1,170	6,890	1.10	14.99	7,230	15.73
1928	662	#97,200	Aug. 18, 1928	1,180	9,120	1.46	19.89	7,750	16.89
1929	682	56,600	Apr. 17, 1929	1,520	7,590	1.22	16.53	8,640	18.80
1930	697	48,000	Nov. 20, 1929	464	4,930	.790	10.73	3,210	7.00
1931	712	28,400	Aug. 23, 1931	348	3,590	.575	7.84	3,670	8.00
1932	727	54,800	Mar. 7, 1932	358	4,600	.737	10.03	6,800	14.84
1933	742	75,400	Oct. 18, 1932	683	8,910	1.43	19.37	6,820	14.83
1934	757	49,000	Mar. 5, 1934	1,070	4,547	.728	9.90	6,168	13.41
1935	782	134,000	Sept. 6, 1935	1,840	9,935	1.59	21.60	9,195	19.99
1936	802	166,000	Mar. 19, 1936	1,000	9,507	1.52	20.72	9,373	20.44
1937	822	133,000	Apr. 26, 1937	1,520	8,942	1.43	19.45	10,620	23.08
1938	852	98,400	Oct. 21, 1937	1,860	8,018	1.28	17.42	6,018	13.08
1939	872	65,500	Aug. 20, 1939	1,310	5,185	.991	13.45	5,878	12.78
1940	892	145,000	Aug. 17, 1940	1,200	7,385	1.18	16.11	7,931	17.31

* Revised.

† Corrected.

‡ Not previously published.

§ From Virginia Geological Survey, Bull. 31.

Yearly discharge, in cubic feet per second, of James River at Cartersville, Va.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	922	39,700	Apr. 6, 1941	605	4,573	0.733	9.93	3,869	8.40
1942	952	75,000	May 24, 1942	506	5,140	.825	11.17	7,243	15.74
1943	972	135,000	Oct. 16, 1942	865	8,301	1.33	18.04	6,218	13.50
1944	1002	180,000	Sept. 20, 1944	700	5,418	.868	11.80	6,143	13.38
1945	1032	67,400	Sept. 19, 1945	1,120	5,506	.882	11.97	5,606	12.20
1946	1052	43,700	Jan. 9, 1946	1,070	6,576	1.05	14.33	5,862	12.77
1947	1082	38,900	Mar. 16, 1947	1,170	4,618	.740	10.03	5,360	11.65
1948	1112	83,500	Apr. 2, 1948	1,330	8,066	1.29	17.58	10,440	22.75
1949	1142	134,000	Dec. 5, 1948	2,480	12,150	1.95	26.42	9,915	21.56
1950	1172	68,600	Sept. 11, 1950	1,810	6,988	1.12	15.20	-	-

44. Lickinghole Creek near Goochland, Va.

Location.--Lat 37°42', long 77°58', at highway bridge a quarter of a mile downstream from confluence of Big and Little Lickinghole Creeks, 1 1/4 miles upstream from mouth, and 4 miles west of Goochland, Goochland County.

Drainage area.--70 sq mi, approximately.

Gage.--Chain gage. Datum of gage is 161.69 ft above mean sea level, datum of 1929, Culpeper supplementary adjustment of 1943.

Extremes.--1944-46: Maximum discharge, 729 cfs July 20, 1945 (gage height, 10.7 ft), from rating curve extended above 220 cfs by logarithmic plotting; minimum daily discharge, 4 cfs Aug. 14, 15, 21, 22, 1944.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	-	16.9	39.1	-
1945	37.1	16.8	48.3	76.1	40.8	41.7	34.2	61.4	19.9	104	23.2	72.9	48.2
1946	27.6	50.0	128	84.6	111	89.0	63.7	112	64.0	45.6	17.2	20.0	67.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	-	0.28	0.62	-
1945	0.61	0.27	0.80	1.26	0.61	0.69	0.55	1.01	0.32	1.72	.32	1.16	9.39
1946	.45	.80	2.11	1.40	1.66	1.46	1.02	1.84	1.02	.75	.28	.32	13.11

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1944	1002	-	-	84	-	-	-	-	-
1945	1032	729	July 20, 1945	5	48.2	0.689	9.38	56.9	11.06
1946	1052	557	May 5, 1946	10	87.6	.966	13.11	-	-

a Minimum day during August and September.

45. Beaverdam Creek at State Farm, Va.

Location.--Lat 37°39', long 77°49', 75 ft upstream from highway bridge at State Farm, Goochland County, three-quarters of a mile upstream from mouth, and 4 miles southeast of Goochland Courthouse.

Drainage area.--42 sq mi, approximately.

Gage.--Staff gage. Datum of gage is 136.59 ft above mean sea level (levels by State Farm surveyors).

Extremes.--1944-47: Maximum discharge, 750 cfs July 19, 1945, and May 4, 1946 (gage height, 5.6 ft, from graph based on gage readings), from rating curve extended above 280 cfs by logarithmic plotting; maximum gage height, 20.9 ft Sept. 20, 1944, from floodmark (backwater from James River); minimum discharge observed, 2.0 cfs Sept. 9, 1947 (gage height, 0.70 ft).

Flood of Mar. 19, 1936, reached a stage of 20.9 ft, from floodmark (backwater from James River).

Remarks.--State Farm diverted 0.5 cfs from unnamed tributary a quarter of a mile above station, varying amounts of which are returned above control.

Monthly and yearly mean discharge, in cubic feet per second, of Beaverdam Creek at State Farm, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	16.1	13.3	15.3	-
1945	16.9	17.0	31.0	38.4	35.6	27.2	36.6	38.2	13.2	66.7	13.2	46.2	31.7
1946	19.9	32.4	78.8	43.5	61.3	48.8	36.2	94.7	27.8	17.4	12.6	16.7	40.8
1947	11.7	14.4	20.3	73.1	20.1	60.0	30.9	23.9	10.4	8.07	4.34	4.99	23.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	0.44	0.37	0.41	-
1945	0.46	0.45	0.85	1.05	0.88	0.75	0.97	1.05	0.35	1.83	.36	1.23	10.23
1946	.55	.86	2.17	1.20	1.52	1.34	.96	2.59	.74	.48	.35	.44	13.20
1947	.32	.38	.56	2.01	.50	1.65	.82	.66	.28	.22	.12	.13	7.65

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1944	1002	-	-	-	-	-	-	-	-	-	-	-	-
1945	1032	750	July 19, 1945	7.4	31.7	0.755	10.23	37.3	12.05	-	-	-	-
1946	1052	*750	May 4, 1946	8.7	40.8	.871	13.20	33.7	10.88	-	-	-	-
1947	1082	478	Jan. 20, 1947	2.0	23.6	.562	7.65	-	-	-	-	-	-

* Revised.

46. Fine Creek at Fine Creek Mills, Va.

Location (revised).--Lat 37°35'52", long 77°49'12", on left bank 10 ft upstream from highway bridge at Fine Creek Mills, Powhatan County, 0.8 mile upstream from mouth, and 6.7 miles northeast of Powhatan.

Drainage area.--23 sq mi, approximately.

Gage.--Inclined staff gage. Crest-stage indicator installed July 26, 1950. Altitude of gage is 160 ft (from topographic map). Prior to July 16, 1946, chain gage at same site and datum.

Average discharge.--6 years (1944-50), 22.0 cfs.

Extremes.--1944-50: Maximum discharge, 1,650 cfs Aug. 4, 1948 (gage height, 7.0 ft, from floodmark); minimum observed, 1.5 cfs Sept. 5, 1947 (gage height, 1.63 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	*10.3	7.45	9.00	-
1945	20.3	17.9	19.0	20.6	24.1	19.8	16.7	30.1	7.34	20.6	8.66	31.0	19.7
1946	11.1	12.1	39.1	24.4	28.9	26.9	24.4	46.1	11.1	10.1	7.56	6.17	20.7
1947	7.82	9.39	11.3	35.3	12.1	32.9	31.7	12.7	6.08	4.93	3.16	7.34	14.6
1948	8.74	23.6	12.9	28.2	38.3	39.7	31.4	18.0	15.3	10.3	*61.9	6.91	*24.6
1949	16.1	29.4	53.9	41.7	39.6	29.6	23.9	21.6	13.9	25.7	24.7	15.4	27.9
1950	19.7	38.7	20.3	23.0	24.8	36.3	16.9	35.7	15.2	13.1	15.3	35.0	24.5

* Revised.

* Not previously published; partly estimated on basis of records for Beaverdam Creek at State Farm.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	*0.52	0.37	0.44	-
1945	1.02	0.87	0.95	1.03	1.09	0.99	0.81	1.51	0.36	1.03	.43	1.51	11.60
1946	.56	.59	1.96	1.22	1.31	1.35	1.18	2.31	.54	.51	.38	.30	12.21
1947	.39	.46	.57	1.76	.55	1.65	1.54	.84	.29	.25	.16	.36	8.62
1948	.44	1.15	.65	1.42	1.80	1.99	1.53	.90	.74	.52	*3.10	.33	*14.57
1949	.81	1.43	2.70	2.09	1.79	1.49	1.16	1.08	.67	1.29	1.23	.75	16.49
1950	.99	1.87	1.02	1.15	1.12	1.82	.82	1.79	.74	.66	.77	1.70	14.45

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1944	1002	-	-	-	-	-	-	-	-	-	-	-	-
1945	1032	*550	Sept. 18, 1945	2.7	19.7	0.857	11.60	20.1	11.87	-	-	-	-
1946	1052	370	May 5, 1946	3.9	20.7	.900	12.21	17.8	10.52	-	-	-	-
1947	1082	224	Apr. 17, 1947	1.5	14.6	.635	8.62	16.0	9.44	-	-	-	-
1948	1112, 1203	1,650	Aug. 4, 1948	3.4	*24.8	*1.07	*14.57	*29.2	*17.27	-	-	-	-
1949	1142	440	July 17, 1949	4.6	27.9	1.21	16.49	26.2	15.43	-	-	-	-
1950	1172	718	Sept. 13, 1950	4.0	24.5	1.07	14.45	-	-	-	-	-	-

* Revised.

47. James River & Kanawha Canal near Richmond, Va.

Location (revised).--Lat 37°33'52", long 77°34'28", on left bank 75 ft downstream from canal bridge, 400 ft downstream from headgates, 1,200 ft north of north end of Boshier Dam on James River, 2.1 miles upstream from Huguenot Memorial Bridge, and 4.4 miles west of city limits of Richmond, Henrico County.

Gage.--Water-stage recorder. Datum of gage is 106.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1938, at datum 3.06 ft higher.

Average discharge.--14 years (1936-50), 866 cfs.

Extremes.--1936-50: Maximum gage height, 19.7 ft Sept. 20, 1944 (discharge not determined, flow of canal merges with James River); no flow at times when headgates were closed.

Remarks.--Canal diverts from James River 1,200 ft above Boshier Dam and discharges into river at several points below gaging station near Richmond. Water is used for industrial purposes. Figures given show flow in canal only; for record of flow of James River near Richmond see following station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	709	735	796	832	818	774	722	703	687	680	676	686	734
1938	809	696	722	683	700	581	559	737	796	738	702	696	700
1939	720	699	659	761	772	753	774	742	650	729	688	729	723
1940	760	806	831	771	814	882	841	909	909	956	1,108	900	874
1941	885	906	959	882	931	945	978	876	866	919	809	756	893
1942	523	775	882	896	910	935	910	897	949	869	919	896	863
1943	1,059	952	982	963	795	997	931	872	827	806	774	707	888
1944	653	693	768	888	928	967	992	956	811	762	750	924	842
1945	827	862	934	994	958	955	937	905	842	811	824	855	890
1946	888	854	936	990	1,013	983	960	1,035	923	867	798	764	917
1947	772	796	847	1,003	857	987	1,005	895	870	876	783	804	875
1948	889	1,014	907	850	981	1,019	1,102	948	903	851	914	841	934
1949	1,078	990	1,220	1,145	1,066	1,074	1,071	1,006	903	886	897	937	1,023
1950	849	971	974	997	1,060	1,055	1,030	987	997	929	884	924	971

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1937		822	(a)	Apr. 27, 1937*	372	734	-	-	733	-
1938		852	2,200	Oct. 21, 1937	0	700	-	-	688	-
1939		872	1,010	Feb. 21, 1939	3	723	-	-	750	-
1940		892	(a)	Aug. 18, 1940	68	874	-	-	904	-
1941		922	1,130	Apr. 5, 1941	128	893	-	-	844	-
1942		952	1,130	Mar. 10, 1942	42	863	-	-	930	-
1943		972	3,220	Oct. 17, 1942	138	888	-	-	816	-
1944		1002	(a)	Sept. 20, 1944	150	842	-	-	885	-
1945		1032	1,370	July 18, 1945	86	890	-	-	895	-
1946		1052	1,230	Dec. 26, 1945	219	917	-	-	895	-
1947		1068	1,150	June 15, 1947	50	875	-	-	908	-
1948		1112	1,260	Apr. 2, 1948	218	923	-	-	975	-
1949		1142	(a)	Dec. 5, 1948	0	1,024	-	-	981	-
1950		1172	1,230	Oct. 31, 1949	0	971	-	-	-	-

* Not previously published.

a Momentary maximum discharge of canal included in figure published for James River near Richmond.

48. James River near Richmond, Va.

Location (revised).--Lat 37°33'47", long 77°32'50", on left bank 0.1 mile upstream from Huguenot Memorial Bridge, 1.7 miles downstream from Boshier Dam, 2.9 miles west of city limits of Richmond, Henrico County, 3.3 miles upstream from Powhite Creek, and at mile 111.7.

Drainage area.--6,757 sq mi.

Supplemental records available.--Records of chemical analyses during 1906-7 together with water temperatures for the water years 1949 and 1950 are published in WSP 236, 1162, and 1186, respectively. Records of chemical analyses and water temperatures for the water year 1948 are published in Virginia Division of Water Resources, Bull. 11. Gage-height records collected at Mayo's Bridge, at mile 104.6, since 1876 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 98.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years (1934-50), 7,902 cfs (adjusted).

Extremes.--1934-50: Maximum discharge, 175,000 cfs Mar. 19, 1936 (gage height, 23.42 ft); minimum daily, 46 cfs Sept. 18-20, 25-27, Oct. 1-4, 7, 1941, Sept. 8, 9, 12, 1944.

Remarks.--Flow regulated by powerplants above station. James River & Kanawha Canal (see preceding station) diverts water around station. Records above 120,000 cfs include the flow of the canal.

JAMES RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of James River near Richmond, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*3,469	3,299	16,100	16,940	10,580	15,530	23,180	5,525	4,330	3,766	5,384	13,830	*9,977
1936	1,688	5,624	7,727	27,350	17,380	27,370	15,220	4,523	2,700	1,427	1,294	903	9,425
1937	4,086	1,370	6,877	25,500	14,300	7,366	19,240	8,502	3,929	4,609	5,793	6,692	8,977
1938	19,090	8,732	6,361	8,296	6,921	8,446	5,939	4,190	8,077	8,197	10,330	1,882	8,068
1939	1,309	2,275	5,612	5,653	19,850	13,230	6,506	3,813	2,548	3,086	6,279	1,467	5,885
1940	1,240	2,188	1,542	3,065	10,970	5,514	13,020	6,561	14,110	4,644	19,120	5,551	7,266
1941	1,660	4,353	5,136	7,757	3,899	5,644	9,096	2,137	1,906	6,221	769	248	4,072
1942	177	338	2,071	2,494	4,046	5,995	2,866	12,180	6,726	11,600	3,276	4,511	4,511
1943	14,110	4,805	9,235	10,230	14,270	12,580	10,200	8,633	5,660	4,605	989	545	7,967
1944	448	1,537	1,156	3,602	5,834	16,070	8,528	7,096	1,885	906	871	11,910	4,972
1945	4,616	2,202	5,611	8,842	7,689	8,383	5,386	5,377	2,183	3,453	2,338	7,727	5,308
1946	2,144	2,710	8,711	13,140	11,820	9,380	6,569	11,470	5,090	2,911	1,545	993	6,357
1947	1,004	1,358	1,903	10,980	3,613	9,710	8,176	3,758	3,233	2,764	1,488	1,258	4,114
1948	2,462	8,683	3,534	5,084	14,220	14,010	18,240	4,596	2,729	9,288	1,646	7,879	7,879
1949	5,351	10,100	26,480	19,860	13,420	12,290	13,320	10,930	6,434	10,680	6,907	4,198	11,680
1950	2,673	7,032	5,673	4,942	13,400	8,272	4,824	10,276	5,961	2,832	1,933	10,330	6,433

* Not previously published; partly estimated from record for station at Cartersville.

Monthly and yearly runoff, in inches (adjusted)^a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*0.71	0.66	2.87	3.01	1.74	2.77	3.95	1.07	0.83	0.76	0.77	2.40	*21.48
1936	.41	1.05	1.44	4.78	2.69	4.80	2.63	.89	.56	.37	.34	.27	20.43
1937	.82	.35	1.31	4.46	2.33	1.40	3.29	1.57	.76	.90	1.10	1.22	19.51
1938	3.39	1.56	1.21	1.53	1.18	1.54	1.07	.84	1.46	1.52	1.86	.43	17.61
1939	.35	.49	1.07	1.09	5.18	2.39	1.20	.78	.53	.65	1.19	.36	13.28
1940	.34	.49	.40	.65	1.58	1.09	2.29	1.28	2.48	.96	3.41	1.08	16.35
1941	.43	.87	1.04	1.46	.74	1.12	1.66	.51	.46	1.22	.27	1.17	9.97
1942	.12	.18	.50	.58	.76	1.19	.62	2.24	1.27	.48	2.17	.69	10.80
1943	2.58	.95	1.74	1.91	2.32	2.32	1.84	1.63	1.07	.92	.30	.21	17.79
1944	.19	.37	.33	.77	1.08	2.90	1.57	1.37	.45	.28	.28	2.10	11.69
1945	.93	.51	1.12	1.68	1.33	1.59	1.04	1.07	.50	.73	.54	1.42	12.46
1946	.52	.59	1.65	2.41	1.96	1.76	1.24	2.13	.99	.64	.40	.29	14.60
1947	.30	.36	.47	2.04	.69	1.82	1.52	.79	.68	.62	.39	.34	10.02
1948	.57	1.61	.76	1.01	2.43	2.56	3.19	1.96	.91	.61	1.74	.41	17.76
1949	1.10	1.83	4.73	3.58	2.23	2.28	2.38	2.04	1.22	1.97	1.33	.85	25.54
1950	.60	1.32	1.13	1.01	2.23	1.59	.97	1.92	1.15	.64	.48	1.83	14.87

* Not previously published; see footnote to preceding table.

^aAdjusted for diversion into James River & Kanawha Canal; flow in canal estimated for 1935 and 1936, and adjusted figures supersede unadjusted figures previously published in WSP 782 and 802.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted ^a /			Observed	Adjusted ^a /	
		Momentary maximum		Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day							
1935	782	b127,000	Sept. 7, 1935	1,070	*9,977	*10,760	*1.59	*21.48	9,306	*10,030	*20.12
1936	802	b175,000	Mar. 19, 1936	274	9,425	10,150	1.50	20.43	9,208	9,935	20.01
1937	822	b148,000	Apr. 27, 1937	768	8,977	9,712	1.44	19.51	10,610	11,550	23.19
1938	852	92,500	Oct. 21, 1937	1,307	8,068	8,768	1.30	17.61	5,963	6,651	13.36
1939	872	57,900	Aug. 20, 1939	742	5,885	6,608	.978	13.28	5,527	6,276	12.60
1940	892	b151,000	Aug. 16, 1940	258	7,266	8,124	1.20	16.35	7,784	8,671	17.46
1941	922	39,100	Apr. 6, 1941	46	4,072	4,965	.735	9.97	3,356	4,200	8.43
1942	952	b68,600	May 24, 1942	46	4,511	5,374	.795	10.80	6,670	7,600	15.27
1943	972	b19,000	Oct. 17, 1942	109	7,967	8,855	1.31	17.79	5,852	6,668	13.41
1944	1002	b150,000	Sept. 20, 1944	46	4,972	5,804	.659	11.69	5,757	6,642	13.56
1945	1032	61,100	Sept. 20, 1945	470	5,308	6,196	.917	12.46	5,403	6,296	12.66
1946	1052	41,300	Jan. 9, 1946	392	6,357	7,274	1.08	14.60	5,571	6,466	12.97
1947	1082	37,000	Mar. 17, 1947	353	4,114	4,969	.738	10.02	4,979	5,887	11.83
1948	1112	75,000	Apr. 2, 1948	570	7,879	8,813	1.30	17.76	10,180	11,160	22.48
1949	1142	b136,000	Dec. 5, 1948	1,880	11,680	12,700	1.88	25.54	9,438	10,420	20.93
1950	1172	59,500	Sept. 12, 1950	943	6,433	7,404	1.10	14.87	-	-	-

* Not previously published.

^aAdjusted for diversion into James River & Kanawha Canal; flow in canal estimated for 1935 and 1936, and adjusted figures supersede unadjusted figures previously published in WSP 802.

^bIncludes flow of James River & Kanawha Canal.

49. Falling Creek near Drewrys Bluff, Va.

Location--Lat 37°27'40", long 77°28'00", at highway bridge, 2.4 miles northeast of town of Drewrys Bluff, Chesterfield County, 2.7 miles downstream from Pocoshock Creek, and 3.7 miles upstream from mouth.

Drainage area--54 sq mi, approximately.

Supplemental records available--Records of chemical analyses for the water year 1946 are published in WSP 1050.

Gage--Water-stage recorder. Altitude of gage is 68 ft (from topographic map).

Average discharge--8 years (1942-50), 58.8 cfs.

Extremes--1942-50: Maximum discharge, 7,270 cfs July 18, 1945 (gage height, 10.1 ft); minimum, 1.0 cfs July 30, 31, 1944; minimum gage height, 0.97 ft Aug. 29, 1943, July 8, 1944.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	-	-	-	-	\$7.13
1943	89.7	33.0	59.2	46.5	114	68.5	56.2	36.1	13.3	15.8	3.25	3.73	44.6
1944	4.51	8.84	11.9	43.2	81.9	166	100	29.3	6.66	7.83	52.1	12.8	43.7
1945	30.5	45.2	67.5	79.1	88.9	63.7	44.6	76.6	20.05	253	28.0	82.5	73.5
1946	50.1	41.0	142	109	126	73.6	69.3	170	51.9	85.8	35.8	12.2	79.0
1947	13.6	18.7	25.6	98.5	35.8	97.0	86.5	34.1	21.3	20.3	4.41	38.2	41.2
1948	16.9	89.0	40.1	89.4	137	146	124	54.1	34.0	9.59	22.8	4.39	63.6
1949	12.9	51.0	101	97.2	111	76.4	67.4	97.9	32.5	47.0	96.8	28.7	68.3
1950	57.0	137	47.9	47.4	66.9	83.5	39.2	70.2	26.6	61.4	14.0	23.6	56.2

* Not previously published; partly estimated on basis of records for Blackwater River near Dendron.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	-	-	-	-	\$0.15
1943	1.91	0.68	1.27	0.99	2.20	1.46	1.16	0.77	0.27	0.34	0.07	1.08	11.20
1944	.10	.18	.25	.92	1.64	3.54	2.06	.63	.14	.17	1.11	.26	11.00
1945	.65	.93	1.44	1.68	1.72	1.36	.92	1.64	.42	5.41	.60	1.71	18.48
1946	.64	.85	3.03	2.33	2.45	1.57	1.43	3.63	1.07	1.85	.76	.25	19.82
1947	.29	.39	.55	2.10	.69	2.08	1.78	.73	.44	.43	.09	.79	10.36
1948	.36	1.84	.86	1.91	2.74	3.11	2.57	1.15	.70	.21	.49	.09	16.03
1949	.28	1.05	2.16	2.08	2.14	1.63	1.40	2.09	.67	1.00	2.06	.59	17.15
1950	1.22	2.83	1.02	1.01	1.29	1.79	.81	1.50	.55	1.31	.30	.49	14.12

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	972	-	-	-	-	-	-	-	-
1943	972	575	Oct. 26, 1942	1.5	44.6	0.826	11.20	31.4	7.87
1944	1002	745	Aug. 7, 1944	1.0	43.7	.809	11.00	53.6	13.49
1945	1032	7,270	July 18, 1945	7.4	73.5	1.36	18.48	79.4	19.98
1946	1052	940	July 23, 1946	9.5	79.0	1.46	19.82	65.9	16.53
1947	1082	790	Sept. 25, 1947	1.7	41.2	.763	10.36	48.5	12.19
1948	1112	745	Feb. 14, 1948	3.2	65.6	1.16	16.03	65.3	16.46
1949	1142	700	Aug. 16, 1949	4.0	68.3	1.26	17.15	74.6	18.73
1950	1172	1,420	Nov. 2, 1949	4.9	56.2	1.04	14.12	-	-

50. Buffalo Creek near Hampden Sydney, Va.

Location--Lat 37°15', long 78°29', at bridge on State Highway 626, 0.8 mile upstream from Locket Creek, 2 miles northwest of Hampden Sydney, Prince Edward County, and 6 miles southwest of Farmville.

Drainage area--70 sq mi, approximately.

Supplemental records available--Records of chemical analyses for water year 1947 are published in WSP 1102.

Gage--Staff gage. Crest-stage indicator, installed Aug. 4, 1950. Altitude of gage is 340 ft (by barometer).

Extremes--1946-50: Maximum discharge, 2,640 cfs (revised) Feb. 14, 1948 (gage height, 7.1 ft, from graph based on gage readings), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 11 cfs Sept. 5, 6, 1947 (gage height, 1.60 ft). Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second, of Buffalo Creek near Hampden Sydney, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	*57.3	32.2	-
1947	38.2	47.5	48.3	115	49.1	107	87.6	48.5	33.6	31.1	28.3	36.8	56.0
1948	71.8	97.5	52.9	64.6	142	124	139	78.3	77.1	44.4	51.7	29.6	80.7
1949	57.7	111	145	112	112	84.7	73.6	87.1	41.7	45.9	34.4	30.6	77.7
1950	46.8	87.4	51.9	53.4	75.0	103	51.6	92.8	62.7	128	60.8	83.2	74.8

* Not previously published; estimated on basis of records for Appomattox River at Farmville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	*0.94	0.51	-
1947	0.63	0.76	0.80	1.89	0.73	1.76	1.40	0.80	0.54	0.51	.47	.59	10.88
1948	1.19	1.55	.87	1.06	2.19	2.04	2.22	1.29	1.23	.73	.85	.47	15.69
1949	.95	1.77	2.35	1.84	1.67	1.40	1.17	1.43	.66	.76	.57	.49	15.06
1950	.77	1.40	.85	.88	1.11	1.70	.82	1.53	1.00	2.11	1.00	1.33	14.50

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	-	-	-	-	-	-	-	-	-
1947	1082	730	Apr. 17, 1947	11	56.0	0.800	10.88	63.3	12.30
1948	1112	*2,640	Feb. 14, 1948	22	80.7	1.15	15.69	88.2	17.15
1949	1142	*2,440	Dec. 4, 1948*	24	77.7	1.11	15.06	67.1	13.01
1950	1172	*1,660	Mar. 23, 1950	24	74.8	1.07	14.50	-	-

* Revised.

51. Appomattox River at Farmville, Va.

Location.--Lat 37°18', long 78°23', at highway bridge 1,000 ft north of town limits of Farmville, Prince Edward County, and 1 $\frac{1}{4}$ miles downstream from Buffalo Creek.

Drainage area.--306 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1947 are published in WSP 1102.

Gage.--Water-stage recorder. Datum of gage is 281.93 ft above mean sea level, datum of 1929. Prior to Nov. 29, 1928, chain gage at same site and datum.

Average discharge.--24 years (1926-50), 301 cfs (corrected).

Extremes.--1926-50: Maximum discharge, 21,000 cfs Aug. 15, 1940 (gage height, 23.60 ft), from rating curve extended above 12,000 cfs by logarithmic plotting; minimum, 3.8 cfs Sept. 25, 1941; minimum daily, 9 cfs Sept. 20, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	250	106	71.4	119	95.5	49.6	-
1927	75.8	165	409	155	298	180	291	116	76.0	87.2	252	79.5	181
1928	289	376	476	280	392	313	586	180	133	98.6	94.6	547	384
1929	160	143	168	200	379	529	573	249	205	199	80.5	56.7	244
1930	249	270	272	300	405	213	224	101	87.3	44.2	19.6	21.8	182
1931	30.3	69.8	90.8	126	118	226	318	392	121	105	187	82.5	156
1932	37.8	51.0	103	424	195	627	249	251	82.8	44.3	24.5	27.5	177
1933	397	606	549	495	406	260	577	252	218	158	102	75.8	340
1934	52.8	74.3	125	129	114	614	247	172	172	83.9	101	368	188
1935	258	349	679	520	491	568	902	265	290	327	216	653	459
1936	137	379	305	1,170	713	805	474	189	228	131	205	106	403
1937	139	119	226	1,223	509	306	875	424	294	360	398	291	430
1938	666	274	218	368	255	448	265	187	850	426	200	134	360
1939	127	202	333	306	723	648	276	153	235	449	243	109	314
1940	150	239	153	232	815	280	585	166	156	179	1,783	149	406
1941	128	322	232	336	182	253	380	152	147	290	71.1	50.3	210
1942	41.0	68.7	108	135	194	216	118	203	120	189	608	122	178
1943	551	184	402	331	788	501	333	261	133	104	48.9	49.5	305
1944	61.6	152	118	220	387	936	498	228	95.1	103	189	869	320
1945	287	195	506	460	328	347	282	153	193	171	175	873	344
1946	180	236	676	451	602	387	304	694	229	316	224	129	369
1947	162	169	181	578	188	521	419	193	127	104	77.2	150	240
1948	253	475	209	346	671	578	692	297	290	171	359	107	369
1949	258	454	864	547	478	347	328	356	181	387	154	122	373
1950	222	438	226	244	379	399	212	431	187	354	185	383	303

Monthly and yearly runoff, in inches, of Appomattox River at Farmville, Va.

Water year	Monthly and yearly runoff, in inches, of Appomattox River at Farmville, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	0.84	0.40	0.26	0.45	0.36	0.18	-
1927	0.29	0.60	1.54	0.58	1.01	0.68	1.06	.44	.28	.33	.95	.29	8.05
1928	1.09	1.37	1.80	1.06	1.38	1.18	2.14	.68	.49	.37	3.56	2.00	17.12
1929	.60	.52	.63	.75	1.29	1.99	2.09	.94	.75	.75	.30	.21	10.82
1930	.94	.98	1.02	1.13	1.38	.80	.82	.38	.32	.17	.07	.08	8.09
1931	.11	.25	.34	.49	.40	.85	1.16	1.48	.44	.40	.70	.30	6.91
1932	.14	.19	.39	1.60	.69	2.38	.91	.95	.30	.17	.09	.10	7.89
1933	1.50	2.21	2.06	1.87	1.38	.99	2.11	.95	.79	.59	.38	.28	15.10
1934	.20	.27	.47	.49	.39	2.32	.90	.65	.63	.32	.38	1.34	8.36
1935	.97	1.27	2.56	1.96	1.67	2.14	3.29	1.00	1.06	1.23	.81	2.38	20.34
1936	.52	1.38	1.15	4.40	2.51	3.03	1.73	.71	.83	.49	.77	.39	17.91
1937	.52	.43	.85	4.61	1.73	1.15	3.19	1.60	1.07	1.36	1.50	1.08	19.07
1938	2.51	1.00	.82	1.46	.87	1.68	.97	.70	3.10	1.60	.75	.49	15.95
1939	.48	.74	1.26	1.15	2.46	2.44	1.01	.58	.81	1.70	.92	.40	13.95
1940	.49	.87	.58	.87	2.87	1.05	2.13	.70	.57	.67	6.72	.54	18.06
1941	.48	1.17	.87	1.27	.62	.88	1.38	.57	.54	1.09	.27	.18	9.32
1942	.15	.25	.41	.51	.66	.81	.43	.76	.44	.71	2.29	.45	7.87
1943	2.08	.67	1.51	1.24	2.69	1.89	1.22	.98	.48	.39	.18	.18	13.51
1944	.23	.55	.44	.83	1.36	3.53	1.82	.86	.35	.39	.71	3.17	14.24
1945	1.08	.71	1.31	1.90	1.56	1.23	1.26	1.06	.58	.72	.66	3.18	15.23
1946	.68	.86	2.55	1.70	2.05	1.45	1.11	2.62	.83	1.19	.84	.47	16.35
1947	.61	.62	.68	2.18	.64	1.96	1.53	.73	.46	.39	.29	.55	10.64
1948	.95	1.73	.79	1.30	2.36	2.18	2.52	1.12	1.06	.64	1.35	.39	16.39
1949	.97	1.65	3.25	2.06	1.62	1.30	1.19	1.34	.66	1.45	.58	.44	16.51
1950	.84	1.60	.85	.92	1.29	1.50	.77	1.63	.68	1.26	.70	1.40	13.44

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622	-	-	-	-	-	-	-	-
1927	972	*2,560	Dec. 29, 1926	22	181	0.592	8.05	223	9.88
1928	972	13,900	Aug. 12, 1928	18	384	1.25	17.12	328	14.61
1929	972	5,530	Apr. 17, 1929	46	244	.797	10.82	271	12.01
1930	972	2,800	Feb. 5, 1930	11	182	.595	8.09	132	5.85
1931	972	2,960	May 22, 1931	14	156	.510	6.91	156	6.93
1932	972	5,400	Mar. 7, 1932	9	177	.578	7.89	291	12.94
1933	972	6,650	Oct. 18, 1932	25	340	1.11	15.10	231	10.27
1934	972	4,570	Mar. 5, 1934	31	188	.614	8.36	275	12.22
1935	972	11,300	Sept. 6, 1935	79	459	1.50	20.34	419	18.59
1936	972	7,270	Mar. 18, 1936	80	403	1.32	17.91	375	16.66
1937	972	12,100	Apr. 26, 1937	98	430	1.41	19.07	487	21.60
1938	852	7,110	June 21, 1938	102	360	1.18	15.95	318	14.10
1939	872	3,460	Feb. 12, 1939	88	314	1.03	13.95	302	13.41
1940	892	21,000	Aug. 15, 1940	94	406	1.33	18.06	420	18.64
1941	922	2,640	Nov. 15, 1940	32	210	.686	9.32	172	7.61
1942	952	4,570	Aug. 9, 1942	30	178	.582	7.87	255	11.32
1943	972	3,940	Feb. 6, 7, 1943	33	305	.997	13.51	236	10.47
1944	1002	13,700	Sept. 20, 1944	41	320	1.05	14.24	362	16.12
1945	1032	13,500	Sept. 19, 1945	69	344	1.12	15.23	366	16.22
1946	1052	3,740	Dec. 28, May 5	94	369	1.21	16.35	320	14.17
1947	1082	3,470	Mar. 15, 1947	44	240	.784	10.64	275	12.20
1948	1112	5,400	Apr. 2, 1948	84	369	1.21	16.39	423	18.79
1949	1142	9,000	Dec. 5, 1948	90	373	1.22	16.51	315	13.93
1950	1172	3,350	Nov. 1, 1949	100	303	.990	13.44	-	-

* Revised.

52. Appomattox River at Mattoax, Va.

Location (revised).--Lat 37°25'17", long 77°51'33", at Southern Railway bridge at Mattoax, Amelia County, 0.3 mile upstream from Skinquarter Creek and 3.7 miles upstream from Flat Creek.

Drainage area.--729 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1947 are published in WSP 1102.

Gage.--Water-stage recorder. Datum of gage is 174.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. August 1900 to December 1905, chain gage at same site, different datum. March 1926 to October 1936, chain gage at same site and datum.

Average discharge.--29 years (1900-1905, 1926-50), 741 cfs.

Extremes.--1900-1905, 1926-50: Maximum discharge, 35,000 cfs Aug. 18, 1940 (gage height, 35.3 ft, from floodmark in gage house), from rating curve extended above 20,000 cfs on basis of records for stations at Farmville and near Petersburg; minimum, 11 cfs Oct. 2, 1930 (gage height, 3.52 ft).

JAMES RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Appomattox River at Mattox, Va.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	-	170
1901	175	219	376	950	320	505	2,322	2,064	477	575	2,592	493	928
1902	360	336	1,489	1,684	2,501	2,014	1,004	601	668	277	437	246	960
1903	934	877	1,637	1,762	2,582	2,592	2,449	598	1,006	852	704	681	1,381
1904	372	414	551	397	1,290	1,109	569	595	537	254	339	789	598
1905	193	295	662	892	1,443	1,074	776	807	321	407	511	549	656
1906	229	213	1,710	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	556	208	121	119	201	101	-
1927	120	575	1,080	521	857	513	838	317	203	164	426	171	478
1928	412	480	1,100	598	975	750	1,280	853	279	181	1,860	1,320	840
1929	333	263	296	359	744	1,600	1,180	655	524	395	194	96.2	552
1930	1,040	653	670	750	1,110	442	688	237	167	114	35.6	31.9	491
1931	32.7	107	154	235	248	496	869	982	272	201	586	146	362
1932	71.7	110	221	911	478	1,550	744	825	170	79.3	36.1	30.0	420
1933	783	1,220	1,200	1,450	1,050	582	1,510	544	579	360	357	154	812
1934	101	145	243	261	269	1,896	707	381	384	213	239	785	445
1935	331	293	1,396	1,302	1,033	1,249	2,262	524	544	546	382	1,202	919
1936	221	676	572	3,322	1,952	2,107	1,227	353	321	209	384	192	960
1937	327	235	492	3,046	1,412	703	2,789	838	586	939	766	921	1,085
1938	1,553	661	466	957	647	1,183	677	399	1,827	1,918	475	281	923
1939	250	493	776	689	1,731	1,619	719	370	482	880	522	221	722
1940	298	535	335	485	1,855	769	1,509	576	409	428	4,566	337	1,007
1941	254	682	470	763	438	646	857	296	264	552	133	94.9	454
1942	64.4	111	305	407	502	656	313	261	232	382	1,090	240	381
1943	949	412	641	831	1,828	1,123	727	632	278	269	99.3	78.2	649
1944	97.7	246	221	493	890	2,287	1,275	512	177	219	347	1,370	676
1945	676	438	845	1,101	1,147	775	748	898	331	639	324	1,393	774
1946	340	468	1,500	1,285	1,499	960	828	1,884	541	834	404	264	900
1947	290	358	387	1,356	441	1,319	1,045	407	253	237	137	365	551
1948	521	1,089	492	818	1,776	1,565	1,704	805	603	341	823	179	887
1949	540	849	2,267	1,569	1,309	938	823	925	361	771	551	293	934
1950	442	1,439	468	539	950	1,054	460	1,121	549	764	335	815	742

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	-	0.26
1901	0.28	0.33	0.59	1.50	0.46	0.80	3.56	3.26	0.73	0.91	4.10	.75	17.27
1902	.47	.51	2.35	2.66	3.57	3.18	1.54	.95	1.02	.44	.69	.38	17.86
1903	1.58	1.34	2.59	2.79	3.69	4.10	3.75	.95	1.54	1.35	1.11	1.04	25.73
1904	.59	.63	.87	.63	1.91	1.75	.87	.94	.82	.40	.54	1.20	11.15
1905	.31	.45	1.05	1.41	2.06	1.70	1.16	1.28	.49	.64	.81	.84	12.22
1906	.36	.33	2.71	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	.85	.33	.19	.66	.32	.16	-
1927	.19	.88	1.71	.82	1.20	.81	1.28	.50	.31	.26	.67	.26	8.89
1928	.65	.73	1.74	.95	1.44	1.19	1.96	1.35	.43	.29	2.94	2.02	15.69
1929	.53	.40	.47	.57	1.06	2.52	1.81	1.04	.80	.62	.31	.15	10.28
1930	1.65	1.00	1.06	1.19	1.58	.70	1.05	.37	.26	.18	.06	.05	9.15
1931	.05	.16	.24	.37	.35	.78	1.33	1.56	.42	.32	.93	.22	6.73
1932	.11	.17	.35	1.44	.71	2.46	1.14	.99	.26	.13	.06	.05	7.87
1933	1.23	1.86	1.90	2.29	1.50	.89	2.31	.86	.89	.57	.56	.24	15.10
1934	.16	.22	.38	.41	.38	2.52	1.08	.60	.59	.34	.38	1.20	8.26
1935	.52	.45	2.20	2.06	1.48	1.97	3.46	.83	.83	.86	.60	1.84	17.10
1936	.35	1.03	.90	5.26	2.89	3.33	1.87	.56	.49	.33	.61	.29	17.91
1937	.52	.36	.78	4.82	2.02	1.11	4.27	1.33	.90	1.49	1.21	1.41	20.22
1938	2.46	1.01	.74	1.51	.92	1.87	1.04	.63	2.80	5.03	.75	.43	17.19
1939	.40	.75	1.22	1.09	2.47	2.56	1.10	.59	.71	1.40	.83	.34	13.46
1940	.47	.82	.53	.77	2.74	1.21	2.31	.91	.63	.68	7.22	.52	18.81
1941	.40	1.04	.74	1.21	.63	1.02	1.32	.47	.40	.87	.21	.14	8.45
1942	.10	.17	.48	.64	.72	1.04	.48	.41	.35	.60	1.73	.37	7.09
1943	1.50	.63	1.01	1.31	2.61	1.78	1.11	1.00	.43	.43	.16	.12	12.09
1944	.15	.38	.35	.78	1.32	3.62	1.95	.81	.27	.35	.55	2.10	12.63
1945	1.07	.67	1.34	1.74	1.64	1.22	1.15	1.42	.51	1.01	.51	2.13	14.41
1946	.54	.72	2.38	2.03	2.14	1.52	1.27	2.97	.83	1.31	.64	.40	16.75
1947	.46	.52	.61	2.14	.63	2.09	1.60	.64	.40	.37	.22	.59	10.27
1948	.82	1.66	.76	1.29	2.63	2.48	2.61	1.27	.92	.54	1.30	.27	16.55
1949	.85	1.29	3.58	2.48	1.87	1.49	1.26	1.46	.55	1.22	.87	.45	17.37
1950	.70	2.20	.74	.85	1.85	1.67	.70	1.78	.84	1.21	.53	1.25	13.82

Yearly discharge, in cubic feet per second, of Appomattox River at Mattoax, Va.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1900	(a)	-	-	-	-	-	-	-	-
1901	(a)	*13,400	May 25, 1901	152	928	1.27	17.27	1,048	19.50
1902	(a)	*12,000	Feb. 28, 1902	150	960	1.32	17.86	1,066	19.84
1903	(a)	*10,600	Mar. 25, 1903	212	1,381	1.89	25.73	1,203	22.41
1904	(a)	*6,120	Sept. 16, 1904	148	598	.820	11.15	582	10.87
1905	(a)	*5,020	Feb. 25, 1905	154	656	.900	12.22	741	13.81
1906	(a)	-	-	-	-	-	-	-	-
1926	622	-	-	-	-	-	-	-	-
1927	642	3,850	Dec. 29, 1926	58	478	.656	8.89	497	9.23
1928	662, 972	11,200	Aug. 15, 1928	64	840	1.15	15.69	747	13.97
1929	682	4,770	Apr. 20, 1929	64	552	.757	10.28	676	12.59
1930	697	4,090	Oct. 22, 1929	18	491	.674	9.15	317	5.89
1931	712	3,450	May 25, 1931	13	362	.497	6.73	371	6.91
1932	727, 972	6,700	Mar. 10, 1932	15	420	.576	7.87	655	12.23
1933	742	5,090	Apr. 20, 1933	26	812	1.11	15.10	584	10.87
1934	757, 972	7,800	Mar. 8, 1934	64	445	.610	8.26	574	10.67
1935	782, 972	8,190	Dec. 4, 1934	166	919	1.26	17.10	872	16.21
1936	802, 972	10,300	Mar. 20, 1936	95	960	1.32	17.91	926	17.29
1937	822, 972	20,100	Apr. 28, 1937	199	1,085	1.49	20.22	1,222	22.77
1938	872, 972	8,840	June 24, 1938	164	923	1.27	17.19	825	15.35
1939	872	3,930	Mar. 4, 1939	164	722	.990	13.46	692	12.91
1940	892	35,000	Aug. 18, 1940	204	1,007	1.58	18.81	1,027	19.17
1941	922	3,080	Apr. 6, 1941	61	454	.623	8.45	377	7.02
1942	952	3,850	Aug. 12, 1942	46	381	.523	7.09	509	9.48
1943	972	5,700	Apr. 9, 1943	49	649	.890	12.09	528	9.83
1944	1002	10,300	Sept. 23, 1944	67	676	.927	12.63	793	14.85
1945	1032	10,300	Sept. 22, 1945	143	774	1.06	14.41	803	14.97
1946	1052	4,730	Dec. 30, 1945	182	900	1.23	16.75	791	14.70
1947	1082	4,300	Mar. 18, 1947	71	551	.756	10.27	643	11.92
1948	1112	7,420	Feb. 18, 1948	339	887	1.22	16.55	1,020	19.03
1949	1142	9,100	Dec. 7, 1948	218	954	1.28	17.37	821	15.29
1950	1172	6,230	Nov. 4, 1949	189	742	1.02	13.82	-	-

* Revised.
 * Not previously published.
 a From Virginia Geological Survey, Bull. 31.

53. Flat Creek near Amelia, Va.

Location.--Lat 37°23', long 78°03', at bridge on State Highway 38, half a mile downstream from Horsepen Creek and 6 miles northwest of Amelia, Amelia County.

Drainage area.--73 sq mi, approximately.

Gage.--Staff gage. Altitude of gage is 230 ft (from topographic map).

Extremes.--1946-47: Maximum discharge (revised), 1,090 cfs Sept. 26, 1947 (gage height, 6.9 ft, from graph based on gage readings); minimum daily, 3.5 cfs (corrected) Sept. 16, 17, 1947; minimum gage height observed, 0.62 ft Sept. 14, 15, 1947.
 The flood of Feb. 15, 1948 reached a stage of 7.23 ft (discharge, 1,300 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	*38.3	-
1947	25.1	27.1	31.4	112	44.8	154	94.6	35.8	23.6	31.4	16.8	74.8	56.0

* Not previously published; partly estimated on basis of records for Deep Creek near Mannboro.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	*0.59	-
1947	0.40	0.41	0.50	1.76	0.64	2.43	1.45	0.56	0.36	0.50	0.27	1.14	10.42

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1082	*1,090	Sept. 26, 1947*	3.5	56.0	0.767	10.42	-	-

* Revised.

54. Deep Creek near Mannboro, Va.

Location (revised).--Lat 37°16'59", long 77°52'22", at bridge on State Highway 38, 0.9 mile upstream from Sweathouse Creek, 3.4 miles northwest of Mannboro, Amelia County, and 7.5 miles southeast of Amelia.

Drainage area.--156 sq mi.

Gage.--Water-stage recorder. Datum of gage is 177.20 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 2, 1949, staff gage at same site and datum.

Extremes.--1946-50: Maximum discharge, 7,140 cfs Sept. 25, 1947 (gage height, 13.1 ft, from floodmarks); minimum observed, 10 cfs Sept. 6, 1947 (gage height, 1.08 ft).

Flood in August 1940 reached a stage of 14.8 ft (discharge, 10,000 cfs, from rating curve extended above 3,800 cfs by logarithmic plotting), from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	*70.4
1947	64.2	78.3	86.0	279	94.7	257	216	84.3	59.3	93.5	27.7	27.5	131
1948	66.7	345	111	178	366	355	313	142	74.5	44.2	74.5	23.1	173
1949	63.9	180	296	223	255	176	135	197	61.2	102	132	59.1	156
1950	75.0	320	94.1	95.3	145	207	88.7	283	82.0	148	56.2	74.0	139

* Not previously published; partly estimated on basis of records for Appomattox River at Farmville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	*0.50
1947	0.48	0.56	0.64	2.06	0.63	1.90	1.54	0.62	0.42	0.69	0.21	1.68	11.43
1948	.49	2.47	.62	1.31	2.53	2.63	2.24	1.05	.53	.33	.55	.19	15.14
1949	.47	1.28	2.19	1.65	1.70	1.30	.97	1.45	.44	.75	.98	.42	13.60
1950	.55	2.29	.70	.70	.97	1.53	.63	2.09	.59	1.09	.42	.53	12.09

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1082	-	-	-	10	131	0.840	11.43	156
1948	1112	7,140	Sept. 25, 1947	1,340	17	173	1.11	15.14	1,750
1949	1142	4,560	Feb. 15, 1948	1,350	22	156	1.00	13.60	152
1950	1172	1,300	Dec. 31, 1948	1,430	26	139	.891	12.09	-

† Corrected.

55. Appomattox River near Petersburg, Va.

Location (revised).--Lat 37°13'33", long 77°32'20", 2.2 miles upstream from dam of Virginia Electric & Power Co., 4.2 miles downstream from Whipponock Creek, and 5.9 miles west of corporate limits of city of Petersburg, Dinwiddie County.

Drainage area.--1,335 sq mi.

Supplemental records available.--Records of chemical analyses for 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Altitude of gage is 118 ft (by barometer). Prior to Sept. 22, 1931, water-stage recorder at site 0.8 mile downstream at different datum.

Average discharge.--24 years (1926-50), 1,205 cfs.

Extremes.--1926-50: Maximum discharge, 28,000 cfs Aug. 20, 1940 (gage height, 18.15 ft); minimum, 19 cfs Sept. 21-27, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*206	*950	*1,740	*860	*1,350	*845	*1,350	*528	341	186	615	352	*773
1928	501	577	1,700	1,040	1,700	1,340	2,340	1,530	577	340	1,850	2,170	1,301
1929	536	445	498	591	1,350	3,100	1,740	1,190	1,050	576	307	141	958
1930	1,940	1,080	1,170	1,430	1,990	670	1,190	422	292	176	63.6	59.9	867
1931	*58	*185	*261	345	368	868	1,590	1,750	801	415	1,630	264	*714
1932	128	179	377	1,633	930	2,678	1,293	1,046	260	120	44.2	32.3	729
1933	1,400	1,891	1,962	2,551	1,918	951	2,466	1,053	1,020	554	650	264	1,384
1934	143	237	404	446	527	2,915	1,242	797	776	411	445	1,408	814
1935	454	449	1,967	2,304	1,675	2,020	3,908	965	1,314	896	547	2,166	1,550
1936	354	955	911	5,669	3,724	3,155	2,330	703	583	337	549	256	1,622
1937	442	319	708	4,861	2,294	1,225	3,827	1,864	995	1,480	1,360	1,672	1,750
1938	2,379	1,189	813	1,637	1,146	1,978	1,306	730	3,548	3,992	950	485	1,668
1939	428	948	1,354	1,249	2,688	2,789	1,489	676	710	1,637	1,045	391	1,276
1940	530	927	570	826	3,160	1,363	2,465	1,232	807	775	8,003	515	1,661

* Not previously published; estimated or partly estimated on basis of records for station at Mattox.

Monthly and yearly mean discharge, in cubic feet per second, of Appomattox River near Petersburg, Va.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	436	1,191	839	1,502	1,231	1,408	438	365	758	190	123		760
1942	75.7	146	423	560	694	1,151	597	599	360	549	1,246	328	545
1943	1,524	698	1,177	1,439	2,214	2,005	1,399	1,068	602	668	163	127	1,141
1944	150	371	369	941	1,602	3,832	2,226	848	288	325	582	1,426	1,078
1945	975	816	1,603	1,939	2,122	1,369	1,317	2,140	567	2,458	515	1,637	1,453
1946	552	823	2,472	2,330	2,674	1,534	1,669	3,435	1,007	1,383	629	462	1,578
1947	506	608	669	2,356	783	2,297	1,806	749	495	484	217	976	998
1948	717	2,152	913	1,560	3,214	2,917	2,921	1,424	918	527	1,073	282	1,542
1949	798	1,407	3,325	2,495	2,200	1,517	1,327	1,634	608	1,037	917	510	1,481
1950	607	2,755	870	896	1,604	1,899	848	2,079	906	1,266	533	1,199	1,284

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*0.18	*0.79	*1.50	*0.74	*1.05	*0.73	*1.13	*0.46	0.28	0.16	0.53	0.29	*7.84
1928	.43	.48	1.46	.90	1.37	1.16	1.95	1.33	.47	.29	1.60	1.82	13.25
1929	.46	.37	.43	.51	1.05	2.68	1.45	1.03	.88	.50	.27	1.12	9.75
1930	1.67	.90	1.01	1.23	1.55	.58	.99	.36	.24	.15	.06	.05	8.79
1931	*.05	*1.16	*.23	.50	.29	.75	1.33	1.51	.67	.36	1.41	.22	*7.28
1932	.11	.15	.33	1.41	.75	2.32	1.08	.90	.22	1.10	.04	.03	7.44
1933	1.21	1.58	1.70	2.20	1.50	.80	2.06	.91	.85	.48	.56	.22	14.07
1934	.12	.20	.35	.39	.41	2.51	1.04	.69	.65	.36	.38	1.17	8.27
1935	.39	.37	1.70	1.99	1.30	1.74	3.27	.83	1.10	.77	.47	1.81	15.74
1936	.31	.80	.79	4.90	3.01	2.72	1.95	.61	.49	.29	.47	.21	16.55
1937	.36	.27	.61	4.20	1.79	1.06	3.20	1.61	.83	1.28	1.18	1.40	17.81
1938	2.05	.99	.70	1.42	.89	1.71	1.09	.63	2.80	3.45	.82	.40	16.95
1939	.37	.79	1.16	1.08	2.09	2.41	1.25	.58	.59	1.42	.90	.33	12.97
1940	.46	.77	.49	.71	2.56	1.18	2.06	1.06	.67	.67	5.88	.43	16.94
1941	.58	1.00	.72	1.12	.63	1.06	1.17	.42	.30	.65	.16	.10	7.71
1942	.07	.12	.37	.48	.54	.99	.50	.34	.30	.47	1.08	.27	5.53
1943	1.31	.58	1.02	1.24	2.27	1.73	1.17	.94	.50	.58	.14	.11	11.59
1944	.14	.31	.32	.61	1.29	5.31	1.86	.73	.24	.28	.50	1.19	10.96
1945	.84	.68	1.38	1.67	1.66	1.19	1.10	1.84	.47	2.12	.44	1.37	14.76
1946	.68	.69	2.13	2.02	2.08	1.33	1.40	2.96	.84	1.20	.54	.39	16.06
1947	.44	.51	.58	2.03	.61	1.98	1.51	.65	.41	.42	1.19	.82	10.15
1948	.62	1.80	.79	1.35	2.60	2.52	2.44	1.23	.77	.46	.93	.24	15.75
1949	.69	1.17	2.87	2.16	1.72	1.31	1.11	1.41	.51	.90	.79	.43	15.07
1950	.52	2.30	.75	.77	1.25	1.64	.71	1.80	.76	1.09	.46	1.00	13.05

* Not previously published; estimated or partly estimated on basis of records for station at Mattoax.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642	*7,000	Dec. 30, 1926	*63	*773	*0.579	*7.84	*763	*7.74
1928	662	6,710	Apr. 30, 1928	74	†1,301	.974	13.25	1,192	12.14
1929	682	7,380	Mar. 1, 1929	95	958	.718	9.75	1,187	12.07
1930	697	7,120	Oct. 24, 1929	38	867	.649	8.79	*556	*5.65
1931	712	5,950	Aug. 13, 1931	-	*714	*.535	*7.28	729	7.43
1932	757, 972	8,890	Mar. 8, 1932	19	729	.546	7.44	1,111	11.34
1933	757	87,500	Oct. 21, 1932	27	1,384	1.04	14.07	1,010	10.25
1934	757, 972	8,890	Mar. 6, 1934	108	814	.610	8.27	990	10.06
1935	782, 972	10,200	Sept. 6, 1935	243	1,550	1.16	15.74	1,493	15.18
1936	802	11,000	Jan. 9, 1936	133	1,622	1.21	16.55	1,560	15.91
1937	822	16,800	Apr. 30, 1937	258	1,750	1.31	17.81	1,995	20.29
1938	856	16,200	July 26, 1938	270	1,668	1.25	16.95	1,528	15.53
1939	872	5,540	July 1, 1939	232	1,276	.956	12.97	1,217	12.37
1940	892	26,000	Aug. 20, 1940	320	1,661	1.24	16.94	1,698	17.32
1941	922	4,560	Nov. 16, 1940	75	760	.569	7.71	609	6.17
1942	952	4,080	Mar. 30, 1942	59	545	.408	5.53	777	7.88
1943	972	7,080	Feb. 8, 1943	71	1,141	.855	11.59	929	9.45
1944	1002	7,220	Sept. 25, 1944	86	1,078	.807	10.98	1,288	13.11
1945	1032	17,900	July 19, 1945	212	1,453	1.09	14.76	1,492	15.16
1946	1052	7,220	Jan. 1, 1946	288	1,578	1.18	16.06	1,404	14.29
1947	1082	7,950	Sept. 27, 1947	127	998	.784	10.15	1,163	11.63
1948	1112	9,600	Feb. 16, 1948	218	1,542	1.16	15.75	1,692	17.27
1949	1142	7,650	Dec. 10, 1948	330	1,461	1.11	15.07	1,367	13.91
1950	1172	11,400	Nov. 4, 1949	313	1,284	.962	13.05	-	-

† Corrected.

* Not previously published.

a Estimated on basis of records for stations at Farmville and Mattoax.

JAMES RIVER BASIN

56. Swift Creek near Chester, Va.

Location.--Lat 37°18'55", long 77°29'40", at Bradley Bridge, 1¼ miles downstream from Second Branch, 3 miles upstream from Frank Branch, and 4 miles southwest of Chester, Chesterfield County.

Drainage area.--143 sq mi.

Gage.--Chain gage. Altitude of gage is 65 ft (from topographic map).

Average discharge.--6 years (1943-49), 156 cfs.

Extremes.--1943-49: Maximum discharge, 13,200 cfs July 18, 1945 (gage height, 29.0 ft, from floodmarks); minimum observed, 0.2 cfs Sept. 19, 1943 (gage height, 1.16 ft). Flood of August 1940 reached a stage of 27 ft, from information by local resident (discharge, 10,700 cfs).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	5.70	11.9	119.4	#83.2	#161	#331	#202	#55.8	#13.1	14.1	96.6	24.0	#84.8
1945	45.8	85.9	181	198	242	144	117	256	43.1	783	55.8	254	199
1946	63.7	104	360	260	324	165	172	505	129	172	109	32.7	200
1947	35.6	51.0	70.8	289	87.5	289	256	86.5	60.7	33.7	12.9	142	118
1948	50.1	248	101	197	403	376	336	140	79.5	25.4	58.1	9.77	167
1949	27.3	160	263	248	251	187	153	216	53.1	#146	#245	#74.7	#167

* Not previously published; estimated or partly estimated from record for Falling Creek near Drewrys Bluff.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	-
1944	0.05	0.09	#0.16	#0.67	#1.22	#2.66	#1.57	#0.45	#0.10	0.11	#0.01	#0.02	#8.07
1945	.37	.67	1.30	1.59	1.76	1.16	.91	2.06	.34	6.32	.45	1.99	18.92
1946	.51	.81	2.90	2.10	2.36	1.33	1.34	4.07	1.01	1.38	.88	.26	18.95
1947	.29	.40	.57	2.33	.64	2.33	2.00	.70	.47	.27	.10	1.11	11.21
1948	.40	1.93	.81	1.59	3.04	3.03	2.62	1.13	.62	.21	.47	.08	15.93
1949	.22	1.25	2.12	1.99	1.69	1.51	1.19	1.74	.41	#1.18	#1.97	#.58	#15.85

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1945	972	-	-	-	-	-	-	-	-
1944	1002	*853	Aug. 3, 1944	#1.6	#84.8	#0.593	#8.07	#106	#10.11
1945	1032	13,200	July 18, 1945	9	199	1.39	18.92	219	20.80
1946	1052	*1,740	May 27, 1946	19	200	1.40	18.95	168	15.99
1947	1082	*2,180	Sept. 26, 1947*	1.3	118	.825	11.21	138	13.09
1948	1112	*2,180	Feb. 15, 1948*	5.5	167	1.17	15.93	172	16.38
1949	1142	1,480	May. 12, 1949	#10	#167	#1.17	#15.85	-	-

* Revised.

* Not previously published.

57. Chickahominy River near Providence Forge, Va.

Location.--Lat 37°26'10", long 77°03'40", at highway bridge 1.1 miles southwest of Providence Forge, New Kent County, and 1.7 miles downstream from Schiminoe Creek.

Drainage area.--249 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1948 are published in WSP 1132.

Gage.--Water-stage recorder. Datum of gage is 6.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years (1942-50), 271 cfs.

Extremes.--1942-50: Maximum discharge, 5,750 cfs July 21, 1945 (gage height, 10.6 ft); minimum, 9.6 cfs Aug. 25, 26, Sept. 18, 1943, July 8, 1944; minimum gage height, 1.56 ft Aug. 25, 26, 1943.

Monthly and yearly mean discharge, in cubic feet per second, of Chickahominy River near Providence Forge, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	#82.7	94.4	213	236	38.6	32.2	59.3	159	59.4	-
1943	230	196	280	244	564	323	291	231	200	51.2	17.6	20.9	218
1944	33.6	59.8	54.5	237	278	872	550	174	32.6	48.6	168	47.2	213
1945	68.3	77.1	312	305	268	323	173	246	97.1	1,081	320	344	303
1946	167	184	556	585	562	352	258	669	244	428	227	112	362
1947	141	145	180	551	233	383	390	165	80.3	73.5	24.5	67.0	203
1948	128	528	255	367	551	658	658	390	354	108	281	48.7	359
1949	102	198	674	554	493	353	262	325	125	228	155	125	299
1950	55.0	478	187	196	314	370	162	214	154	177	93.3	91.3	208

* Not previously published; partly estimated on basis of records for Pamunkey River near Hanover.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	#0.38	0.39	0.99	1.06	0.18	0.14	0.27	0.74	0.27	-
1943	1.07	0.88	1.29	1.13	2.36	1.50	1.30	1.07	.90	.24	.08	.09	11.91
1944	.16	.27	.25	1.10	1.21	4.04	2.47	.81	.15	.22	.78	.21	11.67
1945	.32	.35	1.44	1.41	1.12	1.50	.78	1.14	4.44	5.00	1.49	1.54	16.53
1946	.77	.82	2.57	2.71	2.35	1.63	1.16	3.10	1.09	1.98	1.05	.50	19.73
1947	.65	.65	.63	2.55	.97	1.78	1.75	.75	.56	.34	.11	.30	11.05
1948	.59	2.36	1.18	1.70	2.38	3.04	2.94	1.81	1.58	.50	1.30	.22	19.60
1949	.47	.89	3.12	2.56	2.06	1.64	1.17	1.51	.56	1.06	.72	.56	16.32
1950	.25	2.14	.87	.91	1.31	1.72	.82	.99	.69	.82	.43	.41	11.36

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952	760	Apr. 4, 1942	-	-	-	-	\$141	*7.66
1943	972	1,080	Feb. 8, 1943	9.9	218	0.876	11.91	171	9.35
1944	1002	1,080	Mar. 7, 1944	10	213	.855	11.67	239	13.10
1945	1032	5,750	July 21, 1945	20	303	1.22	16.53	341	18.58
1946	1052	1,620	Dec. 31, 1945	47	362	1.45	19.73	325	17.70
1947	1082	940	Apr. 21, 1947	13	203	.815	11.05	240	13.05
1948	1112	1,320	May 26, Aug. 9	33	359	1.44	19.60	365	19.95
1949	1142	1,320	Dec. 4, June 30†	28	299	1.20	16.32	277	15.10
1950	1172	1,820	Nov. 5, 1949	28	208	.835	11.36	-	-

† Corrected.

* Not previously published.

CHOWAN RIVER BASIN

58. Nottoway River near Burkeville, Va.

Location.--Lat 37°05', long 78°12', at bridge on State Highway 723 (revised), 2½ miles up stream from Modest Creek, 6 miles north of Victoria, and 7½ miles south of Burkeville, Nottoway County.

Drainage area.--38 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and water temperatures for the water year 1947 are published in WSP 1102.

Gage.--Wire-weight gage. Datum of gage is 354.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1946-50: Maximum discharge, 3,020 cfs Sept. 25, 1947 (gage height, 18.3 ft, revised, from graph based on gage readings); minimum observed, 0.3 cfs Sept. 20, 1947 (gage height, 1.02 ft).

Maximum stage known, 27.4 ft August 1940, from Corps of Engineers floodmark.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	#11.6	-
1947	10.9	*18.6	16.4	*83.4	18.8	74.7	47.3	13.6	6.02	*16.4	1.97	*81.9	*32.6
1948	*19.0	*85.3	24.0	33.1	*106	*72.2	86.0	*28.3	11.1	3.38	5.59	6.25	*39.6
1949	*21.7	*76.5	*83.0	*52.9	55.4	44.7	36.2	*66.3	8.64	*20.9	*21.8	*17.3	*42.1
1950	46.9	77.9	27.3	28.4	37.4	63.5	23.6	66.5	36.4	70.4	13.5	21.6	42.9

* Revised.

† Corrected.

* Not previously published; partly estimated on basis of records for North Meherrin River near Lunenburg.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	\$0.34
1947	0.33	*0.55	0.50	*2.52	0.52	2.27	1.38	0.41	0.18	*0.50	0.06	*2.41	*11.63
1948	*1.58	*2.50	.73	1.00	*3.01	*2.19	2.52	*.86	.33	.10	.17	.18	*14.17
1949	*.66	*2.24	*2.51	*1.60	1.52	1.36	1.06	*2.01	.25	*.63	*.66	*.51	*15.01
1950	1.42	2.29	.83	.86	1.02	1.92	.69	2.02	1.07	2.13	.41	.63	15.29

* Revised.

† Corrected.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Nottoway River near Burkeville, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082,1383	-	-	-	-	-	-	-	-
1947	1082,1383	3,020	Sept. 25, 1947	0.3	*32.6	*0.858	*11.63	*39.4	*14.06
1948	1142,1433	2,130	Feb. 14, 1948	1.1	*39.6	*1.04	*14.17	*44.1	*15.77
1949	1142,1383	*1,510	Nov. 29, 1948	2.4	*42.1	*1.11	*15.01	*39.6	*14.14
1950	1172	2,190	Nov. 2, 1949	3.9	42.9	1.13	15.29	-	-

* Revised.

59. Nottoway River near McKenney, Va.

Location--Lat 36°56'45", long 77°43'55", at bridge on U. S. Highway 1, 1.4 miles upstream from Birch Creek, 3 miles south of McKenney, Dinwiddie County, and 10 miles northeast of Alberta.

Drainage area--362 sq mi.

Gage--Wire-weight gage. Datum of gage is 153.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes--1946-50: Maximum discharge, 5,390 cfs (revised) Feb. 15, 1948 (gage height, 16.8 ft, from graph based on gage readings); minimum observed, 15 cfs Sept. 19, 1947 (gage height, 0.89 ft); minimum daily, 36 cfs Sept. 5, 1947.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	*196	-
1947	202	262	233	624	266	629	466	213	113	145	65.9	265	291
1948	120	665	259	406	922	677	718	306	279	167	140	91.8	393
1949	195	536	708	555	610	419	371	400	206	359	372	265	415
1950	151	663	228	238	322	426	227	678	253	461	128	176	351

* Not previously published; partly estimated from record for station near Stony Creek.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	*0.60	-
1947	0.64	0.81	0.74	1.98	0.77	2.01	1.44	0.68	0.35	0.46	0.21	.82	10.91
1948	.38	2.05	.82	1.29	2.75	2.16	2.21	.97	.86	.53	.45	.28	14.75
1949	.62	1.65	2.26	1.76	1.76	1.34	1.14	1.27	.63	1.14	1.19	.82	15.58
1950	.48	2.04	.73	.76	.93	1.36	.70	2.16	.78	1.53	.41	.54	12.42

* Not previously published; see Footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1082	4,840	Sept. 26, 1947	36	291	0.804	10.91	319	11.97
1948	1112	*5,390	Feb. 15, 1948	53	393	1.09	14.75	426	16.03
1949	1142	*3,920	Nov. 30, 1948	83	415	1.15	15.58	381	14.30
1950	1172	4,640	Nov. 3, 1949	79	331	.912	12.42	-	-

* Revised.

60. Nottoway River near Stony Creek, Va.

Location (revised)--Lat 36°54'00", long 77°24'00", at bridge on U. S. Highway 301, 1.8 miles upstream from Island Swamp, 3.3 miles south of town of Stony Creek, Sussex County, and 4.4 miles upstream from Stony Creek.

Drainage area--586 sq mi.

Supplemental records available--Records of chemical analyses during 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3, and for 1947 in WSP 1102.

Gage--Water-stage recorder. Datum of gage is 58.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 11, 1934, chain gage at same site and datum.

Average discharge--21 years (1929-50), 555 cfs.

Extremes--1929-50: Maximum discharge, 25,200 cfs Aug. 17, 1940 (gage height, 23.66 ft), from rating curve extended above 13,000 cfs by logarithmic plotting on basis of records for stations on Appomattox River; minimum, 5 cfs Sept. 2, 5, 1932 (gage height, 0.62 ft).

Monthly and yearly mean discharge, in cubic feet per second, of Nottoway River near Stony Creek, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*1,620	*540	*555	*685	*935	*378	663	237	255	94.7	46.7	27.2	*501
1931	14.0	77.7	125	173	176	386	802	915	241	145	958	87.1	343
1932	68.6	71.6	147	727	460	1,120	526	347	108	47.2	19.9	9.4	305
1933	355	350	742	887	947	641	948	307	223	92.4	159	65.1	473
1934	25.1	55.2	97.0	117	257	1,318	815	998	342	460	236	967	475
1935	153	222	844	1,081	909	1,012	1,758	502	358	313	157	924	681
1936	141	391	402	2,578	1,828	1,370	1,430	297	280	175	268	118	770
1937	137	126	349	2,228	993	681	1,795	562	399	379	967	730	777
1938	710	572	415	778	476	786	634	315	1,612	2,423	399	236	762
1939	202	458	527	605	1,063	1,261	945	406	199	688	965	262	628
1940	267	455	351	404	1,246	649	879	525	304	254	3,057	255	719
1941	178	619	399	611	473	679	703	161	136	356	86.6	89.9	373
1942	21.1	43.1	132	177	281	528	276	129	74.6	251	276	98.9	191
1943	515	260	515	661	1,195	1,064	669	316	192	298	39.9	54.3	478
1944	54.1	105	125	435	934	1,677	1,114	347	106	107	156	194	444
1945	465	364	673	759	1,028	620	580	1,046	267	2,095	424	653	749
1946	260	350	1,225	1,079	1,460	682	803	1,375	538	627	315	247	744
1947	296	332	560	1,031	466	944	699	306	158	242	85.7	364	441
1948	192	974	386	679	1,447	1,161	1,164	422	490	264	197	108	619
1949	223	671	1,154	914	1,051	657	599	625	362	680	387	636	661
1950	199	786	310	341	512	647	313	1,015	353	955	201	457	499

* Not previously published; estimated on basis of records for Meherrin River near Lawrenceville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*3.18	*1.03	*1.09	*1.35	*1.67	*0.74	1.26	0.47	0.49	0.19	0.09	0.05	*11.61
1931	.03	.15	.25	.34	.31	.76	1.53	1.80	.46	.28	1.88	.17	7.96
1932	.13	.14	.29	1.43	.85	2.20	1.00	.68	.21	.09	.04	.02	7.08
1933	.70	.67	1.46	1.74	1.69	1.26	1.81	.60	.43	.18	.31	1.12	10.97
1934	.05	.10	.19	.23	.46	2.59	1.55	1.96	.65	.90	.46	1.84	10.98
1935	.30	.42	1.66	2.12	1.61	1.99	3.35	.99	.64	.62	.31	1.76	15.77
1936	.28	.74	.79	5.07	3.36	2.70	2.72	.58	.53	.34	.53	.22	17.86
1937	.27	.24	.69	4.38	1.76	1.34	3.43	1.11	.76	.75	1.90	1.40	18.01
1938	1.40	1.09	.92	1.33	.85	1.54	1.20	.62	3.07	4.76	.79	.45	18.12
1939	.40	.83	1.04	1.19	1.88	2.48	1.80	.80	.38	1.35	1.90	.50	14.55
1940	.53	.87	.65	.79	2.30	1.28	1.67	1.03	.58	.50	6.02	.49	16.71
1941	.35	1.18	.79	1.20	.84	1.34	1.34	.32	.26	.70	.17	.17	8.66
1942	.04	.08	.26	.35	.50	1.04	.53	.25	.14	.49	.54	.19	4.41
1943	1.01	.50	1.01	1.30	2.12	2.10	1.27	.62	.37	.59	.08	.10	11.07
1944	.11	.20	.25	.86	1.72	3.30	2.12	.68	.20	.21	.31	.37	10.33
1945	.92	.69	1.33	1.50	1.82	1.22	1.10	2.05	.51	4.13	.83	1.24	17.34
1946	.51	.67	2.41	2.12	2.59	1.34	1.53	2.71	1.02	1.23	.62	.47	17.22
1947	.58	.63	.71	2.03	.83	1.86	1.33	.60	3.00	.48	.17	.69	10.21
1948	.38	1.85	.76	1.34	2.66	2.28	2.22	.83	.93	.52	.39	.21	14.37
1949	.44	1.28	2.27	1.80	1.86	1.29	1.14	1.23	.69	1.34	.76	1.22	15.32
1950	.39	1.50	.61	.67	.91	1.27	.60	1.99	.67	1.68	.40	.87	11.56

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	*a5,700	Oct. 4, 1929	18	*501	*0.855	*11.61	*290	*6.74
1931	712	4,540	Aug. 21, 1931	8	343	.585	7.96	349	8.09
1932	727, 972	5,540	Mar. 7, 9, 1932	5	305	.520	7.08	403	9.35
1933	742	3,140	Oct. 20, 1932	13	473	.807	10.97	366	8.48
1934	757, 972	5,180	Mar. 7, 1934	17	475	.811	10.98	563	13.02
1935	782, 972	8,300	Sept. 7, 1935	71	681	1.16	15.77	657	15.20
1936	802	7,690	Jan. 22, 1936	46	770	1.31	17.86	743	17.25
1937	822	11,500	Apr. 28, 1937	93	777	1.33	18.01	868	20.12
1938	852	11,400	July 28, 1938	128	782	1.33	18.12	738	17.08
1939	872, 972	6,370	Aug. 30, 1939	94	628	1.07	14.55	619	14.33
1940	892	25,200	Aug. 17, 1940	121	719	1.23	16.71	730	16.98
1941	922	3,440	Apr. 5, 1941	18	373	.637	8.66	290	6.72
1942	952	2,230	July 3, 1942	14	191	.326	4.41	283	6.55
1943	972	4,150	Feb. 8, 1943	9	478	.816	11.07	393	9.11
1944	1002	*a3,500	Mar. 8, 1944a	24	444	.758	10.33	547	12.71
1945	1032	12,600	July 20, 1945	96	749	1.28	17.34	777	17.99
1946	1052	4,920	Dec. 30, 1945	96	744	1.27	17.22	672	15.55
1947	1082	4,140	Sept. 28, 1947	35	441	.753	10.21	487	11.28
1948	1112	5,780	Feb. 17, 1948	62	619	1.06	14.37	561	15.37
1949	1142	5,020	June 30, 1949	110	661	1.13	15.32	597	13.83
1950	1172	3,930	Nov. 4, 1949	105	499	.852	11.56	-	-

* Not previously published.

a Estimated on basis of records for station near Sebrell, and Meherrin River near Lawrenceville.

CHOWAN RIVER BASIN

61. Stony Creek near Dinwiddie, Va. 1/

Location.--Lat 37°04'00", long 77°36'10", at bridge on U. S. Highway 1, 1.2 miles southwest of Dinwiddie, Dinwiddie County, and 1.7 miles downstream from Chamberlains Bed Creek.

Drainage area.--111 sq mi.

Gage.--Wire-weight gage. Altitude of gage is 131 ft (by barometer).

Extremes.--1946-50: Maximum discharge, 1,950 cfs Feb. 15, 1948 (gage height, 10.05 ft); minimum observed, 2.8 cfs Aug. 20, 1947 (gage height, 1.06 ft).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	*29.9
1947	36.0	46.0	57.0	181	67.1	221	123	46.3	21.1	19.9	8.52	38.7	72.3
1948	24.3	166	71.5	156	289	241	262	96.7	85.7	20.6	24.9	9.96	120
1949	28.1	150	207	168	207	124	110	107	67.2	111	136	107	126
1950	37.8	125	56.7	65.6	98.7	138	71.4	245	50.5	140	24.0	91.6	95.5

* Not previously published; partly estimated from record for Nottoway River near Stony Creek.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	*0.30
1947	0.37	0.46	0.59	1.88	0.63	2.29	1.24	0.48	0.21	0.21	0.09	.39	8.84
1948	.25	1.67	.74	1.63	2.80	2.50	2.63	1.00	.86	.21	.26	.10	14.65
1949	.29	1.51	2.14	1.74	1.94	1.29	1.11	1.11	.68	1.15	1.42	1.08	15.46
1950	.39	1.26	.59	.68	.93	1.43	.72	2.55	.51	1.45	.25	.92	11.68

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second													
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1946	1082	-	-	-	-	-	-	-	-	-	-	-	-
1947	1082	*890	Mar. 15, 1947	2.8	72.3	0.651	8.84	82.5	10.08				
1948	1112	1,950	Feb. 15, 1948	5.3	120	1.08	14.65	130	15.93				
1949	1142	1,270	Aug. 29, 1949	9.6	126	1.14	15.46	112	15.76				
1950	1172	1,100	Sept. 10, 1950	11	95.5	.860	11.68	-	-				

* Revised.

62. Anderson Branch at Sussex, Va.

Location.--Lat 36°55'10", long 77°15'45", at bridge on State Highway 40, 1 mile east of Sussex, Sussex County, and 1.5 miles upstream from mouth.

Drainage area.--5.4 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 96 ft (by barometer).

Extremes.--1948-50: Maximum discharge, 126 cfs Sept. 12, 1950 (gage height, 6.12 ft); no flow at times.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	0.013	2.87	7.78	7.97	13.5	6.28	3.98	4.59	2.16	1.35	7.14	1.63	4.89
1950	.25	4.11	1.73	2.51	3.76	4.23	2.36	7.11	2.08	2.38	.48	11.2	3.50

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	0.003	0.59	1.66	1.71	2.60	1.34	0.82	0.98	0.45	0.29	1.52	0.34	12.30
1950	.05	.85	.37	.54	.72	.90	.49	1.52	.43	.51	1.10	2.31	6.79

Yearly discharge, in cubic feet per second													
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1949	1142	70	Aug. 15, 1949	0	4.89	0.906	12.30	4.50	11.32				
1950	1172	126	Sept. 12, 1950	0	3.50	.648	6.79	-	-				

1/ Published as "at Dinwiddie," 1946-47, 1949-50.

63. Nottoway River near Sebrell, Va.

Location--Lat 36°46'13", long 77°09'59", on right bank at upstream side of highway bridge, 1 mile downstream from Three Creek, 2.5 miles southwest of Sebrell, Southampton County, and 5.5 miles (revised) upstream from Assamoosick Swamp.

Drainage area--1,451 sq mi.

Supplemental records available--Records of chemical analyses for 1947 are published in WSP 1102.

Gage--Water-stage recorder. Datum of gage is 5.94 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 23, 1950, wire-weight gage at same site and datum.

Average discharge--9 years (1941-50), 1,261 cfs.

Extremes--1941-50: Maximum discharge, 25,000 cfs July 22, 1945 (gage height, 24.5 ft); minimum observed, 12 cfs Oct. 23, 1941 (gage height, 3.30 ft).
Flood in August 1940 reached a stage of 29.7 ft, from floodmarks (discharge, 48,000 cfs, from rating curve extended by logarithmic plotting above 25,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	32.1	59.5	169	247	524	*1,198	915	*300	*131	360	566	202	*391
1943	993	551	1,089	1,313	2,992	2,377	1,833	822	463	835	120	97.5	1,121
1944	84.9	194	*224	*1,049	1,948	4,419	*3,047	729	222	216	270	202	*1,047
1945	745	446	1,820	1,767	2,561	1,850	1,184	1,829	1,247	4,788	1,361	1,755	1,780
1946	656	683	2,035	3,243	3,568	1,719	1,830	2,542	1,675	2,112	782	435	1,764
1947	713	737	828	2,403	1,291	1,977	1,642	657	376	440	162	406	969
1948	390	1,851	1,098	1,851	*3,620	*3,027	2,788	1,137	1,287	401	544	167	*1,498
1949	359	*1,050	*2,948	*2,644	*2,782	*1,713	1,407	*1,548	372	*1,792	1,146	*1,436	*1,615
1950	347	1,501	783	875	1,342	1,445	828	1,873	957	1,946	555	1,508	1,161

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	0.03	0.05	0.13	0.20	0.38	*0.95	0.70	*0.24	0.10	0.29	0.45	0.16	*3.68
1943	.79	.42	.87	1.04	2.14	1.89	1.48	.65	.36	.66	.10	.07	10.47
1944	.07	.15	.18	*.85	1.44	3.52	*2.34	.58	.17	.17	.21	.16	*9.82
1945	.59	.34	1.44	1.41	1.83	1.46	.91	1.45	.96	5.80	1.08	1.35	16.82
1946	.52	.53	1.61	2.58	2.56	1.36	1.41	2.02	1.28	1.68	.61	.33	16.49
1947	.57	.57	.66	1.91	.95	1.57	1.26	.52	.29	.35	.13	.31	9.07
1948	.31	*1.41	.87	1.45	*2.68	*2.41	2.14	.90	.99	.32	.43	.13	*14.04
1949	.31	.81	*2.34	*2.26	2.00	1.36	1.08	*1.23	.29	*1.43	.91	1.11	*15.13
1950	.28	1.15	.62	.70	.96	1.15	.63	1.49	.74	1.54	.44	1.16	10.86

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	852	-	-	-	-	-	-	-	-
1942	952,1333	3,050	Apr. 2, 1942	16	*591	*0.269	*3.68	592	*5.55
1943	972	6,800	Feb. 11, 1943	37	1,121	.773	10.47	941	8.79
1944	1002,1333	*6,410	Mar. 11, 1944*	48	*1,047	*.722	*9.82	*1,259	*11.79
1945	1032	25,000	July 22, 1945	204	1,780	1.23	16.62	1,810	16.91
1946	1052	9,230	Jan. 2, 1946	202	1,764	1.22	16.49	1,670	15.63
1947	1082	4,170	Jan. 25, 1947	86	969	.668	9.07	*1,054	*9.86
1948	1112,1333	9,020	Feb. 19, 1948	107	*1,498	1.03	*14.04	*1,591	*14.91
1949	1142,1333	7,800	Jan. 3, 1949	166	*1,615	1.11	*15.13	*1,465	*13.72
1950	1172	5,690	Sept. 14, 1950	226	1,161	.800	10.86	-	-

* Revised.

64. Blackwater River near Dendron, Va.

Location--Lat 37°01'30", long 76°52'30", on left bank 10 ft upstream from Walls Bridge, 1.2 miles downstream from Cypress Swamp and 3.5 miles southeast of Dendron, Surry County.

Drainage area--285 sq mi.

Supplemental records available--Records of miscellaneous chemical analyses for the water year 1947 are published in Virginia Department of Conservation and Development, Bull. 11.

Gage--Water-stage recorder. Datum of gage is 30.99 ft above mean sea level (Corps of Engineers benchmark).

Average discharge--9 years (1941-50), 270 cfs.

Extremes--1941-50: Maximum discharge, 4,710 cfs July 21, 1945 (gage height, 8.90 ft); no flow at times.
Flood in August 1940 reached a stage of 13.1 ft, from floodmarks of Corps of Engineers (discharge, 10,000 cfs, from rating curve extended above 4,800 cfs by logarithmic plotting).

Monthly and yearly mean discharge, in cubic feet per second, of Blackwater River near Dendron, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	±0.571	±0.887	±5.82	±31.4	70.8	247	233	29.8	45.7	12.6	81.8	19.6	±64.8
1943	243	122	243	259	752	496	424	190	165	73.0	15.9	5.61	246
1944	16.1	34.6	35.2	312	464	1,233	580	127	2.62	3.21	5.54	0	234
1945	10.1	25.4	205	251	448	421	211	436	304	1,364	368	468	377
1946	129	138	572	822	770	393	299	491	250	331	162	48.6	366
1947	83.6	119	137	467	251	310	283	64.8	34.7	18.9	19.5	15.0	148
1948	73.0	439	309	459	942	714	640	229	353	56.8	172	23.5	364
1949	93.7	272	809	624	705	425	300	264	51.4	380	376	420	392
1950	55.7	566	162	173	282	304	182	397	138	219	118	461	237

* Not previously published; estimated on basis of record for station near Burdette.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	±0.002	±0.003	±0.02	±0.13	0.26	1.00	0.91	0.12	0.18	0.05	0.33	0.08	±3.08
1943	.98	.48	.98	1.05	2.75	2.01	1.66	.77	.65	.30	.06	.02	11.71
1944	.06	.14	.14	1.26	1.76	4.99	2.28	.51	.01	.01	.02	0	11.18
1945	.04	.10	.83	1.02	1.64	1.71	.83	1.76	1.19	5.52	1.49	1.83	17.96
1946	.52	.54	2.32	3.32	2.81	1.59	1.17	1.98	.98	1.34	.65	.19	17.41
1947	.54	.47	.55	1.89	.92	1.26	1.03	.26	.14	.08	.08	.06	7.08
1948	.30	1.72	1.24	1.86	3.57	2.89	2.51	.93	1.38	.23	.70	.09	17.42
1949	.38	1.06	3.27	2.52	2.57	1.72	1.17	1.07	.20	1.53	1.52	1.64	18.85
1950	.22	1.43	.65	.70	1.03	1.23	.71	1.60	.54	.89	.48	1.81	11.29

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952	560	Mar. 11, 1942	±0.2	±64.8	±0.227	±3.08	±116	±95.50
1943	972	1,580	Feb. 7, 8, 1943	.1	246	.863	11.71	202	9.61
1944	1002	1,740	Mar. 9, 1944	0	234	.821	11.18	247	11.81
1945	1032	4,710	July 21, 1945	0	377	1.32	17.96	427	20.37
1946	1052	2,580	Dec. 31, 1945	13	366	1.28	17.41	323	15.39
1947	1082	845	Jan. 23, 1947	.9	148	.591	7.08	188	8.98
1948	1112	2,130	Feb. 18, 1948	4.2	364	1.28	17.42	395	18.87
1949	1142	2,220	Aug. 16, 1949	13	392	1.38	18.65	342	16.24
1950	1172	2,040	Sept. 12, 1950	9.6	237	.832	11.29	-	-

* Not previously published.

65. Blackwater River at Zuni, Va.

Location (revised).--Lat 36°52'05", long 76°50'07" (revised), on left bank at downstream side of bridge on U. S. Highway 460 at Zuni, Isle of Wight County, 1.6 miles downstream from Pope Swamp and 4.2 miles upstream from Antioch Swamp.

Drainage area.--448 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1947 are published in WSP 1102.

Gage.--Staff gage. Datum of gage is 8.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years (1942-50), 449 cfs.

Extremes.--1942-50: Maximum discharge, 5,200 cfs July 25, 1945 (gage height, 15.05 ft); no flow Sept. 10-18, 1944.

Flood in August 1940 reached a stage of 23.2 ft (discharge, 16,000 cfs, from rating curve extended above 5,100 cfs by logarithmic plotting).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	±421	±213	±417	±424	1,120	776	748	323	322	254	30.3	7.85	±417
1944	28.3	62.0	59.4	573	782	1,976	936	180	5.40	3.36	5.40	.56	384
1945	9.64	18.6	246	358	727	757	265	405	288	1,913	789	713	542
1946	212	180	688	1,158	1,072	650	512	719	348	500	167	70.4	521
1947	107	147	182	636	376	493	539	147	67.3	30.7	17.5	35.0	231
1948	92.4	530	501	751	1,293	983	935	337	466	69	1324	35.0	523
1949	118	338	1,102	921	1,106	710	465	468	124	599	776	725	619
1950	101	533	297	301	444	439	339	516	179	450	211	496	358

* Not previously published; estimated or partly estimated on basis of record for station near Dendron.

Monthly and yearly runoff, in inches, of Blackwater River at Zuni, Va.

Water year	Monthly and yearly runoff, in inches, of Blackwater River at Zuni, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	\$1.08	\$0.53	\$1.07	\$1.09	2.60	1.99	1.86	0.83	0.80	0.65	0.08	0.02	\$12.60
1944	.07	.15	.15	1.48	1.89	5.08	2.33	.46	.01	.009	.01	.001	11.64
1945	.03	.05	.63	.92	1.69	1.95	.66	1.04	.72	4.92	2.03	1.77	16.41
1946	.55	.45	1.78	2.97	2.49	1.67	1.27	1.84	.87	1.29	.43	.18	15.79
1947	.28	.37	.47	1.64	.87	1.27	1.34	.38	.17	.08	.04	.09	7.00
1948	.24	1.32	1.29	1.94	3.12	2.52	2.33	.87	1.16	.18	.83	.09	15.89
1949	.30	.84	2.84	2.38	2.57	1.82	1.16	1.20	.31	1.54	1.99	1.81	18.76
1950	.26	1.33	.76	.77	1.03	1.13	.84	1.34	.45	1.35	.54	1.24	10.84

* Not previously published; estimated or partly estimated on basis of record for station near Dendron.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	972	2,120	Feb. 9, 1943	0.4	\$417	\$0.931	\$12.60	\$340	\$10.29
1944	1002	2,580	Mar. 9, 1944	0	384	.857	11.64	394	11.98
1945	1032	5,200	July 25, 1945	4.8	542	1.21	16.41	617	18.48
1946	1052	2,740	Jan. 21, 1946	18	521	1.16	15.79	460	14.13
1947	1082	965	Jan. 22-25, 1947	2.4	231	.516	7.00	288	8.73
1948	1112	2,440	Feb. 17, 1948	6.1	523	1.17	15.89	560	17.02
1949	1142	3,880	Aug. 18, 1949	7.8	619	1.38	18.76	565	17.13
1950	1172	1,720	Sept. 14, 1950	16	358	.799	10.84	-	-

* Not previously published.

66. Seacock Creek at Unity, Va.

Location.--Lat 36°49'15", long 76°53'00", at highway bridge 0.7 mile northeast of Unity, Southampton County, 1 mile upstream from mouth, and 4.2 miles downstream from Round Hill Swamp.

Drainage area.--102 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1947 are published in WSP 1102.

Gage.--Chain gage. Datum of gage is 9.22 ft above mean sea level, unadjusted.

Average discharge.--7 years (1942-49), 94.3 cfs.

Extremes.--1942-49: Maximum discharge 1,180 cfs Sept. 19, 1945; maximum gage height, 9.44 ft July 23, 1945 (backwater from Blackwater River); no flow at times.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	\$75.9	\$37.4	\$74.9	\$94.3	190	184	121	42.3	39.5	105	10.4	0.02	\$80.5
1944	.80	4.07	6.82	76.3	154	344	187	11.9	.18	.01	0	0	65.1
1945	.12	5.15	73.6	114	232	155	52.7	36.1	3.75	184	122	243	101
1946	56.1	43.1	149	229	262	115	110	75.3	12.3	65.9	16.6	.01	93.8
1947	11.6	35.0	28.7	125	70.4	96.8	134	33.9	15.1	13.1	.68	5.38	47.0
1948	33.6	134	102	189	316	207	191	69.9	67.5	19.7	127	2.05	121
1949	16.0	89.1	179	196	240	153	95.6	174	127	203	227	125	132

* Not previously published; estimated or partly estimated on basis of record for Blackwater River near Dendron.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	\$0.84	\$0.41	\$0.85	\$1.07	1.94	2.08	1.33	0.48	0.43	1.19	0.12	0.0002	\$10.74
1944	.009	.04	.08	.86	1.63	3.88	2.04	.13	.002	.0001	0	0	8.67
1945	.001	.06	.83	1.29	2.36	1.75	.58	.41	.04	2.08	1.38	2.66	13.44
1946	.63	.47	1.68	2.58	2.68	1.30	1.20	.85	.14	.74	.19	.0001	12.46
1947	.13	.36	.32	1.42	.72	1.09	1.46	.38	.14	.15	.008	.06	6.24
1948	.38	1.46	1.15	2.13	3.34	2.34	2.09	.79	.74	.22	1.44	.02	16.10
1949	.18	.98	2.02	2.21	2.45	1.73	1.05	1.97	1.40	2.29	2.57	1.37	20.22

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	972	500	July 11, 1943	0	\$80.5	\$0.789	\$10.74	\$65.8	\$8.77
1944	1002	614	Mar. 9, 1944	0	65.1	.638	8.67	70.7	9.43
1945	1032	1,180	Sept. 19, 1945	0	101	.990	13.44	115	15.33
1946	1052	633	Dec. 31, 1945	0	93.8	.920	12.46	79.0	10.49
1947	1082	332	Apr. 18, 1947	0	47.0	.461	6.24	63.4	8.42
1948	1112	778	Feb. 16, 1948	0	121	1.19	16.10	122	16.29
1949	1142	946	Aug. 16, 1949	.8	152	1.49	20.22	-	-

* Not previously published.

67. Blackwater River near Burdette, Va.

Location.--Lat 36°48'15", long 76°51'45", 1.5 miles downstream from Seacock Creek, 1.8 miles upstream from Corrowaugh Swamp, and 3 miles northeast of Burdette, Southampton County.

Drainage area.--576 sq mi.

Gage.--Wire-weight gage. Datum of gage is 1.81 ft below mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1941-44: Maximum discharge, 3,380 cfs Mar. 10, 1944 (gage height, 17.27 ft, from graph based on gage readings); no flow at times.
Flood in August 1940 reached a stage of 28.7 ft, from floodmarks (discharge, 20,000 cfs, from rating curve extended above 2,600 cfs by logarithmic plotting).
Flood on July 25, 1945, reached a stage of 19.5 ft, from graph based on gage readings (discharge, 5,800 cfs, from rating curve extended above 2,600 cfs by logarithmic plotting).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	0.93	1.42	19.50	45.1	146	446	394	59.8	74.4	33.4	227	80.2	126
1943	466	224	465	542	1,398	1,000	897	383	377	413	53.7	9.21	513
1944	28.9	70.0	86.5	762	1,014	2,452	1,213	211	5.92	4.57	6.05	.58	497

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	0.002	0.003	0.02	0.09	0.26	0.89	0.76	0.12	0.14	0.07	0.45	0.16	2.96
1943	.93	.43	.93	1.08	2.52	2.01	1.74	.77	.73	.85	.11	.02	12.10
1944	.06	.14	.17	1.52	1.90	4.91	2.35	.42	.01	.009	.01	.001	11.50

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	952	-	-	-	-	-	-	-	-
1942	952	756	Mar. 14, 1942	0.4	126	0.219	2.96	223	5.23
1943	972	2,500	Feb. 9, 1943	1.5	513	.891	12.10	431	10.18
1944	1002	3,380	Mar. 10, 1944	0	487	.845	11.50	-	-

68. Blackwater River near Franklin, Va.

Location (revised).--Lat 36°45'46", long 76°53'55", on right bank 0.4 mile south of town of Burdette, 0.5 mile upstream from Black Creek, 3.3 miles downstream from Corrowaugh Swamp, and 6 miles north of Franklin, Southampton County.

Drainage area.--613 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1947 are published in WSP 1102.

Gage.--Water-stage recorder. Datum of gage is 1.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--6 years (1944-50), 651 cfs.

Extremes.--1944-50: Maximum discharge, 5,360 cfs July 25, 1945 (gage height, 13.4 ft, from graph based on gage readings); minimum, 0.4 cfs Sept. 10, 11, 1944 (gage height, 0.36 ft).

Flood of August 1940 reached a stage of about 22 ft (discharge, 21,000 cfs, from rating curve extended above 5,300 cfs by logarithmic plotting).

Remarks.--Diversion above station during periods of low flow to augment municipal supply for city of Norfolk.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	-	-	-	-	-	-	-	-	-	-	-	-	2.34
1945	27.5	49.7	411	587	1,043	1,006	292	445	316	2,003	1,039	1,265	707
1946	356	256	958	1,578	1,495	804	622	814	360	556	197	70.3	669
1947	122	182	228	812	471	642	719	207	148	114	56.4	72.3	314
1948	198	746	716	1,042	1,801	1,333	1,210	500	592	156	548	46.8	756
1949	150	556	1,517	1,303	1,562	1,001	653	851	393	1,085	1,031	1,037	926
1950	131	846	502	502	670	658	477	676	264	815	293	704	544

Monthly and yearly runoff, in inches (adjusted)^{a/}, of Blackwater River near Franklin, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year	
	1944	-	-	0.77	1.10	-	1.79	1.95	0.58	0.88	0.61	3.77		1.96
1945	0.05	0.09	-	-	-	-	-	-	-	-	-	2.30	15.84	
1946	.67	.47	1.80	2.96	2.54	1.51	1.13	1.53	.65	1.05	.37	.13	14.81	
1947	.25	.33	.43	1.52	.80	1.21	1.30	.39	.27	.21	.11	.13	6.93	
1948	.37	1.56	1.35	1.96	3.17	2.50	2.20	.94	1.08	.29	1.03	.06	16.35	
1949	.28	1.01	2.85	2.46	2.66	1.88	1.19	1.60	.72	2.04	1.94	1.89	20.52	
1950	.25	1.54	.94	1.14	1.23	1.23	.87	1.27	.48	1.53	.55	1.28	12.02	

^{a/} Adjusted for diversion by city of Norfolk.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year				
		Observed				Adjusted ^{a/}			Observed	Adjusted ^{a/}			
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1944	1052	-	-	-	-	-	-	-	-	-	-	-	-
1945	1032	5,360	July 25, 1945	5	707	716	1.17	15.64	798	#807	17.87	-	-
1946	1052	3,340	Jan. 3, 1946	24	669	669	1.09	14.81	581	581	12.86	-	-
1947	1082	1,280	Jan. 24, 25, 1947	4.4	314	314	.512	6.93	408	408	9.02	-	-
1948	1112	3,180	Feb. 18, 1948	15	756	756	1.20	16.35	784	784	17.39	-	-
1949	1142	3,660	Aug. 19, 1949	17	926	926	1.51	20.52	862	862	19.11	-	-
1950	1172	2,480	July 17, 1950	8.2	544	544	.887	12.02	-	-	-	-	-

* Not previously published.

^{a/} Adjusted for diversion by city of Norfolk.

69. North Meherrin River near Keysville, Va.

Location.--Lat 37°03', long 78°25', 3 miles northeast of Keysville, Charlotte County, and 4 miles upstream from Owl Creek.

Drainage area.--9.2 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 475 ft (by barometer).

Extremes.--1948-50: Maximum discharge, 640 cfs July 24, 1950 (gage height, 6.04 ft), from rating curve extended above 220 cfs; minimum, 0.8 cfs Aug. 10, 12, 13, 1949 (gage height, 0.74 ft).

Flood of August 1940 reached a stage of 10.3 ft, from information by local residents.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	8.78	18.8	25.4	12.9	15.2	12.8	9.41	8.98	2.58	3.87	1.69	2.50	10.1
1950	8.13	10.4	4.85	4.35	6.93	11.3	5.35	15.8	4.97	14.5	6.03	16.9	8.98

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	1.10	2.28	3.18	1.81	1.49	1.60	1.14	1.13	0.31	0.49	0.21	0.30	14.84
1950	1.02	1.28	.61	.55	.78	1.42	.65	1.73	.60	1.82	.76	2.05	13.25

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1949	1142	564	Dec. 4, 1948	0.9	10.1	1.10	14.84	7.58	11.17
1950	1172	640	July 24, 1950	1.3	8.98	.976	13.25	-	-

70. North Meherrin River near Lunenburg, Va.

Location.--Lat 36°59', long 78°21', at bridge on State Highway 40, 0.5 mile downstream from Tusekiah Creek and 5 miles northwest of Lunenburg, Lunenburg County.

Drainage area.--60 sq mi, approximately.

Supplemental records available.--Records of water analyses for the water year 1947 are published in WSP 1102.

Gage.--Wire-weight gage. Datum of gage is 337.7 ft above mean sea level, levels by Corps of Engineers.

Extremes.--1946-50: Maximum discharge, 3,340 cfs Oct. 31, 1949 (gage height, 18.25 ft, from graph based on gage readings), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum observed, 2.4 cfs Aug. 31, 1947; minimum gage height observed, 1.13 ft Aug. 31, 1947, Sept. 5, 1948.

Flood in August 1940 reached a stage of 48 ft, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second, of North Meherrin River near Lunenburg, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	11.9
1947	12.0	19.8	* 22.5	90.1	28.5	92.5	52.2	29.5	9.11	12.9	10.0	70.7	37.6
1948	26.8	88.1	29.6	53.1	177	152	137	57.9	21.8	9.87	10.2	9.39	63.8
1949	40.6	123	186	73.3	82.6	61.0	47.7	57.6	10.3	26.4	23.3	18.3	62.5
1950	82.9	92.1	26.8	33.4	43.4	69.8	51.2	74.2	26.0	42.7	12.4	38.1	49.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	0.22	-
1947	0.23	0.37	0.43	1.73	0.49	1.78	0.97	0.57	0.17	0.25	0.19	1.32	8.50
1948	.52	1.64	.57	1.02	3.18	2.92	2.54	1.11	.40	.19	.20	.17	14.46
1949	.78	2.29	3.57	1.41	1.44	1.18	.89	1.11	.19	.51	.45	.34	14.16
1950	1.59	1.72	.52	.64	.75	1.34	.95	1.43	.48	.82	.24	.71	11.19

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1082	*2,480	Sept. 25, 1947	2.4	37.6	0.627	8.50	45.0	10.23
1948	1112	2,890	Feb. 14, 1948	3.2	63.8	1.06	14.46	81.0	18.37
1949	1142	*2,240	Nov. 28, 1948	3.5	62.5	1.04	14.16	50.0	11.35
1950	1172	3,340	Oct. 31, 1949	4.3	49.4	.823	11.19	-	-

* Revised.

71. Meherrin River near Lawrenceville, Va.

Location.--Lat 36°43'00", long 77°49'55", at Gholson Bridge, 0.6 mile (revised) upstream from Allen Creek, and 3 miles southeast of Lawrenceville, Brunswick County.

Drainage area.--553 sq mi.

Supplemental records available.--Records of chemical analyses during 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 136.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 17, 1931, chain gage at same site and datum.

Average discharge.--22 years (1928-50), 506 cfs.

Extremes.--1928-50: Maximum discharge, 38,000 cfs Aug. 17, 1940 (gage height, 42.0 ft, from floodmark), from rating curve extended above 13,000 cfs on basis of velocity-area studies and records for Nottoway River near Stony Creek; minimum, 5 cfs Sept. 23, 24, 1932 (gage height, 0.72 ft); minimum daily, 5 cfs Sept. 24, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*220	*180	*205	176	691	1,570	550	377	601	412	199	123	*441
1930	1,410	487	501	614	851	343	578	193	199	56.3	38.1	45.0	439
1931	17.1	88.5	113	166	175	345	623	672	263	159	473	70.0	264
1932	52.1	46.9	115	705	416	963	468	200	119	42.8	59.7	15.2	267
1933	361	368	792	821	844	651	847	377	180	138	118	85.8	463
1934	22.7	44.1	71.2	88.8	271	1,331	754	878	324	317	444	823	449
1935	167	363	1,048	991	671	834	1,406	401	219	323	146	748	610
1936	134	383	349	2,391	1,478	1,293	1,254	242	284	172	239	95.1	690
1937	137	96.7	280	2,032	816	504	1,931	349	297	232	845	698	683
1938	719	438	314	759	386	664	516	288	1,555	1,980	344	197	683
1939	132	494	512	582	1,009	1,170	718	402	142	502	793	179	553
1940	232	338	258	334	1,192	545	802	377	228	322	4,199	202	754
1941	147	612	295	492	324	584	546	148	176	373	91.2	117	325
1942	28.8	47.8	152	159	298	470	202	128	107	337	647	158	228
1943	647	283	557	627	1,043	1,004	549	269	188	167	38.7	67.3	451
1944	56.7	99.6	116	336	759	1,374	857	349	151	152	270	585	422
1945	699	420	607	668	1,024	468	504	687	217	2,358	444	1,264	780
1946	289	387	1,241	1,013	1,442	594	585	1,081	462	365	179	155	644
1947	166	207	232	841	310	827	614	278	142	188	148	455	366
1948	321	895	314	521	1,297	1,005	1,108	445	528	200	220	86.7	374
1949	255	850	1,049	792	1,002	610	522	512	250	408	668	391	607
1950	199	515	250	340	432	556	307	883	521	758	175	295	436

* Not previously published; estimated on basis of record for Appomattox River near Farmville.

Monthly and yearly runoff, in inches, of Meherrin River near Lawrenceville, Va.

Water year	Monthly and yearly runoff, in inches, of Meherrin River near Lawrenceville, Va.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.46	*0.36	*0.43	0.37	1.30	3.27	1.11	0.70	1.22	0.86	0.42	0.25	*10.75
1930	2.94	.98	1.04	1.28	1.56	.71	1.17	.40	.40	.12	.08	.09	10.77
1931	.04	.18	.24	.35	.33	.72	1.26	1.41	.53	.33	.99	.14	6.52
1932	.11	.09	.24	1.46	.81	2.01	.94	.42	.24	.09	.12	.03	6.56
1933	.75	.74	1.71	1.71	1.59	1.56	1.71	.79	.36	.29	.25	.17	11.37
1934	.05	.09	.15	.19	.51	2.78	1.52	1.83	.65	.66	.93	1.66	11.02
1935	.35	.77	2.19	2.06	1.26	1.74	2.83	.84	.44	.67	.30	1.51	14.96
1936	.28	.77	.73	4.98	2.88	2.70	2.53	.50	.57	.36	.50	.19	16.99
1937	.29	.20	.58	4.23	1.54	1.05	3.89	.73	.60	.48	1.76	1.41	16.76
1938	1.50	.88	.65	1.58	.73	1.38	1.04	.60	3.14	4.13	.72	.40	16.75
1939	.32	1.00	1.07	1.21	1.90	2.44	1.45	.84	.29	1.05	1.65	.36	13.58
1940	.48	.68	.54	.70	2.33	1.14	1.62	.79	.46	.67	8.75	.41	18.57
1941	.31	1.24	.61	1.03	.61	1.22	1.10	.31	.35	.78	.19	.24	7.99
1942	.06	.10	.32	.33	.56	.98	.41	.27	.22	.70	1.35	.32	5.62
1943	1.35	.57	1.16	1.30	1.97	2.10	1.11	.56	.38	.35	.08	.14	11.07
1944	.12	.20	.24	1.70	1.44	2.86	1.73	.73	.30	.32	.56	1.18	10.38
1945	1.45	.85	1.27	1.40	1.93	.98	1.02	1.43	.44	4.91	.93	2.56	19.17
1946	.60	.87	2.58	2.11	2.68	1.23	1.18	2.25	.93	.76	.37	.31	15.78
1947	.35	.42	.48	1.75	.58	1.73	1.24	.58	.29	.39	.31	.92	9.04
1948	.67	1.81	.65	1.09	2.53	2.10	2.23	.93	1.07	.42	.46	.18	14.14
1949	.53	1.72	2.19	1.65	1.88	1.27	1.05	1.07	1.50	.85	1.40	.79	14.90
1950	.42	1.04	.52	.71	.81	1.16	.62	1.84	1.05	1.58	.36	.59	10.70

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	6,990	Mar. 6, 1929	56	441	*0.797	*10.75	592	14.46
1930	697	7,270	Oct. 3, 1929	8	439	.794	10.77	255	6.27
1931	712	4,320	Apr. 7, 1931	7	264	.477	6.52	264	6.50
1932	727	8,600	Mar. 7, 1932	5	267	.463	6.56	377	9.26
1933	742	5,200	Apr. 18, 1933	6	463	.637	11.37	347	8.52
1934	757	5,880	Mar. 6, 1934	9	449	.812	11.02	572	14.04
1935	782, 972	9,420	Dec. 1, 1934	75	610	1.10	14.96	548	13.43
1936	802	11,200	Jan. 21, 1936	40	690	1.25	16.99	661	16.28
1937	822	17,300	Apr. 27, 1937	63	683	1.24	16.76	763	18.72
1938	852	14,500	July 27, 1938	97	683	1.24	16.75	656	16.11
1939	872	6,480	Aug. 30, 1939	75	553	1.00	13.58	525	12.89
1940	892	38,000	Aug. 17, 1940	115	754	1.56	18.57	772	19.03
1941	922	4,450	Nov. 16, 1940	29	325	.588	7.99	256	6.31
1942	952	3,970	Aug. 10, 1942	14	228	.412	5.62	335	8.22
1943	972	4,970	Feb. 7, 1943	22	451	.816	11.07	348	8.55
1944	1002	4,890	Sept. 21, 1944	35	422	.763	10.38	544	13.39
1945	1032	11,800	July 19, 1945	95	780	1.41	19.17	796	19.56
1946	1052	6,190	Feb. 12, 1946	76	644	1.16	15.78	533	13.07
1947	1082	5,260	Sept. 27, 1947	47	368	.665	9.04	445	10.92
1948	1112	7,660	Feb. 16, 1948	56	564	1.04	14.04	627	15.45
1949	1142	5,430	Nov. 30, 1948	110	607	1.10	14.90	507	12.44
1950	1172	4,110	Nov. 2, 1949	106	436	.788	10.70	-	-

* Not previously published.

72. Fontaine Creek near Emporia, Va.

Location [revised].--Lat 36°38'10", long 77°35'10", near center of span on upstream side of highway bridge, 4.4 miles southwest of Emporia, Greenville County, and 7.1 miles upstream from Cattail Creek.

Drainage area.--96 sq mi, approximately.

Gage.--Chain gage. Altitude of gage is 98 ft (by barometer).

Average discharge.--7 years (1943-50), 103 cfs.

Extremes.--1943-50: Maximum discharge, 3,500 cfs July 19, 1945 (gage height, 10.58 ft, from graph based on gage readings); minimum observed, 0.6 cfs Sept. 6, 1944 (gage height, 1.58 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	*13.1	*15.4	*11.6	*70.6	*190	*341	*199	*19.9	*8.33	*24.8	24.0	56.5	*80.7
1945	80.0	52.0	101	114	284	112	58.1	139	72.2	430	87.0	285	150
1946	45.1	38.2	146	186	265	109	106	244	80.2	70.4	36.4	15.4	111
1947	20.9	35.4	27.7	112	65.9	90.4	80.3	30.3	28.1	30.0	32.1	27.7	48.3
1948	26.5	166	71.8	113	273	162	195	108	169	23.3	63.8	9.70	116
1949	45.2	166	277	25	250	128	33.7	136	48.5	57.7	114	74.5	137
1950	21.1	78.3	46.1	96.0	79.9	66.5	41.2	68.0	70.4	138	16.4	228	78.9

* Not previously published; estimated or partly estimated from monthly discharge measurements and records for Meherrin River near Lawrenceville.

CHOWAN RIVER BASIN

Monthly and yearly runoff, in inches, of Fontaine Creek near Emporia, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	*0.16	*0.18	*0.14	*0.85	*2.14	*4.09	*2.31	*0.24	*0.10	*0.30	0.29	0.66	*11.46
1945	.96	.60	1.21	1.37	3.06	1.35	.68	1.67	.84	5.16	1.04	3.31	21.27
1946	.54	.44	1.75	2.24	2.87	1.31	1.23	2.95	.93	.65	.44	.18	15.71
1947	.25	.41	.33	1.35	.71	1.09	.93	.36	.33	.36	.59	.32	6.83
1948	.32	1.95	.86	1.38	3.06	1.95	2.26	1.29	2.20	.28	.77	.10	16.40
1949	.54	1.93	3.33	3.04	2.71	1.53	1.09	1.66	.56	.69	1.37	.87	19.32
1950	.25	.91	.55	1.15	.87	.80	.48	.82	.82	1.66	.20	2.64	11.15

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1944	1002	*1,050	Apr. 13, 1944	0.7	*80.7	*0.841	*11.46	*97.0	*13.76
1945	1032	3,500	July 19, 1945	13	150	1.56	21.27	150	21.23
1946	1052	*2,840	May 27, 1946	8	111	1.16	15.71	98.8	13.97
1947	1082	354	Jan. 21, 1947	7	48.3	.503	6.83	63.4	8.97
1948	1112	1,660	Feb. 15, 1948	5	116	1.21	16.40	135	19.07
1949	1142	1,120	Dec. 1, 1948	7	137	1.43	19.32	108	15.23
1950	1172	1,220	Sept. 13, 1950	9	78.9	.822	11.15	-	-

* Revised.

* Not previously published.

a Maximum daily discharge.

73. Ahoskie Creek at Ahoskie, N. C.

Location.--Lat 36°17', long 77°00', on right bank 10 ft downstream from bridge on State Highway 350, half a mile upstream from Atlantic Coast Line Railroad bridge, and three-quarters of a mile southwest of Ahoskie, Hertford County.

Drainage area.--64.3 sq mi.

Gage.--Staff gage. Altitude of gage is 22 ft (by barometer).

Extremes.--January to September 1950: Maximum discharge, 430 cfs July 2 (gage height, 6.56 ft); no flow Aug. 11-23.

Flood of August 1940 reached a stage of 11.1 ft, from floodmark witnessed by local resident (discharge not determined).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	110	51.3	59.6	18.2	11.7	8.69	138	11.3	28.2	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	1.97	0.83	1.07	0.32	0.21	0.15	2.47	0.20	0.49	-

ROANOKE RIVER BASIN

74. Roanoke River at Lafayette, Va.

Location (revised).--Lat 37°14'10", long 80°12'30", at Lafayette, Montgomery County, 0.4 mile downstream from confluence of North and South Forks of Roanoke River, and 1.1 miles upstream from Cove Hollow.

Drainage area.--257 sq mi.

Gage.--Water-stage recorder. Datum of gage is 1,174.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 30, 1949, staff gage at same site and datum.

Average discharge.--7 years (1943-50), 287 cfs.

Extremes.--1943-50: Maximum discharge, 13,200 cfs (revised) Aug. 4, 1948 (gage height, 11.0 ft, from graph based on gage readings); minimum observed, 26 cfs on many days in August and on Sept. 1, 1944 (gage height, 0.85 ft).

Flood of August 1940 reached a stage of 12.2 ft, from information by local residents (discharge, 19,000 cfs, from rating curve extended above 12,000 cfs by logarithmic plotting).

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Lafayette, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	*47.3
1944	44.4	48.9	62.7	109	466	598	244	347	102	56.5	43.4	165	189
1945	279	98.1	221	397	425	267	173	134	76.0	74.7	62.6	448	220
1946	105	169	405	668	560	309	206	437	147	196	69.5	61.5	277
1947	76.4	73.6	83.8	682	165	379	396	154	263	88.3	164	89.6	219
1948	369	434	128	142	*683	*569	*622	295	313	163	*551	113	*363
1949	117	*535	*913	*568	479	*385	*608	*497	*298	*590	*291	218	*442
1950	136	283	234	251	548	257	163	642	325	301	136	272	296

* Revised.

† Not previously published; partially estimated from record for station at Roanoke.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	-	-	-	-	-	-	-	-	-	*0.21
1944	0.20	0.21	0.28	0.49	1.88	2.69	1.06	1.56	0.44	0.25	0.19	.72	9.97
1945	1.26	.43	.99	1.78	1.72	1.20	.75	.60	.33	.34	.28	1.94	11.62
1946	.47	.73	1.82	3.00	2.27	1.38	.89	1.96	.64	.88	.31	.27	14.62
1947	.34	.32	.38	3.06	.67	1.70	1.72	.89	1.14	.40	.74	.39	11.55
1948	1.66	1.89	.57	.64	*2.87	*2.55	*2.70	1.33	1.36	.73	*2.47	.49	*19.26
1949	.52	*1.45	*4.09	*2.55	1.94	*1.73	*2.64	*2.22	*1.29	*2.65	*1.30	.95	*23.33
1950	.61	1.23	1.05	1.13	2.22	1.15	.79	2.86	1.41	1.35	.62	1.16	15.62

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	1032	-	-	-	-	-	-	-	-
1944	1032	*6,500	Feb. 18, 1944*	26	189	0.735	9.97	226	11.96
1945	1032	*10,400	Sept. 18, 1945	32	220	.656	11.62	227	11.96
1946	1052	*7,200	Feb. 10, 1946	48	277	1.08	14.62	239	12.64
1947	1082	*7,200	Jan. 20, 1947	43	219	.852	11.55	277	14.63
1948	1112,1353	*15,200	Aug. 4, 1948	64	*363	*1.41	*19.26	*400	*21.20
1949	1142,1353	*11,500	Dec. 4, 1948	75	*442	*1.72	*23.33	*382	*20.16
1950	1172	6,600	July 12, 1950	60	296	1.15	15.82	-	-

* Revised.

75. Roanoke River at Roanoke, Va.

Location--Lat 37°15'30", long 79°56'20", at Walnut Street Bridge in Roanoke, Roanoke County, 3.2 miles (revised) upstream from Tinker Creek, and at mile 360.6.

Drainage area--388 sq mi.

Supplemental records available--Records of chemical analyses for the water years 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage--Water-stage recorder. Datum of gage is 906.84 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, wire or chain gage on downstream side of highway bridge 50 ft upstream at same datum.

Average discharge--51 years (1899-1950), 390 cfs.

Extremes--1899-1950: Maximum discharge, 26,400 cfs (revised) Aug. 14, 1940 (gage height, 18.25 ft), from rating curve extended above 15,000 cfs by logarithmic plotting on basis of slope area determination, and records for other stations in Roanoke River basin; practically no flow Dec. 23, 1909, when flow was retarded by freezing (gage height, 0.0 ft); minimum daily, 27 cfs Feb. 20, 1934.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1899	-	-	-	-	-	2,521	482	377	278	*147	*119	*140	-
1900	*98.1	*141	*186	403	*659	964	687	320	422	*226	*94.6	*131	*359
1901	361	593	578	501	247	531	1,702	*1,468	865	859	*1,792	454	*836
1902	275	*198	1,425	781	1,423	1,047	543	256	*202	143	89.0	77.9	*534
1903	*147	*251	567	*623	1,113	1,528	1,190	391	422	306	247	531	*606
1904	206	162	127	*129	*211	395	*180	292	417	*246	453	133	*246
1905	*90.7	111	118	213	259	620	316	802	317	1,190	374	469	*409
1906	*158	126	425	808	299	524	459	243	161	*198	*400	*288	*342
1907	*1,080	*450	*460	*730	*425	*795	*890	*495	768	244	187*	462	*563
1908	173	384	632	1,230	448	506	494	478	421	358	207	262	*467
1909	647	459	627	838	531	542	737	1,210	413	210	248	128	351
1910	158	103	108	250	506	361	242	210	1,190	546	163	175	551

* Revised.

† Corrected.

‡ Not previously published; estimated on basis of records for station at Niagara or for James River at Buchanan.

Monthly and yearly runoff, in inches, of Roanoke River at Roanoke, Va.--Continued

Water year	Monthly runoff, in inches												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1936	0.28	0.39	0.75	3.92	2.80	3.67	2.30	1.20	0.50	0.31	0.44	0.28	16.84
1937	1.10	.31	1.23	4.02	1.46	.95	1.14	1.18	.50	.50	2.14	1.13	15.66
1938	3.03	1.47	.96	1.40	.89	1.31	.92	.64	1.54	1.58	1.01	.38	15.13
1939	.31	.51	.57	.93	2.04	1.56	.76	.51	.41	.92	1.31	.32	10.15
1940	.26	.28	.29	.29	.94	.64	1.57	2.10	1.34	.50	6.36	.98	15.55
1941	.41	.45	.62	.78	.51	.81	.96	.33	.35	1.13	.24	.23	6.82
1942	.19	.24	.35	.30	.29	.59	.31	1.87	1.67	.27	1.05	.61	7.72
1943	.98	.84	1.38	1.20	2.10	1.92	1.87	1.45	1.95	.97	.29	.22	13.97
1944	.23	.24	.29	.43	1.51	2.49	1.15	.87	.37	.27	.22	.56	8.63
1945	1.22	.47	.89	1.52	1.49	1.26	.70	.66	.33	.37	.28	2.23	11.42
1946	.56	.66	1.65	2.54	2.09	1.49	.90	1.78	.61	.94	.32	.28	13.82
1947	.43	.36	.43	2.57	.64	1.50	1.62	.70	1.00	.45	.92	.47	11.09
1948	1.96	1.99	.63	.66	2.52	2.12	2.62	1.26	1.15	.67	2.16	.50	18.24
1949	.60	1.20	3.98	2.52	1.98	1.79	2.54	1.82	1.64	2.69	1.37	1.03	23.16
1950	.56	1.14	.91	.91	1.98	1.11	.60	2.61	1.37	1.24	.67	1.25	14.55

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1899	(a), 1383	\$11,000	Mar. 4, 1899	-	-	-	-	-	-
1900	(a), 1383	\$5,060	Mar. 20, 1900	*78	*359	*0.925	*12.56	*453	*15.87
1901	(a), 1383	\$19,000	May 22, Aug. 6	99	*836	*2.15	*29.26	*867	*30.33
1902	(a), 1383	\$15,300	Feb. 25, 1902	76	*534	*1.38	*18.67	*455	*15.89
1903	(a), 1383	\$10,200	Feb. 17, 1903	*91	*606	*1.56	*21.21	*566	*19.83
1904	126, 1383	\$2,900	Aug. 10, 1904	*63	*246	*.654	*8.65	*232	*8.13
1905	167	\$14,800	July 12, 1905	74	409	1.05	14.32	442	15.48
1906	203	\$4,520	Dec. 20, 1905	85	*342	*.881	*11.97	*450	*15.73
1907	242	\$9,920	Sept. 23, 1907	*583	*1.50	*20.40	*515	*18.03	
1908	242	\$11,800	Jan. 12, 1908	117	*467	1.20	16.38	*512	18.00
1909	282	\$9,880	Oct. 24, 1908	86	551	1.42	19.27	436	15.25
1910	282	\$9,380	June 13, 1910	60	331	.853	11.60	334	11.67
1911	302	\$3,040	Apr. 5, 1911	65	314	.809	10.97	362	12.64
1912	322	\$8,980	May 12, 1912	76	557	1.44	19.54	520	18.23
1913	352	\$9,120	Mar. 14, 1913	50	325	.838	11.35	344	12.03
1914	382	*2,780	Jan. 9, 1914*	43	353	.910	12.36	412	14.42
1915	432	*11,000	Dec. 5, 1914	65	472	1.22	16.48	479	16.73
1916	432	*8,040	Dec. 18, 1915*	61	443	1.14	15.53	348	12.21
1917	452	*6,420	Mar. 5, 1917	46	296	.763	10.35	278	9.71
1918	502, 1383	*6,440	June 26, 1918	*30	*430	*1.11	*15.01	*546	*19.07
1919	502, 1383	*6,700	Jan. 3, 1919	77	*480	*1.24	*16.77	*385	*13.46
1920	502, 1383	*4,270	Feb. 4, 1920	55	*249	*.642	*8.73	*291	*10.21
1921	522, 1383	*1,700	Nov. 30, 1920	56	*310	*.799	*10.82	*317	*11.07
1922	542, 1383	*14,100	Nov. 1, 1921	48	*457	*1.18	*15.98	*392	*13.68
1923	562, 1383	*5,510	Mar. 7, 1923	48	*289	*.745	*10.13	*301	*10.54
1924	562, 1383	*9,600	Sept. 29, 1924	76	*414	*1.07	*14.52	*429	*15.05
1925	602	*1,300	Jan. 18, 1925*	43	197	.508	6.91	173	6.08
1926	622	*2,240	Jan. 17, 1926*	38	170	.438	5.96	248	8.69
1927	642	*8,900	Dec. 26, 1926*	53	352	.907	12.32	342	*11.95
1928	662, 972	*26,100	Aug. 16, 1928*	-	*467	*1.20	*16.40	*433	*15.19
1929	682	*5,180	Mar. 5, 1929	88	464	1.20	16.24	577	20.19
1930	697	*11,100	Oct. 2, 1929	33	303	.781	10.60	150	5.27
1931	712	*3,470	Aug. 22, 1931	32	201	.518	7.04	196	6.94
1932	727	*2,240	Feb. 3, 1932	30	217	.559	7.61	359	12.57
1933	742, 972	*13,900	Oct. 17, 1932	40	435	1.12	15.20	296	10.34
1934	757	*6,570	Mar. 28, 1934	27	188	.485	6.55	257	9.00
1935	782, 1383	*11,400	Jan. 23, 1935	75	*475	*1.22	*16.64	*429	*15.00
1936	802	*10,400	Mar. 18, 1936	68	480	1.24	16.84	515	18.06
1937	822	*9,180	Aug. 30, 1937	87	447	1.15	15.66	528	18.48
1938	852	*10,000	Oct. 19, 1937	112	433	1.12	15.13	316	11.06
1939	872	*8,480	Aug. 19, 1939	88	291	.750	10.15	274	9.59
1940	892	*26,400	Aug. 14, 1940	59	443	1.14	15.55	462	16.20
1941	922	3,910	July 8, 1941	59	194	.500	6.82	174	6.10
1942	952	5,740	May 22, 1942	54	221	.570	7.72	282	9.86
1943	972	5,870	Apr. 19, 1943	59	397	1.02	13.87	335	11.73
1944	1002	4,750	Feb. 18, 1944	35	246	.634	8.63	298	10.45
1945	1032	15,100	Sept. 18, 1945	68	327	.843	11.42	335	11.71
1946	1052	5,400	Feb. 10, 1946	70	395	1.02	13.82	347	12.17
1947	1082	5,960	Jan. 20, 1947	85	317	.817	11.09	413	14.45
1948	1112	11,900	Aug. 5, 1948	116	520	1.34	18.24	554	19.44
1949	1142	15,100	Dec. 4, 1948	138	662	1.71	23.16	572	19.99
1950	1172	6,960	May 30 or 31	135	416	1.07	14.55	-	-

* Revised.

† Corrected.

* Not previously published.

a From Virginia Geological Survey, Bull. 31.

b May have been higher in October 1906.

ROANOKE RIVER BASIN

76. Tinker Creek at Roanoke, Va.

Location.--Lat 37°17'02", long 79°55'12", at crossing on present U. S. Highway 460, about 1½ miles northeast of the center of Roanoke, 1.0 mile upstream from Glade Creek, and 1.7 miles from mouth.

Drainage area.--70 sq mi, approximately.

Gage.--Chain gage. Altitude of gage was 905 ft (from topographic map). Prior to Apr. 27, 1908, staff gage, at same site and datum.

Extremes.--May 1907 to July 1908: Maximum discharge, 3,300 cfs Sept. 23, 1907 (gage height, 7.0 ft), from rating curve extended above 170 cfs by logarithmic plotting; minimum, 13 cfs several days in August and September 1907 (gage height, 0.4 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	26.3	*84.6	-
1908	39.2	85.9	153	*193	*156	120	*107	91.9	*108	*122	-	-	-

* Only monthly figures revised; revised daily figures not available.

† Not previously published; partly estimated on basis of gage-height record and stage-discharge relation extended above 250 cfs.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	0.43	*1.35	-
1908	0.65	1.37	2.19	*3.18	*2.40	1.97	*1.71	1.51	*1.72	*2.01	-	-	-

* Only monthly figures revised; revised daily figures not available.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	242	*a3,300	Sept. 23, 1907	-	-	-	-	-	-
1908	242	*b1,970	Jan. 12, 1908	-	-	-	-	-	-

* Not previously published.

a Maximum during period July 16 to Sept. 30, 1907.

b Maximum during period Oct. 1, 1907, to July 31, 1908.

77. Roanoke River at Niagara, Va.

Location.--Lat 37°15'18", long 79°52'18", on right bank 200 ft downstream from powerplant of Appalachian Electric Power Co. at Niagara, Roanoke County, 2.0 miles downstream from Tinker Creek, 2.1 miles southeast of Vinton, and at mile 355.3.

Drainage area.--511 sq mi.

Gage.--Water-stage recorder. Datum of gage is 820.15 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--24 years (1926-50), 538 cfs (corrected).

Extremes.--1926-50: Maximum discharge, 35,000 cfs Aug. 14, 1940 (gage height, 17.5 ft, from floodmark), from rating curve extended above 12,000 cfs by logarithmic plotting on basis of velocity-area study by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 13 cfs June 4, 1937 (gage height, 0.42 ft); minimum daily, 22 cfs Oct. 18, 1941.

Remarks.--Flow regulated at dam and powerplant 200 ft above station.

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Niagara, Va.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1927	120	307	1,100	419	1,350	481	1,030	378	226	334	306	175	515
1928	148	309	268	991	610	535	436	592	466	232	194	2,050	677
1929	448	276	242	352	904	1,520	800	851	1,080	422	216	204	606
1930	1,430	805	499	487	708	403	319	193	168	109	104	89.8	442
1931	86.0	114	143	237	137	310	710	443	373	201	516	169	287
1932	108	102	173	535	597	895	713	560	238	131	103	89.7	353
1933	1,040	831	904	752	869	675	950	585	232	230	183	114	612
1934	111	115	139	133	117	1,178	680	230	197	233	155	266	297
1935	186	504	798	1,378	692	1,316	2,042	463	308	232	182	404	708
1936	156	224	381	1,910	1,358	1,950	1,173	512	265	170	204	156	703
1937	468	162	491	1,941	772	513	597	490	270	238	1,017	641	634
1938	1,722	809	481	637	436	573	400	303	778	801	528	213	643
1939	167	275	288	431	1,149	772	366	257	203	399	692	194	629
1940	149	148	141	162	474	333	737	950	672	257	2,931	563	428
1941	230	250	327	418	289	399	529	196	209	629	142	124	312
1942	90.1	101	149	144	178	290	157	919	867	190	569	340	334
1943	451	341	661	600	1,085	904	992	683	462	521	178	136	562
1944	132	139	156	254	744	1,177	556	436	209	148	118	467	376
1945	600	239	427	736	749	499	661	387	331	205	192	1,022	472
1946	256	313	731	1,109	1,033	696	457	823	332	405	179	153	539
1947	204	186	207	1,183	345	758	813	345	524	267	392	269	459
1948	911	1,005	335	329	1,268	1,065	1,314	692	561	313	1,039	273	756
1949	338	759	2,065	1,208	1,013	861	1,167	999	†944	1,396	681	471	†984
1950	294	505	411	409	990	495	374	1,200	644	527	304	613	561

† Corrected.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1927	0.32	0.67	2.48	0.95	2.75	1.08	2.25	0.85	0.49	0.75	0.69	0.38	13.66
1928	.70	.58	2.24	1.37	1.13	.98	1.29	1.05	.51	.44	3.27	4.47	18.03
1929	1.01	.60	.55	.79	1.84	3.42	1.75	1.88	2.35	.95	.49	4.45	16.08
1930	3.23	1.76	1.13	1.10	1.45	.91	.70	.44	.37	.25	.24	.20	11.78
1931	.19	.25	.32	.53	.28	.70	1.55	1.00	.81	.45	1.16	.37	7.61
1932	.24	.82	.59	1.21	1.26	2.02	1.56	1.27	.52	.30	.23	.20	9.42
1933	2.35	1.82	2.04	1.70	1.77	1.52	2.08	1.31	.51	.52	.41	.25	16.28
1934	.25	.25	.31	.30	.24	2.66	1.48	5.22	.43	.53	.35	.58	7.90
1935	.42	1.10	1.80	3.11	1.41	2.97	4.46	1.04	.67	.52	.41	.88	18.79
1936	.35	.49	.86	4.31	2.83	4.40	2.57	1.15	.58	.38	.46	.34	18.72
1937	1.06	.35	1.11	4.38	1.57	1.15	1.30	1.11	.59	.54	2.29	1.40	16.85
1938	3.88	1.76	1.08	1.44	.89	1.29	.87	.68	1.70	1.81	1.19	4.47	17.06
1939	.38	.60	.65	.97	2.34	1.74	.80	.58	.44	.90	1.56	4.42	11.38
1940	.34	.32	.32	.37	1.00	.75	1.61	2.14	1.47	.58	6.82	1.23	16.75
1941	.52	.55	.74	.94	.59	.90	1.16	.44	.46	1.42	.32	.27	8.31
1942	.20	.22	.34	.33	.36	.65	.34	2.08	1.90	.43	1.28	.74	8.87
1943	1.02	.74	1.49	1.35	2.21	2.04	2.16	1.54	1.01	1.18	.40	.30	15.44
1944	.30	.30	.35	.57	1.58	2.65	1.22	.98	.46	.33	2.27	1.02	10.03
1945	1.35	.52	.96	1.66	1.53	1.49	.84	.75	.45	.43	.33	2.23	12.54
1946	.58	.68	1.65	2.50	2.10	1.57	1.00	1.86	.73	.91	.40	.33	14.31
1947	.46	.41	.47	2.68	.70	1.71	1.77	.78	1.15	.80	.98	.59	12.20
1948	.56	2.20	.76	.74	2.68	2.40	2.87	1.56	1.23	.71	2.34	.60	20.14
1949	.76	1.66	4.66	2.72	2.06	1.94	2.54	2.24	†1.84	3.15	1.53	1.03	†26.13
1950	.66	1.10	.93	.92	2.02	1.12	.82	2.71	1.41	1.19	.69	1.34	14.91

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	642	-	-	-	-	-	-	-	-
1927	642	*10,800	Dec. 26, 1926	97	515	1.01	13.66	517	13.71
1928	(a)	34,400	Aug. 16, 1928	112	677	1.32	18.03	626	16.67
1929	682	7,300	Feb. 28, 1929	128	606	1.19	16.08	754	20.04
1930	(a)	19,700	Oct. 2, 1929	71	442	.865	11.78	241	6.42
1931	712	*5,000	Aug. 22 or 23	74	287	.562	7.61	291	7.70
1932	727	4,150	Mar. 6, 1932	40	353	.691	9.42	554	14.78
1933	(a)	24,300	Oct. 17, 1932	90	612	1.20	16.28	410	10.88
1934	(a)	8,950	Mar. 28, 1934	92	297	.581	7.90	392	10.41
1935	(a)	19,300	Jan. 23, 1935	102	708	1.39	18.79	647	17.17
1936	(a)	21,700	Mar. 17, 1936	105	703	1.38	18.72	733	19.54
1937	(a)	8,950	Jan. 20, 1937	125	634	1.24	16.85	793	21.05
1938	(a)	17,100	Oct. 19, 1937	118	643	1.26	17.06	450	11.97
1939	872	*13,000	Aug. 19, 1939	136	429	.840	11.38	404	10.73
1940	(a)	35,000	Aug. 14, 1940	110	628	1.23	16.75	659	17.58
1941		6,290	July 8, 1941	50	312	.611	8.31	273	7.26
1942	952	8,380	May 22, 1942	22	334	.654	8.87	428	11.36
1943	972	9,170	Apr. 19, 1943	116	582	1.14	15.44	495	13.14
1944	1002	14,100	Sept. 18, 1944	46	376	.736	10.03	447	11.91
1945	1032	21,500	Sept. 18, 1945	98	472	.924	12.54	475	12.62
1946	1052	6,570	Feb. 10, 1946	118	539	1.05	14.31	480	12.74
1947	1082	7,380	Jan. 20, 1947	116	459	.898	12.20	597	15.87
1948	1112	16,600	Aug. 4, 1948	167	756	1.48	20.14	833	22.21
1949	1142	27,600	Dec. 4, 1948	172	†984	†1.93	†26.13	†819	†21.74
1950	1172	10,500	May 31, 1950	164	561	1.10	14.91	-	-

* Revised.

† Corrected.

‡ Not previously published.

a From Virginia Conservation Commission, Division of Water Resources and Power, Bull. 6.

78. Back Creek near Roanoke, Va.

Location.--Lat 37°10'45", long 79°56'10", at a footbridge 0.5 mile below settlement of Red Hill, near present crossing of U. S. Highway 220, about 5 miles south of Roanoke, and 0.1 mile upstream from Narrows Creek.

Drainage area.--43 sq mi, approximately.

Gage.--Staff gage. Altitude of gage is 950 ft (from topographic map).

Extremes.--1907-8: Maximum discharge, 2,000 cfs Sept. 23, 1907 (gage height, 11.0 ft), from rating curve extended above 97 cfs by logarithmic plotting; minimum, 10 cfs Sept. 1, 2, 16-20, 1907 (gage height, 0.9 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	-	-	-
1908	79.4	#109	#145	#189	#172	#96.0	#72.6	#51.7	#137	36.4	28.4	#72.0	-

* Not previously published; partly estimated on basis of gage-height record and records for Tinker Creek near Roanoke.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	-	-	-
1908	2.13	#2.82	#3.88	#5.07	#4.31	#2.57	#1.89	#1.38	#3.58	0.98	0.76	#1.86	-

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1907	242	#2,000	Sept. 23, 1907	-	-	-	-	-	-	-
1908	242	#b992	Jan. 12, 1908	-	-	-	-	-	-	-

* Not previously published.

a Maximum during period May to September.

b Maximum during period October to July.

79. Blackwater River near Union Hall, Va.

Location.--Lat 37°02'35", long 79°41'07", at highway bridge at Kemps Ford, 3 miles upstream from Gillis Creek and 3 miles north of Union Hall, Franklin County.

Drainage area.--208 sq mi.

Supplemental records available.--Records of chemical analyses for the water years 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 693.13 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 22, 1929, chain gage at site 75 ft downstream at same datum.

Average discharge.--26 years (1924-50), 231 cfs.

Extremes.--1924-50: Maximum discharge, 19,700 cfs Aug. 14, 1940 (gage height, 19.52 ft), from rating curve extended above 6,500 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 13 cfs Sept. 20, 1932 (gage height, 1.42 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	#176	#118	#125	#260	#240	#155	199	213	118	103	89.9	81.1	#156
1926	77.1	108	97.3	186	220	142	169	107	89.8	115	97.5	53.5	121
1927	68.9	145	340	248	233	148	239	140	99.1	240	263	79.6	187
1928	162	103	238	197	207	170	224	180	132	164	759	690	269
1929	182	140	126	154	213	368	291	308	411	226	146	105	222
1930	590	362	243	217	231	345	178	138	130	62.5	44.1	38.5	215
1931	44.0	74.0	114	144	67.5	147	217	162	108	92.5	215	69.8	122
1932	49.2	47.9	68.1	171	153	289	210	152	148	61.4	39.0	23.5	117
1933	502	443	352	284	248	226	337	259	173	151	112	66.8	263
1934	60.2	72.3	85.5	76.8	75.5	316	230	145	137	100	838	143	127
1935	127	201	347	414	263	381	486	242	218	183	107	302	272
1936	115	147	182	769	510	519	450	246	192	108	110	76.8	285
1937	238	81.0	191	614	324	212	274	214	143	189	405	244	259
1938	850	344	251	273	229	244	205	161	357	564	342	132	331
1939	108	226	210	212	492	322	201	177	146	237	470	118	242
1940	105	110	109	136	283	140	305	623	336	243	1,572	315	358
1941	173	222	247	221	165	166	262	142	141	252	77.7	77.1	179
1942	55.9	68.6	113	109	120	180	106	359	312	128	267	225	171
1943	198	154	266	266	362	305	386	398	297	459	135	105	278
1944	89.9	98.0	122	163	264	437	244	187	136	126	73.4	256	183
1945	350	148	186	228	241	231	203	206	113	119	87.9	513	218

* Not previously published; estimated on basis of records for Roanoke River at Roanoke.

Monthly and yearly mean discharge, in cubic feet per second, of Blackwater River near Union Hall, Va.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	157	160	374	442	411	323	237	419	217	253	116	126	269
1947	134	131	136	341	151	272	252	166	237	121	153	123	185
1948	340	397	185	195	415	400	382	286	285	169	295	152	291
1949	179	319	584	398	402	481	423	522	487	583	386	363	428
1950	239	257	215	207	339	247	197	419	291	261	163	327	263

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	*0.98	*0.63	*0.69	*1.44	*1.20	*0.86	1.07	1.18	0.63	0.57	0.50	0.44	*10.19
1926	.43	.58	.54	1.03	1.10	.79	.91	.59	.48	.64	.54	.29	7.92
1927	.58	.78	1.98	1.37	1.17	.82	1.28	.78	.55	1.33	1.45	.43	12.20
1928	.90	.55	1.51	1.09	1.07	.94	1.20	1.00	.71	.91	4.21	3.70	17.59
1929	1.01	.75	.70	.85	1.06	2.04	1.58	1.71	2.21	1.26	.81	.56	14.52
1930	3.27	1.94	1.35	1.20	1.16	1.91	.96	.76	.70	.35	.24	.21	14.05
1931	.24	.40	.63	.80	.34	.82	1.16	.90	.58	.51	1.19	.37	7.94
1932	.27	.26	.38	.95	.79	1.59	1.13	.84	.79	.34	.22	.13	7.69
1933	2.78	2.38	1.95	1.58	1.24	1.26	1.81	1.44	.93	.84	.62	.36	17.19
1934	.33	.39	.47	.43	.38	1.75	1.24	.90	.74	.55	.46	.77	8.31
1935	.70	1.08	1.92	2.29	1.31	2.11	2.61	1.34	1.17	1.01	.59	1.62	17.75
1936	.64	.79	1.01	4.27	2.64	2.68	2.41	1.36	1.03	.60	.61	.41	18.65
1937	1.31	.43	1.06	3.40	1.62	1.18	1.47	1.19	.77	.94	2.25	1.30	16.92
1938	4.72	1.85	1.40	1.51	1.14	1.35	1.10	.89	1.92	3.12	1.89	.71	21.60
1939	.60	1.22	1.16	1.18	2.47	1.79	1.08	.98	.78	1.31	2.61	.63	15.81
1940	.58	.59	.60	.75	1.47	.78	1.64	3.46	1.81	1.35	8.72	1.68	23.43
1941	.96	1.19	1.37	1.22	.83	.92	1.41	.79	.76	1.40	.43	.41	11.69
1942	.31	.37	.63	.60	.60	1.00	.57	1.99	1.67	.71	1.48	1.20	11.13
1943	1.10	.83	1.49	1.48	1.81	1.70	2.08	2.20	1.60	2.55	.75	.56	18.15
1944	.50	.53	.68	.90	1.37	2.42	1.30	1.04	.73	.70	.41	1.37	11.95
1945	1.94	.79	1.03	1.27	1.21	1.28	1.09	1.14	.61	.66	.49	2.76	14.27
1946	.87	.86	2.08	2.44	2.06	1.79	1.27	2.32	1.16	1.41	.64	.68	17.58
1947	.74	.70	.75	1.89	.76	1.51	1.53	.92	1.27	.67	.85	.66	12.07
1948	1.68	2.13	1.02	1.08	2.16	2.21	2.05	1.58	1.53	.94	1.64	.82	19.04
1949	.99	1.71	3.24	2.20	2.01	2.66	2.26	2.89	2.61	3.23	2.14	1.95	27.89
1950	1.33	1.38	1.19	1.15	1.70	1.37	1.06	2.32	1.56	1.44	.90	1.75	17.15

* Not previously published; estimated on basis of records for Roanoke River at Roanoke.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	*156	*0.750	*10.19	*145	*9.44
1926	622	*1,840	Jan. 18, 1926	16	121	.582	7.92	144	9.41
1927	642	*6,400	Dec. 25, 1926*	26	187	.699	12.20	183	11.92
1928	662	*18,000	Aug. 11, 1928	29	269	1.29	17.59	264	17.29
1929	682	*2,800	June 9, 1929	57	222	1.07	14.52	285	18.62
1930	697	8,730	Oct. 2, 1929	27	215	1.03	14.05	134	8.76
1931	712	2,490	Aug. 22, 1931	30	122	.587	7.94	116	7.58
1932	727	2,560	Mar. 6, 1932	13	117	.562	7.69	112	13.89
1933	742	12,500	Oct. 17, 1932	26	263	1.26	17.19	213	11.27
1934	757	3,190	Mar. 28, 1934	42	127	.611	8.31	166	10.82
1935	782	4,800	Sept. 6, 1935	70	272	1.31	17.75	253	16.49
1936	802	5,200	Jan. 19, 1936	55	285	1.37	18.65	291	19.01
1937	822	5,440	Oct. 17, 1936	72	259	1.25	16.92	338	22.09
1938	852	13,400	Oct. 19, 1937	114	331	1.59	21.60	255	16.61
1939	872	17,900	Aug. 19, 1939	71	242	1.16	15.81	224	14.60
1940	892	19,700	Aug. 14, 1940	83	358	1.72	23.43	385	25.18
1941	922	2,190	Apr. 5, 1941	49	179	.861	11.69	145	9.48
1942	952	5,220	May 22, 1942	48	171	.822	11.13	203	13.24
1943	972	9,480	July 10, 1943	88	278	1.34	18.15	251	16.44
1944	1002	5,330	Sept. 18, 1944	51	183	.860	11.95	214	14.00
1945	1032	8,350	Sept. 18, 1945	60	218	1.05	14.27	219	14.32
1946	1052	2,860	Jan. 7, 1946	79	269	1.29	17.58	245	15.96
1947	1082	3,130	June 14, 1947	74	185	.889	12.07	228	14.91
1948	1112	3,770	June 18, 1948	94	291	1.40	19.04	305	19.95
1949	1142	8,610	Mar. 23, 1949	117	428	2.06	27.89	396	25.85
1950	1172	5,850	May 31, 1950	128	263	1.26	17.15	219	-

* Revised.

* Not previously published.

80. Roanoke River near Toshes, Va.

Location.--Lat 37°02'03", long 79°31'18", on right bank $1\frac{1}{2}$ miles downstream from Witchers Creek, 3 miles upstream from Pigg River, 5 miles northwest of Toshes, Pittsylvania County, and at mile 313.1.

Drainage area.--1,020 sq mi.

Gage.--Water-stage recorder. Datum of gage is 588.99 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 14, 1929, staff gage at same site and datum.

Average discharge.--25 years (1925-50), 1,036 cfs (corrected).

Extremes.--1925-50: Maximum discharge, 70,000 cfs Aug. 15, 1940 (gage height, 27.36 ft, from floodmark), from rating curve extended above 31,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 93 cfs Sept. 19, 20, 1932 (gage height, 0.96 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year	
1925	-	-	-	-	-	-	-	-	-	-	-	-	+308	-
1926	270	432	387	926	1,360	670	867	416	270	433	319	238	544	
1927	300	773	1,580	726	2,080	878	1,590	669	449	672	735	325	889	
1928	800	522	1,820	923	1,050	873	1,130	835	451	513	3,220	3,710	1,320	
1929	896	589	531	666	1,360	2,250	1,340	1,200	1,760	795	523	483	1,030	
1930	2,630	1,450	931	893	1,160	1,080	699	483	420	228	187	160	860	
1931	184	285	391	586	292	686	1,250	777	634	393	1,120	311	578	
1932	220	222	336	927	1,175	1,260	921	492	242	174	160	160	635	
1933	1,840	1,920	1,640	1,450	1,500	1,230	1,730	1,160	592	498	381	232	1,180	
1934	228	272	339	320	271	1,839	1,298	472	435	487	367	577	577	
1935	512	880	1,706	2,381	1,462	2,348	3,122	954	708	587	427	1,124	1,349	
1936	400	573	860	3,712	2,441	3,103	2,276	968	600	346	399	266	1,327	
1937	831	348	964	3,467	1,557	1,024	1,287	990	592	681	2,103	1,305	1,264	
1938	3,483	1,542	943	1,301	948	1,179	824	632	1,547	2,031	1,420	475	1,367	
1939	385	740	787	962	2,330	1,601	808	669	505	1,076	1,690	453	994	
1940	364	400	386	474	1,223	693	1,528	1,909	1,678	819	5,867	1,245	1,385	
1941	548	744	847	902	633	770	1,112	440	478	1,132	317	273	694	
1942	198	243	386	358	417	637	367	1,665	1,501	483	1,185	761	685	
1943	893	648	1,342	1,172	1,974	1,596	1,755	1,412	1,100	1,268	445	304	1,155	
1944	303	333	393	599	1,225	2,152	1,054	878	464	410	258	1,069	759	
1945	1,410	522	858	1,410	1,367	1,194	850	722	439	428	347	1,974	958	
1946	522	696	1,613	2,185	1,969	1,373	922	1,706	703	910	405	435	1,120	
1947	475	464	492	2,042	681	1,374	1,395	636	998	528	+706	499	+859	
1948	1,492	1,890	667	714	2,130	1,944	2,225	1,291	1,185	606	1,700	519	1,358	
1949	696	1,434	3,522	2,174	1,867	1,822	1,925	1,950	1,528	2,900	1,431	1,240	1,878	
1950	707	1,008	783	759	1,682	999	747	2,230	1,431	1,134	684	1,486	1,133	

† Corrected.

‡ Not previously published; partly estimated on basis of record for station near Gretna.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year	
1925	-	-	-	-	-	-	-	-	-	-	-	-	+0.34	-
1926	0.31	0.47	0.44	1.05	1.38	0.76	0.95	0.47	0.30	0.49	0.36	.26	7.24	
1927	.34	.85	1.79	.82	2.12	.99	1.74	.76	.49	.76	.83	.36	11.85	
1928	.90	.57	2.05	1.04	1.11	.99	1.24	.94	.49	.58	3.64	4.06	17.61	
1929	1.01	.64	.60	.75	1.38	2.55	1.46	1.36	1.93	.90	.59	.53	13.70	
1930	2.97	1.58	1.05	1.01	1.19	1.22	1.76	.55	.46	.26	.21	.18	11.44	
1931	.21	.31	.44	.66	.30	.78	1.37	.88	.69	.44	1.27	.54	7.69	
1932	.25	.24	.38	1.05	.96	1.98	1.38	1.04	.54	.27	.20	.18	8.47	
1933	2.08	2.10	1.86	1.64	1.53	1.40	1.90	1.31	.65	.56	.43	.25	15.71	
1934	.58	.30	.36	.36	.26	.26	2.09	1.42	.53	.45	.55	.42	7.69	
1935	.58	.96	1.92	2.69	1.49	2.65	3.41	1.08	.77	.66	.48	1.23	17.92	
1936	.45	.63	.97	4.20	2.58	3.50	2.49	1.09	.66	.39	.45	.29	17.70	
1937	.94	.38	1.09	3.92	1.59	1.15	1.41	1.12	.65	.77	2.38	1.43	16.83	
1938	3.93	1.68	1.07	1.48	.97	1.34	.90	.71	1.70	2.29	1.60	.52	18.19	
1939	.43	.81	.89	1.09	2.37	1.81	.88	.76	.55	1.21	1.91	.50	13.21	
1940	.41	.44	.44	.54	1.29	.78	1.67	2.16	1.84	.93	6.63	1.36	18.49	
1941	.62	.81	.96	1.02	.65	.87	1.22	.50	.52	1.28	.36	.30	9.11	
1942	.22	.27	.44	.41	.43	.72	.40	1.88	1.64	.55	1.34	.83	9.13	
1943	1.01	.71	1.52	1.33	2.02	1.80	1.92	1.59	1.20	1.43	.50	.33	15.36	
1944	.34	.36	.44	.68	1.29	2.43	1.15	.99	.51	.46	.29	1.17	10.11	
1945	1.59	.57	.97	1.59	1.42	1.35	.93	.82	.48	.48	.39	2.16	12.75	
1946	.62	.76	1.82	2.47	2.01	1.56	1.01	1.92	.77	1.03	.46	.48	14.91	
1947	.54	.51	.56	2.31	.70	1.53	1.72	1.09	.60	.60	+1.80	.55	+11.47	
1948	1.68	2.06	.75	.81	2.25	2.20	2.43	1.46	1.29	.68	1.92	.57	18.10	
1949	.79	1.57	3.98	2.46	1.91	2.06	2.11	2.20	1.67	3.27	1.61	1.36	24.99	
1950	.80	1.10	.89	.86	1.72	1.13	.82	2.52	1.56	1.28	.77	1.63	15.08	

† Corrected.

‡ Not previously published; partly estimated on basis of record for station near Gretna.

Yearly discharge, in cubic feet per second, of Roanoke River near Toshes, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	622	-	-	-	-	-	-	-	-
1926	622	7,840	Jan. 19, 1926	158	544	0.533	7.24	676	9.00
1927	642	*15,900	Feb. 19, 1927	200	889	.872	11.85	932	12.39
1928	662	*28,600	Aug. 16, 1928*	235	1,320	1.29	17.61	1,230	16.34
1929	682	*9,900	June 15, 1929*	344	1,030	1.01	13.70	1,280	17.05
1930	697	*28,200	Oct. 2, 1929	115	860	.843	11.44	510	6.80
1931	712	7,990	Aug. 22, 1931	130	578	.567	7.69	571	7.60
1932	727	7,850	Mar. 6, 1932	96	635	.623	8.47	1,020	13.64
1933	742	27,700	Oct. 18, 1932	145	1,180	1.16	15.71	796	10.61
1934	757	7,560	Mar. 28, 1934	120	577	.566	7.69	767	10.21
1935	782	19,400	Dec. 1, 1934	208	1,349	1.32	17.92	1,242	16.51
1936	802	21,900	Mar. 18, 1936	208	1,327	1.30	17.70	1,354	18.06
1937	822	15,400	Aug. 31, 1937	261	1,264	1.24	16.83	1,586	21.10
1938	852	29,500	Oct. 19, 1937	361	1,367	1.34	18.19	1,024	13.64
1939	872	28,600	Aug. 19, 1939	299	994	.975	13.21	930	12.37
1940	892,1032	70,000	Aug. 15, 1940	304	1,385	1.36	18.49	1,468	19.59
1941	922	7,120	Apr. 5, 1941	176	684	.671	9.11	574	7.65
1942	952	16,900	May 22, 1942	132	685	.672	9.13	859	11.44
1943	972	13,200	Apr. 20, 1943	250	1,155	1.13	15.36	998	13.26
1944	1002	26,200	Sept. 19, 1944	160	759	.744	10.11	908	12.10
1945	1032	30,800	Sept. 18, 1945	214	958	.939	12.75	964	12.82
1946	1052	9,000	Jan. 8, 1946	273	1,120	1.10	14.91	999	13.32
1947	1082	9,900	Jan. 20, 1947	268	†859	†.842	†11.47	†1,078	†14.35
1948	1112	21,800	Aug. 5, 1948	347	1,358	1.33	18.10	1,495	19.95
1949	1142	35,800	Dec. 4, 1948	406	1,878	1.84	24.99	1,611	21.44
1950	1172	26,200	May 31, 1950	426	1,133	1.11	15.08	-	-

* Revised.

† Corrected.

81. Snow Creek at Sago, Va.

Location--Lat 36°53'50", long 79°39'05", at highway bridge 200 ft downstream from First Fork and three-quarters of a mile northwest of Sago, Franklin County.

Drainage area--60 sq mi, approximately.

Gage--Water-stage recorder. Datum of gage is 706.20 ft above mean sea level, datum of 1929.

Average discharge--10 years (1934-44), 66.3 cfs.

Extremes--1934-44: Maximum discharge, 12,000 cfs Aug. 14, 1940 (gage height, 22.98 ft), from rating curve extended above 2,200 cfs by logarithmic plotting on basis of velocity-area studies and records for other stations in Roanoke River basin; minimum, 7 cfs July 17, 1939; minimum gage height, 1.38 ft Aug. 28, 1935.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	†42.2	46.6	50.3	91.4	66.5	91.8	78.4	50.4	42.0	36.2	22.6	51.2	†55.7
1936	27.5	42.0	43.0	163	126	127	101	34.5	45.2	57.5	37.7	30.1	69.3
1937	61.3	35.0	63.7	203	81.8	59.4	89.6	68.0	63.5	67.4	143	61.8	83.3
1938	206	108	71.3	85.8	65.3	73.4	66.4	59.2	72.7	84.2	73.1	33.3	83.5
1939	28.4	48.2	63.6	48.9	152	75.2	44.5	25.7	26.7	54.0	73.4	24.6	54.9
1940	28.5	32.9	39.6	50.2	77.6	49.1	74.9	70.5	76.1	82.1	329	50.6	80.4
1941	34.4	86.1	56.6	59.0	48.4	51.1	78.5	39.0	43.9	109	27.4	30.7	55.3
1942	20.6	27.7	39.7	52.3	56.2	75.6	36.1	125	78.6	27.2	54.0	45.7	53.2
1943	53.4	40.7	69.5	59.3	114	99.9	105	61.6	76.3	72.7	40.1	27.4	68.0
1944	26.5	29.2	35.5	†48	†77	†122	†74	†71	†36	†33	†22	†140	†59.3

* Not previously published; estimated on basis of record for Pigg River near Toshes.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	†0.81	0.87	0.97	1.75	1.16	1.76	1.46	0.97	0.78	0.70	0.43	0.95	†12.61
1936	.53	.78	.83	3.14	2.26	2.44	1.87	.66	.84	1.10	.72	.56	15.73
1937	1.18	.65	1.22	3.90	1.42	1.14	1.66	1.30	1.18	1.29	2.74	1.15	18.83
1938	3.95	2.01	1.37	1.65	1.14	1.41	1.24	1.14	1.35	1.61	1.41	.62	18.90
1939	.55	.90	1.22	.94	2.64	1.44	.83	.49	.50	1.04	1.41	.46	12.42
1940	.55	.61	.76	.96	1.39	.94	1.40	1.36	1.42	1.58	6.32	.94	18.23
1941	.66	1.61	1.09	1.15	.84	.98	1.46	.75	.82	2.10	.53	.57	12.54
1942	.40	.52	.76	1.01	.98	1.45	.67	2.40	1.46	.52	1.04	.85	12.06
1943	1.03	.76	1.34	1.14	1.98	1.91	1.95	1.19	1.42	1.40	.77	.51	15.40
1944	.51	.54	.68	†.92	†1.38	†2.34	†1.37	†1.36	†.67	†.63	†.42	†2.60	†13.42

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Snow Creek at Sago, Va.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1935	782	888	Jan. 23, 1935	15	\$55.7	\$0.928	\$12.61	53.5	12.10	
1936	802	\$a3,000	Jan. 19, 1936	18	69.3	1.16	15.73	73.4	16.64	
1937	822	1,290	Aug. 11, 1937	26	83.3	1.39	18.83	102	23.11	
1938	852	2,290	Oct. 20, 1937	25	83.5	1.39	18.90	62.9	14.24	
1939	872	1,700	July 29, 1939	10	54.9	.915	12.42	51.6	11.67	
1940	892, 972	12,000	Aug. 14, 1940	24	80.4	1.34	18.23	86.7	19.67	
1941	922	972	July 8, 1941	16	55.3	.922	12.54	47.9	10.86	
1942	952	1,910	May 22, 1942	16	53.2	.887	12.06	59.6	13.51	
1943	972	1,440	Apr. 19, 1943	23	68.0	1.13	15.40	61.9	14.00	
1944	1002	1,700	Sept. 19, 1944*	-	\$59.3	\$.968	\$13.42	-	-	

* Not previously published.

a Estimated on basis of peak flow for Pigg River near Toshes and Sandy River near Danville.

82. Pigg River near Toshes, Va.

Location.--Lat 36°59'01", long 79°30'52", on right bank 0.5 mile downstream from Fryingpan Creek and 1.7 miles northwest of Toshes, Pittsylvania County.

Drainage area.--394 sq mi.

Gage.--Water-stage recorder. Datum of gage is 602.55 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--20 years (1930-50), 412 cfs.

Extremes.--1930-50: Maximum discharge, 34,300 cfs Aug. 15, 1940 (gage height, 32.5 ft, from floodmark), from rating curve extended above 11,000 cfs by logarithmic plotting on basis of slope-area determination at gage height 25.8 ft, and records for other stations in Roanoke River basin; minimum, 22 cfs Aug. 31, 1932 (gage height, 2.32 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	76.7	-
1931	88.9	171	223	286	157	355	436	361	284	229	357	118	256
1932	85.3	102	166	406	274	599	369	229	193	128	86.2	65.5	224
1933	770	543	487	408	408	441	534	473	198	184	183	115	396
1934	95.2	135	167	177	155	595	365	250	212	141	129	348	231
1935	340	352	481	642	442	672	646	415	309	548	209	447	442
1936	208	299	353	1,341	865	852	733	330	366	299	294	183	510
1937	416	232	427	1,118	493	373	515	397	348	432	860	438	505
1938	1,398	542	409	496	392	438	389	324	507	635	388	196	512
1939	180	306	372	350	883	562	366	270	263	443	628	183	398
1940	177	214	226	276	466	285	634	510	471	450	5,526	312	541
1941	245	415	395	381	326	332	480	237	259	665	206	174	343
1942	138	159	265	297	330	406	234	668	454	205	426	320	325
1943	318	237	436	388	725	678	679	433	460	537	248	184	442
1944	173	190	229	313	513	841	496	476	233	207	156	977	397
1945	712	294	365	471	498	390	428	390	229	214	173	681	419
1946	270	346	619	825	649	477	387	641	301	412	240	264	452
1947	247	261	273	591	264	480	424	267	244	199	208	237	309
1948	483	620	289	394	701	710	772	469	578	364	362	248	498
1949	324	604	947	616	606	606	531	765	550	750	501	475	605
1950	385	410	365	368	483	440	342	716	455	306	270	660	433

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	0.22	-
1931	0.26	0.48	0.65	0.84	0.41	1.04	1.24	1.06	0.80	0.67	1.04	.53	8.82
1932	.25	.29	.49	1.19	.75	1.75	1.05	.67	.55	.37	.19	.19	7.74
1933	2.25	1.54	1.43	1.20	1.08	1.29	1.52	1.38	.56	.54	.53	.33	13.65
1934	.28	.38	.49	.52	.41	1.74	1.03	.73	.60	.41	.38	.99	7.96
1935	.99	1.00	1.41	1.88	1.17	1.97	1.83	1.21	.87	1.02	.61	1.26	15.22
1936	.61	.85	1.03	3.92	2.37	2.49	2.08	.97	1.04	.88	.86	.52	17.62
1937	1.22	.66	1.24	3.27	1.30	1.09	1.46	1.16	.99	1.27	2.51	1.24	17.41
1938	4.09	1.54	1.20	1.45	1.04	1.28	1.10	.95	1.44	1.86	1.14	.55	17.64
1939	.53	.87	1.09	1.02	2.33	1.65	1.04	.79	.75	1.29	1.83	.52	13.71
1940	.52	.61	.66	.81	1.33	.83	1.52	1.49	1.34	1.31	7.39	.88	18.69
1941	.72	1.17	1.15	1.11	.86	.97	1.36	.69	.73	1.95	.60	.49	11.80
1942	.40	.45	.78	.87	.87	1.19	.66	1.96	1.28	.60	1.24	.91	11.21
1943	.93	.67	1.28	1.14	1.92	1.98	1.92	1.27	1.30	1.57	.73	.52	15.23
1944	.51	.54	.67	.92	1.40	2.46	1.41	1.40	.66	.61	.40	2.77	13.75
1945	2.09	.83	1.07	1.38	1.31	1.14	1.22	1.14	.65	.63	.51	2.50	14.47
1946	.79	.98	1.81	2.41	1.72	1.40	1.10	1.88	.85	1.21	.70	.75	15.60
1947	.72	.74	.80	1.73	.70	1.41	1.20	.78	.69	.58	.61	.67	10.63
1948	1.42	1.75	.85	1.15	1.92	2.08	2.19	1.37	1.64	1.07	1.06	.70	17.20
1949	.95	1.71	2.77	1.80	1.60	1.78	1.51	2.24	1.56	2.13	1.46	1.35	20.86
1950	1.13	1.16	1.07	1.08	1.28	1.29	.97	2.10	1.28	.90	.79	1.87	14.92

Yearly discharge, in cubic feet per second, of Pigg River near Toshes, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	-	-	-	-	-	-
1931	712	4,880	Aug. 22, 1931	61	256	0.650	8.82	246	8.46
1932	727	5,680	Mar. 6, 1932	27	224	.569	7.74	545	11.93
1933	742, 972	15,100	Oct. 17, 1932	54	396	1.01	13.65	278	9.58
1934	757	5,280	Sept. 16, 1934	86	231	.586	7.96	296	10.21
1935	782	7,200	Dec. 1, 1934	136	442	1.12	15.22	416	14.31
1936	802, 972	13,400	Jan. 19, 1936	142	510	1.29	17.62	528	18.25
1937	822	9,000	Jan. 3, 1937	195	505	1.28	17.41	613	21.12
1938	852, 972	15,400	Oct. 20, 1937	164	512	1.30	17.64	386	13.30
1939	872, 972	10,600	Aug. 19, 1939	136	398	1.01	13.71	378	13.01
1940	892, 972	34,300	Aug. 15, 1940	152	541	1.37	18.69	577	19.94
1941	922	4,820	July 5, 1941	117	343	.871	11.80	302	10.39
1942	952	7,070	May 22, 1942	115	325	.825	11.21	362	12.46
1943	972	7,700	Apr. 19, 1943	148	442	1.12	15.23	408	14.07
1944	1002	20,800	Sept. 18, 1944	82	397	1.01	13.75	463	16.02
1945	1032	12,800	Sept. 18, 1945	117	419	1.06	14.47	408	14.06
1946	1052	9,000	Jan. 7, 1946	161	452	1.15	15.60	414	14.28
1947	1082	3,550	Jan. 20, 1947	112	309	.784	10.63	360	12.39
1948	1112	8,670	Apr. 1, 1948	170	498	1.26	17.20	538	18.61
1949	1142	9,530	Dec. 4, 1948	247	605	1.54	20.86	545	18.79
1950	1172	9,770	Sept. 11, 1950	168	433	1.10	14.92	-	-

83. Roanoke River near Gretna, Va.

Location.--Lat 37°00'46", long 79°28'24", at Toler Bridge, 0.7 mile below Pigg River and 7.5 miles northwest of Gretna, Pittsylvania County.

Drainage area.--1,430 sq mi (approximately).

Gage.--Chain gage. Altitude of gage is 575 ft (from topographic map).

Average discharge.--5 years (1925-30), 1,339 cfs.

Extremes.--1925-30: Maximum discharge, 35,700 cfs Aug. 17, 1928, revised (gage height, 29.2 ft, from graph based on gage readings), from rating curve extended above 14,000 cfs by logarithmic plotting; minimum, 152 cfs Sept. 6, 1930 (gage height, 2.94 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	*1,126	1,020	1,260	571	471	423	435	-
1926	474	734	632	1,410	1,950	1,030	1,240	592	425	702	453	346	825
1927	412	1,150	2,070	990	2,900	1,200	2,010	835	554	1,010	967	470	1,200
1928	1,090	733	2,600	1,390	1,510	1,310	1,860	1,200	667	708	4,660	4,520	1,850
1929	1,200	836	761	969	2,210	3,340	2,170	1,880	2,940	1,280	820	744	1,590
1930	3,370	2,020	1,440	1,440	1,710	1,640	1,030	818	576	301	246	219	1,230

* Not previously published; partly estimated on basis of record for station at Brookneal.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	*0.91	0.80	1.02	0.45	0.38	0.34	0.34	-
1926	0.38	0.57	0.51	1.14	1.42	.83	.97	.48	.33	.57	.37	.27	7.84
1927	.33	.89	1.67	.80	2.11	.97	1.57	.67	.43	.81	.78	.37	11.40
1928	.89	.57	2.10	1.12	1.14	1.06	1.45	.97	.52	.57	3.76	3.53	17.67
1929	.97	.85	.61	.78	1.81	2.70	1.70	1.51	2.30	1.03	.66	.58	15.10
1930	2.72	1.57	1.16	1.16	1.25	1.33	.80	.66	.45	.24	.20	.17	11.71

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches		
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	9,980	Jan. 19, 1926	200	825	0.577	7.84	975	9.28
1927	642	20,700	Feb. 19, 1927	280	1,200	.839	11.40	1,270	12.19
1928	662	35,700	Aug. 17, 1928*	300	1,850	1.29	17.67	1,720	16.35
1929	682	18,400	Feb. 28, 1929	470	1,590	1.11	15.10	1,950	18.32
1930	697	31,200	Oct. 2, 1929	158	1,230	.860	11.71	-	-

* Revised.

84. Goose Creek near Huddleston, Va.

Location.--Lat 37°10', long 79°32', on left bank a quarter of a mile upstream from Haden Bridge, three-eighths of a mile upstream from Rockcastle Creek, and 4 miles upstream from Huddleston, Bedford County.

Drainage area.--187 sq mi.

Supplemental records available.--March 1925 to September 1927, gage heights only published in water-supply papers. October 1927 to August 1928, July 1929 to December 1931, gage heights only at site 4 miles downstream, published in Virginia Conservation Commission, Division of Water Resources and Power, Bull. 6.

Gage.--Water-stage recorder. Datum of gage is 592.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1930-50), 185 cfs.

Extremes.--1930-50: Maximum discharge, 20,300 cfs Oct. 19, 1937 (gage height, 25.75 ft, from floodmarks), from rating curve extended above 6,400 cfs on basis of slope-area determination at gage height 24.1 ft; minimum, 3 cfs Aug. 31, 1932, Jan. 30, 1934.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	†33.3	-
1931	34.1	52.7	69.2	98.0	51.6	105	135	105	57.6	54.2	189	39.9	83.0
1932	27.9	32.9	52.7	145	112	327	171	93.0	50.7	28.3	22.9	53.0	83.1
1933	280	308	277	250	202	170	361	166	105	71.2	47.8	28.8	189
1934	41.0	41.8	65.5	60.6	48.5	368	180	64.5	66.7	66.5	48.5	107	98.7
1935	61.0	197	319	417	210	370	534	135	126	91.2	63.4	284	236
1936	69.7	139	166	772	494	599	392	117	105	59.7	129	46.8	257
1937	151	52.7	153	721	323	147	204	140	122	100	380	169	222
1938	719	327	177	213	146	190	135	94.7	277	349	371	78.2	258
1939	64.6	131	148	134	365	251	158	152	124	162	402	62.5	179
1940	61.7	63.9	62.1	73.8	180	109	203	297	224	144	622	203	204
1941	76.2	142	164	170	112	110	178	84.7	113	212	83.5	49.0	125
1942	38.2	54.2	82.1	83.7	75.7	108	73.2	408	315	111	377	147	157
1943	157	123	271	201	319	279	297	240	198	153	74.4	57.0	197
1944	56.5	61.4	75.0	117	258	366	152	198	96.6	83.5	41.5	254	146
1945	308	97.1	121	239	200	224	177	127	86.0	75.2	98.2	191	162
1946	66.0	106	259	305	317	184	155	239	161	180	90.6	81.8	178
1947	79.0	81.5	96.0	320	115	201	221	115	145	119	153	71.8	144
1948	136	347	118	151	379	345	373	259	213	124	403	125	247
1949	135	275	616	396	291	442	294	432	225	468	149	150	324
1950	104	139	132	139	262	179	151	443	209	197	130	437	210

† Not previously published; partly estimated on basis of record for Pigg River near Toshes.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	†0.20	-
1931	0.21	0.31	0.43	0.60	0.29	0.65	0.81	0.65	0.34	0.33	1.16	.24	6.02
1932	.17	.20	.33	.89	.65	2.02	1.02	.57	.30	.17	.14	.32	6.78
1933	1.73	1.84	1.71	1.54	1.12	1.05	2.15	1.02	.63	.44	.30	.17	13.70
1934	.25	.25	.40	.37	.27	2.39	1.07	4.40	.40	.41	.30	.64	7.15
1935	.56	1.17	1.97	2.57	1.17	2.28	3.19	.83	.75	.56	.39	1.70	17.14
1936	.43	.83	1.02	4.76	2.85	3.69	2.34	.72	.63	.37	.80	.28	18.72
1937	.93	.31	.94	4.45	1.80	.91	1.22	.86	.73	.62	2.34	1.01	16.12
1938	4.43	1.95	1.09	1.31	.81	1.18	.81	5.8	1.65	2.16	2.28	.47	18.72
1939	.40	.78	.91	.83	2.03	1.54	.94	.94	.74	1.00	2.48	.37	12.96
1940	.38	.38	.58	.46	1.04	.67	1.22	1.83	1.34	.89	5.07	1.22	14.88
1941	.47	.85	1.01	1.05	.62	.68	1.06	.52	.67	1.30	.52	.29	9.04
1942	.24	.32	.51	.52	.42	.67	.44	2.50	1.87	.68	2.33	.88	11.38
1943	.97	.73	1.67	1.23	1.78	1.72	1.77	1.48	1.18	.94	.46	.34	14.27
1944	.35	.37	.46	.72	1.49	2.26	.91	1.22	.58	.52	.26	1.52	10.66
1945	1.90	.58	.75	1.48	1.11	1.38	1.08	.78	.51	.46	.61	1.14	11.76
1946	.41	.63	1.60	1.88	1.77	1.13	.92	1.48	.96	1.11	.56	.49	12.94
1947	.49	.49	.59	1.97	.64	1.23	1.32	.71	.86	.73	.94	.43	10.40
1948	.84	2.08	.73	.93	2.19	2.12	2.22	1.60	1.27	.76	2.49	.73	17.96
1949	.83	1.64	3.79	2.44	1.62	2.72	1.75	2.66	1.34	2.87	.92	.89	23.47
1950	.64	.83	.61	.86	1.46	1.10	.90	2.73	1.25	1.21	.60	2.61	15.20

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Goose Creek near Huddleston, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	712	-	-	-	-	-	-	-	-
1931	712	3,610	Aug. 22, 1931	21	83.0	0.444	6.02	79.4	5.77
1932	727	3,730	Mar. 6, 1932	6	93.1	.498	6.78	156	11.36
1933	(a)	8,980	Oct. 17, 1932	19	189	1.01	13.70	128	9.32
1934	757	3,610	Mar. 27, 1934	20	98.7	.528	7.15	137	9.95
1935	782, 972	8,350	Sept. 5, 1935	40	236	1.26	17.14	217	15.72
1936	802, 972	5,730	Jan. 3, 1936	27	257	1.37	18.72	256	18.62
1937	822, 972	5,040	Oct. 17, 1936	38	222	1.19	16.12	295	21.41
1938	852, 972	20,300	Oct. 19, 1937	62	258	1.38	18.72	184	13.34
1939	872, 892	14,100	Aug. 18, 1939	45	179	.957	12.96	166	12.11
1940	892, 972	14,400	Aug. 14, 1940	50	204	1.09	14.88	220	16.07
1941	922	2,620	June 2, 1941	37	125	.668	9.04	107	7.78
1942	952	11,000	Aug. 8, 1942	30	157	.840	11.38	189	13.68
1943	972	5,380	May 26, 1943	48	197	1.05	14.27	167	12.08
1944	1002	7,990	Sept. 18, 1944	24	146	.781	10.66	174	12.71
1945	1032	6,630	Oct. 20, 1944	41	162	.866	11.76	154	11.17
1946	1052	3,690	Feb. 10, 1946	56	178	.952	12.94	163	11.87
1947	1092	3,580	Aug. 23, 1947	53	144	.770	10.40	172	12.48
1948	1112	9,000	Aug. 4, 1948	56	247	1.32	17.96	285	20.57
1949	1142	17,600	Mar. 23, 1949	94	324	1.75	23.47	269	19.49
1950	1172	19,200	May 31, 1950	82	210	1.12	15.20	-	-

a WSP 742, 782, 892.

85. Roanoke River at Altavista, Va.

Location (revised).--Lat 37°06'16", long 79°17'44" on right bank 12 ft upstream from highway bridge, a quarter of a mile south of Altavista, Campbell County, half a mile downstream from Sycamore Creek, 3½ miles upstream from Otter River, and at mile 286.5.

Drainage area.--1,802 sq mi.

Gage.--Water-stage recorder and telemark. Datum of gage is 503.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years (1930-50), 1,970 cfs.

Extremes.--1930-50: Maximum discharge, 105,000 cfs Aug. 15, 1940 (gage height, 40.08 ft, from floodmark), from rating curve extended above 41,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 94 cfs Jan. 31, 1934 (gage height, 1.66 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	‡324	282	-
1931	324	591	787	1,110	575	1,360	2,130	1,370	1,090	778	1,910	467	1,050
1932	328	388	528	1,560	1,400	3,100	2,040	1,380	809	442	314	340	1,050
1933	3,380	2,970	2,660	2,390	2,390	2,110	3,090	2,140	1,070	866	707	415	2,010
1934	408	506	660	657	517	3,441	2,117	827	753	718	617	1,346	1,050
1935	1,168	1,636	3,168	3,971	2,435	3,848	4,792	1,863	1,412	1,252	794	2,497	2,403
1936	762	1,155	1,524	7,148	4,613	5,313	3,962	1,618	1,347	873	1,048	565	2,490
1937	1,860	735	1,783	6,486	2,740	1,781	2,415	1,928	1,415	1,636	3,802	2,460	2,425
1938	6,570	2,854	1,818	2,328	1,760	2,163	1,620	1,194	2,618	3,551	2,476	921	2,501
1939	735	1,261	1,505	1,559	4,193	2,904	1,522	1,175	909	1,898	3,494	868	1,825
1940	727	809	826	1,037	2,305	1,260	2,715	3,048	2,712	1,505	10,210	1,940	2,430
1941	1,007	1,609	1,687	1,829	1,315	1,504	2,237	902	1,028	2,564	720	570	1,430
1942	406	526	904	952	1,063	1,495	815	3,345	2,640	954	2,615	1,474	2,136
1943	1,797	1,247	2,283	2,115	3,592	3,010	3,184	2,290	2,113	2,275	947	639	1,476
1944	617	684	824	1,252	2,293	4,108	2,076	2,078	917	857	524	3,235	1,617
1945	3,000	1,107	1,588	2,485	2,471	1,764	1,564	953	890	759	559	3,461	1,842
1946	1,039	1,278	2,853	3,910	3,591	2,402	1,765	3,033	1,394	1,898	871	913	2,075
1947	985	998	1,063	3,426	1,302	2,348	2,358	1,282	1,539	1,057	1,248	943	1,533
1948	2,331	3,335	1,293	1,511	3,803	3,311	4,178	2,409	2,280	1,371	2,923	1,057	2,474
1949	1,337	2,707	5,971	3,858	3,386	3,600	3,467	4,020	2,608	5,354	2,416	2,278	3,424
1950	1,585	2,074	1,646	1,637	3,089	2,024	1,499	3,726	3,056	1,925	1,317	3,096	2,213

* Not previously published; partly estimated on basis of record for station near Tushes.

Monthly and yearly runoff, in inches, of Roanoke River at Altavista, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	#0.21	0.17	-
1931	0.21	0.37	0.50	0.71	0.33	0.87	1.32	0.88	0.68	0.50	1.22	.29	7.88
1932	2.17	2.24	.34	1.00	.84	1.98	1.26	.86	.50	.28	.20	.21	7.94
1933	2.21	1.84	1.71	1.53	1.38	1.35	1.91	1.77	.66	.55	.45	.26	15.18
1934	.26	.31	.42	.42	.30	2.20	1.30	.53	.47	.46	.39	.83	7.89
1935	.75	1.01	2.04	2.54	1.41	2.27	2.97	1.19	.87	.80	.51	1.55	18.11
1936	.49	.72	.98	4.58	2.76	3.40	2.46	1.04	.83	.56	.67	.35	18.84
1937	1.19	.46	1.14	4.15	1.58	1.14	1.50	1.23	.88	1.05	2.43	1.53	18.28
1938	4.21	1.76	1.16	1.49	1.02	1.38	1.00	.76	1.62	2.27	1.58	.57	18.82
1939	.47	.79	.96	1.00	2.43	1.86	.94	.75	.56	1.21	2.24	.54	13.75
1940	.46	.50	.53	.66	1.58	.81	1.68	1.95	1.67	.96	6.54	1.20	16.34
1941	.64	1.00	1.08	1.16	.76	.96	1.38	.58	.64	1.64	.46	.35	10.65
1942	.26	.33	.58	.61	.61	.96	5.50	2.14	1.64	.61	1.67	.91	10.82
1943	1.15	.77	1.46	1.35	2.07	1.92	1.98	1.46	1.30	1.45	.61	.40	15.92
1944	.39	.42	.53	.80	1.37	2.63	1.28	1.33	.57	.55	.34	2.01	12.22
1945	1.91	.68	1.02	1.59	1.43	1.36	1.09	1.00	.59	.57	.49	2.14	13.87
1946	.67	.79	1.82	2.50	2.07	1.53	1.09	1.94	.86	1.21	.56	.57	15.61
1947	.63	.62	.68	2.19	.75	1.50	1.46	.82	.98	.68	.80	.59	11.69
1948	1.49	2.06	.83	.97	.28	2.12	2.59	1.54	1.42	.88	1.87	.85	18.70
1949	.86	1.67	3.82	2.47	1.96	2.31	2.14	2.57	1.62	3.42	1.54	1.41	25.79
1950	1.01	1.28	1.05	1.05	1.78	1.29	.93	2.39	1.90	1.23	.84	1.92	16.67

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	-	-	-	-	-	-
1931	712, 972	19,500	Aug. 22, 1931	225	1,050	0.583	7.88	1,010	7.59
1932	727, 972	20,600	Mar. 7, 1932	159	1,050	.583	7.94	1,700	12.87
1933	742, 972	49,000	Oct. 18, 1932	230	2,010	1.12	15.18	1,390	10.45
1934	757	17,800	Mar. 28, 1934	230	1,050	.583	7.89	1,422	10.70
1935	782	37,600	Dec. 1, 1934	471	2,403	1.33	18.11	2,187	16.50
1936	802	42,200	Jan. 20, 1936	431	2,490	1.38	18.84	2,571	19.44
1937	822	32,400	Jan. 3, 1937	608	2,425	1.35	18.28	3,002	22.62
1938	852	57,000	Oct. 20, 1937	730	2,501	1.39	18.62	1,849	15.91
1939	872	47,300	Aug. 19, 1939	562	1,625	1.01	13.75	1,728	13.02
1940	892	105,000	Aug. 15, 1940	620	2,430	1.35	18.34	2,592	19.57
1941	922	13,000	Apr. 5, 1941	386	1,416	.786	10.65	1,209	9.10
1942	952	32,700	May 22, 1942	304	1,436	.797	10.82	1,731	13.03
1943	972	28,800	Apr. 20, 1943	503	2,116	1.17	15.92	1,846	13.88
1944	1002	55,900	Sept. 19, 1944	324	1,617	.897	12.22	1,918	14.49
1945	1032	44,100	Sept. 19, 1945	396	1,842	1.02	13.87	1,797	13.54
1946	1052	21,300	Jan. 8, 1946	555	2,075	1.15	15.61	1,895	14.26
1947	1082	16,400	Jan. 21, 1947	525	1,553	.862	11.69	1,879	14.14
1948	1112	32,100	Aug. 5, 1948	667	2,474	1.37	18.70	2,734	20.67
1949	1142	54,600	Dec. 4, 1948	872	3,424	1.90	25.79	3,026	22.78
1950	1172	35,800	June 1, 1950	872	2,213	1.23	16.67	-	-

86. Otter River near Bedford, Va.

Location.--Lat 37°21'50", long. 79°25'10", on left bank 10 ft upstream from bridge on U. S. Highway 460, 1 mile downstream from Roaring Run, 5 miles upstream from Elk Creek, 6½ miles northeast of Bedford, Bedford County, and 8 miles upstream from Little Otter River.

Drainage area.--116 sq mi.

Gage.--Water-stage recorder. Datum of gage is 647.16 ft above mean sea level, datum of 1929.

Average discharge.--7 years (1943-50), 142 cfs.

Extremes.--1943-50: Maximum discharge, 12,100 cfs Mar. 23, 1949 (gage height, 17.3 ft), from rating curve extended above 4,000 cfs on basis of slope-area determinations at gage heights 12.1 and 17.3 ft; minimum, 5.6 cfs Sept. 8, 1944 (gage height, 0.89 ft). Flood in 1937 or 1939 reached a stage of 21.8 ft, from floodmarks at present site. Flood of Aug. 14, 1940, reached a stage of 12.1 ft, from floodmarks (discharge, 8,080 cfs, from rating curve extended above 4,000 cfs on basis of slope-area determinations at gage heights 12.1 and 17.3 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	22.0	26.7	45.0	81.3	146	285	139	192	62.4	52.4	20.5	192	105
1945	120	69.3	102	171	140	153	123	109	61.6	35.6	34.9	91.3	101
1946	40.2	70.9	176	65.3	238	155	126	223	129	148	58.6	40.2	138
1947	40.9	48.2	63.7	248	108	156	233	98.0	135	52.6	59.8	29.4	106
1948	85.0	171	85.3	107	262	320	371	245	117	69.3	202	55.6	173
1949	73.6	190	508	349	249	341	269	†284	109	326	123	87.9	†243
1950	61.0	72.8	87.4	95.8	228	135	111	268	149	127	86.6	143	130

† Corrected.

Monthly and yearly runoff, in inches, of Otter River near Bedford, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	0.22	0.26	0.45	0.81	1.36	2.84	1.34	1.91	0.60	0.52	0.20	1.85	12.36
1945	1.19	.67	1.01	1.70	1.26	1.52	1.18	1.08	.59	.35	.35	.88	11.78
1946	.40	.68	1.75	2.51	2.14	1.54	1.22	2.21	1.24	1.48	.58	.39	16.14
1947	.41	.46	.63	2.48	.97	1.54	2.24	.97	1.29	.52	.59	.28	12.58
1948	.85	1.64	.83	1.06	2.44	3.18	3.57	2.43	1.13	.69	2.01	.53	20.56
1949	.73	1.83	5.05	5.47	2.24	3.39	2.59	†2.82	1.05	3.24	1.22	.85	†28.48
1950	.61	.70	.87	.95	2.05	1.34	1.07	2.66	1.43	1.26	.86	1.37	15.17

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1944	1032	8,000	Sept. 18, 1944	5.9	105	0.905	12.36	122	14.30
1945	1032	1,320	Jan. 1, 1945	13	101	.871	11.78	100	11.74
1946	1052	1,880	Feb. 10, 1946	24	158	1.19	16.14	126	14.81
1947	1082	4,620	June 14, 1947	16	106	1.914	12.58	122	14.20
1948	1112	10,700	Aug. 4, 1948	24	173	1.49	20.36	210	24.65
1949	1142	12,100	Mar. 23, 1949	47	†243	2.09	†28.48	†197	†23.05
1950	1172	4,240	May 31, 1950	44	130	1.12	15.17	-	-

† Corrected.

87. Otter River near Evington, Va.

Location.--Lat 37°12'30", long 79°18'14", on right bank 10 ft upstream from highway bridge, 2 miles upstream from Flat Creek, and 2 miles southwest of Evington, Campbell County.

Drainage area.--325 sq mi.

Gage.--Water-stage recorder. Datum of gage is 544.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years (1936-50), 365 cfs.

Extremes.--1936-50: Maximum discharge, 27,500 cfs Oct. 19, 1937, Aug. 19, 1939 (gage height, 23.1 ft), from rating curve extended above 6,600 cfs by logarithmic plotting on basis of unit-hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 39 cfs Dec. 16, 1943 (gage height, 1.07 ft), result of freezeup.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	†250	†125	377	1,132	565	344	485	302	272	255	449	258	†599
1938	1,108	451	339	417	295	426	296	242	586	518	596	156	455
1939	134	228	365	350	702	520	287	232	176	280	851	159	356
1940	124	150	151	196	409	218	504	329	339	197	1,412	308	361
1941	166	291	290	318	214	228	349	133	196	364	113	62.2	227
1942	58.6	71.9	138	143	209	280	152	621	417	157	894	293	288
1943	443	241	518	442	661	575	517	432	374	273	135	106	392
1944	88.4	97.6	136	218	396	730	370	555	201	191	85.0	568	302
1945	352	182	267	433	373	381	337	297	181	146	132	273	279
1946	120	210	486	533	608	395	324	513	292	386	172	159	349
1947	132	157	209	683	227	356	432	236	294	182	233	100	272
1948	241	501	221	344	691	697	848	569	379	199	545	187	450
1949	242	520	1,192	857	623	860	698	753	407	925	296	224	635
1950	186	215	245	289	562	374	237	561	390	365	233	451	341

* Not previously published; estimated or partly estimated on basis of record for station near Altavista.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	†0.82	†0.43	1.34	4.01	1.81	1.22	1.66	1.07	0.93	0.90	1.59	0.89	†16.67
1938	3.93	1.55	1.20	1.48	.95	1.51	1.02	.86	2.01	1.83	2.11	.54	18.99
1939	.48	.78	1.31	1.18	2.25	1.84	.99	.82	.60	.99	3.02	.55	14.86
1940	.44	.52	.54	.70	1.36	.77	1.73	1.16	1.16	.70	5.00	1.08	15.14
1941	.59	1.00	1.03	1.13	.69	.81	1.19	.47	.67	1.29	.40	.21	9.48
1942	.21	.25	.49	.51	.67	.99	.52	2.20	1.43	.56	3.17	1.01	12.01
1943	1.57	.83	1.83	1.57	2.11	2.04	1.77	1.53	1.28	.97	.48	.36	16.34
1944	.31	.33	.48	.77	1.32	2.59	1.27	1.97	.69	.68	.30	1.95	12.66
1945	1.24	.62	.95	1.53	1.20	1.35	1.16	1.05	.62	.52	.47	.94	11.65
1946	.43	.72	1.73	1.89	1.95	1.41	1.11	1.82	1.00	1.37	.61	.55	14.59
1947	.47	.54	.74	2.42	.73	1.20	1.68	.84	1.01	.57	.83	.34	11.37
1948	.86	1.72	.78	1.22	2.30	2.47	2.91	2.02	1.30	.71	1.94	.64	18.87
1949	.86	1.78	4.23	3.04	2.00	3.06	2.40	2.68	1.40	3.29	1.05	.77	26.56
1950	.66	.74	.87	1.02	1.80	1.33	.81	1.99	1.34	1.29	.83	1.55	14.23

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Otter River near Evington, Va.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1937	852, 972	6,070	Jan. 3, 1937	-	*399	*1.23	*16.67	498	20.76	
1938	852, 972	27,500	Oct. 19, 1937	122	455	1.40	18.99	358	14.93	
1939	872, 972	27,500	Aug. 19, 1939	79	356	1.10	14.86	329	13.74	
1940	892,1032	24,600	Aug. 14, 1940	86	361	1.11	15.14	389	16.26	
1941	922	2,950	Apr. 5, 1941	50	227	.698	9.48	187	7.81	
1942	952	14,600	Aug. 8, 1942	45	288	.886	12.01	366	15.29	
1943	972	7,280	Dec. 30, 1942	74	392	1.21	16.34	317	13.23	
1944	1002	14,000	Sept. 19, 1944	52	302	.929	12.66	343	14.35	
1945	1032	3,870	Oct. 21, 1944	72	279	.858	11.65	280	11.72	
1946	1052	4,950	Feb. 10, 1946	100	349	1.07	14.59	322	13.46	
1947	1082	4,610	June 14, 1947	65	272	.837	11.37	311	12.98	
1948	1112	9,580	Aug. 4, 1948	76	450	1.38	18.87	534	22.38	
1949	1142	22,300	Mar. 23, 1949	160	635	1.95	26.56	525	21.96	
1950	1172	5,600	May 31, 1950	130	341	1.05	14.23	-	-	

* Not previously published.

88. Otter River near Altavista, Va.

Location (revised).--Lat 37°11'05", long 79°16'45", on left bank 1.2 miles below Flat Creek and 5 miles north of Altavista, Campbell County.

Drainage area.--372 sq mi.

Supplemental records available.--Records of chemical analyses for the water year 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Altitude of gage is 540 ft (from topographic map). Prior to Aug. 23, 1930, staff gage at same site and datum.

Average discharge.--7 years (1929-36), 339 cfs (revised).

Extremes.--1929-36: Maximum discharge, 15,500 cfs (revised) Mar. 17, 1936 (gage height, 21.70 ft), from rating curve extended above 1,900 cfs by logarithmic plotting and conveyance-slope study; minimum, 9 cfs Sept. 1, 1932 (gage height, 1.71 ft). Flood of Oct. 19, 1937, reached a stage of 26.8 ft (discharge, about 28,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	332	-
1930	*1,022	471	359	531	434	*694	287	232	231	79.2	46.3	50.6	*370
1931	61.7	108	136	157	98.4	280	340	355	187	117	416	96.4	197
1932	52.0	58.5	94.4	343	244	595	358	188	94.8	60.2	67.9	35.8	183
1933	*549	547	*527	484	493	370	825	428	210	141	95.2	64.8	*393
1934	57.4	77.4	144	147	115	750	543	208	165	102	126	263	225
1935	253	*359	*765	713	461	686	900	311	305	278	167	*718	*491
1936	154	307	343	*1,775	*987	*1,125	689	204	241	79.3	*224	70.3	*516
1937	*254	-	-	-	-	-	-	-	-	-	-	-	-

* Revised.

* Not previously published; partly estimated from records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	1.00	-
1930	*3.17	1.42	1.11	1.65	1.22	*2.16	0.86	0.72	0.69	0.25	0.14	1.15	*13.54
1931	.19	.32	.42	.49	.28	.87	1.02	1.10	.56	.36	1.29	.29	7.19
1932	.16	.18	.29	1.07	.71	1.84	1.07	.58	.28	.19	.21	.11	6.69
1933	*1.71	1.64	*1.64	1.50	1.38	1.15	2.48	1.33	.63	.44	.30	.19	*14.39
1934	.18	.25	.45	.46	.32	2.33	1.63	.64	.50	.42	.39	.79	8.24
1935	.78	*1.02	*2.36	2.21	1.29	2.12	2.70	.96	.91	.86	.52	*2.22	*17.97
1936	.48	.92	1.06	*5.50	*2.86	*3.48	2.06	.63	.72	.25	*.69	.21	*18.86
1937	*.79	-	-	-	-	-	-	-	-	-	-	-	-

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697,1333	*14,500	Oct. 2, 1929	34	*370	*0.995	*13.54	*240	*8.77
1931	712	*7,800	Aug. 23, 1931	40	197	.530	7.19	189	6.89
1932	727	*10,500	Mar. 6, 1932	10	183	.492	6.69	*302	*11.05
1933	742,1333	*13,900	Oct. 17, 1932	24	*393	*1.06	*14.39	281	10.26
1934	757	*3,420	Mar. 28, 1934	47	225	.605	8.24	*316	*11.56
1935	782,1333	*14,100	Sept. 6, 1935	98	*491	*1.32	*17.97	*444	16.25
1936	802,1333	*15,500	Mar. 17, 1936	32	*516	*1.39	*18.86	-	-
1937	802	-	-	-	-	-	-	-	-

* Revised.

89. Roanoke River at Brookneal, Va.

Location.--Lat 37°02'28", long 78°57'02", on left bank 1,600 ft upstream from highway bridge at Brookneal, Campbell County, 3 miles upstream from Falling River, and at mile 255.9.

Drainage area.--2,420 sq mi, approximately.

Gage.--Water-stage recorder and telemark. Datum of gage is 351.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 30, 1929, chain gage at site 1,800 ft downstream at same datum. Aug. 30, 1929, to Aug. 15, 1940, water-stage recorder at site on left bank 1,800 ft downstream at same datum (destroyed by flood). Aug. 16, 1940, to Oct. 1, 1940, staff gage at site 1,800 ft downstream at same datum. Oct. 2, 1940, to Sept. 30, 1941, chain gage at site 1,600 ft downstream at same datum.

Average discharge.--27 years (1923-50), 2,512 cfs.

Extremes.--1923-50: Maximum discharge, 130,000 cfs Aug. 15, 1940 (gage height, 46.5 ft at present site from gage-height relation curve), from rating curve extended above 44,000 cfs by logarithmic plotting on basis of slope-area determination by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 191 cfs Sept. 2, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	1,590	1,540	1,270	1,700	2,360	-
1924	855	1,020	1,740	3,940	2,450	3,450	3,390	3,880	2,210	2,870	1,400	2,250	2,460
1925	2,740	1,930	2,620	5,570	3,500	2,260	2,090	2,400	1,060	874	809	686	2,210
1926	749	1,280	1,450	2,220	3,840	2,130	2,440	1,220	714	1,140	777	560	1,530
1927	643	1,910	3,540	1,980	3,590	2,310	3,890	1,650	1,010	1,570	1,430	868	2,010
1928	3,390	1,514	4,210	2,700	2,861	2,216	3,379	1,962	1,086	1,060	8,644	7,430	3,374
1929	2,072	1,482	1,379	1,731	3,195	5,510	3,831	3,398	4,320	1,995	1,370	1,011	2,602
1930	5,166	2,966	2,293	2,587	2,864	2,966	1,844	1,309	1,188	489	404	371	2,022
1931	415	777	1,054	1,500	848	1,900	2,928	2,028	1,466	990	2,477	731	1,431
1932	480	528	805	2,150	1,908	3,875	2,594	1,699	964	513	364	375	1,356
1933	3,633	3,691	3,604	3,303	3,215	2,632	4,057	2,624	1,359	1,092	948	553	2,572
1934	534	658	920	918	754	4,476	2,795	1,230	1,553	861	869	1,828	1,421
1935	1,656	1,837	4,165	4,614	3,025	4,725	6,407	2,378	1,938	1,744	1,142	3,542	3,095
1936	1,047	1,769	2,072	9,581	6,248	7,071	5,210	2,106	1,856	1,175	1,466	761	3,541
1937	2,165	966	2,192	6,225	3,768	2,397	3,591	2,477	1,818	1,951	4,121	3,250	3,080
1938	856	3,596	2,450	2,359	2,878	2,064	1,522	3,860	4,440	3,047	1,220	3,270	3,270
1939	1,015	1,659	2,201	2,155	5,439	3,997	2,065	1,541	1,250	2,434	4,391	1,206	2,431
1940	1,061	1,142	1,123	1,381	3,020	1,666	3,459	2,972	3,562	1,965	14,270	2,539	3,186
1941	1,498	2,146	2,169	2,631	1,838	1,962	2,854	1,258	1,595	3,429	969	816	1,932
1942	568	704	1,132	1,239	1,432	1,886	1,083	4,235	3,195	1,418	4,135	2,054	1,929
1943	2,921	1,690	3,082	3,045	5,241	4,152	4,076	2,996	2,824	12,817	1,234	861	12,899
1944	802	917	1,065	1,674	2,953	5,558	2,868	2,798	1,372	1,220	736	4,757	2,220
1945	3,569	1,541	2,188	3,421	3,127	2,742	2,405	2,098	1,297	1,393	1,037	4,370	2,427
1946	1,334	1,659	3,741	4,952	4,755	3,216	2,467	3,900	1,931	2,397	1,163	1,122	2,715
1947	1,157	1,223	1,337	4,439	1,694	3,150	3,253	1,719	1,929	1,280	1,548	1,228	2,000
1948	2,732	3,614	1,700	2,264	5,301	4,650	5,738	3,346	2,976	1,666	3,521	1,374	3,227
1949	1,808	3,861	1,776	5,319	4,321	4,441	4,454	5,052	2,930	7,125	2,786	2,638	4,586
1950	1,981	2,666	2,167	2,043	3,820	2,556	1,880	3,988	3,722	2,317	1,650	3,736	2,698

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	0.76	0.71	0.61	0.81	1.09	-
1924	0.41	0.47	0.83	1.88	1.09	1.65	1.56	1.84	1.02	1.37	.67	1.04	13.83
1925	1.30	.89	1.24	2.65	1.51	1.08	.96	1.14	1.49	.42	.39	.32	12.39
1926	.36	.59	.69	1.06	1.66	1.01	1.13	.58	.33	.54	.37	.26	8.58
1927	.31	.88	1.68	9.0	1.54	1.10	1.80	.79	.47	.75	.68	.40	11.30
1928	1.61	.70	2.01	1.29	1.27	1.06	1.58	.94	.50	.50	4.12	3.42	18.98
1929	.99	6.68	.66	.82	1.58	2.63	1.76	1.61	2.00	.95	.65	.47	14.60
1930	2.47	1.37	1.09	1.14	1.23	1.42	.85	.62	.55	.23	.19	.17	11.33
1931	.20	.36	.50	.71	.36	.90	1.35	.97	.68	.47	1.18	.34	8.02
1932	.23	.24	.38	1.02	.85	1.84	1.19	.81	.44	.24	.18	.17	7.59
1933	1.82	1.71	1.72	1.57	1.38	1.26	1.87	1.24	.63	.52	.45	.26	14.43
1934	.26	.30	.44	.44	.32	.13	1.29	.59	.53	.43	.41	.84	7.06
1935	.79	.85	1.98	2.20	1.30	2.25	2.96	1.13	.89	.83	.54	1.63	17.35
1936	.50	.82	.99	4.47	2.78	3.37	2.40	1.00	.86	.56	.70	.35	16.80
1937	1.03	.45	1.04	3.92	1.64	1.14	1.65	1.18	.84	.93	1.96	1.50	17.28
1938	4.08	1.66	1.16	1.46	1.02	1.37	.95	.73	1.78	2.11	1.45	.56	18.33
1939	.48	.77	1.05	1.03	2.34	1.90	.95	.73	1.58	1.16	2.09	.56	13.64
1940	.50	.53	.53	.66	1.35	.79	1.60	1.42	1.64	.94	6.80	1.17	17.93
1941	.71	.99	1.03	1.26	.79	.94	1.32	.60	.74	1.64	.46	.38	10.86
1942	.27	.32	.54	.59	.62	.90	.50	2.02	1.47	.68	1.97	.95	10.83
1943	1.40	.78	1.46	1.45	2.26	1.98	1.87	1.43	1.30	1.34	.59	.40	16.26
1944	.38	.42	.51	.80	1.32	2.65	1.32	1.34	.63	.58	.35	2.20	12.50
1945	1.70	.71	1.04	1.63	1.34	1.30	1.11	1.00	.60	.66	.49	2.02	13.60
1946	.64	.77	1.79	2.36	2.04	1.53	1.14	1.86	.89	1.14	.56	.52	15.24
1947	.55	.56	.64	2.11	.73	1.50	1.50	.82	.89	.61	.74	.57	11.22
1948	1.30	1.66	.81	1.08	2.36	2.21	2.64	1.59	1.37	.79	1.67	.63	18.11
1949	.86	1.78	3.70	2.54	1.89	2.12	2.05	2.41	1.35	3.39	1.33	1.22	24.61
1950	.94	1.23	1.03	.97	1.64	1.22	.87	1.90	1.72	1.10	.79	1.72	15.13

Yearly discharge, in cubic feet per second, of Roanoke River at Brookneal, Va.									
Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1923	582	-	-	-	-	-	-	-	-
1924	582	*25,100	Jan. 17, 1924*	750	2,460	1.02	13.83	2,770	15.55
1925	602	*41,000	Oct. 1, 1924	460	2,210	.913	12.39	1,890	10.60
1926	622	*18,100	Jan. 19, 1926	370	1,530	.632	8.58	1,750	9.81
1927	642	*16,900	Dec. 26, 1926	485	2,010	.831	11.30	2,270	12.75
1928	(a)	76,300	Aug. 12, 1928	570	3,374	1.39	18.98	3,020	16.99
1929	(a)	*20,200	Apr. 16, 1929	782	2,602	1.08	14.60	3,068	17.20
1930	(a)	57,700	Oct. 3, 1929	280	2,022	.836	11.33	1,330	7.46
1931	(a)	22,300	Aug. 23, 1931	274	1,431	.591	8.02	1,394	7.81
1932	(a)	25,800	Mar. 7, 1932	191	1,356	.560	7.59	2,136	11.99
1933	(a)	49,900	Oct. 16, 1932	306	2,572	1.06	14.43	1,615	10.18
1934	(a)	19,300	Mar. 28, 1934	440	1,421	.587	7.96	1,889	10.58
1935	782	42,000	Sept. 6, 1935	614	3,095	1.28	17.35	2,860	16.04
1936	802	45,700	Jan. 20, 1936	602	3,341	1.38	18.80	3,380	19.01
1937	822	38,500	Jan. 3, 1937	792	3,080	1.27	17.28	3,861	21.66
1938	852	60,400	Oct. 20, 1937	1,040	3,270	1.35	18.33	2,449	13.75
1939	872	51,200	Aug. 20, 1939	822	2,431	1.00	15.64	2,301	12.90
1940	892	130,000	Aug. 15, 1940	860	3,186	1.32	17.93	3,394	19.10
1941	922	*17,700	Apr. 6, 1941*	550	1,932	.798	10.86	1,646	9.26
1942	952	35,500	May 23, 1942	456	1,929	.797	10.83	2,376	13.34
1943	972	29,800	Mar. 20, 1943	660	†2,899	1.20	16.26	†2,484	13.93
1944	1002	75,500	Sept. 19, 1944	404	2,220	.917	12.50	2,600	14.64
1945	1032	44,200	Sept. 19, 1945	556	2,427	1.00	13.60	2,379	13.35
1946	1052	23,200	Jan. 8, 1946	720	2,715	1.12	15.24	2,460	13.79
1947	1082	17,900	Jan. 21, 1947	680	2,000	.826	11.22	2,361	13.24
1948	1112	36,100	Apr. 1, 1948	858	3,227	1.33	18.11	3,684	20.68
1949	1142	55,100	Dec. 5, 1948	1,120	4,386	1.81	24.61	3,826	21.47
1950	1172	37,000	June 1, 1950	1,000	2,698	1.11	15.13	-	-

* Revised.

† Corrected.

a Virginia Conservation Commission, Division of Water Resources and Power, Bull. 6.

90. Falling River near Naruna, Va.

Location.--Lat 37°07', long 78°58', at highway bridge 2 miles upstream from Little Falling River and 2½ miles northeast of Naruna, Campbell County.

Drainage area.--172 sq mi.

Supplemental records available.--Records of chemical analyses during the water years 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 412.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1929, to Jan. 15, 1935, chain gage at same site and datum.

Average discharge.--14 years (1929-34; 1941-50), 150 cfs (revised).

Extremes.--1929-35, 1941-50: Maximum discharge, 15,800 cfs Sept. 18 or 19, 1944 (gage height, 23.9 ft, from floodmarks), from rating curve extended above 6,100 cfs on basis of slope-area determinations at gage heights 23.9 and 26.5 ft; minimum, 3 cfs Oct. 9, 1932 (gage height, 2.18 ft).
Flood in August 1940 reached a stage of 26.5 ft, from floodmarks (discharge, 22,000 cfs, by slope-area determination).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	*175	178	143	166	190	149	99.0	64.3	74.6	39.7	80.7	69.3	-
													*110
1931	26.6	42.3	57.7	69.8	56.5	129	189	172	76.4	46.4	83.6	46.9	83.2
1932	35.2	39.1	56.9	171	118	312	132	113	54.3	32.8	23.9	25.9	93.1
1933	193	165	266	198	209	132	256	145	85.1	104	64.1	36.7	154
1934	37.8	50.4	78.9	73.9	73.5	343	219	112	108	58.8	105	149	118
1935	*158	215	231	-	-	-	-	-	-	-	-	-	--
1942	41.0	49.0	74.0	107	119	124	71.8	194	110	74.6	241	105	109
1943	325	112	208	167	436	280	214	208	109	121	52.8	43.5	186
1944	47.5	57.6	64.6	96.8	218	420	243	141	77	61.6	55.0	499	164
1945	118	103	153	238	223	198	214	254	108	201	125	459	199
1946	120	147	319	272	302	231	149	327	130	134	120	78.3	194
1947	76.5	91.1	103	332	110	233	224	117	85.5	88.1	57.1	66.3	132
1948	84.1	205	105	175	384	310	330	162	113	83.1	201	69.7	184
1949	115	261	482	301	278	213	231	182	139	267	116	99.6	224
1950	136	140	120	129	188	188	120	164	112	166	105	270	153

* Revised.

Yearly discharge, in cubic feet per second, of Little Falling River at Hat Creek, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697	428	Oct. 2, 1929	1	24.8	0.577	7.82	18.7	5.90
1931	712	358	Aug. 22, 1931	1	23.8	.553	7.53	24.5	7.75
1932	727	*2,300	Mar. 6, 1932	1	30.3	.705	9.59	40.8	12.94
1933	742	854	Oct. 17, 1932	1	42.0	.977	13.27	30.5	9.66
1934	757	1,334	Aug. 13, 1934	1	28.9	.672	9.12	44.1	13.93
1935	782	*a1,630	Oct. 6, 1934*	-	-	-	-	-	-

* Revised.

a Maximum during period Oct. 1, 1934, to Jan. 15, 1935.

92. Falling River near Brookneal, Va.

Location.--Lat 37°04'54", long 78°56'07", 300 ft downstream from Hat Creek and 2½ miles north of Brookneal, Campbell County.

Drainage area.--228 sq mi.

Gage.--Water-stage recorder. Datum of gage is 378.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years (1934-41), 287 cfs.

Extremes.--1935-41: Maximum discharge, 23,000 cfs Aug. 15, 1940 (gage height, 29.35 ft, from floodmarks), from rating curve extended above 7,000 cfs on basis of computation of flood flow at Naruna by slope-area method and records for other stations in Roanoke River basin; minimum daily, 45 cfs Sept. 21, 24, 30, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*218	*292	*332	*355	326	408	626	209	253	216	106	321	*304
1936	104	246	207	874	728	983	528	177	157	110	148	107	363
1937	125	82.0	167	890	336	202	525	260	180	178	221	157	277
1938	566	212	169	323	207	319	194	142	906	457	148	93.1	312
1939	84.0	146	218	248	573	428	161	81.8	169	351	384	132	246
1940	117	144	105	197	634	220	391	166	233	196	1,254	124	314
1941	104	209	233	322	164	183	302	117	156	415	82.2	53.5	196

* Not previously published; estimated or partly estimated from record for station near Naruna.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*1.10	*1.43	*1.68	*1.80	1.49	2.06	3.07	1.06	1.24	1.09	0.54	1.57	*18.13
1936	.53	1.20	1.05	4.42	3.44	4.97	2.59	.89	.77	.56	.75	.52	21.69
1937	.63	1.40	.84	4.50	1.53	1.02	2.57	1.31	.88	.90	1.12	.77	16.47
1938	2.86	1.04	.85	1.64	.95	1.61	.95	.72	4.43	2.31	.75	.45	18.56
1939	.42	.71	1.10	1.26	2.61	2.17	.79	.41	.83	1.78	1.94	.65	14.67
1940	.59	.71	.53	1.00	3.00	1.11	1.91	.84	1.14	.99	6.34	.61	18.77
1941	.53	1.02	1.18	1.63	.75	.93	1.47	.59	.76	2.10	.42	.26	11.64

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches		
		Discharge	Date						
1935	782	a17,500	Sept. 6, 1935	#54	#304	#1.33	#18.13	#280	#16.70
1936	802	20,400	Mar. 17 or 18	51	363	1.59	21.69	348	20.78
1937	822	12,200	Apr. 26, 1937	63	277	1.21	16.47	325	19.35
1938	852	19,200	June 22, 1938	81	312	1.37	18.56	270	16.04
1939	872	6,280	Aug. 19, 1939	53	246	1.08	14.67	239	14.27
1940	892	23,000	Aug. 15, 1940	87	314	1.38	18.77	329	19.67
1941	922	6,260	July 17, 1941	45	196	.860	11.64	-	-

* Not previously published.

a Maximum for period Jan. 15 to Sept. 30, 1935.

93. Cub Creek at Phenix, Va.

Location.--Lat 37°05', long 78°46', at bridge on State Highway 40, 0.9 mile west of Phenix, Charlotte County, and 2 miles downstream from Rough Creek.

Drainage area.--102 sq mi.

Gage.--Water-stage recorder. Datum of gage is 370.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 14, 1950, staff gage at same site and datum.

Extremes.--1946-50: Maximum discharge (revised), 2,720 cfs Dec. 4, 1948 (gage height, 13.0 ft, from graph based on gage readings); minimum observed, 16 cfs Oct. 31, 1947; minimum gage height observed, 1.16 ft Sept. 5, 1947.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	*80.3	54.6	-
1947	61.7	72.4	76.1	186	81.4	178	159	73.3	68.8	44.1	34.7	77.2	91.1
1948	59.5	255	92.1	146	242	164	*223	95.3	80.2	58.4	59.1	41.0	*123
1949	99.9	137	273	175	164	132	128	121	70.9	82.5	52.4	51.3	124
1950	87.9	143	86.1	86.1	124	124	78.0	109	66.9	159	81.0	203	112

* Revised.
 † Not previously published; estimated on basis of records for Falling River near Naruna and Otter River near Evington.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	*0.91	0.60	-
1947	0.70	0.79	0.86	2.10	0.83	2.01	1.52	0.83	0.75	0.50	.39	.84	12.12
1948	.67	2.57	.93	1.65	2.56	1.86	*2.44	1.05	.88	.66	.67	.45	*16.39
1949	1.13	1.50	3.09	1.98	1.68	1.49	1.40	1.37	.78	.93	.59	.56	16.50
1950	.99	1.56	.97	1.27	1.27	1.41	.85	1.23	.73	1.80	.92	2.22	14.92

* Revised.
 † Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1083	*1,250	Mar. 14, 1947*	19	91.1	0.893	12.12	105	13.94
1948	1112, 1333	2,340	Apr. 1, 1948	16	*123	*1.21	*16.39	*134	*17.94
1949	1142	*2,720	Dec. 4, 1948	40	124	1.22	16.50	107	14.30
1950	1172	1,600	Sept. 13, 1950	38	112	1.10	14.92	-	-

* Revised.

94. Roanoke River at Randolph, Va. 1/

Location (revised).--Lat 36°53'05", long 78°42'00", at Southern Railway bridge 0.8 mile southwest of Randolph, Charlotte County, and 0.4 mile upstream from Roanoke Creek.

Drainage area.--3,010 sq mi.

Supplemental records available.--Records of chemical analyses for the water years 1906-7 are published in WSP 236, and for the water years 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3. Gage heights collected at this site since January 1905 are contained in reports of U. S. Weather Bureau.

Gage.--Wire or chain gage. Datum of gage is 303.66 ft above mean sea level, datum of 1929, supplemental adjustment of 1936. Aug. 27, 1900, to Oct. 12, 1902, wire gage at same site and at datum about 2 ft lower.

Average discharge.--9 years (1900-1906, 1927-30), 3,919 cfs.

Extremes.--1900-1906, 1927-30: Maximum discharge (revised), 97,000 cfs Dec. 31, 1901 (gage height, 35.0 ft, from graph based on gage readings site and datum then in use); minimum, 590 cfs Oct. 18, 1904 (gage height, 2.5 ft).
 Flood of Aug. 16, 1940, reached a stage of 41.6 ft (discharge, 150,000 cfs), from records of U. S. Weather Bureau.

1/ Published as Staunton River prior to Oct. 13, 1902.

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Randolph, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	-	1,878
1901	2,597	2,938	3,944	5,362	2,948	4,000	9,620	8,793	4,759	6,259	13,185	3,998	*5,727
1902	3,346	2,984	9,621	*6,421	*11,124	*9,691	*5,447	*4,189	*4,524	*2,341	2,198	1,844	*5,281
1903	4,845	2,551	5,349	6,123	8,575	11,010	7,041	3,370	4,147	2,445	2,712	3,273	5,101
1904	2,191	1,841	1,940	2,087	3,667	2,787	2,224	2,939	3,397	2,117	2,899	1,801	2,486
1905	787	1,223	1,881	2,773	*3,849	4,601	2,576	*3,978	2,891	6,485	3,083	3,213	*3,113
1906	1,528	1,292	4,733	6,200	3,220	4,210	3,980	2,300	2,880	2,360	*7,200	*3,000	*3,588
1928	*4,098	2,141	*5,661	2,951	3,418	2,712	*4,733	2,277	1,296	1,443	*11,880	*8,928	*4,300
1929	2,522	1,806	1,662	2,025	3,679	*6,929	*5,141	3,897	*4,829	2,470	1,621	1,328	*3,153
1930	*6,861	3,651	2,839	3,009	3,850	*3,539	*2,200	*1,500	*1,400	*620	*450	*410	*2,523

* Only monthly figures revised; revised daily figures not available.

† Corrected.

‡ Not previously published; estimated on basis of records for stations at Roanoke and Dan River at South Boston.

§ Revised; figure of daily discharge for May 23, 1901, has been revised to 57,940 cfs, superseding figure published in WSP 75.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	-	0.70
1901	0.99	1.09	1.51	2.05	1.02	1.53	3.57	*3.37	1.76	2.40	5.05	1.48	*25.82
1902	1.28	1.11	3.69	*2.46	*3.85	*3.71	*2.02	*1.60	*1.67	*.90	.84	.68	*23.61
1903	1.86	.95	2.05	2.34	2.97	4.22	2.61	1.29	1.54	.94	1.04	1.22	23.02
1904	.84	.68	.74	.80	1.32	1.07	.82	1.13	1.26	.81	1.11	.67	11.25
1905	.30	.45	.72	1.06	*1.33	1.76	.96	1.52	1.07	2.48	1.18	1.19	*14.02
1906	.59	.48	1.81	2.38	1.11	1.61	1.47	.88	1.07	.90	*2.76	*1.11	*16.17
1928	*1.57	.79	*2.17	1.13	1.23	1.04	*1.75	.87	.48	.55	*4.55	*3.31	*19.44
1929	.97	.67	.64	.78	1.27	*2.65	*1.91	1.49	*1.78	.95	.62	.49	*14.22
1930	*2.63	1.35	1.09	1.15	1.33	*1.36	*.82	*.57	*.52	*.24	*1.17	*.15	*11.38

* Revised.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1900	75	-	-	-	-	-	-	-	-
1901	75	*60,000	May 23, 1901	1,350	*5,727	*1.90	*25.82	*6,276	*29.31
1902	(a), 83	*97,000	Dec. 31, 1901*	1,535	*5,281	*1.75	*23.81	*5,010	*22.59
1903	(a)	*47,000	Feb. 18, 1903	1,310	5,101	1.69	23.02	4,528	20.43
1904	(a)	*10,000	June 2, 1904	725	2,486	.826	11.25	2,312	10.46
1905	(a)	*34,000	July 15, 1905	590	*3,113	*1.03	*14.02	*3,423	*15.43
1906	(a)	*39,000	Jan. 5, 1906	1,120	*3,588	*1.19	*16.17	-	-
1928	662,1203	*74,500	Aug. 13, 1928	700	*4,300	*1.43	*19.44	3,801	17.19
1929	682,1203	*24,800	Apr. 17, 1929	1,110	*3,153	*1.05	*14.22	3,774	17.01
1930	697,1203	*49,500	Oct. 4, 1929	-	*2,523	*.858	*11.38	-	-

* Revised.

‡ Not previously published.

§ From Virginia Geological Survey, Bull. 31, beginning Oct. 13, 1902.

95. Roanoke Creek at Saxe, Va.

Location.--Lat 36°55'49", long 78°39'56", at highway bridge, 500 ft northwest of Saxe, Charlotte County, and 4 miles upstream from mouth.

Drainage area.--162 sq mi.

Gage.--Water-stage recorder. Datum of gage is 322.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 21, 1950, staff gage at same site and datum.

Extremes.--1946-50: Maximum discharge, 3,190 cfs Nov. 1, 1949 (gage height, 12.0 ft, from graph based on gage readings), minimum discharge observed, 19 cfs Sept. 5, 6, 1947, Sept. 3-6, 1948; minimum gage height observed, 1.73 ft Sept. 6, 1947.

Flood of Aug. 16, 1940, reached a stage of 25.7 ft, from levels to floodmarks, caused by backwater from Roanoke River.

A discharge of 10.8 cfs was measured on Sept. 13, 1943.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	35.4
1947	47.1	69.4	66.4	269	66.6	244	164	62.8	37.0	46.0	50.7	195	110
1948	89.9	246	90.1	141	364	283	267	156	105	40.5	57.6	27.4	154
1949	99.5	208	*368	185	207	150	127	145	48.3	67.5	63.3	47.9	*143
1950	102	280	77.1	82.3	128	174	73.3	179	85.9	172	76.1	246	140

* Revised.

Monthly and yearly runoff, in inches, of Roanoke Creek at Saxe, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	-	-	0.24
1947	0.34	0.48	0.47	1.91	0.43	1.74	1.13	0.45	0.25	0.33	0.36	1.36	9.21
1948	.63	1.70	.64	1.00	2.43	2.02	1.84	1.11	.72	.29	.41	.19	12.98
1949	.71	1.43	*2.61	1.30	1.33	1.07	.87	1.03	.33	.48	.45	.33	*11.94
1950	.73	1.93	.55	.59	.82	1.23	.50	1.27	.59	1.22	.56	1.70	11.69

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Maximum observed		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1082	-	-	-	-	-	-	-	-
1947	1082	2,790	Sept. 25, 1947	19	110	0.679	9.21	130	10.91
1948	1112	2,790	Feb. 15, 1948	19	154	.951	12.98	*175	*14.76
1949	1142, 1333	*2,400	Dec. 5, 1948*	31	*143	*.883	*11.94	124	10.40
1950	1172	3,190	Nov. 1, 1949	31	140	.864	11.69	-	-

* Revised.

96. Roanoke River near Clover, Va.

Location (revised).--Lat 36°50'17", long 78°40'05", on bridge on U. S. Highway 360, 3.2 miles downstream from Roanoke Creek and 3.7 miles east of Clover, Halifax County.

Drainage area --3,230 sq mi.

Gage.--Water-stage recorder. Datum of gage is 302.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1929-50), 3,346 cfs.

Extremes.--1929-50: Maximum discharge, 160,000 cfs Aug. 16, 1940 (gage height, 37.15 ft, from floodmark), from rating curve extended above 70,000 cfs by logarithmic plotting on basis of slope-area determination by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 204 cfs Sept. 3, 1932 (gage height, 0.50 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	*6,540	3,790	2,970	3,160	3,790	3,430	2,360	1,640	1,570	694	*1,630	1,330	-
1931	495	956	1,220	1,700	1,110	2,250	3,650	2,680	1,800	1,170	2,980	920	1,750
1932	559	638	1,040	3,130	2,680	5,550	3,260	2,100	1,230	645	466	455	1,810
1933	4,950	5,180	4,960	4,340	4,120	3,360	5,230	3,300	1,860	1,610	1,240	704	3,400
1934	677	870	1,222	1,272	1,017	5,937	3,801	1,872	1,748	1,328	1,219	3,168	2,015
1935	2,370	2,216	7,168	6,269	4,369	6,285	8,296	2,896	2,595	2,366	1,559	4,317	4,223
1936	1,349	2,607	2,759	13,080	8,328	9,679	6,581	2,650	2,316	1,537	2,096	1,006	4,493
1937	2,555	1,279	2,889	11,760	5,194	3,180	5,539	3,290	2,476	2,593	5,542	5,060	4,280
1938	10,190	4,330	3,034	4,155	3,013	3,892	2,847	2,200	6,155	7,022	4,024	1,573	4,388
1939	1,354	2,309	3,014	2,888	7,096	5,791	2,939	2,266	1,813	3,364	5,624	1,569	3,318
1940	1,431	1,736	1,594	2,431	7,004	2,475	4,717	2,982	4,788	2,427	18,460	3,112	4,246
1941	1,709	2,872	2,650	3,258	2,237	2,483	3,610	1,495	1,788	3,953	1,191	955	2,351
1942	663	891	1,448	1,701	2,031	2,467	1,429	4,599	3,434	1,748	5,529	2,588	2,383
1943	3,878	2,154	3,547	4,114	6,855	5,301	4,870	3,624	3,173	3,190	1,429	1,019	5,576
1944	955	1,343	1,364	2,269	3,899	7,873	4,339	3,357	1,625	1,457	1,005	7,573	3,077
1945	4,938	2,179	3,070	4,484	4,369	3,539	3,198	3,010	1,647	2,562	1,551	6,912	3,446
1946	1,855	2,333	5,448	6,508	6,182	3,921	2,956	5,363	2,410	2,972	1,652	1,426	3,578
1947	1,477	1,639	1,794	5,795	2,201	4,270	4,173	2,162	2,236	1,634	1,820	2,110	2,613
1948	3,115	5,512	2,232	2,918	7,146	5,955	7,555	4,191	3,491	1,917	3,842	1,546	4,097
1949	2,410	4,328	10,020	6,822	5,543	5,374	5,033	5,729	2,857	8,310	3,338	3,208	5,261
1950	2,538	3,809	2,463	2,434	4,641	3,434	2,380	4,347	4,757	3,178	2,072	4,738	3,383

† Corrected.

* Not previously published; estimated on basis of record for station at Brookneal.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	-
1930	2.34	1.30	1.06	1.13	1.22	1.22	0.82	0.59	0.54	0.25	*0.58	0.46	-
1931	.18	.32	.44	.61	.36	.80	1.26	.96	.62	.42	1.06	.32	7.35
1932	.20	.22	.37	1.12	.90	1.98	1.13	.75	.43	.23	.17	.16	7.66
1933	1.76	1.78	1.78	1.54	1.33	1.20	1.81	1.18	.64	.57	.44	.24	14.27
1934	.24	.30	.44	.45	.33	2.12	1.32	.67	.60	.47	.43	1.09	8.46
1935	.85	.77	2.56	2.24	1.41	2.25	2.87	1.03	.90	.85	.56	1.50	17.79
1936	.48	.90	.98	4.87	2.78	3.46	2.28	.95	.80	.55	.75	.35	18.95
1937	.91	1.44	1.03	4.20	1.68	1.14	1.91	1.18	.86	.93	1.98	1.75	18.01
1938	3.63	1.50	1.08	1.49	.97	1.38	.98	.79	2.13	2.50	1.44	.54	18.43
1939	.48	.80	1.08	1.03	2.29	2.06	1.02	.81	.63	1.20	2.01	.54	13.95
1940	.51	.60	.57	.75	1.67	.88	1.63	1.06	1.65	.87	6.60	1.10	17.89

† Corrected.

* Not previously published; see footnote to preceding table.

Monthly and yearly runoff, in inches, of Roanoke River near Clover, Va.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.61	0.99	0.95	1.16	0.72	0.89	1.25	0.53	0.62	1.41	0.43	0.33	9.89
1942	.24	.31	.52	.61	.66	.88	.49	1.64	1.18	.62	1.97	.89	10.01
1943	1.38	.74	1.27	1.46	2.21	1.89	1.68	1.29	1.10	1.14	.51	.35	15.02
1944	.34	.46	.49	.81	1.30	2.81	1.50	1.20	.56	.52	.36	.21	12.96
1945	1.76	.75	1.10	1.60	1.41	1.27	1.10	1.07	.57	.91	.55	2.39	14.48
1946	.66	.81	1.95	2.32	1.99	1.40	1.02	1.91	.83	1.06	.59	.49	15.03
1947	.53	.57	.64	2.06	.71	1.52	1.44	.77	.77	.58	.65	.73	10.97
1948	1.11	1.91	.80	1.04	2.58	2.12	2.61	1.50	1.20	.68	1.37	.53	17.25
1949	.86	1.50	3.57	2.43	1.79	1.91	1.74	2.04	.99	2.96	1.19	1.11	22.09
1950	.91	1.32	.88	.87	1.50	1.22	.82	1.56	1.64	1.13	.74	1.64	14.23

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	697	-	-	-	-	-	-	-	-
1930	697, 972	52,300	Oct. 4, 1929	313	+2,570	+0.796	+10.81	1,680	7.05
1931	712	19,600	Aug. 24, 1931	328	1,750	.542	7.35	1,710	7.20
1932	727	27,600	Mar. 8, 1932	213	1,810	.560	7.66	2,890	12.19
1933	742	54,300	Oct. 19, 1932	355	3,400	1.05	14.27	2,370	9.93
1934	757	20,500	Mar. 29, 1934	524	2,015	.624	8.46	2,774	11.66
1935	782	46,500	Dec. 3, 1934	984	4,223	1.31	17.79	3,794	15.97
1936	802	56,400	Mar. 19, 1936	776	4,493	1.39	18.95	4,497	18.97
1937	822	448,000	Jan. 5, 1937	1,040	4,280	1.33	18.01	5,192	21.84
1938	852	70,000	Oct. 21, 1937	1,320	4,368	1.36	18.43	3,469	14.58
1939	872	42,600	Aug. 21, 1939	1,200	3,318	1.03	13.95	3,156	13.27
1940	892	160,000	Aug. 16, 1940	1,160	4,246	1.31	17.89	4,452	18.76
1941	922	16,900	Apr. 6, 1941	636	2,351	.728	9.89	1,998	8.41
1942	952	28,000	Aug. 10, 1942	574	2,363	.738	10.01	2,937	12.33
1943	972	24,600	Dec. 31, 1942	802	3,576	1.11	15.02	3,078	12.92
1944	1002	77,000	Sept. 20, 1944	538	3,077	.953	12.96	3,627	15.28
1945	1032	51,700	Sept. 20, 1945	816	3,446	1.07	14.48	3,599	14.29
1946	1052	24,300	Jan. 9, 1946	975	3,578	1.11	15.03	3,179	13.35
1947	1082	20,800	Jan. 22, 1947	915	2,613	.809	10.97	3,108	13.05
1948	1112	35,800	Feb. 16, 1948	1,130	4,097	1.27	17.25	4,600	19.36
1949	1142	+62,000	Dec. 5, 1948	1,460	5,261	1.63	22.09	4,587	19.27
1950	1172	30,600	June 2, 1950	1,330	3,383	1.05	14.23	-	-

† Corrected.

* Not previously published.

97. Dan River near Asbury, N. C.

Location.--Lat 36°32'11", long 80°23'59", 300 ft downstream from bridge on county road at Joyce's mill $1\frac{1}{4}$ miles northeast (revised) of Asbury, Stokes County, and 2.4 miles upstream from Little Dan River.

Drainage area.--71.4 sq mi (revised).

Gage.--Staff gage. Altitude of gage 1,065 ft (from topographic map).

Extremes.--1924-26: Maximum discharge observed, 3,370 cfs Dec. 8, 1924 (gage height, 5.00 ft), from rating curve extended above 200 cfs; minimum observed, 12.7 cfs Aug. 20, 1925, result of discharge measurement (gage height, 0.35 ft).

Remarks.--Considerable diurnal fluctuation during low flow caused by gristmill 400 ft above gage is evidenced by the observed extreme minimum discharge for period of record. These fluctuations are not reflected in the daily record which is based on early morning and late afternoon gage readings.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	155	-
1925	118	99.7	175	189	149	118	109	110	57.6	41.8	30.7	33.5	102
1926	60.7	65.9	51.9	113	129	107	104	60.4	51.4	63.4	52.1	47.6	75.1

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	2.42	-
1925	1.90	1.56	2.83	3.05	2.18	1.90	1.58	1.78	0.90	0.68	0.50	.52	19.38
1926	.98	1.03	.84	1.82	1.69	1.72	1.62	.98	.80	1.02	.84	.74	14.28

Yearly discharges, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum observed		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	622	-	-	-	-	-	-	-	-
1925	622	3,370	Dec. 8, 1924	20	102	1.43	19.38	83.8	15.94
1926	622	1,000	Jan. 19, 1926	24	75.1	1.05	14.28	-	-

98. Dan River near Francisco, N. C.

Location (revised).--Lat 36°30'15", long 80°18'12", on left bank at downstream side of bridge on State Highway 704, an eighth of a mile downstream from Georges Mill, 3 miles east of Francisco, Stokes County, and 7.9 miles downstream from Little Dan River.

Drainage area.--124 sq mi.

Gage.--Water-station recorder. Altitude of gage is 830 ft (from topographic map). Prior to Nov. 15, 1929, chain gage at same site and datum.

Average discharge.--26 years (1924-50), 190 cfs (revised).

Extremes.--1924-50: Maximum discharge, 12,400 cfs Oct. 19, 1937 (gage height, 12.45 ft); minimum, 7.1 cfs Sept. 8, 1932 (gage height, 0.43 ft); minimum daily, 30 cfs Sept. 18, 20, 1932.

Flood of 1916 reached a stage of about 15.0 ft.

Remarks.--Considerable diurnal fluctuation and regulation from mills and powerplants above station. Talbott and Townes Reservoirs above Pinnacles Hydroelectric Plant in Virginia, 28 miles above station and having a combined capacity of 416,000,000 cu ft, were completed in 1938.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	235	-
1925	168	132	*319	272	220	187	172	202	114	75.6	62.9	76.4	*167
1926	91.4	124	*96.1	*198	188	150	165	110	86.7	76.3	70.4	80.5	*119
1927	*66	*195	*162	*143	*226	*175	*180	128	107	160	111	78.3	*143
1928	151	*106	354	181	172	184	239	228	147	166	697	405	*256
1929	*259	171	146	165	209	489	243	274	317	209	194	136	*235
1930	389	259	232	207	202	258	174	131	114	57.3	52.4	50.6	177
1931	54.7	80.1	*103	*106	72.0	116	213	165	95.0	128	161	80.4	*115
1932	54.6	62.4	105	175	146	219	230	140	121	76.7	64.1	52.9	120
1933	291	324	266	253	248	287	293	256	137	96.8	104	71.8	219
1934	66.8	70.2	79.5	88.6	68.9	226	225	120	149	147	115	211	131
1935	172	218	287	290	234	339	278	210	157	212	132	165	225
1936	114	145	132	464	508	355	435	191	130	104	113	99.9	216
1937	166	94.7	190	472	293	207	218	208	170	145	241	140	212
1938	543	263	221	228	187	176	136	146	243	373	278	144	246
1939	109	175	142	160	363	233	190	159	165	168	238	128	185
1940	115	117	111	94.1	127	118	182	158	144	154	514	218	171
1941	132	176	149	152	123	124	151	110	110	323	133	118	150
1942	89.4	109	140	134	158	165	126	*188	311	159	298	358	186
1943	208	159	245	283	322	294	275	254	246	315	154	123	239
1944	128	126	132	135	173	280	203	172	152	156	113	131	157
1945	140	137	138	189	177	178	171	196	166	221	139	275	177
1946	174	190	239	370	271	294	213	356	245	243	174	137	242
1947	150	154	122	234	182	170	200	165	360	178	156	140	184
1948	183	203	179	193	236	*247	372	232	172	145	136	109	200
1949	99.5	163	277	252	210	238	267	405	255	327	361	260	260
1950	219	211	152	175	217	183	171	295	257	180	179	170	201

* Revised.

† Not previously published; estimated or partly estimated on basis of records for station at Fisher River near Dobson.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	2.12	-
1925	1.56	1.18	*2.97	2.52	1.84	1.74	1.55	1.88	1.02	0.70	0.58	.69	*18.23
1926	.85	1.11	*.89	*1.84	1.58	1.39	1.48	1.02	.78	.71	.65	.72	*13.02
1927	*.61	*1.75	*1.51	*1.33	*1.90	*1.61	*1.62	1.19	.92	1.49	1.04	.70	*15.61
1928	1.22	*.95	3.29	1.68	1.49	1.71	2.60	2.12	1.33	1.54	6.48	3.65	*28.06
1929	*2.41	1.54	1.35	1.53	1.76	4.55	2.19	2.54	2.85	1.95	1.80	1.22	*25.69
1930	3.62	2.33	2.15	1.92	1.69	2.40	1.56	1.22	1.02	.53	.49	.46	19.39
1931	.51	.72	*.96	*.98	.60	1.08	1.92	1.53	.84	1.19	1.50	.72	*12.55
1932	.51	.56	.97	1.63	1.27	2.03	2.07	1.30	1.09	.71	.60	.48	13.22
1933	2.70	2.91	2.47	2.35	2.08	2.67	2.64	2.38	1.23	.90	.97	.65	23.95
1934	6.22	.63	.74	.82	.58	2.10	2.01	1.11	1.34	1.37	1.07	1.90	14.29
1935	1.60	1.96	2.67	2.70	1.97	3.16	2.50	1.96	1.41	1.97	1.23	1.48	24.61
1936	1.06	1.30	1.23	4.31	2.68	3.30	3.91	1.78	1.17	.97	1.05	.90	23.66
1937	1.55	.85	1.77	4.39	2.46	1.92	1.96	1.93	1.53	1.35	2.24	1.26	23.21

* Revised.

† Not previously published; see footnote to preceding table.

Note.--Monthly discharge in cubic feet per second per square mile and runoff depth in inches, published in water-supply papers for water years 1938 to 1950, are subject to error due to regulation in Talbott and Townes Reservoirs. They are not published herein and should not be used.

Yearly discharge, in cubic feet per second, of Dan River near Francisco, N. C.									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	602	-	-	-	-	-	-	-	-
1925	602,1433	8,700	Dec. 8, 1924	35	*167	*1.35	*18.23	*141	*15.37
1926	622,1433	*2,720	Jan. 18, 1926	31	*119	*.960	*13.02	*128	*14.04
1927	642	-	-	-	*143	*1.15	*15.61	*158	*17.26
1928	662,1433	*9,850	Aug. 16, 1928	48	*256	*2.06	*28.06	*254	*27.90
1929	682,1433	3,140	Aug. 18, 1929	107	*235	*1.90	*25.69	260	28.49
1930	697	5,060	Oct. 2, 1929	31	177	1.43	19.39	*123	*13.48
1931	712,1433	2,820	Aug. 22, 1931	36	*115	*.927	*12.55	*113	*12.40
1932	727	2,300	Mar. 6, 1932	30	120	.968	13.22	176	19.26
1933	742	5,520	Oct. 17, 1932	42	219	1.77	23.95	163	17.86
1934	757	3,190	Sept. 29, 1934	45	131	1.06	14.29	169	18.53
1935	782	3,640	Dec. 1, 1934	94	225	1.81	24.61	201	21.97
1936	802	3,760	Apr. 6, 1936	60	216	1.74	23.66	221	24.24
1937	822	3,880	July 17, 1937	77	212	1.71	23.21	260	28.49
1938	852	12,400	Oct. 19, 1937	95	246	1.98	26.91	195	21.36
1939	872	8,670	Aug. 18, 1939	79	185	1.49	20.19	178	19.44
1940	892	7,630	Aug. 14, 1940	65	171	1.38	18.80	181	19.85
1941	922	2,550	July 4, 1941	80	150	1.21	16.47	141	15.38
1942	952,1433	6,590	Sept. 6, 1942	60	186	1.50	*20.36	209	*22.88
1943	972	2,400	July 13, 1943	71	239	1.93	26.21	220	24.13
1944	1002	1,530	Sept. 30, 1944	38	157	1.27	17.20	159	17.46
1945	1032	2,950	Sept. 17, 1945	54	177	*1.43	19.41	193	21.14
1946	1052	1,880	Jan. 7, 1946	63	242	1.95	26.54	228	24.92
1947	1082	7,650	June 14, 1947	65	184	1.48	20.13	196	21.40
1948	1112,1433	1,740	May 12, 1948	48	200	1.61	*21.98	198	*21.75
1949	1142	3,690	Aug. 28, 1949	52	260	2.10	28.50	264	28.88
1950	1172	1,960	May 27, 1950	113	201	1.62	21.99	-	-

* Revised.

† Corrected.

‡ Not previously published.

99. Dan River at Pine Hall, N. C

Location.--Lat 36°19', long 80°03', on highway bridge at Pine Hall, Stokes County, 1½ miles (revised) upstream from Belew Creek, and 2½ miles downstream from Town Fork Creek.

Drainage area.--481 sq mi.

Gage.--Chain gage. Altitude of gage, 565 ft (from river-profile map).

Extremes.--1923-26: Maximum gage height, 22.08 ft Sept. 30, 1924 (discharge not determined); minimum discharge observed, 64 cfs Aug. 21 and Sept. 9, 1925 (gage height, 0.58 ft).

Remarks.--Considerable diurnal fluctuation subsequent to June 20, 1925, caused by power-plants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	*250	*306	611	846	612	644	722	583	531	948	463	*953	*622
1925	571	329	649	1,030	699	524	403	605	240	220	169	182	468
1926	168	303	254	614	638	490	-	-	-	-	-	-	-

* Revised.

‡ Not previously published; estimated or partly estimated on basis of records for stations near Francisco, N. C., and at South Boston, Va.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	*0.60	*0.71	1.46	2.03	1.37	1.54	1.67	1.40	1.23	2.27	1.11	*2.21	*17.60
1925	1.37	.76	1.56	2.47	1.51	1.26	.94	1.45	.56	.53	.40	.42	13.23
1926	.40	.70	.61	1.48	1.38	1.18	-	-	-	-	-	-	-

* Revised.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	602,1433	-	Sept. 30, 1924	*220	*622	*1.29	*17.60	*655	*18.52
1925	602	-	Dec. 9, 1924	65	468	.973	13.23	-	-
1926	622	6,900	Jan. 18, 1926	-	-	-	-	-	-

* Revised.

‡ Not previously published.

Note.--Discharge records May 17 to Sept. 30, 1926, published in WSP 622 have been found unreliable on basis of restudy of the original data and comparison with other stations; these records are not published herein and should not be used.

100. North Mayo River near Spencer, Va.

Location.--Lat 36°34'05", long 79°59'15". 800 ft downstream from highway bridge at Moores Mill, 2 miles downstream from Horse Pasture Creek, and 4 miles southeast of Spencer, Henry County.

Drainage area.--108 sq mi.

Gage.--Water-stage recorder. Datum of gage is 730.94 ft above mean sea level (levels by Corps of Engineers). Prior to July 25, 1936, chain gage at site 800 ft upstream at datum 1.50 ft higher. July 25 to Sept. 27, 1936, staff gage at present site and datum.

Average discharge.--22 years (1928-50), 126 cfs.

Extremes.--1928-50: Maximum discharge, 17,200 cfs Oct. 9, 1947 (gage height, 15.80 ft), from rating curve extended above 7,200 cfs on basis of logarithmic plotting and velocity-area study; minimum, 19 cfs Sept. 2-5, 1930 (gage height, 2.12 ft, site and datum then in use).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	104	96.0	95.8	97.8	167	201	149	153	198	165	116	86.6	*135
1930	272	158	137	119	131	124	105	71.1	69.6	38.1	31.8	32.7	107
1931	33.0	69.5	97.7	87.3	49.6	133	133	110	45.1	103	166	67.5	91.7
1932	30.4	33.8	96.0	175	96.7	215	138	97.5	105	59.5	47.9	37.0	94.5
1933	275	206	189	133	136	159	138	144	90.1	96.1	85.5	51.4	142
1934	52.6	55.2	77.8	92.1	94.8	197	121	118	118	119	51.9	116	101
1935	72.7	98.6	128	204	128	214	160	118	96.8	101	82.2	110	126
1936	50.2	73.7	92.6	*465	*215	*220	*255	*113	*77.0	*67.0	77.6	57.0	*147
1937	132	52.3	123	368	163	115	148	136	122	111	164	105	145
1938	498	188	142	150	120	117	116	86.5	146	186	84.6	56.4	158
1939	49.8	91.4	107	98.6	279	152	108	79.6	83.3	87.5	171	59.8	113
1940	53.2	60.9	73.0	80.8	122	96.4	153	163	95.9	160	374	92.3	127
1941	67.0	124	128	106	88.6	93.9	138	66.0	67.7	181	74.0	56.6	99.3
1942	40.9	54.6	84.7	93.0	115	132	74.2	199	204	75.8	181	148	117
1943	97.2	73.2	128	147	207	187	197	119	244	137	80.4	75.0	140
1944	62.1	65.6	73.8	103	150	244	146	94.1	62.3	55.1	50.5	168	106
1945	178	88.9	107	134	143	117	127	111	76.6	80.1	67.3	397	135
1946	108	127	192	233	183	154	115	196	101	105	66.4	79.2	138
1947	76.5	81.4	79.4	191	79.2	127	118	76.6	83.3	61.3	46.3	59.8	90.0
1948	406	134	77.1	95.3	173	158	190	115	156	99.0	78.9	68.7	146
1949	83.1	157	238	184	174	149	183	232	172	245	212	180	183
1950	128	132	110	105	131	119	97.7	193	129	100	107	141	124

* Not previously published; estimated or partly estimated on basis of record for Mayo River near Price, N. C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*1.11	0.99	1.00	1.04	1.61	2.14	1.54	1.64	2.04	1.76	1.23	0.89	*16.99
1930	2.90	1.63	1.46	1.27	1.26	1.33	1.08	.76	.72	.41	.34	.34	13.50
1931	.35	.72	1.04	.93	.48	1.42	1.37	1.18	.47	1.10	1.78	.70	11.54
1932	.32	.35	1.02	1.87	.97	2.29	1.43	1.04	1.08	.64	.51	.38	11.90
1933	2.94	2.13	2.02	1.42	1.31	1.70	1.43	1.53	.93	1.03	.91	.53	17.88
1934	.56	.57	.83	.98	.91	2.10	1.25	1.26	1.22	1.27	.55	1.19	12.89
1935	.78	1.02	1.37	2.18	1.22	2.28	1.65	1.26	1.00	1.08	.88	1.14	15.86
1936	.54	.76	.99	*4.97	*2.15	*2.35	*2.63	*1.21	*.80	*.71	.83	.59	*18.53
1937	1.41	1.54	1.31	3.93	1.57	1.22	1.53	1.45	1.26	1.19	1.75	1.08	18.24
1938	5.32	1.94	1.51	1.60	1.16	1.24	1.19	.92	1.51	1.98	.90	1.60	19.87
1939	.53	.94	1.14	1.05	2.69	1.63	1.12	.85	.86	.93	1.82	.62	14.18
1940	.57	.63	.78	.86	1.22	1.03	1.58	1.74	.99	1.71	3.99	.95	16.05
1941	.71	1.28	1.37	1.13	.85	1.00	1.43	.70	.70	1.94	.79	.58	12.48
1942	.44	.56	.90	.99	1.10	1.41	.77	2.12	2.11	.81	1.94	1.53	14.68
1943	1.04	.76	1.37	1.57	2.00	1.99	2.03	1.27	2.52	1.46	.86	.77	17.64
1944	.66	.68	.79	1.10	1.50	2.61	1.51	1.00	.64	.59	.54	1.74	13.36
1945	1.90	.92	1.14	1.43	1.38	1.24	1.32	1.19	.79	.86	.72	4.11	17.00
1946	1.15	1.32	2.05	2.49	1.76	1.65	1.18	2.09	1.04	1.12	.71	.82	17.38
1947	.82	.84	.85	2.04	.76	1.36	1.22	.82	.86	.65	.49	.62	11.33
1948	4.34	1.38	.82	1.02	1.73	1.68	1.96	1.22	1.61	1.06	.84	.71	18.37
1949	.89	1.62	2.54	1.96	1.68	1.59	1.89	2.48	1.77	2.62	2.26	1.65	22.95
1950	1.37	1.36	1.18	1.32	1.26	1.27	1.01	2.06	1.33	1.07	1.14	1.46	15.63

* Not previously published; see Footnote to preceding table.

ROANOKE RIVER BASIN

Yearly discharge, in cubic feet per second, of North Mayo River near Spencer, Va.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	697	*1,660	Feb. 28, 1929	66	*135	*1.25	*16.99	158	19.88
1930	697	*4,600	Oct. 2, 1929	20	107	.991	13.50	76.5	9.62
1931	712	*1,980	May 21, 1931*	23	91.7	.849	11.54	88.4	11.12
1932	727	*2,840	Mar. 6, 1932	20	94.5	.875	11.90	137	17.30
1933	742	*7,200	Oct. 17, 1932	30	142	1.31	17.88	101	12.75
1934	757	*1,450	Mar. 29, 1934*	32	101	.935	12.69	111	13.90
1935	792	1,310	Jan. 23, 1935	40	126	1.17	15.86	119	14.98
1936	802	3,200	Jan. 19, 1936	35	*147	*1.36	*18.53	*155	*19.50
1937	822	3,060	Jan. 3, 1937	46	145	1.34	18.24	189	23.75
1938	852	14,300	Oct. 19, 1937	46	158	1.46	19.87	109	13.71
1939	872	3,820	Aug. 19, 1939	40	113	1.05	14.18	108	13.55
1940	892	6,800	Aug. 14, 1940	46	127	1.18	16.05	138	17.43
1941	922	1,180	(a)	36	99.3	.919	12.48	87.7	11.02
1942	952	4,980	June 10, 1942	34	117	1.08	14.68	127	15.95
1943	972	2,660	Apr. 19, 1943	55	140	1.30	17.64	132	16.60
1944	1002	2,580	Sept. 30, 1944	25	106	1.08	13.36	120	15.19
1945	1032	7,280	Sept. 18, 1945	43	135	1.25	17.00	140	17.56
1946	1052	1,850	Jan. 8, 1946	53	138	1.28	17.38	122	15.37
1947	1082	1,480	Jan. 20, 1947	37	90.0	.833	11.33	122	15.36
1948	1112	17,200	Oct. 9, 1947	52	146	1.35	18.37	134	16.88
1949	1142	2,500	June 29, 1949	62	183	1.69	22.95	*173	21.81
1950	1172	1,390	Sept. 10, 1950	64	124	1.15	15.63	-	-

* Revised.

† Corrected.

‡ Not previously published.

a Dec. 29, 1940, Apr. 5, 1941.

101. Mayo River near Price, N. C.

Location.--Lat 36°32'00", long 79°59'30", on right bank 300 ft downstream from Anglins Bridge, half a mile downstream from confluence of North and South Mayo Rivers, three-quarters of a mile downstream from Virginia-North Carolina State line, and 4 miles west of Price, Rockingham County.

Drainage area.--260 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in reports of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 689.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 29, 1929, staff gage at same site and datum.

Average discharge.--21 years (1929-50), 331 cfs.

Extremes.--1929-50: Maximum discharge, 30,000 cfs Oct. 19, 1937 (gage height, 14.00 ft), from rating curve extended above 8,000 cfs by logarithmic plotting; minimum, 34 cfs (revised) Sept. 19, 1932 (gage height, 0.52 ft); minimum daily, 39 cfs (revised) Sept. 19, 1932.

Remarks.--Some diurnal fluctuation at low flow caused by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	307	235	-	-
1930	824	427	381	345	386	366	286	206	185	104	89.9	83.3	307
1931	89.3	135	198	207	139	258	359	240	142	207	358	119	205
1932	84.5	95.9	164	*344	*233	*522	*392	204	*214	*141	*135	*78.7	*217
1933	571	567	464	370	392	463	442	438	213	238	231	135	379
1934	119	130	143	152	140	501	432	210	315	242	135	420	245
1935	297	319	406	481	398	552	456	350	272	309	220	293	363
1936	164	215	208	1,022	580	595	685	305	210	183	209	166	378
1937	367	163	352	1,009	480	353	394	367	325	270	546	303	406
1938	1,250	521	401	398	325	314	312	245	408	568	297	197	439
1939	160	282	279	259	760	479	321	227	252	242	432	147	321
1940	133	150	175	187	270	221	376	358	251	362	943	247	307
1941	180	305	284	262	214	222	327	169	176	550	185	175	254
1942	113	142	218	246	310	354	208	553	533	223	574	394	322
1943	257	218	348	389	526	482	525	335	654	498	229	182	386
1944	159	168	182	244	363	573	374	261	186	162	132	398	268
1945	395	215	255	359	347	288	312	281	190	261	186	1,002	338
1946	281	309	512	628	505	423	333	532	329	337	194	218	383
1947	228	227	218	492	248	329	344	244	306	210	162	174	285
1948	709	378	224	277	447	444	549	351	403	246	201	176	366
1949	208	365	558	465	461	424	514	659	453	609	584	440	479
1950	327	343	284	288	348	313	270	508	356	260	260	316	322

* Revised.

Monthly and yearly runoff, in inches, of Mayo River near Price, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	1.36	1.01	-
1930	3.66	1.83	1.70	1.53	1.54	1.63	1.23	0.91	0.79	0.46	.40	.36	16.04
1931	.40	.58	.88	.92	.56	1.14	1.54	1.06	.61	.92	1.59	.51	10.71
1932	.37	.41	.75	*1.53	*.97	2.31	*1.68	*.91	*.92	*.62	*.60	*.34	*11.99
1933	2.54	2.43	2.14	1.64	1.57	2.05	1.90	1.94	.91	1.05	1.02	.58	19.77
1934	.53	.56	.63	.67	.56	2.23	1.85	.93	1.35	1.07	.60	1.81	12.79
1935	1.31	1.37	1.80	2.13	1.59	2.44	1.95	1.56	1.17	1.37	.98	1.26	18.93
1936	.75	.92	.92	4.53	2.40	2.64	2.93	1.35	.90	.81	.93	.71	19.77
1937	1.63	.70	1.48	4.47	1.84	1.48	1.70	1.63	1.40	1.20	2.42	1.50	21.25
1938	5.34	2.23	1.78	1.76	1.30	1.40	1.34	1.09	1.75	2.51	1.31	.85	22.86
1939	.71	1.13	1.23	1.15	3.04	2.12	1.37	1.01	1.08	1.07	2.18	.63	16.72
1940	.59	.64	.78	.83	1.12	.98	1.62	1.59	1.08	1.60	4.18	1.06	16.07
1941	.80	1.31	1.26	1.16	.86	.98	1.40	.75	.75	2.44	.82	.75	15.28
1942	.50	.61	.96	1.09	1.24	1.57	.89	2.45	2.29	.99	2.55	1.69	16.88
1943	1.14	.94	1.55	1.72	2.11	2.14	2.25	1.48	2.81	2.21	1.02	.78	20.15
1944	.71	.72	.81	1.08	1.51	2.54	1.60	1.16	.80	.81	.58	1.71	14.03
1945	1.75	.92	1.13	1.50	1.39	1.28	1.34	1.25	.81	1.16	.82	4.30	17.65
1946	1.25	1.33	2.27	2.79	2.02	1.87	1.43	2.36	1.41	1.50	.86	.93	20.02
1947	1.01	.97	.97	2.18	.99	1.46	1.48	1.08	1.32	.93	.72	.74	13.85
1948	3.15	1.62	.99	1.23	1.85	1.97	2.36	1.56	1.73	1.09	.89	.75	19.19
1949	.92	1.57	2.48	2.06	1.85	1.88	2.20	2.92	1.94	2.70	2.59	1.89	25.00
1950	1.45	1.47	1.26	1.28	1.39	1.39	1.16	2.25	1.53	1.15	1.15	1.36	16.83

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697	15,900	Oct. 2, 1929	51	307	1.18	16.04	205	10.71
1931	712	3,960	Aug. 22, 1931	62	205	.788	10.71	198	10.36
1932	1433	7,300	Mar. 8, 1932	*39	*217	*.835	*11.39	*320	*16.99
1933	742	15,600	Oct. 17, 1932	61	379	1.46	19.77	276	14.38
1934	757	5,550	Mar. 4, 1934	90	245	.942	12.79	298	15.55
1935	782	3,880	Mar. 13, 1935	130	363	1.40	18.93	326	17.02
1936	802	11,200	Jan. 19, 1936	109	378	1.45	19.77	401	21.01
1937	822	8,020	Jan. 3, 1937	149	406	1.56	21.25	517	26.99
1938	852	30,000	Oct. 19, 1937	160	438	1.68	22.86	314	16.38
1939	872	12,300	Aug. 18, 1939	123	321	1.23	16.72	300	15.66
1940	892	19,000	Aug. 14, 1940	117	307	1.19	16.07	333	17.43
1941	922	3,720	July 17, 1941	107	254	.977	13.28	230	11.98
1942	952	10,400	Aug. 17, 1942	99	322	1.24	16.88	352	18.39
1943	972	8,370	June 8, 1943	146	386	1.48	20.15	359	18.76
1944	1002	6,310	Sept. 30, 1944	75	268	1.03	14.03	298	15.59
1945	1032	17,000	Sept. 18, 1945	109	338	1.30	17.65	358	18.70
1946	1052	3,900	Jan. 8, 1946	139	383	1.47	20.02	347	18.12
1947	1082	3,190	Jan. 20, 1947	112	265	1.02	13.85	319	16.66
1948	1112	20,800	Oct. 10, 1947	133	366	1.41	19.19	351	18.40
1949	1142	15,270	Aug. 29, 1949	157	479	1.84	25.00	464	24.22
1950	1172	2,460	May 15, 1950	153	322	1.24	16.83	-	-

* Revised.

† Corrected.

102. Dan River near Wentworth, N. C.

Location.--Lat 36°25', long 79°50', on right bank 150 ft downstream from Settles Bridge, 3½ miles northwest of Wentworth, Rockingham County, and 7½ miles downstream from Mayo River.

Drainage area.--1,050 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 518 ft (by barometer). Prior to Aug. 3, 1949, at site 150 ft upstream at same datum.

Average discharge.--11 years (1939-50), 1,228 cfs (corrected).

Extremes.--1939-50: Maximum discharge, 56,800 cfs Sept. 18, 1945 (gage height, 27.78 ft), from rating curve extended above 16,500 cfs on basis of slope-area determination at gage height 26.9 ft and runoff comparisons; minimum, 149 cfs Sept. 11, 1944 (gage height, 1.32 ft); minimum daily, 182 cfs Sept. 11, 1944.
Flood of 1908 reached a stage of 34.9 ft and flood of 1937 reached a stage of 29.8 ft, from information by local residents.

Remarks.--Slight diurnal fluctuation and regulation at low flow caused by powerplants above station.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*474	*528	629	707	1,128	994	1,361	1,100	1,038	1,101	3,465	767	*1,110
1941	526	1,282	962	980	771	911	1,144	546	574	2,188	610	673	932
1942	335	408	671	772	1,184	1,379	690	1,839	1,761	717	1,656	1,244	1,054
1943	870	660	1,226	1,594	1,998	1,932	1,892	1,063	1,653	1,853	668	469	1,319
1944	450	475	560	911	1,632	2,731	1,766	953	695	868	484	1,690	1,098
1945	1,777	826	1,100	1,493	1,698	1,165	1,130	1,045	670	930	559	3,876	1,350
1946	853	1,120	2,238	2,332	1,969	1,385	1,040	1,751	924	916	628	604	1,312
1947	653	754	676	2,212	863	1,326	1,587	978	1,185	765	626	1,115	1,062
1948	1,792	1,614	862	1,081	2,076	1,963	2,368	1,486	1,167	797	828	570	1,379
1949	704	1,489	2,163	1,772	1,615	1,444	1,788	2,431	1,397	2,345	1,998	1,478	1,722
1950	1,223	1,336	940	1,005	1,292	1,361	1,009	2,338	1,150	869	820	865	1,167

* Not previously published; estimated or partly estimated on basis of records for station at Leaksville.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*0.52	*0.56	0.69	0.78	1.16	1.09	1.45	1.21	1.10	1.21	3.80	0.82	*14.39
1941	.58	1.36	1.06	1.08	.76	1.00	1.22	.60	.61	2.40	.67	.71	12.05
1942	.37	.43	.74	.85	1.17	1.51	.73	2.02	1.87	.79	1.82	1.32	13.62
1943	.96	.70	1.35	1.75	1.98	2.12	2.01	1.17	1.76	2.03	.73	.50	17.06
1944	.49	.50	.61	1.00	1.68	3.00	1.88	1.05	.74	.95	.53	1.80	14.23
1945	1.95	.88	1.21	1.64	1.68	1.28	1.20	1.15	.71	1.02	.61	4.12	17.45
1946	.94	1.19	2.46	2.56	1.95	1.52	1.11	1.92	.98	1.01	.69	.64	16.97
1947	.72	.80	.74	2.43	.86	1.46	1.69	1.07	1.26	.84	.69	1.18	13.74
1948	1.97	1.71	.95	1.19	2.13	2.16	2.52	1.63	1.24	.88	.91	.61	17.90
1949	1.77	1.58	2.38	1.95	1.60	1.59	1.90	2.67	1.48	2.57	2.19	1.57	22.25
1950	1.34	1.42	1.03	1.10	1.20	1.49	1.07	2.35	1.22	.95	.89	.92	15.06

* Not previously published; see footnote to preceding table.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	50,200	Aug. 15, 1940	360	*1,110	*1.06	*14.39	1,204	15.62
1941	922	17,000	July 17, 1941	283	952	.888	12.05	819	10.59
1942	952	18,600	May 22, 1942	244	1,054	1.00	13.62	1,167	15.09
1943	972	18,100	Apr. 20, 1943	338	1,319	1.26	17.06	1,212	15.65
1944	1002	13,100	Mar. 30, 1944	182	1,098	1.05	14.23	1,285	16.67
1945	1032	56,800	Sept. 18, 1945	360	1,350	1.29	17.45	1,392	18.00
1946	1052	12,800	Jan. 8, 1946	370	1,312	1.25	16.97	1,132	14.63
1947	1092	16,000	Sept. 25, 1947	366	1,062	1.01	13.74	1,245	16.11
1948	1112	22,400	Oct. 10, 1947	391	1,379	1.31	17.90	1,367	18.00
1949	1142	16,000	July 12, 1949	510	1,722	1.64	22.25	1,649	21.31
1950	1172	10,600	Oct. 31, 1949†	547	1,167	1.11	15.06	-	-

† Corrected.

* Not previously published.

‡ Maximum peak discharge; maximum discharge during year, 27,600 cfs at 12 p.m. Sept. 30, stage rising.

103. Dan River at Leaksville, N. C.

Location.--Lat 36°29'05", long 79°45'30", at Leaksville, Rockingham County, half a mile downstream from bridge on State Highway 87 and half a mile upstream from Smith River.

Drainage area.--1,150 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and suspended-sediment for the period November 1944 to October 1945 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 490.33 ft above mean sea level, datum of 1929. Prior to Oct. 25, 1929, a staff gage at same site and datum.

Average discharge.--20 years (1929-49), 1,303 cfs (revised).

Extremes.--1929-49: Maximum discharge, 54,200 cfs Sept. 18, 1945 (gage height, 28.27 ft), from rating curve extended above 28,000 cfs on basis of runoff comparisons in the basin; minimum, 84 cfs Sept. 12, 1932 (gage height, 0.25 ft); minimum daily, 114 cfs Sept. 12, 1932.

Remarks.--Slight diurnal fluctuation and regulation at low flow caused by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second, of Dan River at Leaksville, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	1,200	715	-
1930	2,810	1,550	1,390	1,300	1,520	1,360	961	698	594	329	295	286	1,090
1931	263	475	724	878	526	998	1,660	1,270	526	932	1,680	554	877
1932	291	336	699	1,870	1,110	2,100	1,490	863	954	511	390	292	909
1933	1,930	2,430	2,550	1,580	1,800	1,620	1,520	1,390	688	739	655	394	1,440
1934	318	392	475	503	553	2,400	2,070	1,060	1,460	898	716	1,740	1,050
1935	1,014	1,008	1,688	1,712	1,632	2,476	1,847	1,107	834	934	688	1,062	1,333
1936	467	883	699	*4,844	2,812	2,533	2,806	1,018	807	681	640	501	*1,554
1937	1,401	578	1,263	*4,588	1,843	1,245	*1,458	1,553	1,245	1,000	*2,403	1,306	*1,661
1938	*4,861	1,807	1,332	1,583	1,204	1,157	1,117	857	1,495	2,305	1,062	602	*1,622
1939	540	1,188	1,265	1,100	3,461	2,273	1,245	925	970	1,118	1,977	525	1,369
1940	504	561	673	768	1,221	1,061	1,508	1,222	1,113	1,148	3,791	834	1,202
1941	564	1,376	1,061	1,068	865	990	1,275	572	622	2,362	652	693	1,010
1942	356	426	726	804	1,239	1,461	717	2,038	1,939	749	1,827	1,345	1,135
1943	933	700	1,320	1,725	2,194	2,088	2,039	1,188	1,768	2,015	706	506	1,425
1944	459	985	585	991	1,715	2,965	1,952	1,067	767	882	502	1,669	1,167
1945	2,025	853	1,165	1,629	1,825	1,249	1,190	1,094	718	974	642	4,052	1,445
1946	860	1,136	2,298	2,454	2,022	1,399	1,066	1,838	980	930	650	635	1,354
1947	660	779	687	2,270	877	1,381	1,683	987	1,204	786	626	1,152	1,091
1948	1,921	1,731	911	1,141	2,297	2,161	2,592	1,598	1,285	859	851	575	1,489
1949	751	1,618	2,326	1,898	1,702	1,516	1,904	2,569	1,494	2,484	2,065	1,615	1,831

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	1.20	0.69	-
1930	2.81	1.51	1.40	1.50	1.38	1.36	0.93	0.70	0.58	0.33	.30	.28	12.88
1931	.26	.46	.73	.88	.48	1.00	1.61	1.27	.51	.93	1.68	.54	10.35
1932	.29	.33	.70	1.88	1.04	2.11	1.45	.86	.93	.51	.39	.28	10.77
1933	1.94	2.35	2.56	1.58	1.63	1.63	1.47	1.40	.67	.74	.66	.38	17.01
1934	.32	.38	.48	.50	.50	2.41	2.01	1.06	1.42	.90	.72	1.68	12.39
1935	1.02	.98	1.70	1.72	1.48	2.48	1.80	1.11	.81	.94	.69	1.03	15.76
1936	.47	.86	.70	*4.86	2.64	2.54	2.72	1.02	1.78	.68	.64	.49	*18.40
1937	1.41	.56	1.27	*4.60	1.67	1.24	*1.41	1.56	1.20	1.00	*2.41	1.27	*19.80
1938	*4.87	1.75	1.34	1.59	1.09	1.16	1.08	.86	1.45	2.51	1.06	.58	*19.14
1939	.54	1.15	1.27	1.10	3.13	2.28	1.20	.93	.94	1.12	1.98	.51	16.15
1940	.51	.54	.68	.77	1.15	1.06	1.46	1.22	1.08	1.15	3.80	.81	14.23
1941	.57	1.34	1.06	1.07	.78	.99	1.24	.57	.60	2.37	.65	.67	11.91
1942	.36	.41	.73	.81	1.12	1.46	.70	2.04	1.88	.75	1.83	1.31	13.40
1943	.94	.68	1.32	1.73	1.98	2.09	1.98	1.17	1.72	2.02	.71	.49	16.83
1944	.46	.48	.59	.99	1.61	2.97	1.89	1.07	.74	.88	.50	1.62	13.80
1945	2.03	.83	1.17	1.63	1.65	1.25	1.15	1.10	.70	.98	.64	3.93	17.06
1946	.86	1.10	2.30	2.46	1.83	1.40	1.03	1.84	.95	.93	.65	.62	15.97
1947	.66	.76	.69	2.28	.79	1.39	1.63	.99	1.17	.79	.63	1.12	12.89
1948	1.93	1.68	.91	1.14	2.15	2.17	2.52	1.60	1.25	.86	.85	.56	17.62
1949	.75	1.57	2.33	1.90	1.54	1.52	1.85	2.58	1.45	2.49	2.07	1.57	21.62

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momenty maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697	18,500	Oct. 2, 1929	119	1,090	0.948	12.88	729	8.61
1931	712	13,300	Aug. 22, 1931	172	877	.763	10.35	866	10.22
1932	727	-	Mar. 7, 1932	114	909	.790	10.77	1,376	16.30
1933	742	-	Oct. 18, 1932	226	1,440	1.25	17.01	960	11.34
1934	757	-	Mar. 4, 1934	200	1,050	.913	12.39	1,261	14.90
1935	782	13,600	Dec. 1, 1934	390	1,333	1.16	15.76	1,192	14.09
1936	802,1433	-	Jan. 20, 1936	308	*1,554	*1.35	*18.40	*1,656	*19.61
1937	822,1433	-	Aug. 25, 1937	496	*1,661	*1.44	*19.60	*2,082	*24.32
1938	852,1433	-	Oct. 20, 1937	441	*1,622	*1.41	*19.14	1,199	14.14
1939	872	-	Aug. 19, 1939	431	1,369	1.19	16.15	1,265	14.92
1940	892	43,000	Aug. 15, 1940	380	1,202	1.05	14.23	1,307	15.47
1941	922	13,900	July 18, 1941	325	1,010	.878	11.91	885	10.44
1942	952	-	May 22, 1942	274	1,135	.987	13.40	1,257	14.84
1943	972	-	Apr. 20, 1943	372	1,425	1.24	16.83	1,306	15.42
1944	1002	43,500	Mar. 30, 1944	216	1,167	1.01	13.80	1,378	16.30
1945	1032	54,200	Sept. 18, 1945	362	1,445	1.26	17.06	1,466	17.29
1946	1052	-	Jan. 8, 1946	398	1,354	1.18	15.97	1,171	13.82
1947	1082	14,900	Jan. 21, 1947	372	1,091	.949	12.89	1,296	15.30
1948	1112	24,000	Oct. 10, 1947	388	1,489	1.29	17.62	1,500	17.75
1949	1142	14,700	July 12, 1949	542	1,831	1.59	21.62	-	-

* Revised.

† Corrected.

a Maximum peak discharge; maximum discharge during year occurred during backwater from Smith River at 12 p.m. Sept. 30, stage rising.

Note.--Maximum discharges previously published for 1932, 1933, 1934, 1936, and 1937 have been found unreliable on the basis of restudy of the original data and comparisons with records at nearby stations. Those records are not published herein and should not be used.

104. Smith River near Philpott, Va.

Location.--Lat 36°47'35", long 80°01'35", 1 mile upstream from bridge on State Highway 674, 1.2 miles upstream from Town Creek, 1 1/4 miles west of Philpott, Henry County, 2 miles downstream from Philpott Dam, and 9.8 miles (revised) upstream from Reed Creek.

Drainage area.--214 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 784.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Extremes.--1946-50: Maximum discharge, 17,000 cfs June 29, 1949 (gage height, 20.3 ft), from rating curve extended above 9,700 cfs on basis of slope-area determinations at gage heights 18.2 and 20.3 ft; minimum, 21 cfs Aug. 15, 1950 (gage height, 2.40 ft).

Remarks.--Flow regulated since August 1950 by Philpott Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	#172	199	-
1947	246	202	166	386	209	345	306	195	323	158	141	166	237
1948	522	371	199	238	406	468	490	339	284	242	233	171	330
1949	183	345	507	403	392	474	484	631	562	915	759	531	517
1950	353	353	296	269	344	303	244	601	354	223	218	455	334

* Not previously published; partly estimated from record for station at Bassett.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	#0.93	1.04	-
1947	1.33	1.05	0.89	2.08	1.02	1.86	1.60	1.05	1.68	0.85	.76	.87	15.04
1948	2.81	1.93	1.07	1.28	2.05	2.52	2.56	1.82	1.48	1.30	1.26	.89	20.97
1949	.99	1.80	2.73	2.17	1.91	2.55	2.52	3.40	2.93	4.93	4.09	2.77	32.79
1950	1.90	1.84	1.59	1.45	1.68	1.64	1.27	3.24	1.84	1.20	1.18	2.36	21.21

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1946	1082	-	-	-	-	-	-	-	-	-	-	-
1947	1082	-	-	-	-	93	237	1.11	15.04	277	17.58	-
1948	1112	7,600	June 14, 1947	113	350	1.54	20.97	325	20.68	-	-	-
1949	1142	17,000	Oct. 9, 1947	105	517	2.42	32.79	514	32.60	-	-	-
1950	1172	9,980	June 29, 1949	110	334	1.56	21.21	-	-	-	-	-

105. Smith River at Bassett, Va.

Location.--Lat 36°46'15", long 80°00'00", at highway bridge at north edge of North Bassett, 1 mile northwest of Bassett, Henry County, 3 miles (revised) downstream from Town Creek, and 5.6 miles upstream from Reed Creek.

Drainage area.--253 sq mi.

Gage.--Water-stage recorder. Datum of gage is 753.09 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--11 years (1939-50), 371 cfs.

Extremes.--1939-50: Maximum discharge, 26,600 cfs Aug. 14, 1940 (gage height, 18.28 ft); minimum, 58 cfs Jan. 3, 1940; minimum gage height, 1.23 ft Aug. 15, 1950.
Maximum stage known, about 22.9 ft Oct. 19, 1937, from information by local residents (discharge, 38,200 cfs, from rating curve extended above 24,000 cfs on basis of backwater studies and records for station at Martinsville).

Remarks.--Flow regulated since August 1950 by Philpott Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	#287	210	242	266	468	133	-
1940	131	151	157	182	351	201	461	455	411	346	1,262	380	374
1941	221	331	368	293	223	239	377	171	160	681	158	139	281
1942	103	124	270	205	273	335	183	496	492	210	414	425	294
1943	279	214	404	411	570	499	563	470	426	732	256	201	418
1944	167	179	195	259	358	566	342	285	199	183	129	383	270
1945	405	213	268	380	363	308	363	331	215	229	151	970	348
1946	282	323	527	752	599	535	364	553	295	359	202	228	418
1947	278	229	186	439	241	390	342	215	355	200	193	209	273
1948	616	474	257	296	501	561	573	389	325	277	258	193	393
1949	215	422	579	450	451	557	593	764	656	1,071	862	614	604
1950	413	418	352	335	435	374	280	740	450	283	273	563	409

* Not previously published; partly estimated on basis of hydrographic comparison with records for station at Martinsville.

Monthly and yearly runoff, in inches, of Smith River at Bassett, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	1.26	0.96	1.07	1.21	2.13	0.59	-
1940	0.60	0.67	0.72	0.83	1.50	0.92	2.03	2.08	1.81	1.58	5.75	1.67	20.16
1941	1.01	1.46	1.67	1.54	1.92	1.09	1.66	.78	.71	3.10	.72	.61	15.07
1942	.47	.55	1.23	.93	1.12	1.52	.81	2.26	2.16	.96	1.89	1.87	15.77
1943	1.27	.94	1.84	1.87	2.34	2.27	2.49	2.14	1.87	3.33	1.16	.89	22.41
1944	1.76	.79	.89	1.18	1.53	2.58	1.51	1.30	.88	.63	.59	1.68	14.52
1945	1.84	.94	1.22	1.73	1.49	1.41	1.60	1.51	.95	1.04	.69	4.27	18.69
1946	1.28	1.43	2.40	3.42	2.47	2.43	1.61	2.52	1.30	1.64	.92	1.01	22.43
1947	1.27	1.01	.85	2.01	.99	1.78	1.51	.98	1.56	.91	.86	.92	14.67
1948	2.80	2.09	1.18	1.35	2.14	2.56	2.52	1.78	1.43	1.26	1.18	.85	21.14
1949	.98	1.86	2.64	2.05	1.85	2.54	2.61	3.48	2.89	4.88	3.93	2.71	32.42
1950	1.88	1.84	1.60	1.52	1.79	1.71	1.24	3.37	1.99	1.29	1.24	2.49	21.96

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	892	23,300	Aug. 18, 1939	-	-	-	-	-	-
1940	892	26,600	Aug. 14, 1940	106	374	1.48	20.16	415	22.31
1941	922	5,380	July 4, 1941	98	281	1.11	15.07	245	13.18
1942	952	7,730	June 11, 1942	89	294	1.16	15.77	328	17.57
1943	972	19,000	July 10, 1943	165	418	1.65	22.41	368	20.80
1944	1002	4,860	Sept. 29, 1944	82	270	1.07	14.52	299	16.08
1945	1032	19,200	Sept. 18, 1945	110	348	1.38	18.69	369	19.80
1946	1052	6,350	Jan. 7, 1946	140	418	1.65	22.43	381	20.45
1947	1082	6,100	June 14, 1947	122	273	1.08	14.67	328	17.61
1948	1112	8,560	Oct. 9, 1947	154	393	1.55	21.14	362	20.55
1949	1142	21,600	June 29, 1949	143	694	2.39	32.42	602	32.26
1950	1172	16,000	Sept. 10, 1950	153	409	1.62	21.96	-	-

106. Smith River at Martinsville, Va.

Location.--Lat 36°39'45", long 79°52'55", on right bank 800 ft downstream from bridge on U. S. Highways 58 and 220, 2 miles south of Martinsville, Henry County, and 5 miles downstream from Beaver Creek.

Drainage area.--374 sq mi.

Supplemental records available.--Records of chemical analyses during the water years 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 657.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1929-50), 471 cfs.

Extremes.--1929-50: Maximum discharge, 39,000 cfs Oct. 19, 1937 (gage height, 21.50 ft), from rating curve extended above 14,000 cfs on basis of computations of flow over dam at gage heights 16.76 and 21.50 ft; minimum, 5 cfs May 20, 1934 (gage height, 1.20 ft); minimum daily, 19 cfs Oct. 6, 1935.

Remarks.--Flow regulated by powerplant 1,000 ft above station and since August 1950 by Philpott Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	245	-
1930	920	538	479	404	453	594	368	305	233	123	129	164	393
1931	108	155	246	280	160	335	463	328	211	321	431	119	264
1932	107	113	191	451	371	612	484	257	280	153	111	83.1	267
1933	852	940	975	518	495	560	635	597	289	272	264	158	549
1934	146	170	188	200	165	588	484	227	272	231	163	398	269
1935	384	425	567	821	490	760	679	404	339	416	263	562	509
1936	247	303	339	1,352	795	907	953	397	331	252	260	185	526
1937	519	229	477	1,415	609	415	609	470	450	410	845	438	575
1938	1,828	759	530	604	447	404	372	331	576	869	515	287	630
1939	228	381	386	418	1,048	656	415	323	333	380	722	191	453
1940	174	207	228	252	448	309	609	666	492	556	1,778	471	515
1941	336	509	537	439	355	377	566	283	293	965	253	221	429
1942	171	200	372	334	394	469	275	743	768	304	514	558	425
1943	396	326	577	520	733	655	743	577	610	913	324	257	552
1944	216	236	258	355	496	800	484	381	261	227	163	512	365
1945	574	296	369	524	515	412	467	432	283	289	202	1,258	469
1946	380	450	716	956	751	677	460	740	369	448	255	309	542
1947	359	311	283	652	312	945	482	316	442	277	257	287	377
1948	665	825	347	379	655	736	744	490	438	373	343	233	520
1949	286	560	843	625	623	673	679	484	768	1,205	1,016	740	752
1950	533	541	439	406	554	440	336	904	556	337	325	792	511

Monthly and yearly runoff, in inches, of Smith River at Martinsville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929												0.73	
1930	2.84	1.61	1.48	1.24	1.26	1.83	1.10	0.94	0.70	0.38	0.40	.49	14.27
1931	.33	.46	.76	.86	.45	1.03	1.38	1.01	.63	.99	1.33	.35	9.58
1932	.33	.34	.59	1.40	1.07	1.89	1.44	.79	.84	.47	.34	.25	9.75
1933	2.63	2.80	3.01	1.60	1.38	1.79	1.90	1.94	.86	.84	.81	.47	19.93
1934	.45	.51	.58	.62	.46	1.61	1.44	.70	.81	.71	.50	.18	9.77
1935	1.19	1.27	1.75	2.54	1.36	2.34	2.03	1.24	1.01	1.28	.81	1.67	18.49
1936	.76	.90	1.04	4.16	2.30	2.80	2.84	1.22	.99	.78	.80	.55	19.14
1937	1.60	.68	1.48	4.36	1.70	1.28	1.82	1.45	1.34	1.27	2.61	1.30	20.89
1938	5.64	2.26	1.64	1.86	1.25	1.24	1.11	1.02	1.72	2.68	1.59	.86	22.87
1939	.70	1.14	1.19	1.29	2.92	2.02	1.24	1.00	.99	1.18	2.22	.57	16.46
1940	.54	.62	.70	.78	1.29	.95	1.82	2.05	1.47	1.65	5.48	1.41	18.76
1941	1.04	1.52	1.66	1.35	.99	1.16	1.68	.87	.87	2.97	.78	.66	15.55
1942	.33	.60	1.15	1.03	1.09	1.44	.82	2.29	.94	1.58		1.66	15.42
1943	1.22	.97	1.78	1.60	2.04	2.02	2.22	1.78	1.82	2.81	1.00	.77	20.03
1944	.67	.70	.80	1.09	1.43	2.47	1.44	1.18	.78	.70	.50	1.53	13.29
1945	1.76	.68	1.20	1.61	1.44	1.27	1.40	1.34	.84	.89	.62	3.75	17.00
1946	1.18	1.34	2.20	2.95	2.09	2.09	1.37	2.28	1.10	1.38	.79	.92	19.69
1947	1.11	.93	.87	2.01	.87	1.68	1.44	.97	1.32	.85	.79	.86	13.70
1948	2.66	1.86	1.07	1.16	1.89	2.27	2.22	1.51	1.30	1.15	1.06	.75	18.90
1949	.88	1.67	2.59	1.92	1.74	2.08	2.03	2.97	2.35	3.71	3.14	2.21	27.29
1950	1.65	1.62	1.35	1.26	1.49	1.36	1.00	2.79	1.66	1.04	1.00	2.36	18.58

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697	15,200	Oct. 2, 1929	51	393	1.05	14.27	73	9.89
1931	712	6,620	Aug. 22, 1931	57	264	.706	9.58	256	9.29
1932	727	5,660	Mar. 6, 1932	27	267	.714	9.75	465	16.93
1933	742	27,200	Oct. 17, 1932	25	549	1.47	19.93	359	13.03
1934	757	8,520	Sept. 16, 1934	22	269	1.719	9.77	343	12.44
1935	782	8,040	Sept. 6, 1935	62	509	1.36	18.49	468	16.98
1936	802,1032	14,000	Jan. 3, 1936	19	526	1.41	19.14	555	20.20
1937	822,1032	13,600	Oct. 17, 1936	107	575	1.54	20.89	734	26.67
1938	852,1032	39,000	Oct. 19, 1937	158	630	1.68	22.87	451	16.36
1939	872,1032	25,400	Aug. 18, 1939	89	455	1.21	16.46	421	15.29
1940	892	34,200	Aug. 14, 1940	86	515	1.38	18.76	580	21.12
1941	922	10,900	July 8, 1941	117	429	1.15	15.55	375	13.61
1942	952	14,200	June 10, 1942	112	425	1.14	15.42	472	17.11
1943	972	16,600	July 10, 1943	161	552	1.48	20.03	502	18.23
1944	1002	7,600	Sept. 30, 1944	34	365	.976	13.29	411	14.96
1945	1032	21,600	Sept. 18, 1945	108	469	1.25	17.00	493	17.88
1946	1052	9,510	Jan. 7, 1946	168	542	1.45	19.69	492	17.88
1947	1082	7,080	June 14, 1947	80	377	1.01	13.70	452	16.38
1948	1112	14,400	Oct. 9, 1947	152	520	1.39	18.90	508	18.45
1949	1142	15,800	June 29, 1949	144	752	2.01	27.29	737	26.77
1950	1172	19,700	Sept. 10, 1950	194	511	1.37	18.58	-	-

107. Leatherwood Creek near Old Liberty, Va.

Location.--Lat 36°38'10", long 79°47'30", at highway bridge 1.7 miles (revised) above mouth, 3 miles southeast of Old Liberty, Henry County, and 6 miles southeast of Martinsville.

Drainage area.--68 sq mi, approximately.

Gage.--Chain gage. Datum of gage is 627.95 ft above mean sea level, adjustment unknown.

Average discharge.--9 years (1925-34), 497 cfs.

Extremes.--1925-34: Maximum discharge, 2,970 cfs Aug. 11, 1928 (gage height, 14.37 ft, from floodmarks), from rating curve extended above 370 cfs on basis of logarithmic plotting and velocity-area study; minimum, 1 cfs many days in September 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	47.7	84.4	43.2	101	61.7	39.3	55.2	26.1	19.2	41.5	27.2	12.2	46.5
1927	33.0	50.8	99.9	42.9	81.8	52.4	69.1	38.6	40.0	57.9	37.6	13.2	51.3
1928	56.4	36.0	104	62.8	85.9	73.1	83.1	33.1	24.6	25.2	189	99.5	73.5
1929	34.0	36.0	40.3	47.1	96.3	76.4	76.6	50.4	89.6	76.2	33.3	28.7	56.8
1930	63.6	60.4	66.4	49.7	54.3	47.1	45.4	35.5	20.9	7.5	6.2	5.4	38.5
1931	12.0	32.9	48.6	51.2	26.2	71.3	85.0	58.1	41.5	27.1	59.6	9.2	43.7
1932	6.5	11.7	31.4	93.9	53.1	86.6	53.2	31.6	19.3	12.7	6.1	5.2	34.3
1933	65.2	82.9	99.1	47.8	83.3	88.5	61.2	44.6	22.9	25.8	17.4	9.6	53.9
1934	11.2	18.0	22.1	21.5	30.0	132	73.3	45.3	72.9	#25.0	#25.4	#109	#48.8

* Not previously published; estimated from record for Sandy River near Danville.

Monthly and yearly runoff, in inches, of Leatherwood Creek near Old Liberty, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	0.81	1.38	0.73	1.72	0.94	0.67	0.91	0.44	0.31	0.70	0.46	0.20	9.27
1927	.56	.83	1.70	.73	1.25	.89	1.14	.65	.66	.98	.84	.22	10.25
1928	.96	.59	1.76	1.07	1.36	1.24	1.53	.56	.40	.43	3.20	1.63	14.73
1929	.58	.59	.68	.80	1.48	1.29	1.26	.85	1.47	1.29	.56	.47	11.32
1930	1.08	.99	1.13	.84	.83	.80	.75	.60	.34	.13	.10	.09	7.68
1931	.20	.54	.82	.87	.40	1.21	1.40	.98	.68	.46	1.01	.15	8.72
1932	.11	.19	.53	1.59	.84	1.46	.87	.54	.32	.22	.10	.08	6.85
1933	1.11	1.36	1.68	.61	1.27	1.50	1.00	.76	.38	.44	.30	.16	10.77
1934	.19	.30	.37	.86	.46	2.24	1.20	.77	1.19	*.42	*.43	*1.78	*9.71

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	622	-	-	-	-	-	-	-	-
1926	622	1,040	Nov. 13, 1925	7	46.5	0.684	9.27	47.3	9.44
1927	642	481	Dec. 29, 1926	9	31.3	.754	10.25	52.3	10.47
1928	662	2,970	Aug. 11, 1928	9	73.5	1.08	14.73	66.3	13.27
1929	682	2,690	July 14, 1929*	20	56.8	.835	11.32	63.5	12.67
1930	697	562	Oct. 2, 1929	2	38.5	.566	7.68	30.3	6.04
1931	712	*616	May 23, 1931	3	43.7	.643	8.72	40.0	7.99
1932	727	*511	Jan. 9, 1932*	1	34.3	.504	6.85	50.9	10.17
1933	742	*1,090	Oct. 18, 1932	4	53.9	.795	10.77	37.4	7.48
1934	757	-	-	7	*48.8	*.718	*9.71	-	-

* Revised.

* Not previously published.

108, Smith River at Spray, N. C.

Location.--Lat 36°31'45" (revised), long 79°46'08", on right bank, 0.9 mile south of Virginia-North Carolina State line, 1 mile downstream from Stuart Creek, and 1 mile north of Spray, Rockingham County.

Drainage area.--538 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 539.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--11 years (1939-50), 654 cfs (revised).

Extremes.--1939-50: Maximum discharge, 45,600 cfs Aug. 15, 1940 (gage height, 19.28 ft), from rating curve extended above 12,000 cfs on basis of computation of peak flow over dam 1/2 miles downstream; minimum, 63 cfs Jan. 12, 1942 (gage height, 1.38 ft); minimum daily, 66 cfs Sept. 10, 1944.

Remarks.--Diurnal fluctuation and some regulation caused by powerplant at Martinsville, Va.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	240	281	336	371	625	429	817	776	605	647	2,434	559	678
1941	386	702	655	588	449	488	752	325	330	1,202	296	239	535
1942	167	203	417	411	524	638	337	1,005	880	364	678	667	524
1943	503	398	760	688	1,057	961	1,082	758	855	1,129	391	313	738
1944	259	284	324	493	751	1,262	712	576	342	276	202	845	526
1945	815	419	561	753	735	500	550	554	371	357	264	1,779	636
1946	499	616	*1,023	1,321	1,039	821	584	896	461	544	297	330	*702
1947	384	377	350	920	438	732	657	387	489	306	267	358	472
1948	1,182	845	428	500	943	1,052	1,102	664	624	468	432	325	712
1949	398	817	1,237	922	907	876	912	1,273	957	1,477	1,157	906	988
1950	713	693	577	561	702	603	472	1,187	729	488	428	1,059	684

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.51	0.58	0.72	0.80	1.25	0.92	1.69	1.66	1.25	1.39	5.22	1.16	17.15
1941	.83	1.45	1.40	1.26	.87	1.05	1.56	.70	.68	2.58	.64	.50	13.52
1942	.36	.42	.89	.88	1.01	1.37	.70	2.15	1.82	.78	1.45	1.38	13.21
1943	1.08	.83	1.63	1.47	2.05	2.06	2.24	1.62	1.73	2.42	.84	.65	18.62
1944	.56	.59	.69	1.06	1.51	2.70	1.48	1.23	.71	.59	.43	1.75	13.30
1945	1.75	.87	1.20	1.61	1.42	1.07	1.14	1.19	.77	.76	.56	3.69	16.03
1946	1.07	1.28	*2.19	2.83	2.01	1.76	1.21	1.92	.96	1.17	.64	.68	*17.72
1947	.82	.78	.75	1.97	.85	1.57	1.36	.83	1.01	1.66	.57	.74	11.91
1948	2.53	1.75	.92	1.07	1.89	2.25	2.29	1.42	1.29	1.00	.93	.67	18.01
1949	.65	1.69	2.65	1.98	1.76	1.88	1.89	2.73	1.99	3.16	2.48	1.88	24.94
1950	1.53	1.44	1.24	1.20	1.36	1.29	.98	2.54	1.51	1.05	.92	2.20	17.26

* Revised.

Yearly discharge, in cubic feet per second, of Smith River at Spray, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	45,600	Aug. 15, 1940	-	678	1.26	17.15	752	19.02
1941	922	10,700	July 8, 1941	127	535	.994	13.52	455	11.51
1942	952	13,900	May 22, 1942	103	524	.974	13.21	598	15.08
1943	972	15,700	July 10, 1943	231	738	1.37	18.62	671	16.92
1944	1002	10,200	Sept. 30, 1944	66	526	.978	13.30	604	15.28
1945	1032	28,200	Sept. 18, 1945	170	636	1.18	16.03	*664	*16.74
1946	1052, 1433	11,700	Jan. 8, 1946	174	*702	*1.30	*17.72	615	15.53
1947	1082	6,440	June 14, 1947	148	472	.877	11.91	565	14.76
1948	1112	20,400	Oct. 10, 1947	184	732	1.32	18.01	712	18.00
1949	1142	15,100	June 29, 1949	233	988	1.84	24.94	949	23.96
1950	1172	21,400	Sept. 10, 1950	258	684	1.27	17.26	-	-

* Revised.

109. Sandy River near Danville, Va.

Location.--Lat 36°37'10", long 79°30'10", on right bank 200 ft downstream from Hickory Forest Creek, 400 ft upstream from bridge on road between Callahans Store and Mount Cross, 5.5 miles (revised) northwest of western corporate limits of Danville, Pittsylvania County, and 5.8 miles (revised) upstream from mouth.

Drainage area.--113 sq mi.

Supplemental records available.--Records of chemical analyses for the water years 1930-31 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage.--Water-stage recorder. Datum of gage is 460.38 ft above mean sea level, unadjusted. Prior to June 26, 1942, water-stage recorder and October 1936 to June 25, 1942, concrete control at site 1,200 ft downstream at datum 5.57 ft lower.

Average discharge.--21 years (1929-50), 104 cfs.

Extremes.--1929-50: Maximum discharge, 23,000 cfs Aug. 14, 1940 (gage height, 14.8 ft from floodmarks, present site and datum), from rating curve extended above 3,600 cfs by logarithmic plotting on basis of slope-area measurement, unit-hydrograph and flood routing studies, and comparison with flood records for stations in Roanoke River basin; minimum, 3 cfs Sept. 29, 1930 (gage height, 0.40 ft, site and datum then in use); minimum daily, 8 cfs Aug. 29, 31, Sept. 1, 2, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*126	*114	104	96.6	127	87.2	76.3	55.5	67.1	33.2	24.8	14.2	*77.0
1931	23.3	44.2	65.1	76.1	48.9	85.2	117	75.7	69.2	62.6	124	34.4	69.1
1932	22.6	32.2	45.5	127	65.5	184	89.3	66.2	47.1	26.0	17.0	19.5	61.9
1933	139	107	136	99.7	119	113	93.1	96.0	38.8	43.5	61.7	25.4	89.3
1934	23.7	32.4	35.2	31.5	40.2	211	108	88.3	104	53.8	52.3	262	86.8
1935	72.0	69.1	207	131	107	181	136	93.5	76.1	99.4	45.3	70.3	108
1936	44.8	85.3	86.3	409	235	337	219	89.2	73.2	74.8	75.4	44.1	148
1937	85.0	46.3	87.9	384	140	91.7	123	116	61.2	136	262	90.9	136
1938	366	110	92.7	132	97.0	92.2	85.9	77.5	165	182	79.1	64.0	129
1939	56.2	86.2	117	94.1	271	183	107	81.5	70.9	91.7	144	51.2	112
1940	50.9	54.2	68.5	70.8	131	87.4	122	86.7	68.7	50.3	556	70.4	118
1941	49.2	113	86.1	95.7	81.5	86.8	124	61.3	56.1	199	49.9	39.0	86.9
1942	28.0	35.3	51.9	57.2	81.1	104	55.4	203	60.1	42.5	92.7	53.3	72.2
1943	63.2	53.6	117	89.0	164	147	156	79.9	106	111	40.5	37.6	96.6
1944	34.0	43.9	46.8	73.0	139	219	148	160	57.2	57.6	35.8	51.2	126
1945	151	94.6	113	156	164	115	79.8	88.3	53.0	84.1	49.2	213	113
1946	60.7	84.7	148	183	173	99.7	86.8	165	64.5	80.5	37.4	80.8	105
1947	50.2	60.0	61.8	195	70.2	125	144	89.4	74.7	53.2	34.4	100	88.3
1948	163	154	73.0	98.5	199	189	229	104	124	74.2	74.1	54.0	128
1949	68.5	159	201	153	140	111	140	129	106	155	101	86.4	129
1950	111	120	83.8	97.1	110	106	76.3	150	87.7	114	52.6	67.6	98.1

* Not previously published; estimated or partly estimated on basis of record for Leatherwood Creek near Old Liberty.

Monthly and yearly runoff, in inches, of Sandy River near Danville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	\$1.29	\$1.13	1.06	0.99	1.17	0.89	0.75	0.57	0.66	0.34	0.25	0.14	\$9.24
1931	.24	.44	.66	.78	.45	.87	1.16	.77	.68	.64	1.27	.34	8.30
1932	.23	.32	.46	1.29	.63	1.88	.88	.68	.47	.27	.17	.19	7.47
1933	1.42	1.06	1.39	1.02	1.09	1.15	.92	.98	.38	.44	.63	.25	10.72
1934	.24	.32	.36	.32	.37	2.16	1.07	.90	1.03	.55	.53	2.59	10.44
1935	.73	.68	2.11	1.34	.99	1.84	1.34	.95	.75	1.01	.46	.69	12.89
1936	.46	.84	.88	4.17	2.22	3.44	2.16	.91	.72	.76	.77	.44	17.77
1937	.87	.46	.90	3.92	1.29	.94	1.22	1.19	.60	1.38	2.68	.90	16.35
1938	3.74	1.09	.95	1.35	.89	.94	.85	.79	1.63	1.86	.81	.63	15.53
1939	.57	.85	1.20	.96	2.50	1.87	1.06	.65	.70	.94	1.46	.51	13.45
1940	.52	.54	.70	.72	1.25	.89	1.20	.88	.68	.51	5.67	.70	14.26
1941	.50	1.12	.88	.98	.75	.89	1.23	.62	.55	2.03	.51	.38	10.44
1942	.29	.35	.53	.58	.75	1.06	.55	2.08	.59	.43	.95	.53	8.69
1943	.64	.53	1.20	.91	1.51	1.50	1.54	.82	1.05	1.13	.41	.37	11.61
1944	.35	.43	.48	.74	1.33	2.24	1.46	1.64	.56	.59	.37	5.05	15.24
1945	1.54	.93	1.15	1.59	1.51	1.18	.79	.90	.52	.86	.50	2.10	13.57
1946	.62	.84	1.51	1.87	1.59	1.02	.86	1.68	.64	.82	.38	.80	12.63
1947	.51	.59	.63	1.99	.65	1.28	1.42	.91	.74	.54	.35	.99	10.60
1948	1.66	1.52	.74	1.01	1.90	1.92	2.26	1.06	1.23	.76	.76	.53	15.35
1949	.70	1.57	2.05	1.56	1.29	1.13	1.38	1.31	1.05	1.58	1.03	.85	15.50
1950	1.13	1.18	.86	.99	1.01	1.08	.75	1.53	.87	1.16	.54	.67	11.77

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	972	\$1,000	Oct. 2, 1929	10	\$77.0	\$0.681	\$9.24	59.1	7.10
1931	972	4,590	Aug. 22, 1931	10	69.1	.612	8.30	66.3	7.97
1932	972	3,980	Mar. 6, 1932	8	61.9	.548	7.47	85.5	10.32
1933	972	4,500	Oct. 17, 1932	15	89.3	.790	10.72	64.9	7.78
1934	972	7,140	Sept. 7, 1934	16	86.8	.768	10.44	109.	13.04
1935	972	4,980	Dec. 1, 1934	31	108	.956	12.89	96.3	11.55
1936	972	6,330	Jan. 19, 1936	19	148	1.31	17.77	148	17.82
1937	972	4,410	Aug. 25, 1937	41	136	1.20	16.35	165	19.90
1938	972	5,180	Oct. 20, 1937	47	129	1.14	15.53	103	12.37
1939	972	3,000	Aug. 18, 1939	44	112	.991	13.45	105	12.59
1940	972	23,000	Aug. 14, 1940	34	118	1.04	14.26	125	15.00
1941	972	1,650	July 19, 1941	28	86.9	.769	10.44	75.8	9.11
1942	972	2,780	May 15, 1942	23	72.2	.639	8.69	82.2	9.89
1943	972	2,400	Apr. 19, 1943	27	96.6	.855	11.61	87.4	10.50
1944	1002	11,800	Sept. 19, 1944	19	126	1.12	15.24	146	17.60
1945	1032	4,270	Sept. 17, 1945	31	113	1.00	13.57	107	12.92
1946	1052	2,100	Jan. 8, 1946	25	105	.929	12.63	94.9	11.39
1947	1082	3,110	Sept. 24, 1947	19	88.3	.781	10.60	107	12.79
1948	1112	3,180	Apr. 1, 1948	37	128	1.13	15.35	131	15.75
1949	1142	2,330	Nov. 28, 1948	49	129	1.14	15.50	120	14.35
1950	1172	3,400	July 14, 1950	36	98.1	.868	11.77	-	-

* Not previously published.

110. Dan River at Danville, Va.

Location--Lat 36°35'15", long 79°22'55", on left bank 50 ft downstream from Southern Railway bridge in Danville, Pittsylvania County, 1,000 ft upstream from Fall Creek, and at mile 62.7.

Drainage area--2,050 sq mi, approximately.

Supplemental records available--Gage-height records collected in vicinity 1890-1934, at same site 1934-49, and 1949-50 at the Main Street Bridge, 0.25 mile upstream from site, are contained in reports of the U. S. Weather Bureau.

Gage--Water-stage recorder, datum of gage is 379.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--16 years (1934-50), 2,446 cfs.

Extremes--1934-50: Maximum discharge, 75,000 cfs Aug. 15, 1940 (gage height, 20.96 ft); minimum, 40 cfs Dec. 8, 1946 (gage height, 1.19 ft); minimum daily, 338 cfs Sept. 12, 1944.

Remarks--Flow regulated by cotton mills above station.

Monthly and yearly mean discharge, in cubic feet per second, of Dan River at Danville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	-	-	\$1,406	3,515	-
1935	1,759	1,649	3,284	3,522	2,901	4,270	3,521	2,171	1,639	1,899	1,129	1,790	2,461
1936	893	1,522	1,306	8,648	5,642	4,702	4,859	1,695	1,329	1,126	1,109	768	2,791
1937	2,265	986	2,029	7,885	3,286	2,091	2,585	2,512	1,890	1,857	4,165	2,198	2,826
1938	8,519	3,689	3,001	3,505	2,302	2,262	1,975	1,487	2,849	3,914	2,018	1,262	3,078
1939	1,084	2,129	2,333	2,099	5,845	4,102	2,274	1,833	1,718	1,896	3,309	899	2,440
1940	818	901	1,100	1,335	2,424	1,825	2,677	2,000	2,084	1,783	7,505	1,737	2,185
1941	1,199	2,784	1,940	2,224	1,853	1,981	2,603	1,197	1,079	4,021	1,264	1,139	1,942
1942	625	756	1,148	1,184	1,913	2,062	1,129	3,635	3,000	1,185	2,946	2,234	1,816
1943	1,739	1,208	2,346	2,946	3,915	3,792	3,733	2,187	3,059	3,705	1,152	912	2,550
1944	782	917	1,085	1,718	2,943	5,341	3,335	1,903	1,197	1,544	840	3,137	2,056
1945	3,633	1,586	2,155	2,850	3,444	2,239	1,939	1,837	1,172	1,589	1,078	6,258	2,471
1946	1,631	2,025	3,965	4,798	3,909	2,710	1,987	3,233	1,616	1,732	1,059	1,127	2,480
1947	1,146	1,290	1,249	3,868	1,503	2,480	2,703	1,698	1,870	1,330	1,047	2,203	1,867
1948	3,375	2,968	1,553	1,938	3,889	3,901	4,455	2,358	2,044	1,347	1,495	960	2,524
1949	1,394	3,008	4,400	3,599	3,152	2,782	3,511	4,635	2,549	4,595	3,313	3,100	3,344
1950	2,138	2,958	1,791	1,997	2,427	2,559	1,648	4,272	2,572	1,913	1,366	2,311	2,328

* Not previously published; partly estimated on basis of records for station at South Boston.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	-	-	+0.79	1.81	-
1935	0.99	0.90	1.84	1.98	1.48	2.40	1.92	1.22	0.89	1.07	.64	.97	16.30
1936	.50	.83	.73	4.86	2.97	2.64	2.64	.95	.72	.63	.62	.42	18.51
1937	1.27	.54	1.14	4.44	1.67	1.18	1.41	1.42	1.08	1.04	2.34	1.19	18.72
1938	4.80	2.01	1.68	1.97	1.17	1.27	1.07	.84	1.55	2.20	1.13	.69	20.38
1939	.61	1.16	1.31	1.18	2.97	2.31	1.24	1.03	.94	1.07	1.86	.49	16.17
1940	.46	.49	.62	.75	1.27	1.03	1.46	1.13	1.14	1.00	4.22	.94	14.51
1941	.67	1.52	1.09	1.24	.94	1.11	1.42	.67	.59	2.26	.71	.62	12.84
1942	.35	.40	.65	.67	.97	1.16	.61	2.04	1.63	.67	1.66	1.22	12.03
1943	.98	.66	1.31	1.66	1.99	2.13	2.03	1.23	1.66	2.09	.65	.50	16.89
1944	.44	.50	.61	.97	1.55	3.01	1.82	1.07	.65	.87	.47	1.71	13.67
1945	2.04	.86	1.21	1.60	1.75	1.26	1.06	1.03	.64	.89	.61	3.40	16.35
1946	.92	1.10	2.22	2.70	1.99	1.52	1.08	1.82	.88	.97	.60	.61	16.41
1947	.64	.70	.70	2.18	.76	1.40	1.47	.95	1.02	.75	.59	1.19	12.35
1948	1.90	1.62	.97	1.10	2.05	2.13	2.42	1.43	1.11	.76	.84	.52	16.75
1949	.78	1.64	2.48	2.03	1.60	1.57	1.91	2.62	1.38	2.38	1.87	1.68	22.14
1950	1.20	1.61	1.01	1.12	1.23	1.44	.90	2.40	1.40	1.08	.77	1.26	15.42

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	782	-	-	-	-	-	-	-	-
1935	782	28,100	Dec. 1, 1934	614	2,461	1.20	16.30	2,209	14.63
1936	802, 972	52,400	Jan. 20, 1936	436	2,791	1.36	18.51	2,925	19.40
1937	822	31,800	Aug. 26, 1937	746	2,826	1.38	18.72	3,662	24.26
1938	852	54,100	Oct. 21, 1937	810	3,078	1.50	20.38	2,262	14.97
1939	872	30,600	Aug. 20, 1939	608	2,440	1.19	16.17	2,212	14.66
1940	892	75,000	Aug. 15, 1940	602	2,185	1.07	14.51	2,443	16.22
1941	922	19,300	July 18, 1941	494	1,942	.947	12.84	1,657	10.96
1942	952	25,600	May 23, 1942	344	1,816	.886	12.03	2,051	13.58
1943	972	26,300	Apr. 20, 1943	545	2,550	1.24	16.89	2,338	15.43
1944	1002	31,400	Sept. 30, 1944	338	2,056	1.00	13.67	2,443	16.23
1945	1032	59,400	Sept. 19, 1945	560	2,471	1.21	16.35	2,491	16.48
1946	1052	22,200	Jan. 8, 1946	560	2,480	1.21	16.41	2,147	14.21
1947	1082	30,700	Sept. 25, 1947	440	1,867	.911	12.35	2,220	14.70
1948	1112	34,400	Oct. 11, 1947	648	2,524	1.23	16.75	2,600	17.26
1949	1142	23,500	Nov. 29, 1948	635	3,346	1.63	22.14	3,181	21.06
1950	1172	19,300	Sept. 11, 1950	853	2,328	1.14	15.42	-	-

111. Dan River at South Boston, Va.

Location--Lat 36°41'37", long 78°54'09", on left bank 100 ft upstream from Norfolk & Western Railway bridge at South Boston, Halifax County, 1 mile downstream from Lawson Creek, 6 miles upstream from Banister River, and at mile 22.6.

Drainage area--2,730 sq mi, approximately.

Supplemental records available--Records of chemical analyses for water years 1906-7 are published in WSP 236. Records of chemical analyses for water years 1929-30 are published in Virginia Division of Water Resources and Power, Bull. 3.

Gage--Water-stage recorder. Datum of gage is 299.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. August 1900 to May 1907, wire or chain gage at same site at datum 3.06 ft higher. Apr. 18, 1923, to Dec. 8, 1928, chain gage at present site and datum.

Average discharge--34 years (1900-1906, 1922-50), 3,021 cfs.

Extremes--1900-1907, 1922-50: Maximum discharge, 81,000 cfs Aug. 16, 1940 (gage height, 31.8 ft, from floodmark); minimum, 161 cfs Sept. 20, 1932 (gage height, 3.11 ft); minimum daily, 208 cfs Sept. 15, 1932.

Remarks--Water supply for South Boston diverted just above station. Diurnal fluctuation at low flow caused by cotton mills at Danville.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	1,430	-
1901	1,842	1,804	2,785	3,387	2,042	3,504	6,382	7,297	2,292	6,132	9,866	2,902	4,230
1902	2,353	2,032	6,875	4,738	7,105	7,269	4,834	3,876	3,569	1,713	1,197	1,512	†3,907
1903	3,158	1,842	4,186	5,628	9,408	9,545	7,521	3,869	5,456	4,190	‡2,616	‡2,192	‡4,939
1904	1,553	1,811	1,803	1,663	3,235	2,847	1,663	1,999	2,147	1,877	2,898	2,248	‡2,141
1905	783	1,233	1,953	3,004	4,563	2,802	3,992	4,845	1,867	3,927	3,362	1,709	‡2,831
1906	1,463	1,337	5,020	7,156	2,448	3,963	3,325	2,129	2,649	4,250	6,410	2,670	†3,612
1907	3,870	2,270	2,480	3,040	2,530	3,850	3,430	-	-	-	-	-	-
1923	†1,650	†960	†1,650	†3,000	†4,400	†7,500	†3,800	2,290	1,810	1,570	2,380	2,510	‡2,787
1924	1,240	1,660	2,580	4,570	2,880	3,020	3,560	4,290	2,030	3,130	1,790	1,950	2,730
1925	3,510	1,690	2,570	6,160	3,480	2,470	1,760	2,910	1,090	805	957	726	2,340
1926	949	1,420	1,490	3,450	4,560	2,330	2,240	1,190	860	1,730	1,150	787	1,830
1927	833	1,730	3,680	1,820	3,950	2,700	2,680	1,230	1,260	2,200	1,740	1,020	2,060
1928	2,870	1,470	5,170	2,140	3,100	2,770	4,680	2,440	1,620	1,650	6,800	7,120	3,490
1929	2,280	1,600	1,510	1,650	3,720	6,420	4,630	2,640	3,370	3,260	2,590	1,970	2,920
1930	6,090	3,290	3,140	3,330	4,020	2,570	2,160	1,450	1,580	715	675	492	2,440
1931	527	995	1,630	2,080	1,190	2,250	4,500	2,950	1,470	1,940	4,110	1,120	2,070
1932	505	631	1,430	4,570	2,670	5,110	3,240	1,970	2,580	952	662	494	2,050
1933	4,140	5,260	5,970	3,890	4,640	3,710	3,710	3,120	1,590	1,360	1,680	784	3,300
1934	518	708	894	1,010	1,324	6,564	5,598	2,810	3,669	1,952	1,717	4,891	2,637
1935	2,152	1,910	4,465	4,613	3,445	5,849	5,184	2,573	1,804	2,278	1,374	2,421	3,174
1936	1,131	2,150	1,800	11,120	7,111	6,429	6,500	2,140	1,679	1,475	1,484	870	3,648
1937	2,634	1,235	2,869	10,990	4,465	2,790	4,032	3,051	2,567	2,061	4,832	3,289	3,723
1938	9,824	3,596	2,828	3,739	2,760	2,956	2,583	1,843	4,097	6,336	2,167	1,311	3,686
1939	1,141	2,794	2,984	2,449	7,696	5,732	2,854	2,525	1,934	2,740	4,532	1,355	3,186
1940	1,077	1,383	1,694	2,069	4,286	2,463	3,616	2,043	3,190	1,640	9,854	2,273	2,962
1941	1,221	3,440	2,279	2,726	1,965	2,277	3,264	1,261	1,251	4,541	1,283	1,160	2,225
1942	623	784	1,371	1,507	2,327	3,205	1,481	4,743	3,417	1,552	4,303	2,734	2,353
1943	3,127	1,613	3,184	3,875	5,419	4,948	4,534	2,394	3,176	4,340	1,321	1,102	3,242
1944	877	1,163	1,320	2,724	4,327	7,410	5,219	2,479	1,495	1,661	1,950	3,617	2,775
1945	5,627	1,987	2,853	3,836	4,575	2,631	2,303	2,412	1,360	1,836	1,348	8,437	3,253
1946	1,785	2,257	5,667	5,981	5,726	3,262	2,409	4,085	1,818	2,087	1,156	1,212	3,112
1947	1,349	1,680	1,590	5,374	1,742	3,504	3,424	1,925	2,150	1,477	1,320	3,920	2,457
1948	4,166	4,673	2,134	2,627	6,114	5,091	6,010	3,253	2,724	1,869	1,870	1,505	3,470
1949	2,070	4,040	6,030	4,680	4,340	3,740	4,330	6,000	2,670	5,620	3,860	3,340	4,230
1950	2,646	4,382	2,247	2,337	3,006	3,203	2,150	5,052	2,947	2,748	1,602	2,555	2,904

† Corrected.

‡ Not previously published; estimated or partly estimated on basis of records for Roanoke River at Randolph, Va., and Old Gaston, N. C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	-	0.58
1901	0.78	0.74	1.18	1.43	0.78	1.48	2.61	3.08	0.94	2.59	4.16	1.18	20.95
1902	.99	.83	2.90	2.01	2.71	3.07	1.98	1.64	1.46	.72	.50	.62	†19.43
1903	1.34	.75	1.76	2.38	3.59	4.04	3.07	1.64	2.23	1.76	†1.10	†.90	‡24.56
1904	.86	.74	.76	.70	1.27	1.20	.68	.84	.88	.79	1.22	.92	†10.66
1905	.33	.50	.82	1.27	1.74	1.19	1.63	2.04	.76	1.66	1.43	.70	†14.07
1906	.62	.55	2.12	3.02	1.05	1.67	1.36	.90	1.08	1.80	2.71	1.09	†17.97
1907	1.64	.93	1.05	1.28	.97	1.61	1.41	-	-	-	-	-	-
1923	†.70	†.39	†.70	†1.27	†1.68	†3.17	†1.55	.97	.74	.66	1.01	1.03	†13.87
1924	.52	.68	1.09	1.92	1.13	1.28	1.45	1.81	.83	1.33	.76	.80	13.60
1925	1.49	.69	1.08	2.61	1.32	1.04	.72	1.25	.45	.34	.40	.30	11.67

† Corrected.

‡ Not previously published; see footnote to preceding table.

Monthly and yearly runoff, in inches, of Dan River at South Boston, Va.--Continued

Water year	Monthly and yearly runoff, in inches, of Dan River at South Boston, Va.--Continued												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	0.40	0.58	0.63	1.45	1.74	0.98	0.92	0.50	0.36	0.73	0.49	0.32	9.10
1927	.35	.71	1.56	.77	1.51	1.14	1.10	.52	.52	.93	.73	.42	10.26
1928	1.21	.60	2.18	.90	1.23	1.16	1.91	1.03	.66	.70	2.87	2.91	17.36
1929	.96	.65	.64	.70	1.42	2.71	1.90	1.11	1.37	1.37	1.09	.56	14.48
1930	2.57	1.35	1.53	1.41	1.53	1.08	.88	.61	.56	.30	.28	.20	12.10
1931	.22	.41	.69	.88	.45	.94	1.84	1.24	.60	.82	1.74	.46	10.29
1932	.21	.26	.60	1.92	1.05	2.16	1.33	.85	.97	.40	.28	.20	10.21
1933	1.75	2.15	2.52	1.64	1.77	1.57	1.52	1.31	.57	.57	.71	.32	16.40
1934	.22	.29	.38	.43	.50	2.77	2.29	1.19	1.50	.82	.73	2.00	13.12
1935	.91	.78	1.89	1.95	1.31	2.47	2.12	1.09	.74	.96	.58	.99	15.79
1936	.48	.88	.76	4.69	2.80	2.71	2.66	.90	.69	.62	.63	.36	18.18
1937	1.11	.50	1.21	4.65	1.71	1.18	1.65	1.29	.97	.87	2.04	1.34	18.52
1938	4.15	1.47	1.20	1.58	1.05	1.24	1.06	.78	1.67	2.68	.92	.54	18.34
1939	.48	1.14	1.26	1.03	2.94	2.42	1.17	1.07	.79	1.15	1.91	.47	15.83
1940	.46	.57	.72	.87	1.69	1.04	1.47	.86	1.30	.69	4.16	.93	14.76
1941	.52	1.41	.96	1.15	.75	.96	1.34	.53	.51	1.91	.55	.47	11.06
1942	.26	.32	.58	.64	.96	1.35	.60	2.01	1.40	.65	1.82	1.12	11.71
1943	1.33	.66	1.35	1.64	2.06	2.09	1.85	1.01	1.29	1.83	.56	.45	16.12
1944	.37	.48	.56	1.15	1.70	3.12	2.13	1.05	.61	.70	.59	1.56	13.82
1945	2.38	.81	1.21	1.63	1.75	1.11	.94	1.02	.66	.78	.57	3.45	16.21
1946	.75	.92	2.40	2.52	2.19	1.37	.98	1.73	.74	.88	.49	.50	15.47
1947	.57	.69	.67	2.27	.66	1.48	1.40	.81	.88	.62	.56	1.61	12.22
1948	1.76	1.91	.90	1.11	2.42	2.14	2.46	1.37	1.11	.79	.79	.53	17.29
1949	.87	1.65	2.55	1.97	1.66	1.58	1.77	2.54	1.09	2.38	1.64	1.36	21.06
1950	1.12	1.80	.95	.99	1.14	1.35	.88	2.13	1.20	1.16	.68	1.04	14.44

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1900	(a)	-	-	-	-	-	-	-	-
1901	(a)	\$51,000	May 23, 1901	1,200	4,230	1.55	20.95	\$4,623	\$22.97
1902	(a)	\$2,600	Dec. 31, 1901	900	\$3,907	\$1.43	\$19.43	\$3,731	\$18.56
1903	(a)	\$45,000	Mar. 24, 1903	1,250	\$4,939	\$1.81	\$24.56	\$4,598	\$22.87
1904	(a)	\$14,000	Aug. 10, 1904	750	\$2,141	\$1.784	\$10.66	\$2,041	\$10.15
1905	(a)	\$20,000	Feb. 22, 1905	375	\$2,831	\$1.04	\$14.07	\$3,158	\$15.71
1906	(a)	\$32,000	Jan. 5, 1906	937	\$3,612	\$1.32	\$17.97	\$3,678	\$18.30
1907	(a)	-	-	-	-	-	-	-	-
1923	582	-	-	-	\$2,787	\$1.02	\$13.87	\$2,888	\$14.37
1924	582	29,000	Jan. 18, 1924	950	2,730	1.00	13.60	2,920	14.57
1925	602	28,500	Oct. 2, 1924	330	2,340	.857	11.67	2,010	10.02
1926	622	22,300	Jan. 20, 1926	420	1,830	.670	9.10	2,030	10.11
1927	642	\$20,400	Dec. 26, 1926	450	2,060	.755	10.26	2,340	11.63
1928	662	31,800	Aug. 14, 1928	540	3,490	1.28	17.36	3,140	15.62
1929	682	25,000	Mar. 2, 1929	860	2,920	1.07	14.48	3,520	17.48
1930	697, 972	40,000	Oct. 4, 1929	262	2,440	.893	12.10	1,650	8.17
1931	712	20,400	Aug. 24, 1931	322	2,070	.758	10.29	2,020	10.04
1932	727	28,700	Mar. 8, 1932	208	2,050	.751	10.21	3,120	15.56
1933	742	33,500	Oct. 20, 1932	327	3,300	1.21	16.40	2,190	10.87
1934	757	26,500	Mar. 6, 1934	324	2,637	.966	13.12	3,178	15.81
1935	782	26,100	Dec. 2, 1934	740	3,174	1.16	15.79	2,881	14.33
1936	802, 972	51,000	Jan. 21, 1936	600	3,648	1.34	18.18	3,790	18.89
1937	822, 972	32,000	Jan. 4 or 5, 1937	1,000	3,723	1.36	18.52	4,524	22.52
1938	852, 972	48,600	Oct. 22, 1937	824	3,686	1.35	18.54	2,896	14.40
1939	872, 972	27,500	Aug. 21, 1939	718	3,186	1.17	15.83	2,955	14.70
1940	892, 972	81,000	Aug. 16, 1940	810	2,962	1.08	14.76	3,193	15.90
1941	922	19,400	Nov. 16, 1940	538	2,225	.815	11.06	1,879	9.33
1942	(b)	25,700	May 24, 1942	491	2,355	.863	11.71	2,790	13.89
1943	972	26,900	Apr. 21, 1943	700	3,242	1.19	16.12	2,856	14.19
1944	1002	26,000	Sept. 20, 1944	442	2,775	1.02	13.92	3,375	16.81
1945	1032	68,000	Sept. 20, 1945	754	3,253	1.19	16.21	3,188	15.88
1946	1052	22,200	Jan. 9, 1946	645	3,112	1.14	15.47	2,681	13.33
1947	1082	32,000	Sept. 26, 1947	732	2,457	.900	12.22	2,988	14.86
1948	1112	29,000	Oct. 12, 1947	850	3,470	1.27	17.29	3,570	17.79
1949	1142	26,800	Nov. 30, Dec. 1	1,260	4,230	1.55	21.06	3,991	19.86
1950	1172	23,400	Nov. 2, 1949	1,180	2,904	1.06	14.44	-	-

* Revised.

† Corrected.

‡ Not previously published.

a Virginia Geological Survey, Bull. 31.

b WSP 952, 972, 1002.

112. Georges Creek near Gretna, Va.

Location.--Lat 36°56'10", long 79°18'50", at bridge on State Highway 40, 3 miles southeast of Gretna, Pittsylvania County.

Drainage area.--9.2 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 631 ft (by barometer).

Extremes.--1949-50: Maximum discharge, 670 cfs Sept. 13, 1950 (gage height, 6.48 ft), from rating curve extended above 25 cfs; minimum, 3.3 cfs Aug. 21, Sept. 5, 1950; minimum gage height, 1.49 ft Oct. 1, 2, 1949.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	#8.95	-
1950	9.59	10.5	8.26	9.24	11.0	9.52	7.40	9.53	8.57	8.50	4.95	13.2	9.15

* Not previously published; estimated on the basis of records for station on Sandy River near Danville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	#1.09	-
1950	1.20	1.27	1.04	1.15	1.25	1.19	0.90	1.20	1.04	1.07	0.62	1.58	13.51

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1949	1172	-	-	-	-	-	-	-	-	-	-	-
1950	1172	670	Sept. 13, 1950	3.7	9.15	0.995	13.51	-	-	-	-	-

113. Banister River at Halifax, Va.

Location (revised).--Lat 36°46'35", long 78°54'58", on left bank 10 ft downstream from bridge on U. S. Highway 360, 1,700 ft downstream from Terrible Creek, 1 mile northeast of Halifax, Halifax County, and 10 miles upstream from mouth.

Drainage area.--552 sq mi.

Gage.--Water-stage recorder. Datum of gage is 318.54 ft above mean sea level (levels by Corps of Engineers). Sept. 28, 1904, to Dec. 31, 1905, chain gage at site 400 ft upstream at different datum. Dec. 9, 1928, to Sept. 20, 1950, water-stage recorder at site 400 ft upstream at present datum.

Average discharge.--23 years (1904-5, 1928-50), 548 cfs.

Extremes.--1904-5, 1928-50: Maximum discharge, 50,000 cfs Sept. 20, 1944 (gage height, 40.8 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow and velocity-area study; minimum, 6 cfs on many days in August and September 1932; minimum daily, 6 cfs Aug. 30, 1932.

Remarks.--Low and medium flow regulated by powerplant half a mile above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	#141	#193	#305	#590	#927	#575	#693	#557	#322	#363	#316	#192	#430
1906	#182	#179	#891	-	-	-	-	-	-	-	-	-	-
1929	#370	#260	#250	307	539	875	973	661	304	285	401	167	#449
1930	1,182	495	454	551	642	416	334	245	247	100	59.6	90.5	399
1931	34.9	171	225	281	203	403	714	362	451	226	521	98.9	308
1932	60.8	86.1	208	615	455	1,067	487	358	199	121	79.5	131	322
1933	675	727	924	668	726	565	833	787	356	328	231	102	576
1934	79.4	126	171	178	185	1,268	819	337	291	180	184	970	399
1935	476	426	992	824	735	1,074	1,030	433	322	397	227	400	611
1936	187	544	454	1,993	1,266	1,452	1,062	312	407	309	274	129	696
1937	275	195	473	2,125	794	511	966	563	463	549	1,076	648	721
1938	1,691	573	444	697	551	587	424	373	1,362	1,065	372	228	697
1939	226	358	538	495	1,172	998	486	426	325	601	753	194	545
1940	220	285	315	412	1,000	512	581	329	523	305	2,898	480	655
1941	242	748	472	603	449	459	701	229	276	554	254	199	432
1942	101	140	225	273	384	517	250	819	479	441	1,406	314	448
1943	564	354	655	595	1,120	897	693	389	519	418	197	138	542
1944	132	242	211	424	759	1,375	1,025	499	303	344	259	5,717	768
1945	1,063	448	633	888	870	521	467	543	229	453	270	1,245	634
1946	328	437	1,038	1,260	1,093	622	446	706	495	602	245	294	629
1947	235	310	301	1,033	344	763	753	346	246	251	214	555	446
1948	345	1,058	456	594	1,231	981	1,212	680	635	346	313	268	869
1949	524	1,000	1,211	876	672	828	745	785	409	590	397	419	704
1950	566	895	438	465	668	600	397	740	519	364	213	357	517

* Not previously published; figures for 1905-6 computed on basis of gage-height record and discharge measurements, and those for 1929 estimated on basis of records for Dam River at South Boston.

Monthly and yearly runoff, in inches, of Banister River at Halifax, Va.

Water year	Monthly and yearly runoff, in inches, of Banister River at Halifax, Va.												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1905	*0.29	*0.39	*0.64	*1.23	*1.75	*1.20	*1.40	*1.16	*0.65	*0.80	*0.66	*0.39	*10.56
1906	*.38	*.36	*1.86	-	-	-	-	-	-	-	-	-	-
1929	*.77	*.53	*.52	.64	1.02	1.83	1.96	1.38	.61	.59	.84	.34	*11.03
1930	2.47	1.00	.95	1.11	1.21	.87	.68	.51	.50	.21	.12	.18	9.81
1931	.07	.35	.47	.59	.38	.84	1.44	.76	.91	.47	1.09	.20	7.57
1932	.15	.17	.43	1.28	.89	2.22	1.98	.75	.40	.25	.17	.25	7.35
1933	1.41	1.47	1.92	1.44	1.36	1.18	1.68	1.65	.72	.69	.48	.21	14.23
1934	.17	.26	.36	.37	.38	2.65	1.65	.70	.59	.38	.38	1.96	9.82
1935	.99	.88	2.08	1.72	1.38	2.25	2.09	.90	.65	.63	.47	.81	15.03
1936	.39	1.10	.95	4.16	2.47	3.03	2.14	.65	.82	.65	.57	.26	17.19
1937	.57	.39	.99	4.44	1.50	1.07	1.95	1.18	.94	1.15	2.25	1.30	17.73
1938	3.53	1.16	.93	1.45	1.00	1.22	.86	.78	2.76	2.22	.76	.46	17.15
1939	.47	.72	1.12	1.03	2.21	2.09	.98	.89	.66	1.26	1.57	.39	13.39
1940	.46	.58	.66	.86	1.95	1.07	1.17	.69	1.06	.64	6.05	.97	16.16
1941	.50	1.52	.99	1.26	.85	.96	1.42	.48	.56	1.15	.53	.40	10.62
1942	.21	.28	.47	.57	.72	1.08	.51	1.71	.97	.92	2.94	.63	11.01
1943	1.18	.72	1.37	1.24	2.11	1.87	1.41	.81	1.05	.87	.41	.28	13.32
1944	.28	.49	.44	.89	1.49	2.87	2.08	1.04	.61	.72	.54	7.51	18.96
1945	2.22	.91	1.33	1.86	1.64	1.09	.94	1.13	.46	.95	.56	2.52	15.61
1946	.68	.88	2.17	2.63	2.06	1.30	.90	1.48	1.00	1.26	.51	.59	15.46
1947	.49	.63	.63	2.16	.65	1.59	1.52	.72	.50	.52	.45	1.13	10.99
1948	.72	2.10	.95	1.24	2.40	2.05	2.46	1.42	1.24	.72	.65	.54	16.49
1949	1.09	2.02	2.52	1.85	1.64	1.51	1.51	1.64	.83	1.23	.83	.85	17.30
1950	1.19	1.83	.91	.97	1.26	1.26	.80	1.54	1.05	.76	.44	.72	12.71

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1905	-	*3,560	Feb. 22, 1905	*100	*430	*0.779	*10.56	*482	*11.84
1906	-	*4,870	Dec. 22, 1905	-	-	-	-	-	-
1929	682, 892	6,430	Apr. 17, 1929	59	*449	*.813	*11.03	554	13.58
1930	697, 892	10,100	Oct. 3, 1929	19	399	.723	9.81	255	6.28
1931	712	3,530	June 24, 1931	16	308	.558	7.57	302	7.41
1932	727, 892	8,310	Mar. 7, 1932	6	322	.583	7.93	488	12.00
1933	742, 892	7,270	Oct. 18, 1932	14	578	1.05	14.23	414	10.22
1934	757, 892	6,570	Mar. 5, 1934	15	399	.723	9.82	527	12.96
1935	782, 892	7,270	Dec. 2, 1934	26	611	1.11	15.03	550	13.54
1936	802	10,200	Mar. 18, 1936	18	698	1.26	17.19	678	16.70
1937	822	9,110	Apr. 26, 1937	37	721	1.31	17.73	870	21.40
1938	852	19,000	June 22, 1938	105	697	1.26	17.15	563	13.84
1939	872	6,360	Aug. 20, 1939	32	545	.987	13.39	519	12.78
1940	892, 972	34,000	Aug. 16, 1940	60	655	1.19	16.16	708	17.47
1941	922	*3,690	Nov. 16, 1940	32	432	.763	10.62	349	8.57
1942	952	7,750	Aug. 10, 1942	20	448	.812	11.01	541	13.32
1943	972	4,750	Dec. 31, 1942	40	542	.982	13.32	458	11.26
1944	1002	50,000	Sept. 20, 1944	42	768	1.39	18.96	900	22.21
1945	1032	11,100	Sept. 19, 1945	160	634	1.15	15.61	606	14.68
1946	1052	7,800	Jan. 8, 1946	86	629	1.14	15.46	546	13.46
1947	1082	6,420	Sept. 25, 1947	45	446	.808	10.99	529	13.01
1948	1112	6,100	Feb. 5, Apr. 2	34	669	1.21	16.49	745	18.35
1949	1142	7,530	Nov. 29, 1948	151	704	1.28	17.30	633	15.58
1950	1172	7,260	Oct. 31, 1949	84	517	.937	12.71	-	-

* Not previously published.

a Maximum during period October to December.

114. Hyco River near Denniston, Va.

Location.--Lat 36°35'16", long 78°53'56", at bridge on U. S. Highway 501, 0.8 mile upstream from Mayo Creek, 2 miles east of Denniston, Halifax County, and 8 miles south of South Boston.

Drainage area.--289 sq mi (revised).

Gage.--Chain gage. Datum of gage is 315.24 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--6 years (1928-34), 229 cfs.

Extremes.--1928-34: Maximum discharge (revised), 5,000 cfs Oct. 3, 1929 (gage height, 21.38 ft, from graph based on gage readings), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum, 0.004 cfs Sept. 14, 1932 (gage height, 3.58 ft). Floods in August 1928 and September 1945 reached stages of 26.4 and 25.6 ft, respectively, from levels to floodmarks.

Monthly and yearly mean discharge, in cubic feet per second, of Hyco River near Denniston, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*66	*38	*36	*41	*80	*80	*470	*195	*190	*214	141	77.7	*250
1930	*597	235	330	320	472	119	146	120	47.8	226	18.3	3.41	*219
1931	3.72	37.7	76.3	164	82.7	207	633	517	60.2	74.1	546	24.6	203
1932	6.98	8.73	41.0	481	327	526	192	92.4	176	14.5	7.98	3.38	156
1933	193	277	730	438	404	168	346	321	118	16.0	47.9	65.1	260
1934	3.67	16.4	28.6	34.2	59.6	*706	*800	*295	*360	*155	*97	*890	*286

* Revised.

† Not previously published; estimated or partly estimated on basis of Flat River at Bahama, N. C., and adjacent stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.26	*0.15	*0.14	*0.16	*2.45	*3.50	*1.82	*0.78	*0.73	*0.85	0.56	0.30	*11.70
1930	*2.39	.91	1.31	1.28	1.70	.48	.56	.48	.18	.90	.07	.01	*10.27
1931	.02	.14	.30	.65	.30	.83	2.44	2.06	.23	.30	2.18	.09	9.54
1932	.03	.03	.16	1.91	1.22	2.10	.74	.37	.68	.06	.03	.01	7.34
1933	.77	1.07	2.92	1.75	1.46	.67	1.34	1.28	.46	.06	.19	.25	12.22
1934	.02	.06	.11	.14	.21	*2.81	*3.09	*1.18	*1.40	*.62	*.39	*3.44	*13.47

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1929	682	-	-	-	\$250	*0.885	*11.70	*336	*15.76	
1930	697,1383	*5,000	Oct. 3, 1929*	0.8	*219	*.758	*10.27	130	6.12	
1931	712	2,660	Apr. 7, 1931	.3	203	.702	9.54	198	9.30	
1932	727	3,190	Mar. 8, 1932	.1	156	.540	7.34	252	11.88	
1933	742	2,770	Dec. 28, 1932	2.7	260	.900	12.22	163	7.65	
1934	757	a3,420	Mar. 2, 1934	1.2	*286	*.990	*13.47	-	-	

* Revised.

† Not previously published.

a Maximum during period Oct. 1, 1933, to Mar. 14, 1934.

115. Hyco River near Omega, Va.

Location.--Lat 36°38'09", long 78°48'20", on right bank 100 ft above highway bridge, 1.5 miles upstream from Hilly Creek, 2.5 miles south of Omega, Halifax County, and 7 miles upstream from mouth.

Drainage area.--413 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 294.45 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years (1934-50), 403 cfs.

Extremes.--1934-50: Maximum discharge, 11,900 cfs Sept. 20, 1945 (gage height, 28.4 ft), from rating curve extended above 6,800 cfs by logarithmic plotting; minimum, 1.4 cfs Oct. 25, 26, 1941 (gage height, 1.47 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	*1,029	876	378	530	131	288	1,826	-
1935	155	453	843	802	425	965	1,324	223	48.7	102	27.5	153	460
1936	39.3	337	287	2,444	1,334	1,456	1,214	77.5	105	73.5	86.9	27.6	622
1937	96.6	49.8	278	2,192	644	277	1,078	154	206	95.7	423	439	494
1938	411	193	131	556	205	350	281	146	1,246	1,474	201	96.9	443
1939	52.1	390	415	361	925	916	446	607	339	784	970	168	530
1940	75.1	148	200	298	1,114	391	298	138	166	41.7	1,095	60.5	333
1941	23.2	543	273	448	194	414	420	61.2	102	339	63.8	46.0	244
1942	2.77	7.41	40.8	42.0	200	402	93.7	447	120	102	381	178	169
1943	639	264	574	582	972	739	442	109	157	187	13.4	65.2	417
1944	14.8	56.0	75.2	532	802	1,191	839	196	74.1	89.2	125	667	386
1945	1,095	321	520	537	1,036	338	167	195	75.9	224	291	1,716	539
1946	99.4	196	941	875	1,117	279	177	359	68.4	220	26.4	21.1	362
1947	28.8	78.7	70.3	700	118	539	336	139	40.8	76.6	35.0	570	228
1948	342	1,128	253	392	1,484	685	537	264	427	163	102	24.2	477
1949	222	594	991	688	880	529	482	407	144	116	407	178	468
1950	131	489	189	275	293	394	140	459	362	402	69.9	175	282

* Not previously published; partly estimated on basis of records near Denniston, Va., and Flat River at Bahama, N. C.

Monthly and yearly runoff, in inches, of Hyco River near Omega, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	#2.87	2.36	1.05	1.43	0.37	0.80	4.93	-
1935	0.43	1.23	2.35	2.24	1.07	2.70	3.58	.62	.13	.28	.08	.41	15.12
1936	.11	.91	.80	6.82	3.48	4.07	3.28	.22	.28	.21	.24	.07	20.49
1937	.27	.14	.78	6.12	1.62	.77	2.91	.43	.56	.27	1.18	1.18	16.23
1938	1.15	.52	.37	1.56	.52	.98	.76	.41	3.37	4.12	.56	.26	14.58
1939	.15	1.05	1.15	1.01	2.33	2.56	1.20	1.70	.92	2.19	2.71	.45	17.42
1940	.21	1.40	.56	.83	2.91	1.09	.81	.59	.45	.12	3.06	.16	10.99
1941	.06	1.46	.76	1.24	.49	1.15	1.14	.17	.28	.95	.18	.12	8.00
1942	.008	.02	.11	.12	.50	1.12	.25	1.24	.32	.28	1.06	.48	5.51
1943	1.79	.71	1.60	2.44	2.45	2.06	1.19	.30	.42	.52	.04	.18	13.70
1944	.04	.15	.21	1.49	2.09	3.32	2.26	.55	.20	.25	.35	1.81	12.72
1945	3.06	.87	1.45	1.50	2.61	.94	.45	.54	.21	.62	.81	4.63	17.69
1946	.28	.53	2.63	2.44	2.81	.78	.48	1.00	.19	.61	.07	.06	11.88
1947	.08	.21	.20	1.95	.30	1.51	.91	.39	.11	.21	.10	1.54	7.51
1948	.95	3.05	.71	1.07	3.87	1.91	1.45	.74	1.15	.46	.28	.07	15.71
1949	.62	1.61	2.77	1.92	2.22	1.48	1.30	1.14	.39	.32	1.14	.48	15.39
1950	.37	1.32	.53	.77	.74	1.10	.58	1.28	.98	1.12	.19	.47	9.25

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	782, 972	11,000	Sept. 8, 1934	-	-	-	-	-	-
1935	782, 972	6,040	Dec. 1, 1934	4	460	1.11	15.12	393	12.93
1936	802, 972	7,230	Mar. 19, 1936	6	622	1.51	20.49	602	19.86
1937	822, 972	#8,800	Jan. 5, 1937	25	494	1.20	16.23	520	17.08
1938	852, 972	7,440	July 27, 1938	41	443	1.07	14.58	453	14.89
1939	872	4,030	Aug. 31, 1939	32	530	1.28	17.42	494	16.24
1940	892, 972	9,280	Aug. 17, 1940	12	333	.806	10.99	367	12.10
1941	922	3,140	Nov. 17, 1940	4.4	244	.591	8.00	178	5.86
1942	952	2,890	May 3, 1942	1.4	169	.409	5.51	289	9.47
1943	972	3,470	Feb. 8, 1943	3.0	417	1.01	13.70	305	10.00
1944	1002	84,140	Sept. 20, 1944a	4.5	386	.955	12.72	537	17.70
1945	1032	11,900	Sept. 20, 1945	13	539	1.31	17.69	480	15.75
1946	1052	3,660	Feb. 13, 1946	7.3	362	.877	11.88	272	8.93
1947	1082	4,190	Sept. 27, 1947	4.0	228	.552	7.51	357	11.73
1948	1112	6,810	Feb. 15, 1948	7.2	477	1.15	15.71	485	16.00
1949	1142	3,790	Dec. 1, 1948	30	468	1.13	15.39	363	12.61
1950	1172	2,780	Nov. 3, 1949	20	282	.683	9.25	261	7.61

* Not previously published.

a Maximum peak discharge; maximum discharge during the year, 5,690 cfs at 12 p.m. Sept. 30, 1944, stage rising.

116. Roanoke River at Clarksville, Va.

Location.--Lat 36°37'40", long 78°33'04", on right bank 6 ft downstream from highway bridge in Clarksville, Mecklenburg County, 500 ft upstream from Dan River. Records include flow of Dan River.

Drainage area.--7,320 sq mi, approximately, includes that of Dan River.

Supplemental records available.--October 1895 to February 1898, gage heights and discharge measurements for both Roanoke and Dan Rivers at Southern Railway bridge, 2,000 ft above confluence. Gage-height records collected in vicinity since 1890 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 258.23 ft above mean sea level, datum of 1929.

Average discharge.--16 years (1934-50), 8,485 cfs.

Extremes.--1934-50: Maximum discharge, 280,000 cfs Aug. 17, 1940 (gage height, 26.66 ft); minimum, 1,100 cfs Sept. 11, 1944 (gage height, 1.02 ft).

Remarks.--Small diurnal fluctuation at low flow caused by cotton mills at Danville and powerplant on Banister River. Slight regulation by Philipott Reservoir on Smith River since August 1950.

ROANOKE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Clarksville, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	\$5,400	\$5,000	\$16,000	13,260	9,681	15,060	17,290	6,648	5,107	5,539	3,320	7,246	\$9,129
1936	2,661	6,056	5,783	32,560	20,330	21,010	16,980	5,437	4,864	3,671	4,224	1,976	10,460
1937	5,888	2,814	7,057	30,750	11,880	7,285	13,350	7,555	5,976	5,560	12,860	10,140	10,100
1938	22,540	8,913	6,729	10,040	6,898	8,516	6,684	4,905	14,050	17,500	7,042	3,361	9,805
1939	2,833	6,309	7,586	6,772	17,920	14,710	7,617	6,758	4,835	8,105	12,100	3,130	8,174
1940	2,912	3,789	4,012	5,086	12,490	6,452	10,050	5,827	9,143	4,708	35,610	6,172	8,850
1941	3,325	8,163	6,224	7,949	5,323	6,422	8,896	3,313	3,812	10,420	3,053	2,523	5,787
1942	1,468	1,941	3,328	3,839	5,504	7,169	3,538	11,040	7,608	4,226	12,610	5,543	5,663
1943	8,615	4,840	8,660	10,470	15,600	12,940	11,290	6,771	7,365	8,659	3,032	2,428	8,350
1944	2,030	2,899	3,079	6,412	10,730	19,290	12,710	7,169	3,656	3,713	2,537	16,410	7,521
1945	13,890	5,307	8,027	10,800	12,280	7,878	6,862	6,726	3,420	5,372	3,572	19,190	8,580
1946	4,285	5,492	14,400	16,000	15,580	8,705	6,757	11,930	5,256	6,391	3,267	3,148	8,412
1947	3,290	3,974	3,980	14,210	4,862	10,120	9,565	5,263	4,974	3,821	3,677	8,043	6,325
1948	8,201	13,490	5,478	7,128	17,890	13,710	16,220	8,026	7,877	4,451	6,362	3,142	9,279
1949	5,760	10,430	19,870	14,270	12,970	11,110	11,700	14,230	6,498	15,230	8,511	7,622	11,560
1950	6,104	10,870	5,907	6,234	9,123	8,194	5,391	11,740	9,489	7,990	4,250	8,070	7,764

* Not previously published; estimated on basis of records for stations near Clover and at Roanoke Rapids.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	\$0.85	\$0.76	\$2.52	2.09	1.38	2.38	2.63	1.05	0.78	0.87	0.52	1.10	\$16.93
1936	.42	.92	.91	5.13	3.00	3.31	2.59	.84	.78	.58	.67	.30	19.41
1937	.93	.43	1.11	4.84	1.69	1.15	2.03	1.19	.91	.88	2.03	1.55	18.74
1938	3.55	1.36	1.06	1.58	.98	1.34	1.02	.77	2.14	2.76	1.11	.51	18.18
1939	.45	.96	1.20	1.07	2.55	2.32	1.16	1.06	.74	1.28	1.90	.48	15.17
1940	.46	.58	.63	.80	1.84	1.02	1.53	.92	1.40	.74	.56	.94	16.46
1941	.52	1.25	.98	1.26	.76	1.01	1.36	.52	.58	1.64	.48	.38	10.74
1942	.23	.30	.52	.60	.78	1.13	.54	1.74	1.16	.67	1.98	.84	10.49
1943	1.36	.74	1.36	1.65	2.22	2.04	1.72	1.07	1.13	1.36	.48	.37	15.50
1944	.32	.44	.49	1.01	1.58	3.04	1.94	1.13	.56	.58	4.40	2.50	13.99
1945	2.19	.81	1.27	1.71	1.75	1.24	1.05	1.06	.52	.85	.56	2.92	15.93
1946	.67	.84	2.27	2.52	2.22	1.37	1.03	1.88	.80	1.01	.51	.48	15.60
1947	.52	.61	.63	2.24	.69	1.59	1.46	.83	.76	.60	.58	1.23	11.74
1948	1.29	2.05	.86	1.12	2.63	2.16	2.48	1.27	1.20	.71	1.00	.48	17.25
1949	.91	1.58	3.12	2.25	1.84	1.80	1.78	2.24	.99	2.40	1.34	1.16	21.41
1950	.96	1.65	.93	.98	1.30	1.29	.82	1.84	1.45	1.26	.67	1.24	14.39

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	782	\$88,000	Dec. 3, 1934	1,960	\$9,129	\$1.25	\$16.93	8,116	15.05
1936	852	114,000	Jan. 21, 1936	1,540	10,460	1.43	19.41	10,580	19.63
1937	852	87,900	Jan. 5, 1937	2,260	10,100	1.38	18.74	11,980	22.24
1938	852	108,000	Oct. 22, 1937	2,600	9,805	1.34	18.18	7,990	14.82
1939	872	71,400	Aug. 21, 1939	2,230	8,174	1.12	15.17	7,669	14.23
1940	892, 922	280,000	Aug. 17, 1940	2,200	8,850	1.21	16.46	9,431	17.54
1941	922	39,600	Apr. 6, 1941	1,320	5,787	.791	10.74	4,873	9.04
1942	952	55,400	May 24, 1942	1,320	5,663	.774	10.43	6,961	12.90
1943	972	56,300	Apr. 22, 1943	1,740	8,350	1.14	15.50	7,157	13.29
1944	1002	138,000	Sept. 21, 1944	1,120	7,521	1.03	13.99	9,143	17.01
1945	1032	127,000	Sept. 20, 1945	1,650	8,580	1.17	15.93	8,320	15.44
1946	1052	55,400	Jan. 10, 1946	1,990	8,412	1.15	15.60	7,317	13.58
1947	1082	57,200	Sept. 26, 1947	1,900	6,323	.864	11.74	7,650	14.18
1948	1112	74,500	Feb. 16, 1948	2,260	9,279	1.27	17.25	10,040	18.66
1949	1142	82,400	Dec. 6, 1948	3,290	11,560	1.58	21.41	10,440	19.34
1950	1172	51,800	Nov. 2, 1949	3,040	7,764	1.06	14.39	-	-

* Not previously published.

117. Roanoke River at Buggs Island, Va.

Location.--Lat 36°36'29", long 78°17'33", on left bank 1.9 miles upstream from Allens Creek, 4.8 miles upstream from bridge on U. S. Highway 1, 6.7 miles southeast of Boydton, Mecklenburg County, and at mile 177.9.

Drainage area.--7,780 sq mi, approximately.

Supplemental records available.--November 1921 to August 1923, gage heights only at site 0.8 mile upstream.

Gage.--Water-stage recorder. Datum of gage is 197.10 ft above mean sea level (Corps of Engineers benchmark). November 1921 to August 1923, water-stage recorder at site 0.8 mile upstream at different datum.

Extremes.--1947-50: Maximum discharge, 76,000 cfs Dec. 7, 1948 (gage height, 14.97 ft); minimum, 1,690 cfs Sept. 9, 1947 (gage height, 0.74 ft).

Flood of August 1940 reached a stage of 33.9 ft, from levels by Corps of Engineers.

Remarks.--Slight regulation by Philpott Reservoir on Smith River since August 1950, and by John H. Kerr Reservoir since September 1950.

ROANOKE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Buggs Island, Va.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	-	-	-	10,060	5,518	5,086	3,861	3,656	7,522	-
1948	8,540	14,550	5,997	7,826	18,930	14,480	16,640	9,558	8,530	4,613	6,460	3,133	9,864
1949	6,095	10,610	20,080	14,960	13,910	11,790	12,240	14,750	6,519	15,500	8,619	7,734	11,900
1950	5,713	11,210	5,979	6,354	9,713	8,934	5,949	11,770	9,534	8,152	4,352	8,173	7,964

‡ Not previously published; partly estimated on basis of records for station at Clarksville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	-	-	-	1.44	0.82	0.73	0.57	0.54	1.08	-
1948	1.23	2.09	0.89	1.16	2.62	2.14	2.39	1.42	1.23	.68	.96	.45	17.26
1949	.90	1.52	2.97	2.21	1.86	1.75	1.75	2.19	.94	2.27	1.28	1.11	20.75
1950	.85	1.61	.69	.94	1.30	1.33	.85	1.74	1.37	1.21	.64	1.17	13.90

‡ Not previously published; see Footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff inches	Mean	Runoff in inches
		Discharge	Date						
1947	1082	50,400	Sept. 26, 1947	-	-	-	-	-	-
1948	1112	72,800	Feb. 15, 1948	2,350	9,864	1.27	17.26	10,540	18.44
1949	1142	76,000	Dec. 7, 1948	3,310	11,900	1.53	20.75	10,720	16.71
1950	1172	52,600	Nov. 2, 1949	3,110	7,964	1.02	13.90	-	-

118. Roanoke River at Roanoke Rapids, N. C. 1/

Location (revised).--Lat 36°28', long 77°38', on right bank $\frac{1}{2}$ miles downstream from bridge on State Highway 47 at Roanoke Rapids, Halifax County, $\frac{2}{3}$ miles upstream from Chocoyt Creek, and at mile 133.6.

Drainage area.--8,410 sq mi, approximately. At site used 1911-30, 8,350 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in reports of Geological Survey. Gage-height records collected at Weldon since 1890 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder at present site and datum since Feb. 18, 1930. Datum of gage is 43.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 21, 1921, and Aug. 24 to Dec. 31, 1932, chain gage and Nov. 21, 1921, to Apr. 7, 1932, water-stage recorder at Old Gaston 9 miles upstream at different datum.

Average discharge.--38 years (1912-50), 8,423 cfs.

Extremes.--1911-50: Maximum discharge, 261,000 cfs Aug. 18, 1940 (gage height, 39.0 ft, from floodmarks); minimum, 458 cfs Sept. 21, 1932 (gage height, 1.25 ft); minimum daily, 472 cfs Sept. 21, 1932.

Flood of November 1877 reached a stage at Old Gaston of about 19 ft as pointed out by local residents (discharge, 212,000 cfs).

Remarks.--Some diurnal fluctuation at low flow caused by powerplants above station. Philpott Reservoir on Smith River and John H. Kerr Reservoir on Roanoke River, both in Virginia and nearing completion during summer of 1950, had little or no effect on the streamflow at this station prior to Sept. 30, 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	11,300	7,360	14,600	34,510	12,400	16,900	6,110	5,440	*2,310	*4,580	-
1913	*2,620	5,290	3,590	7,240	5,010	19,100	11,200	9,700	6,890	5,230	4,320	6,390	*7,230
1914	*6,170	8,510	7,620	10,100	15,300	11,000	9,010	4,930	*2,990	*6,700	*2,460	*1,700	*7,140
1915	*3,650	*3,560	13,700	23,400	16,500	9,140	7,260	*4,590	10,500	3,300	10,500	8,120	*9,490
1916	9,600	*3,850	7,900	8,890	14,800	6,100	6,560	7,400	11,000	11,100	7,470	*2,540	*8,090
1917	*3,970	*2,580	*3,910	8,550	7,760	26,200	9,790	*5,690	7,590	8,970	*3,120	*4,800	*7,950
1918	*2,630	*3,240	*2,370	*9,160	12,100	6,930	21,100	9,280	4,660	4,210	*4,580	*2,180	*6,980
1919	*2,420	5,110	11,800	17,500	10,200	14,400	8,420	11,300	12,700	*24,400	*6,770	*4,440	10,700
1920	*3,280	3,140	4,160	*4,770	16,200	11,200	12,000	5,110	7,100	5,220	9,020	*3,610	*7,020
1921	*3,250	*9,650	18,400	16,300	17,200	8,310	8,570	8,300	5,110	4,500	*2,640	*2,760	*8,700
1922	*1,820	5,060	3,850	6,140	21,800	23,700	7,930	13,200	10,000	10,500	5,340	*3,260	*9,310
1923	*5,040	*3,020	*4,930	8,930	13,000	26,000	11,400	8,100	4,490	4,120	8,020	8,360	*6,800
1924	2,950	3,790	6,320	14,100	9,170	11,200	13,000	20,000	7,320	9,350	4,380	5,240	8,920
1925	13,800	5,930	9,160	24,000	11,400	7,340	5,370	8,100	3,250	*2,480	*2,670	*2,390	*6,000
1926	*2,700	*4,070	4,740	10,700	14,800	7,170	7,530	*3,300	*2,220	4,060	*2,530	*1,630	*5,390
1927	*1,630	*4,360	10,600	5,870	12,600	8,370	10,300	4,040	3,870	15,480	5,680	3,130	*6,290
1928	7,780	4,780	16,000	7,590	9,970	8,770	*14,500	7,010	4,210	4,240	*22,200	22,500	*10,800
1929	8,070	4,460	4,260	4,990	9,880	21,800	12,700	9,300	9,870	7,620	6,020	3,830	8,390
1950	19,700	9,360	8,290	9,300	10,700	7,640	6,210	4,220	4,040	2,150	1,350	1,050	6,990

* Revised.

† Corrected.

‡ Not previously published; partly estimated on basis of gage-height records by U. S. Weather Bureau at Weldon.

1/ Published as "at Old Gaston", 1911-33 (1911-30 used herein), and as "at Roanoke Rapids", 1930-50.

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River at Roanoke Rapids, N. C.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	940	2,330	3,370	5,140	3,150	5,870	12,000	8,670	4,790	3,920	10,400	2,650	5,280
1932	1,330	1,500	3,180	10,600	8,230	15,500	9,160	5,280	4,290	1,900	1,550	1,020	*5,300
1933	*10,200	12,800	15,100	13,100	13,300	10,000	13,100	8,690	5,200	3,700	3,780	2,020	*9,230
1934	1,330	1,860	2,640	2,940	3,350	18,800	15,600	6,710	7,560	3,640	4,960	13,200	6,880
1935	5,369	5,624*	16,850	14,970	10,910	16,580	19,840	6,863	5,128	5,876	3,317	8,065	*9,944
1936	7,529	6,409	6,200	38,640	22,930	23,580	20,430	6,080	5,304	4,308	4,659	2,239	11,920
1937	6,276	3,059	7,809	52,740	14,450	8,558*	15,400	8,413	6,822	6,310	13,960	11,830	*11,300
1938	*22,820	9,832	7,463	11,590	7,765	9,651	7,459	5,287*	16,770*	19,080	8,046	5,830	*10,840
1939	2,978	6,837	8,372	7,628	19,480	17,250	8,962	7,628	4,947	9,143*	13,490	3,704	*9,151
1940	3,422	4,266	4,353	5,408	14,390	7,478	11,400	6,058	9,560	4,840	38,990	6,471	9,700
1941	3,282	9,108	6,367	9,121	5,885	7,367	9,789	3,498	3,700	10,860	3,337	2,521	6,250
1942	1,446	1,959	3,373	3,889	5,893	7,645	3,869	10,680	7,800	5,069	13,530	5,601	5,909
1943	9,805	5,384	8,575	12,300	17,280	13,860	11,890	7,008	7,672	8,910	3,178	2,567	8,975
1944	2,100	3,083	3,150	7,221	11,580	20,060	14,810	7,659	3,981	4,326	3,457	16,110	8,092
1945	15,840	5,777	9,287	11,740	13,930	8,928	7,393	7,779	4,114	8,421	5,437	21,480	9,982
1946	4,868	5,521	15,430	17,630	17,670	9,446	7,166	12,830	5,944	6,839	3,302	3,369	9,138
1947	3,486	4,110	4,127	14,680	5,375	10,780	10,030	5,342	4,277	4,138	3,606	8,098	6,566
1948	8,250	14,790	5,979	7,817	19,400	14,590	17,390	8,967	8,582	4,723	6,429	2,969	9,929
1949	6,176	10,100	21,370	15,860	13,920	11,630	11,870	14,480	5,873	15,290	8,643	8,440	11,990
1950	5,029	11,760	6,008	6,253	9,834	8,808	5,579	11,370	9,514	8,412	4,357	8,413	7,920

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	*1.56	1.02	1.89	*4.76	1.66	2.33	0.82	0.75	*0.32	*0.61	-
1913	0.36	0.71	.50	1.00	.62	*2.63	1.50	1.34	.92	.72	.60	.85	*11.75
1914	.85	1.11	1.05	1.40	1.91	1.52	1.20	.68	.40	*.93	*.34	*.23	*11.62
1915	*.50	*.48	1.89	3.23	2.06	1.26	.97	*.63	1.41	.46	1.45	1.09	*15.43
1916	1.33	.51	1.09	1.22	1.91	.84	.88	1.02	1.47	1.53	1.03	*.34	*13.17
1917	*.55	*.34	*.54	1.18	1.97	3.62	1.30	*.79	1.01	1.23	*.43	*.64	*12.60
1918	*.36	.43	.33	1.26	1.51	.96	2.82	1.28	.62	.58	.63	*.56	*11.34
1919	*.33	.68	1.63	2.42	1.27	1.98	1.13	1.56	1.70	*3.36	.93	*.33	*17.32
1920	*.45	.42	.57	*.66	2.09	1.54	1.61	.71	.95	.72	1.24	.48	*11.44
1921	*.45	*1.29	2.54	2.25	2.14	1.15	1.15	1.15	.68	.62	*.36	*.37	*14.15
1922	*.75	.68	.55	.85	2.72	3.27	1.06	1.82	1.34	1.45	.74	*.44	*15.15
1923	*.25	*.40	.68	1.23	1.62	*5.60	1.53	.84	.60	.57	1.11	1.12	*14.00
1924	1.40	.51	.87	1.95	1.19	1.54	1.74	2.77	.98	1.29	.61	.70	14.55
1925	1.90	.79	1.27	3.31	1.43	1.01	.72	1.12	.43	*.34	*.37	*.32	*13.01
1926	*.37	*.54	.65	1.48	*1.85	.99	1.01	.46	*.30	.56	*.35	*.22	*8.78
1927	*.22	.58	1.46	.81	1.57	1.15	1.37	.56	.52	.76	.78	.42	*10.20
1928	1.07	.64	2.21	1.05	1.28	*1.21	*1.94	1.06	.56	.59	*3.07	2.98	*17.66
1929	.84	.60	.59	.69	1.23	3.01	1.70	1.28	1.32	1.05	.83	.51	13.65
1930	2.72	1.25	1.14	1.28	1.33	1.05	.83	.58	.54	.30	.19	.14	11.35
1931	.13	.51	.46	.70	.59	.80	1.60	1.19	.64	.54	1.43	.35	8.54
1932	.18	.20	.44	1.45	1.06	*2.13	1.22	.72	.57	.26	.21	.14	*8.58
1933	*1.40	1.70	2.08	1.80	1.64	1.37	1.74	1.19	.69	.51	.52	.27	*14.91
1934	.18	.25	.36	.40	.41	2.58	2.06	.92	1.00	.50	.68	1.75	11.09
1935	.74	.75	*2.31	2.05	1.35	2.27	2.63	.94	.68	.81	.45	1.07	*16.05
1936	.35	.85	.85	5.29	2.94	3.23	2.71	.83	.70	.59	.64	.30	19.28
1937	.86	.41	1.07	*4.49	1.79	1.18	*2.04	1.15	.90	.86	1.91	1.57	*18.23
1938	*3.13	1.30	1.02	1.59	.96	1.33	.99	.72	*2.23	*2.62	1.10	.51	*17.50
1939	.41	.91	1.15	1.05	2.42	2.36	1.19	1.05	.66	1.26	*1.85	.49	*14.80
1940	.45	.57	.60	.74	1.85	1.03	1.51	.83	1.27	.66	5.34	.86	15.71
1941	.47	1.21	.87	1.25	.73	1.01	1.30	.48	.49	1.49	.46	.33	10.09
1942	.20	.26	.46	.53	.73	1.05	.51	1.46	1.03	.69	1.85	.74	9.51
1943	1.34	.71	1.15	1.69	2.14	1.90	1.58	.96	1.02	1.22	.44	.34	14.49
1944	.29	.41	.43	.99	1.49	2.75	1.96	1.05	.53	.59	.47	2.14	13.10
1945	2.17	.77	1.27	1.61	1.72	1.22	.98	1.07	.55	1.15	.75	2.85	16.11
1946	.67	.73	2.11	2.42	2.19	1.29	.95	1.76	.79	.94	.45	.45	14.75
1947	.48	.55	.57	2.01	.67	1.48	1.33	.73	.65	.57	.49	1.07	10.60
1948	1.13	1.96	.82	1.07	2.49	2.00	2.31	1.23	1.14	.65	.86	.59	16.07
1949	.85	1.34	2.93	2.17	1.72	1.59	1.57	1.98	.78	2.10	1.18	1.12	19.33
1950	.69	1.56	.82	.86	1.22	1.21	1.74	1.56	1.26	1.15	.60	1.12	12.79

* Revised.

† Corrected.

* Not previously published; partly estimated on basis of gage-height records by U. S. Weather Bureau Bureau at Weldon.

Yearly discharge, in cubic feet per second, of Roanoke River at Roanoke Rapids, N. C.									
Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1911	352	-	-	-	-	-	-	-	-
1912	(a)	156,000	Mar. 18, 1912	-	-	-	-	*9,650	*15.73
1913	352, 1433	*125,000	Mar. 17, 1913	*1,720	*7,230	*0.866	*11.75	*8,120	*13.19
1914	382, 1433	*51,300	Nov. 11, 1913	*1,230	*7,140	*.855	*11.62	*7,050	*11.48
1915	402, 1433	*75,400	Jan. 10, 1915	*1,140	*9,490	*1.14	*15.43	*9,530	*15.49
1916	432, 1433	*77,100	Feb. 4, 1916*	*1,230	*8,090	*.969	*13.17	*7,170	*11.67
1917	452, 1433	*91,700	Mar. 6, 1917*	*1,230	*7,750	*.928	*12.60	*7,560	*12.29
1918	472, 1433	*80,500	Apr. 23, 1918	*1,230	*6,980	*.836	*11.34	*7,920	*12.86
1919	502, 1433	*101,000	July 23, 1919	*1,230	10,700	1.28	*17.32	*9,930	*16.12
1920	502, 1433	*86,000	Feb. 7, 1920	*1,620	*7,020	.841	*11.44	*8,750	*14.28
1921	1433	59,700	Dec. 3, 1920	*1,230	*8,700	*1.04	*14.15	*6,970	*11.33
1922	542, 1433	73,500	Mar. 5, 1922	*1,230	*9,310	1.11	*15.15	*9,510	*15.47
1923	562, 1433	105,000	Mar. 20, 1923	*1,820	*8,600	*1.03	*14.00	*8,600	*14.00
1924	582	74,900	May 11, 1924	2,160	8,920	1.07	14.55	10,300	16.79
1925	602, 1433	86,200	Oct. 3, 1924	*1,140	*8,000	*.958	*13.01	*6,530	*10.61
1926	1433	57,200	Jan. 21, 1926	*920	*5,390	*.646	*8.78	*5,820	*9.48
1927	642, 1433	54,200	Feb. 22, 1927	*1,050	*6,290	*.752	*10.20	7,300	11.86
1928	662, 1433	107,000	Aug. 15, 1928	1,820	*10,800	*1.29	*17.66	*9,670	*15.73
1929	682	71,800	Mar. 1, 1929	2,890	8,390	1.00	13.65	10,300	16.73
1930	712, 1433	99,200	Oct. 6, 1929	800	6,990	.837	11.35	*4,400	*7.14
1931	712	41,900	Aug. 25, 1931	648	5,280	.628	8.54	5,230	8.46
1932	727, 1433	*71,200	Mar. 7, 1932*	472	*5,300	*.630	*8.58	*7,990	*12.94
1933	742, 1433	90,400	Oct. 21, 1932	930	*9,230	*1.10	*14.91	6,510	10.52
1934	757	69,600	Apr. 11, 1934	962	6,880	.818	11.09	*8,743	*14.10
1935	782, 1433	*80,300	Dec. 4, 1934	2,180	*9,944	*.118	*16.05	8,863	14.30
1936	822	110,000	Jan. 23, 1936	1,660	11,920	1.42	19.28	12,100	19.57
1937	822, 1433	*82,300	Apr. 27, 1937*	2,180	*11,300	*1.34	*18.23	*13,250	*21.34
1938	852, 1433	*96,400	Oct. 24, 1937	2,610	*10,840	*1.29	*17.50	*8,983	*14.52
1939	872, 1433	*62,500	Aug. 22, 1939	2,370	*9,151	1.09	*14.80	*8,622	*13.95
1940	892	261,000	Aug. 18, 1940	2,210	9,700	1.15	15.71	10,280	16.64
1941	922	42,500	Nov. 15, 1940	1,360	6,250	.743	10.09	5,241	8.46
1942	952	55,400	Aug. 11, 1942	1,240	5,909	.703	9.51	7,325	11.79
1943	972	53,500	Feb. 7, 1943	1,800	8,975	1.07	14.49	7,686	12.42
1944	1002	127,000	Sept. 22, 1944	1,240	8,092	.962	13.10	9,998	16.18
1945	1032	121,000	Sept. 22, 1945	2,280	9,982	1.19	16.11	9,551	15.41
1946	1052	52,900	Jan. 10, 1946	1,960	9,138	1.09	14.75	7,945	12.84
1947	1082	54,100	Sept. 26, 1947	1,890	6,566	.781	10.60	8,005	12.91
1948	1112	72,100	Feb. 17, 1948	2,240	9,929	1.18	16.07	10,670	17.28
1949	1142	69,300	Dec. 7, 1948	3,100	11,990	1.43	19.33	10,720	17.28
1950	1172	54,900	Nov. 2, 1949	2,800	7,920	.942	12.79	-	-

* Revised.

† Corrected.

‡ Not previously published.

a WSP 352, 1032, 1433.

119. Roanoke River near Scotland Neck, N. C.

Location.--Lat 36°12', long 77°23', on right bank 10 ft upstream from bridge on U. S. Highway 258, 1 mile downstream from tributary on right, 3 miles downstream from Bridgers Creek, 5½ miles north of Scotland Neck, Halifax County, and at mile 102.5.

Drainage area.--8,700 sq mi, approximately.

Supplemental records available.--July 1896 to May 1903 gage heights and discharge measurements at site of the auxiliary gage are published as "at Neal" in reports of Geological Survey (discharge records for this period published in these reports are unreliable and should not be used).

Records of chemical analyses and suspended-sediment for period October 1944 to September 1945 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 5.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 18, 1940, wire-weight gage at same site and datum. Auxiliary water-stage recorder, 8.9 miles (revised) downstream. Prior to Jan. 13, 1941, auxiliary staff gage or reference-point gage at or near same site and at same datum as auxiliary water-stage recorder.

Average discharge.--10 years (1940-50), 8,781 cfs.

Extremes.--1940-50: Maximum discharge, 260,000 cfs Aug. 19, 1940; maximum gage height, 41.98 ft Aug. 19, 1940; minimum discharge, 1,200 cfs Oct. 16, 1941.

Maximum stage observed during period June 1930 to July 1940, 35.1 ft Jan. 24, 1936 (from unpublished U. S. Weather Bureau records adjusted to present datum). Data on major flood, furnished by State Highway and Public Works Commission, give crest stages (adjusted to present datum) as follows: 1877, about 37.8 ft; March 1912, 36.8 ft; 1919, 34.9 ft; 1924, 32.9 ft.

Remarks.--Phillpott Reservoir on Smith River and John H. Kerr Reservoir on Roanoke River, both in Virginia and nearing completion during summer of 1950, had little or no effect on the streamflow at this station prior to Sept. 30, 1950.

Monthly and yearly mean discharge, in cubic feet per second, of Roanoke River near Scotland Neck, N.C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	43,860	6,841	-
1941	3,474	9,442	5,967	9,160	6,008	7,184	9,708	3,505	3,557	10,850	3,334	2,508	6,225
1942	1,438	1,941	3,389	3,892	6,099	7,985	4,037	10,970	7,926	5,270	13,710	5,511	6,026
1943	10,180	5,484	7,988	12,860	18,010	14,220	12,540	7,373	7,956	9,611	3,234	2,565	9,290
1944	2,078	3,101	3,125	7,613	11,900	19,930	16,600	7,853	4,141	4,397	3,870	15,680	8,237
1945	16,830	5,844	10,190	12,200	14,610	9,623	7,828	8,348	4,287	8,965	6,042	23,280	10,640
1946	5,178	5,645	14,640	19,650	18,220	10,010	7,872	13,910	6,374	7,385	3,555	3,714	9,650
1947	3,716	4,484	4,431	14,930	5,471	11,130	10,440	5,476	5,074	4,312	3,629	7,122	6,666
1948	9,397	15,500	6,332	8,465	20,290	15,000	17,720	9,336	9,335	5,072	6,687	3,052	10,450
1949	6,424	8,974	21,840	16,730	14,820	11,960	12,640	15,100	6,010	15,770	8,546	9,633	12,380
1950	4,998	12,120	6,244	6,577	10,280	9,085	5,746	11,490	9,839	8,891	4,640	8,677	8,189

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	5.81	0.88	-
1941	0.46	1.21	0.79	1.21	0.72	0.95	1.25	0.46	0.46	1.44	1.44	.32	9.71
1942	.19	.25	.45	.52	.73	1.06	.52	1.45	1.02	.70	1.82	.71	9.42
1943	1.35	.70	1.06	1.71	2.16	1.88	1.61	.98	1.02	1.27	.43	.33	14.50
1944	.28	.40	.41	1.01	1.46	2.64	2.13	1.04	.53	.58	.49	2.01	12.98
1945	2.23	.75	1.35	1.62	1.75	1.28	1.00	1.11	.55	1.19	.80	2.99	16.62
1946	.69	.72	1.94	2.60	2.18	1.33	1.01	1.84	.82	.98	.47	.48	15.06
1947	.49	.58	.59	1.98	.65	1.47	1.34	.73	.65	.57	.48	.91	10.44
1948	1.25	1.99	.84	1.12	2.52	1.99	2.27	1.24	1.20	.67	.89	.39	16.37
1949	.85	1.15	2.89	2.22	1.77	1.58	1.62	2.00	.77	2.09	1.13	1.24	19.31
1950	.66	1.55	.63	.87	1.23	1.20	.74	1.52	1.26	1.18	.61	1.11	12.76

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	922	260,000	Aug. 19, 1940	-	-	-	-	-	-
1941	922	32,200	Nov. 18, 1940	1,450	6,225	0.718	9.71	5,217	8.14
1942	952	35,700	May 26, 1942	1,220	6,026	.693	9.42	7,451	11.64
1943	972	39,900	Feb. 10, 1943	1,850	9,290	1.07	14.50	7,993	12.48
1944	1002	96,300	Sept. 23, 1944	1,340	8,297	.954	12.98	10,370	16.22
1945	1032	119,000	Sept. 23, 1945	2,320	10,640	1.22	16.62	10,010	15.64
1946	1052	38,800	Feb. 14, 1946	2,210	9,650	1.11	15.06	8,563	13.37
1947	1082	37,800	Sept. 29, 1947	1,920	6,666	.768	10.44	8,243	12.86
1948	1112	61,900	Feb. 18, 1948	2,320	10,450	1.20	16.37	10,980	17.18
1949	1142	55,400	Dec. 9, 1948	3,290	12,380	1.42	19.31	11,200	17.46
1950	1172	40,500	Nov. 4, 1949	2,960	8,189	.941	12.76	-	-

PAMLICO RIVER BASIN

120. Tar River near Tar River, N. C.

Location--Lat 36°12', long 78°34', on right bank 50 ft downstream from bridge on State Highway 96, 1 1/4 miles upstream from Fishing Creek, 2 1/2 miles east of Tar River, Granville County, and 8 miles south of Oxford.

Drainage area--161 sq mi.

Gage--Water-stage recorder and concrete control. Datum of gage is 287.04 ft above mean sea level, datum of 1929.

Average discharge--11 years (1939-50), 154 cfs.

Extremes--1939-50: Maximum discharge, 10,600 cfs Sept. 18, 1945 (gage height, 16.51 ft); minimum, 0.2 cfs Nov. 9-22, 1941, Oct. 18, 1943.

Remarks--Town of Oxford diverts about 0.5 cfs for municipal water supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#23.0	#32.1	57.3	92.3	379	178	299	216	130	20.7	16.7	23.0	#134
1941	4.77	261	97.8	128	68.4	187	156	16.9	22.7	113	12.5	10.2	89.9
1942	.57	28	4.39	7.04	109	176	33.2	112	26.2	114	207	77.7	72.3
1943	280	146	296	303.	292	311	210	56.2	94.9	33.8	2.31	4.5	169
1944	.710	1.06	6.65	145	334	475	374	108	16.4	45.5	103	373	184
1945	249	200	211	240	483	149	158	95.0	44.4	475	184	671	260
1946	48.5	43.7	444	377	488	142	91.1	193	63.4	61.4	6.92	26.5	164
1947	33.2	49.9	37.5	361	65.9	210	132	55.5	35.6	26.5	20.7	58.5	91.0
1948	236	461	94.2	211	655	338	328	80.1	66.1	120	67.3	36.5	222
1949	144	466	443	267	377	163	174	188	36.5	46.5	90.2	84.1	207
1950	59.7	175	65.5	118	125	139	49.7	163	109	321	26.5	64.3	120

* Not previously published; estimated or partly estimated on basis of records for Flat River at Bahama and for other stations in the Tar River basin.

Monthly and yearly runoff, in inches, of Tar River near Tar River, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#0.16	#0.22	0.41	0.66	2.54	1.28	2.07	1.55	0.90	0.15	1.20	0.16	#11.30
1941	.03	1.81	.70	.92	.44	1.34	1.08	.12	.16	.81	.09	.07	7.57
1942	.004	.002	.03	.05	.70	1.26	.23	.80	.18	.82	1.48	.54	6.10
1943	2.00	1.03	2.12	2.17	1.89	2.23	1.45	.40	.66	.24	.02	.03	14.24
1944	1.005	1.007	.05	1.04	2.24	3.40	2.59	.77	.11	1.33	.74	2.59	13.87
1945	1.78	1.38	1.51	1.72	3.12	1.07	.96	.68	.31	3.40	1.32	4.65	21.90
1946	.35	.30	3.18	2.70	3.16	1.02	.63	1.38	.44	.44	.05	.18	13.83
1947	.24	.35	.27	2.59	.43	1.51	.92	.40	.25	.19	.15	.41	7.71
1948	1.69	3.20	.68	1.51	4.39	2.42	2.28	.57	.46	.86	.48	.27	18.81
1949	1.03	3.37	3.17	1.91	2.44	1.16	1.21	1.34	.25	.33	.65	.58	17.44
1950	.43	1.21	.61	.84	.81	.99	.34	1.17	.75	2.30	.19	.45	10.09

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1940	972	5,550	May 25, 1940		#5.7	#134	#0.832	#11.30	154	13.05
1941	972	4,380	Nov. 15, 1940		1.3	89.9	.558	7.57	60.1	5.07
1942	952	2,370	Feb. 17, 1942		.2	72.3	.449	6.10	133	11.21
1943	972	3,220	Apr. 20, 1943		1.0	169	1.05	14.24	108	9.15
1944	1002	8,950	Sept. 30, 1944		.4	164	1.02	13.87	219	18.48
1945	1032	10,600	Sept. 18, 1945		11	280	1.61	21.90	250	21.06
1946	1052	4,560	Feb. 11, 1946		2.2	164	1.02	13.83	129	10.86
1947	1082	#2,100	January 1947*		3.3	91.0	.565	7.71	147	12.42
1948	1112	6,840	Oct. 10, 1947		3.5	222	1.38	18.81	246	20.81
1949	1142	5,640	Nov. 29, 1948		5.7	207	1.29	17.44	144	12.12
1950	1172	3,500	July 10, 1950		4.9	120	.745	10.09	-	-

† Corrected.

* Not previously published.

121. Tar River near Nashville, N. C.

Location.--Lat 35°51'00", long 77°55'50", on left bank 15 ft downstream from Cockrell Bridge on State Highway 58, 5 miles upstream from Sapony Creek, and 10 miles south of Nashville, Nash County.

Drainage area.--701 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 110.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 27, 1934, chain and staff gages at same site and datum.

Average discharge.--22 years (1928-50), 764 cfs (revised).

Extremes.--1928-50: Maximum discharge, 16,900 cfs Dec. 3, 1934 (gage height, 20.8 ft); minimum observed, 10 cfs Sept. 20, 1932 (gage height, 1.50 ft).

Remarks.--Considerable diurnal fluctuation and some regulation at low flow caused by small mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	457	318	304	387	1,050	2,880	845	814	860	1,060	895	356	852
1930	#,930	1,370	926	919	1,030	582	663	309	675	320	82.2	177	#832
1931	82.2	152	371	487	312	515	1,060	1,160	323	548	1,480	238	564
1932	119	113	323	1,040	770	1,400	606	272	197	73.9	88.1	24.3	418
1933	284	516	1,250	1,090	1,070	559	1,320	601	202	126	222	81.7	609
1934	28.8	78.1	92.3	115	342	1,210	1,920	473	702	477	811	786	586
1935	183	449	2,135	1,230	771	1,248	1,925	577	193	703	186	830	870
1936	206	620	583	3,129	2,544	1,785	2,334	336	619	539	515	247	1,116
1937	452	369	1,285	2,742	1,576	994	2,007	630	456	499	1,842	1,001	1,153
1938	565	529	475	940	522	764	722	431	1,991	1,933	397	360	804
1939	209	398	638	732	2,575	1,742	1,054	952	370	953	1,872	793	1,015
1940	355	330	392	565	1,278	814	1,149	914	530	270	1,989	251	735
1941	146	730	460	573	432	782	832	200	187	832	223	134	461
1942	75.2	97.4	258	207	840	803	353	547	271	396	722	495	405
1943	1,250	551	962	1,517	1,193	1,238	928	380	435	360	68.9	68.4	745
1944	67.9	123	189	837	1,345	1,913	1,536	678	271	642	638	656	739
1945	1,786	607	1,258	940	1,706	871	556	597	272	1,886	960	3,158	1,213
1946	401	369	1,547	1,787	2,003	645	669	1,065	464	411	226	241	813
1947	292	378	371	1,230	494	832	625	350	337	407	263	459	503
1948	526	1,653	582	905	2,632	1,384	1,008	429	468	447	428	193	879
1949	881	1,602	1,857	1,286	1,384	774	675	722	277	581	906	726	954
1950	245	819	490	579	612	612	331	746	410	920	277	390	538

* Revised.

PAMLICO RIVER BASIN

Monthly and yearly runoff, in inches, of Tar River near Nashville, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	0.75	0.51	0.50	0.64	1.56	4.74	1.34	1.34	1.37	1.75	1.47	0.53	16.50
1930	*4.82	2.19	1.52	1.51	1.53	.96	1.06	.51	1.07	.53	.34	.28	*16.12
1931	.14	.24	.61	.80	.46	.85	1.69	1.91	.51	.90	2.43	.38	10.92
1932	.19	.18	.53	1.70	1.18	2.30	.97	.45	.31	.12	.14	.04	8.11
1933	.47	.82	2.05	1.80	1.59	.92	2.11	.99	.32	.21	.37	.15	11.80
1934	.05	.12	.15	.19	.51	2.00	3.06	.78	1.12	.78	1.33	1.25	11.34
1935	.30	.27	3.51	2.02	1.15	2.05	3.06	.95	.31	1.16	.31	1.32	16.86
1936	.34	.99	.96	5.15	3.91	2.94	3.71	.55	.99	.89	.85	.39	21.67
1937	.74	.59	2.11	4.51	2.34	1.64	5.19	1.04	.75	.82	3.03	1.60	22.34
1938	.35	.84	.71	1.54	.78	1.26	1.15	.71	3.17	3.18	.68	.57	15.56
1939	.34	.63	1.05	1.20	3.82	2.87	1.67	1.57	.59	1.57	3.08	1.26	19.65
1940	.58	.53	.64	.93	1.97	1.34	1.83	1.50	.85	.44	3.27	.40	14.28
1941	.24	1.16	.76	.94	.64	1.29	1.32	.33	.30	1.37	.37	.21	8.93
1942	.12	.15	.42	.34	.95	1.34	.56	.90	.43	.65	1.19	.79	7.84
1943	2.06	.88	1.58	2.50	1.77	2.04	1.48	.63	.69	.59	.11	.11	14.44
1944	.11	.20	.31	1.38	2.07	3.15	2.44	1.11	.43	1.06	1.05	1.04	14.35
1945	2.94	.97	2.07	1.55	2.53	1.43	.88	.98	.43	3.10	1.58	5.03	23.49
1946	.66	5.9	2.54	2.94	2.98	1.06	1.06	1.75	.74	.68	.37	.38	15.75
1947	.48	.60	.61	2.02	.73	1.37	.99	.57	.54	.67	.42	.73	9.73
1948	.86	2.63	.96	1.49	4.05	2.28	1.60	.71	.74	.74	.70	.31	17.07
1949	1.12	2.55	3.05	2.11	2.06	1.27	1.07	1.19	.44	.95	1.49	1.15	18.45
1950	.40	1.30	.81	.95	.91	1.01	.53	1.23	.65	1.51	.46	.62	10.38

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	a8,960	Mar. 4, 1929	186	852	1.22	16.50	*1,202	*23.27
1930	697,1273	all,100	Oct. 6, 1929	38	*832	*1.19	*16.12	442	8.58
1931	712	a4,850	Aug. 13, 1931	44	564	.805	10.92	560	10.83
1932	727	a7,240	Mar. 10, 1932	11	418	.596	8.11	544	10.55
1933	742	a4,360	Apr. 20, 1933	32	609	.869	11.80	453	8.78
1934	757	a9,480	Apr. 13, 1934	17	586	.836	11.34	803	15.55
1935	782	16,900	Dec. 3, 1934	75	870	1.24	16.86	754	14.62
1936	802	9,220	Apr. 10, 1936	111	1,116	1.59	21.67	1,175	†22.82
1937	822	9,560	Aug. 29, 1937	149	1,153	1.64	22.34	1,107	21.45
1938	852	9,200	July 30, 1938	143	804	1.15	15.58	776	15.03
1939	872	9,800	Aug. 31, 1939	155	1,015	1.45	19.65	1,001	19.38
1940	892	11,700	Aug. 18, 1940	117	735	1.05	14.28	756	14.69
1941	922	4,140	Nov. 18, 1940	21	465	.658	8.93	386	7.46
1942	952	3,720	Feb. 20, 1942	20	405	.578	7.84	601	11.67
1943	972	5,540	Oct. 18, 1942	12	745	1.06	14.44	544	10.54
1944	1002	b5,460	July 17, 1944	17	739	1.05	14.35	1,015	19.71
1945	1032	15,500	Sept. 21, 1945	111	1,213	1.73	23.49	1,100	21.30
1946	1052	5,970	Feb. 14, 1946	96	813	1.16	15.75	705	13.65
1947	1082	3,490	Jan. 23, 1947	91	503	.718	9.73	646	12.49
1948	1112	8,520	Feb. 18, 1948	89	879	1.25	17.07	996	19.34
1949	1142	6,420	Dec. 3, 1948	154	954	1.36	18.45	736	14.24
1950	1172	4,030	Nov. 4, 1949	113	536	.765	10.38	-	-

* Revised.

† Corrected.

a Maximum observed.

b Maximum peak discharge; maximum discharge during year, 5,700 cfs at 12 p.m. Sept. 30, stage rising.

122. Sapony Creek near Nashville, N. C.

Location.--Lat 35°53'05", long 77°54'45", on downstream side of highway bridge, 1 mile upstream from mouth and 6½ miles southeast of Nashville, Nash County.

Drainage area.--64.8 sq mi.

Gage.--Staff gage. Altitude of gage is 107 ft (from topographic map).

Extremes.--April to September 1950: Maximum discharge, 1,630 cfs Aug. 25 (gage height, 12.30 ft, from graph based on gage readings); minimum observed, 0.78 cfs June 18, 19 (gage height, 0.74 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	-	-	-	21.6	40.6	21.2	85.4	71.3	28.2	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	-	-	-	0.37	0.72	0.37	1.52	1.27	0.49	-

123. Fishing Creek near Enfield, N. C.

Location.--Lat 36°09', long 77°42', on right bank 15 ft downstream from bridge on U. S. Highway 301, 2,000 ft downstream from Atlantic Coast Line Railroad bridge, 2 miles southwest of Enfield, Halifax County, and 4 1/2 miles downstream from Rocky Creek.

Drainage area.--521 sq mi.

Supplemental records available.--Records of chemical analyses for period October 1948 to September 1949 are published in report of Geological Survey. Gage-height records collected at site 2,000 ft upstream at different datum 1910 to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 76.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 28, 1932, staff gage on bridge pier at same site and datum.

Average discharge.--27 years (1923-50), 509 cfs.

Extremes.--1923-50: Maximum discharge, 12,600 cfs Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft Aug. 18, 1940; minimum discharge, about 10 cfs Oct. 19, 1933. Maximum stage known, 20.1 ft, present datum, Apr. 19, 1910, at U. S. Weather Bureau gage site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft present site and datum (discharge, 20,300 cfs).

Remarks.--Slight diurnal fluctuation and some regulation at low flow caused by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	580	879	779	411	1,580	785	1,510	266	620	656
1925	1,670	423	460	1,840	935	622	360	452	-	-	-	-	662
1926	-	-	367	517	1,470	783	555	-	-	196	-	-	386
1927	-	117	435	359	742	635	641	152	247	113	271	167	324
1928	194	148	897	370	648	728	760	446	452	304	290	2,080	615
1929	402	289	305	410	873	1,810	505	820	960	770	493	182	831
1930	2,040	1,070	726	724	732	525	531	219	393	172	79.7	56.0	605
1931	55.1	117	292	328	256	443	696	660	228	113	934	75.8	351
1932	65.0	65.5	*164	*557	482	911	378	188	139	*78.4	89.3	*28.9	*262
1933	89.0	178	569	665	702	484	848	319	91.9	*120	76.1	53.1	*347
1934	14.0	26.0	46.0	60.4	198	713	1,100	273	292	170	360	437	307
1935	102	196	*1,391	878	604	833	1,467	416	136	608	129	828	*632
1936	132	361	321	2,303	1,753	1,164	1,439	246	301	313	237	95.6	718
1937	196	208	776	1,718	1,176	789	1,387	420	175	435	842	475	696
1938	318	337	557	568	363	487	540	358	1,255	649	226	409	488
1939	154	231	395	479	1,569	1,232	716	730	193	725	1,334	621	694
1940	231	269	288	381	929	586	715	480	233	194	1,828	217	529
1941	122	390	321	387	391	566	531	165	158	763	180	57.7	336
1942	37.2	55.1	135	146	424	529	220	247	124	261	243	120	211
1943	711	226	595	944	750	799	632	261	239	280	48.3	37.0	460
1944	29.5	70.0	114	455	829	1,268	905	270	98.4	162	441	251	406
1945	667	472	803	663	1,264	635	284	747	238	1,063	701	1,353	739
1946	321	327	1,098	1,192	1,288	602	528	922	558	433	188	208	636
1947	229	266	291	728	404	561	438	242	282	561	220	357	382
1948	294	1,006	450	719	1,767	1,025	626	315	285	227	273	99.0	585
1949	367	1,237	1,248	904	1,033	618	513	550	187	398	780	810	718
1950	194	545	455	485	462	441	240	457	199	240	107	309	344

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	1.28	1.82	1.72	0.88	3.50	1.68	3.34	0.59	1.33	17.13
1925	3.70	0.91	1.02	4.06	1.87	1.38	0.77	1.00	-	-	-	-	17.25
1926	-	-	.81	1.14	2.93	1.73	1.19	-	-	.43	-	-	10.05
1927	-	.25	.96	.79	1.48	1.41	1.37	.34	.53	.25	.60	.36	8.44
1928	.43	.32	2.21	.82	1.34	1.61	1.63	.99	.97	.67	.64	4.45	16.08
1929	.69	.62	.67	.91	1.75	4.00	1.08	1.81	2.06	1.70	1.09	.39	16.97
1930	4.50	2.60	1.67	1.60	1.46	1.16	1.14	.49	.84	.58	.18	.12	15.78
1931	.12	.25	.65	.73	.51	.98	1.49	1.46	.49	.25	2.07	.16	9.16
1932	.14	.14	*.36	*1.23	1.00	2.02	.81	.42	.30	*.17	.20	*.06	*6.85
1933	.20	.38	1.26	1.47	1.40	1.07	1.82	.70	.20	*.26	.17	.11	*9.04
1934	.03	.06	.10	.13	.40	1.58	2.36	.60	.63	.38	.80	.94	8.01
1935	.23	.42	*3.08	1.94	1.21	1.84	3.14	.92	.29	1.34	.29	1.77	*16.47
1936	.29	.77	.71	5.10	3.63	2.58	3.08	.54	.64	.69	.53	.20	18.76
1937	.43	.45	1.72	3.90	2.35	1.70	2.97	.93	.38	.96	1.42	1.02	18.13
1938	.70	.72	.79	1.26	.72	1.08	1.16	.79	2.69	1.44	.50	.87	12.72
1939	.34	.49	.87	1.06	3.14	2.73	1.53	1.62	.41	1.60	2.95	1.33	18.07
1940	.51	.58	.63	.84	1.92	1.30	1.53	1.06	.50	.43	4.05	.46	13.81
1941	.27	.84	.71	.86	.78	1.25	1.14	.37	.34	1.69	.40	.12	8.77
1942	.08	.12	.30	.32	.85	1.17	.47	.55	.26	.58	.54	.26	5.50
1943	1.57	.48	1.32	2.09	1.50	1.77	1.35	.58	.51	.62	.11	.08	11.98
1944	.07	.15	.25	1.01	1.72	2.81	1.94	.60	.21	.36	.97	.54	10.63
1945	1.48	1.01	1.78	1.47	2.53	1.41	.61	1.65	.51	2.35	1.55	2.92	19.27
1946	.71	.70	2.43	2.64	2.57	1.33	1.13	2.04	1.19	.96	.42	.45	16.57
1947	.51	.57	.64	1.61	.81	1.24	.94	.53	.60	1.24	.49	.76	9.94
1948	.65	2.15	1.00	1.59	3.66	2.27	1.34	.70	.61	.50	.60	.21	15.28
1949	.81	2.65	2.76	2.00	2.07	1.37	1.10	1.22	.40	.88	1.73	1.73	18.72
1950	.43	1.17	1.01	1.07	.92	.98	.51	1.01	.43	.53	.24	.66	8.95

* Revised.

Yearly discharge, in cubic feet per second, of Fishing Creek near Enfield, N. C.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	622	10,600	July 2, 1924	-	656	1.26	17.13	833	21.77
1925	622	12,300	Oct. 1, 2, 1924	-	662	1.27	17.25	507	13.22
1926	622	3,140	Feb. 6, 1926	-	386	.741	10.05	375	9.76
1927	642	2,480	Dec. 31, 1926	-	324	.622	8.44	367	10.09
1928	662	*9,850	Sept. 20, 1928	-	615	1.18	16.08	586	15.30
1929	682	5,130	Mar. 8, 1929	101	651	1.25	16.97	890	23.20
1930	697	8,480	Oct. 24, 1929	42	605	1.16	15.78	322	8.39
1931	712	6,180	Aug. 14, 1931	39	351	.674	9.16	*337	*8.78
1932	727, 1333	4,430	Mar. 9, 1932	12	*262	*.503	*6.85	*308	*8.05
1933	742, 1333	2,710	Apr. 19, 1933	14	*347	*.666	*9.04	*284	*7.39
1934	757	4,430	Apr. 12, 1934	11	307	.569	8.01	*442	*11.55
1935	782, 1333	12,600	Dec. 2, 1934	63	*632	*1.21	*16.47	558	14.31
1936	802	7,720	Jan. 21, 1936	65	718	1.38	18.76	750	19.59
1937	822	5,420	Apr. 28, 1937	83	696	1.34	18.13	681	17.74
1938	852	3,920	June 23, 1938	88	488	.937	12.72	469	12.21
1939	872	11,600	Aug. 31, 1939	102	694	1.33	18.07	694	18.09
1940	892	12,600	Aug. 18, 1940	96	529	1.02	13.81	533	13.91
1941	922	2,210	Mar. 10, 1941	34	336	.645	8.77	286	7.45
1942	952	1,950	Feb. 18, 1942	23	211	.405	5.50	321	8.37
1943	972	3,270	Oct. 15, 1942	14	460	.883	11.98	346	9.06
1944	1002	3,680	Mar. 22, 1944	21	406	.779	10.63	552	14.43
1945	1032	7,700	Sept. 20, 1945	90	739	1.42	19.27	723	18.84
1946	1052	3,890	Feb. 13, 1946	78	636	1.22	16.57	555	14.45
1947	1082	1,900	Sept. 25, 1947	97	382	.733	9.94	462	12.02
1948	1112	5,810	Feb. 17, 1948	65	585	1.12	15.28	678	17.70
1949	1142	4,810	Aug. 31, 1949	116	718	1.38	18.72	579	15.11
1950	1172	2,150	Nov. 3, 1949	69	344	.660	8.95	-	-

* Revised.

Note.--Records of daily discharge below 250 cfs Oct. 1, 1923, to July 3, 1924, below 350 cfs May 30, 1925, to May 31, 1926, below 150 cfs June 1, 1926, to Nov. 16, 1926, and below 100 cfs Nov. 17, 1926, to Sept. 30, 1928, published in WSP 622, 642, and 662 have been found unreliable on basis of restudy of the original data and comparison with other stations and should not be used.

124. Tar River at Tarboro, N. C.

Location.--Lat 35°53'40", long 77°32'00", near right bank on downstream end of pier of bridge on U. S. Highway 64 in Tarboro, Edgecombe County, 6½ miles downstream from Fishing Creek and at mile 46.2.

Drainage area.--2,140 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and suspended-sediment for the period October 1944 to September 1945 are published in report of Geological Survey. Gage-height records at several different datums collected at practically the same site since 1905 are contained along with corrections for adjustment to present datum, in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 10.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to December 1900, chain gage at Atlantic Coast Line Railroad bridge 600 ft downstream, at different datum. Oct. 1 to Dec. 8, 1931, U. S. Weather Bureau chain gage 100 ft upstream, corrected to present datum.

Average discharge.--23 years (1896-1900, 1931-50), 2,295 cfs.

Extremes.--1896-1900, 1931-50: Maximum discharge, 37,200 cfs Aug. 20, 1940 (gage height, 31.77 ft); minimum, 36 cfs Oct. 17, 22, 1933 (gage height, 0.45 ft).
Maximum stage known, 34.0 ft, present datum, July 27, 1919, from floodmarks (discharge, 52,800 cfs, from rating curve extended above 38,000 cfs).

Remarks.--Some diurnal fluctuation at low flow caused by mills above station. Town of Henderson diverts from the basin above the station for municipal supply, and town of Tarboro diverts above the station for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second, of Tar River at Tarboro, N. C.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Tar River at Tarboro, N. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	-	628	1,190	-
1897	703	842	*3,642	1,814	*4,924	6,789	3,636	1,580	689	1,198	399	490	†2,212
1898	295	674	1,430	1,380	1,051	1,697	2,523	3,438	1,600	2,419	1,733	1,356	1,639
1899	816	1,338	3,110	2,440	12,920	9,537	5,060	1,354	1,907	1,250	2,028	*682	*3,474
1900	*1,334	1,598	1,524	2,864	5,952	5,445	4,802	1,664	1,376	552	3,84	233	*2,284
1901	201	659	880	-	-	-	-	-	-	-	-	-	-
1932	423	325	809	2,470	2,390	*3,820	1,670	707	434	286	242	71.7	*1,140
1933	440	951	*2,920	*3,630	*3,930	2,360	*3,730	1,480	495	366	426	197	*1,730
1934	56.7	115	191	253	497	3,010	6,340	1,310	1,990	1,120	2,780	3,480	1,760
1935	619	586	5,628	3,858	2,229	3,566	6,263	1,647	482	2,071	520	2,886	2,532
1936	513	1,346	1,512	10,020	8,524	5,195	7,291	926	1,496	1,574	1,466	532	3,346
1937	*1,094	1,114	3,753	7,132	7,990	3,515	4,898	3,444	1,277	1,674	2,555	*1,222	3,527
1938	1,184	1,354	1,768	2,769	1,538	2,036	2,501	1,524	4,779	3,545	1,884	*4,222	2,236
1939	704	879	1,688	2,348	8,312	6,508	2,915	2,801	772	2,587	3,074	4,636	3,068
1940	873	960	1,026	1,700	3,663	2,564	2,968	2,056	1,124	632	8,260	974	2,234
1941	403	1,492	1,267	1,713	1,822	2,405	2,562	595	542	3,902	860	334	1,492
1942	183	247	573	553	1,675	2,941	1,187	1,246	505	753	1,542	1,022	1,034
1943	*5,447	1,286	2,795	4,583	4,172	3,689	3,082	1,145	997	1,905	254	151	2,277
1944	136	249	359	2,193	3,852	6,895	4,918	1,501	555	1,107	1,877	959	2,044
1945	*1,78	1,162	4,223	3,178	5,008	3,462	1,140	1,463	1,308	4,490	3,722	7,577	3,403
1946	1,310	1,151	3,960	6,301	6,049	2,306	2,147	4,303	2,127	1,428	627	576	2,676
1947	695	1,056	1,180	3,425	1,534	*2,365	1,919	793	901	1,715	894	1,352	1,479
1948	1,186	5,049	2,129	3,184	8,108	5,091	2,583	1,037	1,322	963	995	359	2,721
1949	1,700	4,613	6,193	4,146	4,267	2,694	1,870	2,103	732	1,623	2,469	3,677	3,000
1950	688	2,146	1,638	1,906	1,720	1,691	1,043	1,749	994	2,054	893	1,119	1,470

* Revised.
† Corrected.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	-	0.34	0.62	-
1897	0.38	0.44	†1.96	0.98	†2.40	3.66	1.90	0.85	0.36	0.65	.22	.25	†14.05
1898	.16	.35	.77	.74	.51	.91	1.32	1.85	.83	1.30	.93	.71	10.38
1899	.44	.70	1.68	1.51	*6.29	5.14	2.64	.73	.99	.67	1.09	*.36	*22.04
1900	*.72	.83	.82	1.54	2.90	2.93	2.50	1.00	.72	.30	2.21	.12	*14.59
1901	.11	.34	.47	-	-	-	-	-	-	-	-	-	-
1932	.23	.17	.44	1.33	1.21	*2.06	.87	.38	.23	.15	.13	.04	*7.24
1933	.24	.49	*1.57	*1.95	*1.91	1.27	*1.95	.80	.26	.20	.23	.10	*10.97
1934	.03	.06	.10	.14	.24	1.62	3.30	.71	1.04	.61	1.50	1.81	11.16
1935	.33	.31	3.03	2.08	1.08	1.92	3.27	.89	.25	1.12	.28	1.50	16.06
1936	.28	.70	.81	5.40	4.30	2.80	3.80	.50	.78	.85	.79	.28	21.29
1937	.59	.58	2.02	5.84	3.89	1.89	2.55	1.88	.67	.90	1.38	2.20	22.37
1938	.63	.71	.95	1.43	.75	1.10	1.30	.82	2.49	1.91	1.02	1.02	14.19
1939	.38	.46	.91	1.27	4.04	3.51	1.52	1.51	.40	1.39	1.66	2.42	19.47
1940	.47	.50	.55	.92	1.85	1.38	1.55	1.11	.59	.34	4.45	.51	14.22
1941	.22	.78	.68	.92	.89	1.30	1.34	.32	.28	2.10	.46	.17	9.46
1942	.10	.13	.31	.30	.81	1.58	.62	.67	.26	.41	.83	.53	6.55
1943	1.86	.67	1.51	2.47	2.03	1.92	1.61	.62	.52	1.03	1.14	.08	14.46
1944	.07	.15	.19	1.18	1.94	3.71	2.56	.81	.29	.60	1.01	.50	12.99
1945	2.25	.61	2.27	1.71	2.44	1.87	.59	.79	.68	2.42	2.00	3.95	21.58
1946	.71	.60	2.13	3.39	2.94	1.24	1.12	2.32	1.11	.77	.34	3.00	16.97
1947	.37	.55	.64	1.85	.75	1.27	1.00	.43	.42	.92	.48	.70	9.38
1948	.84	2.63	1.15	1.72	4.59	2.74	1.35	.56	.69	.52	.54	.19	17.32
1949	.92	2.41	3.34	2.23	2.08	1.45	.97	1.13	.38	.87	1.33	1.92	19.03
1950	.37	1.12	.88	1.03	.84	.91	.54	.94	.52	1.11	.48	.58	9.32

* Revised. † Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1896	(a)	-	-	-	-	-	-	-	-
1897	(b)	14,600	Mar. 19, 1897	196	†2,212	†1.03	†14.05	†1,975	†12.55
1898	(c)	8,680	May 28, 1898	170	1,639	.766	10.38	†1,880	11.92
1899	(d)	*22,400	Feb. 11, 1899	350	*3,474	*1.62	*22.04	*3,405	*21.59
1900	(e)	12,970	Feb. 18, 1900	134	*2,284	*1.07	*14.59	*2,073	13.14
1932	727,1503	*12,100	Mar. 12, 1932	38	*1,140	*.533	*7.24	*1,370	*8.70
1933	742,1273	*8,500	Apr. 24, 1933	42	*1,730	*.608	*10.97	*1,400	*8.66
1934	757	15,900	Apr. 16, 1934	36	1,760	.622	11.16	2,308	14.64
1935	782	23,500	Dec. 6, 1934	224	2,532	1.18	16.06	2,236	14.18
1936	802	20,200	Apr. 12, 1936	205	3,346	1.56	21.29	3,566	22.69
1937	822	21,500	Feb. 2, 1937	373	3,527	1.65	22.37	3,384	21.47
1938	852	13,500	Aug. 1, 1938	361	2,236	1.04	14.19	2,151	13.65
1939	872	23,000	Sept. 3, 1939	430	3,068	1.43	19.47	3,033	19.24
1940	892	37,200	Aug. 20, 1940	344	2,234	1.04	14.22	2,258	14.38

* Revised.
† Corrected.
a 18th Ann. Rept., Pt. 4.
b 19th Ann. Rept., Pt. 4.
c 20th Ann. Rept., Pt. 4.
d 21st Ann. Rept., Pt. 4, WSP 1273.
e 22nd Ann. Rept., Pt. 4, WSP 1273.

Yearly discharge, in cubic feet per second, of Tar River at Tarboro, N. C.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	922	8,460	July 19, 1941	158	1,492	0.697	9.46	1,312	8.32
1942	952	7,510	Mar. 13, 1942	92	1,034	.483	6.55	1,585	10.05
1943	972	10,800	Jan. 25, 1943	100	2,277	1.06	14.46	1,703	10.81
1944	1002	15,800	Mar. 24, 1944	102	2,044	.955	12.99	2,789	17.73
1945	1032	24,600	Sept. 23, 1945	240	3,403	1.59	21.58	3,136	19.69
1946	1052	13,200	Feb. 15, 1946	256	2,676	1.25	16.97	2,380	15.09
1947	1082	6,570	Jan. 18, 1947	297	1,479	.691	9.38	1,930	12.24
1948	1112	19,800	Feb. 18, 1948	189	2,721	1.27	17.32	3,073	19.57
1949	1142	15,300	Dec. 4, 1948	394	3,000	1.40	19.03	2,324	14.73
1950	1172	6,990	Nov. 6, 1949	366	1,470	.687	9.32	-	-

125. Tar River at Greenville, N. C.

Location.--Lat 35°37'00", long 77°22'30", at bridge on State Highway 11, about 600 ft downstream from Atlantic Coast Line Railroad bridge at Greenville, Pitt County.

Drainage area.--2,620 sq mi (revised), approximately.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey. Gage-height records collected at same site or at site 600 ft upstream at same datum since 1905 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 2.37 ft (revised) below mean sea level, datum of 1929, supplementary adjustment of 1936. Discharge published only for Mar. 24 to Sept. 30, 1935, and Aug. 1 to Sept. 30, 1940. U. S. Weather Bureau staff gage 600 ft upstream used prior to Mar. 24, 1935.

Extremes.--1935, 1940: Maximum discharge, 36,500 cfs Aug. 22, 1940 (gage height, 22.07 ft).

1905-50: Maximum stage 24.5 ft July 28, 1919, from records of U. S. Weather Bureau (discharge, 46,500 cfs, from rating curve extended above 37,000 cfs).
Maximum stage known since at least 1877 is that of July 28, 1919.

Remarks.--Low and medium stages affected by tide. Station operated primarily for stage only. Discharge published only for short periods in 1935 and 1940.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	7,156	2,110	575	2,736	761	3,684	-
1940	-	-	-	-	-	-	-	-	-	-	*9,560	*1,325	-

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	2.98	0.91	0.24	1.18	0.33	1.53	-
1940	-	-	-	-	-	-	-	-	-	-	*4.21	*.56	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	602	11,800	Sept. 12, 1935	-	-	-	-	-	-
1940	1066,1273	36,500	Aug. 22, 1940	-	-	-	-	-	-

a Maximum during period Mar. 24 to Sept. 30.

126. Herring Run near Washington, N. C.

Location.--Lat 35°34'03", long 77°01'09", at bridge on County road, 1 mile upstream from bridge on U. S. Highway 264, 1 $\frac{1}{4}$ miles upstream from mouth, and 2 $\frac{1}{4}$ miles northeast of Washington, Beaufort County.

Drainage area.--About 15 sq mi.

Gage.--Staff gage. Altitude of gage is 2 ft (from topographic map).

Extremes.--January to September 1950: Maximum discharge, 186 cfs July 9, 11, 14; maximum gage height, 10.0 ft July 9, from graph based on gage readings; minimum discharge observed, 0.8 cfs Apr. 30.

Flood of 1946 reached a stage of 17 ft, from information by local resident.

Remarks.--Natural runoff affected by flow in ditches and canals above station.

Monthly and yearly mean discharge, in cubic feet per second, of Herring Run near Washington, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	4.98	2.39	2.49	1.85	11.6	2.32	50.8	9.64	5.96	-

NEUSE RIVER BASIN

127. Eno River at Hillsboro, N. C.

Location.--Lat 36°04', long 79°96', on right bank 1,000 ft downstream from bridge on State Highway 86, at Hillsboro, Orange County, and 2 miles downstream from Severnile Creek.

Drainage area.--66.5 sq mi.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 487.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 29, 1937, staff gage at same site and datum with natural control.

Average discharge.--23 years (1927-50), 67.8 cfs.

Extremes.--1927-50: Maximum discharge, 11,000 cfs Sept. 18, 1945 (gage height, 20.01 ft), from rating curve extended above 6,000 cfs by logarithmic plotting; minimum daily, 0.3 cfs Oct. 20-27, 1941.

Remarks.--Diversion of about 0.25 cfs for Hillsboro water supply is partly returned above station as sewage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	*39	*15	*161	61.2	102	81.8	*174	51.4	61.7	16.6	*79.7	*292	*94.2
1929	31.7	22.8	23.9	*25	*106	*270	*68	*73	*95	*72.0	49.8	16.6	*71.1
1930	181	78.2	69.0	*83	*92	*43	40.4	27.8	20.3	84.2	7.83	4.50	*61.0
1931	5.97	22.7	31.6	49.3	27.0	49.3	120	165	22.5	61.0	147	13.6	59.6
1932	5.52	4.27	1.44	126	67.0	212	49.4	22.6	29.5	9.76	7.26	*2.39	*45.9
1933	36.4	117	151	93.5	108	44.9	60.1	26.8	13.4	11.9	35.8	9.58	58.8
1934	2.73	2.58	4.46	7.30	38.6	91.1	144	63.6	107	28.2	33.2	137	54.7
1935	22.6	47.1	143	92.2	64.7	98.3	187	62.1	19.9	21.4	6.41	23.7	65.6
1936	9.82	43.0	42.5	326	174	234	264	28.7	38.6	43.7	47.0	15.1	105
1937	19.7	14.5	123	273	117	82.8	141	46.9	53.6	34.6	90.1	73.3	89.2
1938	43.8	32.5	26.5	86.5	44.6	59.2	64.3	20.2	155	359	48.7	17.6	80.2
1939	13.6	47.5	74.8	78.2	222	181	103	96.1	83.9	88.2	256	34.2	106
1940	19.5	18.8	25.5	34.9	180	78.7	75.4	60.2	55.7	19.3	56.0	10.0	50.7
1941	5.20	102	34.8	52.9	45.1	80.5	66.0	17.3	23.4	18.6	4.97	2.73	37.6
1942	.68	.82	3.64	5.16	47.4	76.0	18.8	71.6	31.5	22.6	45.1	21.8	28.7
1943	46.5	65.3	112	125	102	110	87.4	44.5	44.3	18.2	5.96	8.47	63.9
1944	4.51	5.99	11.4	59.2	114	166	121	59.6	11.6	107	14.8	109	65.1
1945	72.4	64.0	57.1	62.6	143	64.1	51.1	39.4	17.8	119	50.5	342	89.5
1946	35.9	25.9	166	154	210	60.9	49.0	66.0	22.6	124	17.6	9.32	77.7
1947	21.4	31.6	25.8	160	43.2	64.2	57.9	21.5	25.6	12.8	14.7	25.2	41.9
1948	28.5	134	39.9	79.1	218	124	120	64.6	34.6	28.2	38.8	23.0	76.9
1949	44.0	192	143	106	136	71.4	72.0	80.8	34.4	41.3	54.7	27.7	83.1
1950	55.6	71.2	47.1	52.9	53.3	69.3	31.7	84.9	67.7	62.0	15.7	17.8	52.5

* Revised.

† Not previously published; estimated or partly estimated on basis of records for stations of Neuse River near Northside and Flat River at dam, near Bahama.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	*0.68	*0.25	*2.79	1.06	1.65	1.42	*2.92	0.89	1.04	0.29	*1.38	*4.90	*19.27
1929	.55	.38	.41	*4.3	*1.66	*4.68	*1.14	*1.27	*1.59	*1.25	.86	.28	*14.50
1930	3.14	1.32	1.20	*1.44	*1.44	*.75	.68	.48	.34	1.46	1.14	.08	*12.47
1931	.10	.38	.55	.85	.34	.85	2.01	2.86	.38	1.06	2.55	.23	12.16
1932	.10	.07	.23	2.18	1.09	3.68	.83	.39	.50	.17	.13	*.04	*9.41
1933	.63	1.96	2.62	1.63	1.69	.78	*1.01	.46	.23	.21	.62	.16	*12.00
1934	.05	.04	.08	.13	.61	1.58	2.42	1.10	1.80	.49	.57	2.30	11.22
1935	.39	.79	2.48	1.60	1.01	1.71	3.14	1.08	.33	.37	.11	.40	13.41
1936	.17	.72	.74	5.65	2.83	4.06	4.43	.50	.65	.76	.82	.25	21.58
1937	.34	.24	2.13	4.74	1.83	1.44	2.36	.81	.90	.60	1.56	1.23	18.18
1938	.76	.55	.46	1.50	.70	1.03	1.08	.35	2.60	6.22	.84	.30	16.39
1939	.24	.80	1.29	1.36	3.48	3.14	1.73	1.67	1.41	1.53	4.44	.57	21.66
1940	.34	.32	.44	.61	2.29	1.36	1.26	1.04	.93	.33	.97	.17	10.36
1941	.09	1.71	.60	.92	.71	1.39	1.11	.50	.39	.32	.09	.05	7.68
1942	.01	.01	.06	.09	.74	1.32	.32	1.24	.53	.39	.78	.37	5.86
1943	.81	1.10	1.94	2.17	1.59	1.91	1.47	.77	.74	.32	.10	1.14	13.06
1944	.08	.10	.20	1.03	1.84	2.87	2.04	1.03	.20	1.86	.26	1.83	13.34
1945	1.25	1.07	.99	1.09	2.23	1.11	.86	.68	.30	2.06	.88	5.75	18.27
1946	.59	.44	2.87	2.67	3.28	1.06	.82	1.14	.38	2.14	.31	.16	15.86
1947	.37	.53	.41	2.78	.68	1.11	.97	.37	.43	.22	.26	.42	8.55
1948	.49	2.24	.69	1.37	3.53	2.16	2.01	1.12	.58	.49	.67	.39	15.74
1949	.76	3.22	2.47	1.84	2.12	1.24	1.21	1.40	.58	.72	.95	.46	16.97
1950	.96	1.19	.82	.92	.83	1.20	.53	1.47	1.14	1.08	.27	.30	10.71

* Revised.

† Corrected.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Eno River at Hillsboro, N. C.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	662,1333	*3,880	Sept. 19, 1928	-	#94.2	#1.42	#19.27	#82.6	*#16.89
1929	682,1333	(a)	Feb. 28, 1929*	-	#71.1	#1.07	#14.50	#92.2	#18.82
1930	697	6,750	Oct. 2, 1929	-	#61.0	#.917	#12.47	#38.4	#7.84
1931	712	3,880	May 21, 1931	3.8	59.6	.896	12.16	56.5	11.53
1932	727,1333	*3,610	Mar. 6, 1932	1.2	*45.9	*.690	*9.41	*69.4	*14.22
1933	742	*1,690	Nov. 26, 1932	1.4	58.8	.883	#12.00	34.0	#6.96
1934	757	*2,240	Apr. 9, 1934	1.5	54.7	.822	11.22	71.8	14.66
1935	782	3,260	Dec. 1, 1934	3.2	65.6	.986	13.41	55.7	11.38
1936	802	3,670	Aug. 28, 1936	5.7	105	1.58	21.58	111	22.66
1937	822	2,500	Jan. 20, 1937	8	89.2	1.34	18.18	84.5	17.24
1938	852	*b5,610	July 24, 1938	12	80.2	1.21	16.39	85.0	16.95
1939	872	4,910	Aug. 16, 1939	10	106	1.59	21.66	100	20.43
1940	892	1,830	Feb. 7, 1940	5.1	50.7	.762	10.36	57.1	11.66
1941	922	2,180	Nov. 14, 1940	4	37.6	.565	7.68	26.3	5.36
1942	952	1,800	May 16, 1942	3	28.7	.432	5.86	47.1	9.63
1943	972	1,650	Nov. 24, 1942	2.4	63.9	.961	13.06	46.9	9.59
1944	1002	5,530	July 15, 1944	3.4	65.1	.979	13.34	79.5	16.27
1945	1032	11,000	Sept. 18, 1945	7.3	89.5	1.35	18.27	92.3	18.86
1946	1052	4,280	July 10, 1946	6.2	77.7	1.17	15.86	65.0	13.27
1947	1082	1,610	Jan. 14, 1947	3.6	41.9	.630	8.55	52.3	10.66
1948	1112	2,110	Feb. 14, 1948	4.0	76.9	1.16	15.74	91.7	18.77
1949	1142	3,060	Nov. 28, 1948	8.1	83.1	1.25	16.97	66.1	13.49
1950	1172	1,500	Oct. 30, 1949	6.4	52.5	.789	10.71	-	-

* Revised.

† Corrected.

* Not previously published.

a Discharge not determined; figure previously published in WSP 682 is in error.

b May have gone higher during period of no gage height record July 26.

128. Flat River at Bahama, N. C.

Location (revised).--Lat 36°11'00", long 78°52'45", on right bank half a mile upstream from Lake Michie, 1 1/4 miles upstream from highway bridge, 1 1/4 miles north of Bahama, Durham County, and 1 1/2 miles upstream from Dial Creek.

Drainage area.--150 sq. mi.

Gage.--Water-stage recorder. Altitude of gage is 356 ft (from topographic map). Prior to Oct. 22, 1925, staff gage at same site and at datum 0.58 ft lower.

Average discharge.--25 years (1925-50), 145 cfs.

Extremes.--1925-50: Maximum discharge (revised), about 20,000 cfs July 26, 1938, computed on basis of records at nearby stations; minimum, 0.37 cfs Sept. 26, 27, 1932 (gage height, 0.23 ft).

Remarks.--Some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 miles above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year	
1925	-	-	-	-	-	-	-	-	-	5.2	4.6	1.4	-	
1926	4.87	11.1	25.9	159	360	141	127	26.2	*16.2	43.8	38.6	45.9	*81.2	
1927	2.80	5.26	176	61.6	195	213	93.8	22.2	29.6	99.5	74.4	72.5	86.7	
1928	62.0	52.2	384	78.9	216	211	449	125	86.8	20.5	87.1	581	179	
1929	40.7	24.3	22.8	25.8	272	478	263	113	112	143	157	41	148	
1930	506	170	148	178	243	85.4	86.3	102	41.3	154	15.8	10.3	145	
1931	2.70	7.02	52.8	94.3	44.4	122	312	327	43.2	45.2	322	20.1	117	
1932	11.1	7.31	33.4	313	161	367	122	37.7	40.0	9.37	5.35	752	92.5	
1933	103	205	340	209	256	100	244	157	47.7	13.4	23.2	14.8	142	
1934	1.39	225	708	1.81	4.29	79.8	271	436	169	204	90.2	59.2	482	149
1935	34.8	225	291	239	171	324	543	103	27.1	42.5	19.4	85.0	175	
1936	19.6	97.9	104	761	492	481	612	53.5	57.9	99.0	57.8	21.9	237	
1937	42.7	18.7	168	728	254	152	481	89.9	96.1	76.5	197	81.6	199	
1938	105	65.5	45.8	201	79.4	128	126	*35.8	551	*723	101	42.8	*185	
1939	22.3	124	177	193	425	411	210	205	74.9	174	43.1	57.4	208	
1940	31.5	39.7	52.7	76.5	391	171	141	245	155	36.5	290	30.5	137	
1941	11.4	241	113	151	79.9	170	135	28.2	28.9	31.8	9.02	14.4	84.3	
1942	1.24	.995	4.17	6.71	65.9	149	31.1	215	41.6	49.8	162	63.6	66.2	
1943	282	177	284	274	320	265	195	63.3	39.2	50.2	5.17	8.35	163	
1944	2.38	3.89	12.7	119	255	380	379	102	27.2	45.1	43.1	477	151	
1945	154	150	165	165	412	135	103	71.8	56.0	273	135	847	203	
1946	56.9	43.0	35.8	302	360	109	*75.6	90.6	35.3	118	13.9	14.0	*130	
1947	21.3	39.1	32.3	283	70.4	173	118	46.5	22.9	16.5	32.7	81.4	78.3	
1948	56.3	595	89.5	173	545	291	262	200	73.0	57.7	51.9	39.5	164	
1949	117	437	370	246	330	167	165	167	28.8	54.4	88.4	44.3	184	
1950	96.6	145	77.3	104	111	129	53.6	112	157	156	42.5	37.3	102	

* Revised.

Monthly and yearly runoff, in inches, of Flat River at Bahama, N. C.

Water year	Monthly and yearly runoff, in inches, of Flat River at Bahama, N. C.												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1925	-	-	-	-	-	-	-	-	-	0.02	0.04	0.01	-
1926	0.04	0.08	0.16	1.22	2.50	1.06	0.94	0.20	*0.12	.34	.30	.34	*7.54
1927	.02	.04	1.35	.47	1.35	1.64	.70	.17	.22	.76	.57	.54	7.83
1928	.48	.39	2.95	.61	1.55	1.63	3.34	.96	.65	.16	.67	2.83	16.22
1929	.31	.18	.16	.20	2.58	3.68	1.95	.87	.83	1.10	1.21	.30	13.59
1930	3.88	1.26	1.14	1.37	1.69	.64	.64	.78	.31	1.19	.12	.08	13.10
1931	.02	.05	.41	.73	.31	.94	2.32	2.51	.32	.33	2.48	.15	10.57
1932	.09	.05	.26	2.41	1.15	2.82	1.91	.29	.30	.07	.04	.006	8.40
1933	.79	1.53	2.62	1.60	1.78	.77	1.62	1.21	.35	.10	.18	.11	12.86
1934	.01	*0.05	.01	.63	.55	2.09	3.25	1.30	1.52	.69	.46	3.58	13.50
1935	.27	1.67	2.24	1.83	1.19	2.49	4.04	.79	.20	.33	.15	.63	15.83
1936	.15	.73	.80	5.84	3.54	3.70	4.55	.41	.43	.76	.44	.16	21.51
1937	.33	.14	1.29	5.59	1.76	1.16	3.58	.69	.72	.59	1.51	.61	17.97
1938	.81	.49	.35	1.54	.55	.96	.94	*.28	4.10	*5.56	.78	.32	*16.70
1939	.17	.92	1.36	1.49	2.55	3.16	1.56	1.58	.56	1.34	3.31	.43	18.83
1940	.24	.30	.41	.59	2.61	1.31	1.05	1.88	1.15	.28	2.23	.23	12.48
1941	.09	1.79	.87	1.16	.55	1.31	1.01	.22	.22	.24	.07	.11	7.64
1942	.01	*0.07	.03	.05	.46	1.14	2.23	1.65	.31	.36	1.24	.47	5.98
1943	2.17	1.31	2.19	2.11	2.22	2.04	1.45	.49	.29	.39	.04	.06	14.76
1944	.02	.03	.10	.92	1.69	2.92	2.82	.78	.20	.35	.33	3.55	13.71
1945	1.18	1.12	1.27	1.26	2.86	1.03	.76	.55	.42	2.10	1.04	4.82	18.41
1946	.44	.32	2.75	2.32	2.50	.84	*.56	.70	.26	.90	.11	.10	*11.80
1947	.16	.29	.25	2.18	.49	1.33	.88	.36	.17	.13	.25	.61	7.10
1948	.43	2.94	.68	1.33	3.92	2.24	1.94	1.54	.54	.44	.40	.29	16.69
1949	.90	3.25	2.84	1.89	2.29	1.28	1.23	1.29	.21	.42	.68	.33	16.61
1950	.74	1.08	.59	.80	.77	.99	.40	.86	1.17	1.20	.33	.28	9.21

* Revised.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622,1333	3,610	Feb. 3, 1926	1.6	*91.2	*0.541	*7.54	*93.4	*8.45
1927	642	4,560	Dec. 29, 1926	1.9	86.7	.578	7.03	115	10.24
1928	662	*9,670	Apr. 28, 1928*	6.0	179	1.19	16.22	144	13.07
1929	662	7,500	Feb. 28, 1929	17	148	.987	13.59	210	19.00
1930	697	12,500	Oct. 2, 1929	4.3	145	.967	13.10	80.6	7.30
1931	712	6,880	May 21, 1931	1.5	117	.780	10.57	116	10.49
1932	727	7,090	Mar. 6, 1932	.37	92.5	.617	8.40	142	12.94
1933	742	4,750	May 13, 1933	1.01	142	.947	12.86	87.9	7.94
1934	757	13,600	Sept. 8, 1934	.47	149	.993	13.50	195	17.65
1935	762	6,880	Dec. 1, 1934	6.9	175	1.17	15.83	147	13.33
1936	802	8,670	Jan. 19, 1936	5.5	237	1.58	21.51	238	21.59
1937	822	9,420	Apr. 26, 1937	10.1	199	1.33	17.97	197	17.86
1938	852,1333	*20,000	July 26, 1938	16	*185	*1.23	*16.70	*193	*17.50
1939	872	9,170	Aug. 18, 1939	17	208	1.39	18.73	191	17.33
1940	892	9,670	May 24, 1940	12	137	.913	12.46	157	14.28
1941	922	5,110	Nov. 14, 1940	2.11	84.3	.562	7.64	54.5	4.94
1942	952	4,410	May 16, 1942	.83	66.2	.441	5.98	128	11.60
1943	972	6,460	Oct. 15, 1942	1.54	165	1.09	14.76	102	9.24
1944	1002	7,970	Apr. 12, 1944	1.16	151	1.01	13.71	189	17.13
1945	1032	16,100	Sept. 18, 1945	17	203	1.35	16.41	203	18.35
1946	1052,1333	5,670	Feb. 10, 1946	5.1	*130	*.867	*11.60	*99.4	*8.99
1947	1082	3,050	Sept. 25, 1947	2.74	78.3	.522	7.10	115	10.45
1948	1112	6,820	May 31, 1948	6.1	184	1.23	16.69	217	19.63
1949	1142	7,250	Nov. 29, 1948	14	184	1.23	16.61	133	12.03
1950	1172	3,200	June 30, 1950	8.7	102	.680	9.21	-	-

* Revised.

129. Dial Creek near Bahama, N. C. 1/

Location (revised).--Lat 36°10'35", long 78°51'20", on right bank three-eighths of a mile upstream from mouth and Lake Michie, and 1½ miles northeast of Bahama, Durham County.

Drainage area.--4.9 sq mi, approximately.

Gage.--Water-stage recorder and "V"-notch sharp-crested weir set in masonry control. Altitude of gage is 356 ft (from topographic map).

Average discharge.--25 years (1925-50), 4.40 cfs (revised).

Extremes.--1925-50: Maximum gage height, 7.60 ft May 24, 1940 (discharge not determined); no flow at times in many years.

1/ Published as "at Bahama" prior to 1930.

Monthly and yearly mean discharge, in cubic feet per second, of Dial Creek near Bahama, N. C.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Dial Creek near Bahama, N. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	0.570	1.34	*4.82	*15.2	4.62	3.22	0.594	0.295	0.331	0.132	0.088	*2.53
1927	0.054	.375	*4.77	1.74	5.00	4.74	3.06	.776	1.26	1.52	1.59	.764	*2.12
1928	1.54	.96	6.29	2.38	*5.04	*4.36	*20.3	*4.25	*6.89	1.06	2.05	*12.3	*5.57
1929	1.48	1.24	1.21	1.37	*11.8	*14.5	6.10	4.76	4.04	3.10	4.49	1.22	*4.56
1930	*18.1	5.26	4.23	5.27	6.34	3.12	2.94	3.31	1.73	*2.56	.326	.289	*4.47
1931	.070	.622	1.97	2.37	1.34	3.43	*6.49	3.03	*1.39	*.609	*4.22	.094	*2.14
1932	.012	.028	.809	*5.58	3.04	*7.95	3.03	1.20	.280	.010	.00	.00	*1.83
1933	2.48	4.65	*8.11	5.86	5.96	2.78	4.79	1.66	.293	.679	1.56	.107	*3.23
1934	.00	.009	.199	.311	2.59	5.90	*12.4	3.81	6.25	3.03	1.69	*5.98	*3.49
1935	1.10	*9.09	7.02	6.03	4.31	9.63	14.9	3.70	.840	2.13	.818	4.01	*5.29
1936	.876	2.92	3.66	*21.8	15.5	11.3	*19.5	1.86	3.66	*5.17	2.89	2.23	*7.57
1937	2.41	1.70	7.36	17.2	8.29	5.41	*13.5	3.09	3.13	1.55	5.32	2.76	*5.97
1938	5.20	3.00	2.45	6.72	3.17	4.62	3.86	1.32	*12.7	*17.9	5.22	1.60	*5.67
1939	.984	3.06	4.85	6.90	16.7	11.5	6.83	7.58	3.30	5.00	*12.8	1.83	*6.71
1940	1.84	1.76	2.19	2.95	7.96	6.06	7.39	*17.7	*5.92	1.72	4.19	.774	*5.03
1941	.363	6.52	3.61	3.95	2.50	5.37	4.28	.922	1.90	1.12	.263	.192	2.58
1942	.00	.024	.390	.507	3.15	4.33	1.37	4.30	1.48	4.03	5.48	1.23	2.19
1943	3.97	4.03	9.32	7.20	6.58	7.95	7.20	2.43	1.43	1.69	.113	.267	4.34
1944	.020	.251	.679	3.49	7.60	9.90	8.17	2.55	.361	1.04	.797	*8.30	*3.57
1945	2.89	2.92	4.51	5.36	12.0	4.43	3.73	2.52	1.14	14.7	4.56	*19.8	*6.50
1946	2.74	2.30	11.5	9.38	13.3	5.78	3.66	4.60	1.86	3.46	.801	1.32	5.00
1947	2.07	2.66	1.88	10.4	3.28	5.43	4.68	2.25	1.98	.988	4.01	1.58	3.44
1948	4.32	13.8	3.05	5.85	16.3	9.51	8.96	3.38	3.72	2.94	4.63	1.55	6.70
1949	4.09	11.1	11.18	7.50	9.36	4.49	5.26	3.92	1.31	3.56	2.71	1.34	5.54
1950	2.64	4.36	3.41	3.65	3.58	3.76	2.38	4.13	3.60	12.9	1.20	1.03	3.90

* Revised.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	0.13	0.31	*1.13	*3.23	1.09	0.73	0.14	0.07	0.08	0.03	0.02	*7.02
1927	0.01	.09	*1.12	.41	1.06	1.11	.70	.18	.29	.36	.37	.17	*5.87
1928	.36	.22	1.48	.56	*1.11	*1.03	*4.62	*1.00	1.57	.25	.48	*2.81	*15.49
1929	.35	.28	.28	.32	*2.50	*3.40	1.58	1.12	.92	.73	1.06	.28	*12.62
1930	*4.27	1.19	.99	1.24	1.34	.73	.67	.78	.39	*.60	.08	.07	*12.35
1931	.02	.14	.46	.56	.28	.81	*1.48	.71	.32	*.14	*.99	.02	*5.93
1932	.003	.007	.19	*1.31	.67	*1.87	.69	.28	.06	.002	.00	.00	*5.09
1933	.58	1.06	*1.91	1.38	1.27	.65	1.09	.39	.07	.16	.37	.03	*8.96
1934	.00	.002	.05	.07	.55	1.38	*2.82	.90	1.43	.71	.40	*1.36	*9.67
1935	.26	*2.07	1.65	1.42	.92	2.27	3.39	.87	.19	.50	.19	.91	*14.64
1936	.21	.66	.86	*5.13	3.41	2.66	*4.43	.44	.83	*1.22	.68	.51	*21.04
1937	.57	.39	1.73	4.05	1.76	1.27	*3.08	.73	.71	.36	1.26	.63	*16.54
1938	1.22	.68	.58	1.58	.67	1.09	.88	.31	*2.89	*4.22	1.23	.36	*15.71
1939	.23	.70	1.14	1.63	3.55	2.71	1.55	1.74	.75	1.18	*3.02	.42	*18.62
1940	.43	.51	.69	.69	1.75	1.43	1.66	*4.16	*1.35	.40	.98	.18	*13.96
1941	.09	1.49	.85	.95	.53	1.26	.98	.22	.43	.26	.06	.04	7.14
1942	.00	.006	.09	.12	.67	1.02	.31	1.01	.34	.95	1.29	.28	6.09
1943	.93	.92	2.19	1.69	1.40	1.87	1.64	.57	.33	.40	.03	.06	12.03
1944	.005	.06	.16	.82	1.67	2.33	1.86	.60	.09	.25	1.19	*1.89	*9.92
1945	.68	.67	1.06	1.26	2.56	1.04	.85	.59	.26	3.46	1.07	*4.51	*18.01
1946	.64	.52	2.70	2.21	2.82	1.36	.83	1.08	.42	.81	.14	.30	13.83
1947	.49	.60	.44	2.44	.70	1.28	1.07	.53	.45	.23	.94	.38	9.53
1948	1.02	3.15	.72	1.58	3.59	2.24	2.04	1.50	.85	.69	1.09	.35	18.62
1949	.96	2.54	2.77	1.76	1.99	1.16	1.20	.92	.30	.79	.64	.31	15.34
1950	.62	.99	.80	.86	.76	.89	.54	.97	.82	3.04	.28	.23	10.80

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1926	622,1233	*550	Feb. 25, 1926	0	*2.53	*0.516	*7.02	*2.79	*7.74	
1927	642,1233	*134	Dec. 28, 1926	0	*2.12	*.433	*5.87	2.43	6.71	
1928	662,1233	*1,330	Apr. 27, 1928	.04	*5.57	*1.14	*15.49	*5.16	*14.34	
1929	682,1233	*500	Mar. 5, 1929	.58	*4.56	*.931	*12.62	*6.56	*18.16	
1930	712,1233	*1,090	Oct. 2, 1929	.00	*4.47	*1.12	*12.35	*2.36	*6.52	
1931	(a)	*321	Aug. 11, 1931	0	*2.14	*.437	*5.93	*1.99	*6.51	
1932	727,1233	*307	Mar. 6, 1932	0	*1.83	*.373	*5.09	*3.04	*8.44	
1933	742,1233	*142	Oct. 17, 1932	0	*3.23	*.659	*8.96	1.97	5.46	
1934	757,1233	*360	Apr. 9, 1934	0	*3.49	*.712	*9.67	*4.31	*13.60	
1935	782,1233	*550	Nov. 29, 1934	.08	*5.29	*1.08	*14.64	4.48	12.39	
1936	802,1233	*682	Jan. 19, 1936	.30	*7.57	*1.54	*21.04	*7.92	*22.00	
1937	822,1233	*346	Apr. 25, 1937	.43	*5.97	*1.22	*16.54	*5.89	*16.33	
1938	852,1233	*1,050	July 26, 1938	.68	*5.67	*1.16	*15.71	*5.52	*15.30	
1939	872,1233	*475	Aug. 18, 1939	.66	*6.71	*1.37	*18.62	*6.45	*17.89	
1940	892,1233	(b)	May 24, 1940	.30	*5.03	*1.03	*13.96	*5.42	*15.05	
1941	922	*174	Nov. 14, 1940	0	2.58	.527	7.14	1.74	4.81	
1942	952	*162	Aug. 9, 1942	0	2.19	.447	6.09	3.62	10.03	
1943	972	164	Dec. 30, 1942	0	4.34	.886	12.03	2.96	8.21	
1944	1002,1233	*368	Sept. 30, 1944	0	*3.57	*.729	*9.92	*4.36	*12.11	
1945	1032,1233	*818	Sept. 17, 1945	*.30	*6.50	*1.33	*18.01	*7.03	*19.46	

* Revised.

a WSP 712, 1233, 1333.

b Discharge not determined; figure previously published in WSP 892 is in error.

Yearly discharge, in cubic feet per second, of Dial Creek near Bahama, N. C.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1946	1052	*214	Feb. 10, 1946	0.15	5.00	1.02	13.83	4.16	11.50	
1947	1082	*256	Aug. 8, 1947	.25	3.44	.702	9.53	4.65	12.89	
1948	1112	*356	May 30, 1948	.40	6.70	1.37	18.82	7.20	20.00	
1949	1142	*244	Nov. 28, 1948	.63	5.54	1.13	15.34	4.15	11.48	
1950	1172	328	July 9, 1950	.43	3.90	.796	10.80	-	-	

* Revised.

130. Flat River at dam, near Bahama, N. C.

Location (revised).--Lat 36°08'55", long 78°49'43", on right bank 900 ft downstream from Durham municipal dam and Lake Michie, 3 miles southeast of Bahama, Durham County, and 5 miles upstream from confluence with Eno River.

Drainage area.--171 sq mi.

Gage.--Water-stage recorder. Datum of gage is 255.05 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 19, 1927, datum of gage was 1.30 ft higher and the low-water control was a sharp-crested weir at same site.

Average discharge.--23 years (1927-50), 159 cfs.

Extremes.--1927-50: Maximum discharge, 19,700 cfs (revised) July 26, 1938 (gage height, 19.50 ft), from rating curve extended above 4,000 cfs on basis of computations of peak flow over dam at gage heights 13.1, 13.60, 14.60, 16.70, and 19.50 ft; no flow Sept. 3-14, 1938 (result of regulation caused by construction work upstream).

Remarks.--Considerable regulation since 1926 by Lake Michie (usable capacity, 12,610 acre-ft). Diversion for water supply has increased during the period of record from about 9 cfs to about 16 cfs. About 6 cfs is returned to Neuse River as sewage 3 miles upstream from Northside gage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	-	-	96.8
1928	92.9	*23.0	339	102	253	212	*432	172	126	25.6	67.4	410	*187
1929	59.8	43.8	22.8	17.8	257	530	299	147	96.3	184	142	66.7	*155
1930	530	166	190	164	286	105	102	85.5	63.9	130	55.6	16.0	*158
1931	4.28	2.25	43.1	56.2	60.2	22.6	341	288	96.2	44.0	319	41.6	114
1932	26.1	5.64	48.2	271	202	297	198	56.9	45.5	14.5	4.89	2.59	97.5
1933	28.0	179	349	265	258	132	221	142	65.6	12.7	8.70	10.3	139
1934	4.88	3.60	3.76	1.20	9.19	234	*506	126	247	74.6	77.7	*483	*147
1935	76.0	148	383	246	217	296	620	148	66.0	35.4	5.39	65.0	192
1936	40.3	92.3	117	743	576	508	681	94.9	54.3	56.0	101	57.7	259
1937	40.9	28.9	138	759	327	217	448	160	79.9	63.7	197	143	217
1938	86.2	86.1	87.3	229	96.0	131	114	39.5	491	795	190	21.4	198
1939	54.9	81.6	154	196	466	423	254	231	70.0	164	481	120	224
1940	42.8	26.7	44.2	116	343	202	136	220	199	53.2	253	65.3	141
1941	17.9	216	81.9	173	92.8	142	167	42.9	25.8	28.2	3.32	4.23	82.7
1942	3.01	3.69	13.7	2.29	29.8	99.0	43.0	204	33.7	48.5	178	58.7	60.2
1943	290	156	284	296	355	256	210	69.5	26.8	54.0	3.12	3	166
1944	3	3	.44	*98.4	220	412	437	89.9	21.2	32.7	23.7	468	*149
1945	206	128	217	176	437	168	96.7	62.4	51.7	353	151	714	228
1946	47.5	31.1	397	364	522	109	86.1	111	37.0	129	13.5	13.9	153
1947	23.8	26.4	41.2	323	55.3	175	125	52.2	22.5	19.1	33.6	73.9	81.3
1948	75.6	470	78.1	200	614	305	293	197	105	61.3	84.0	15.1	206
1949	157	444	421	287	372	176	182	165	46.5	40.5	72.1	63.3	201
1950	63.6	213	47.9	110	103	141	49.7	109	166	234	33.0	31.8	108

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	662	-	-	-	-	-	-	-	-
1928	662,1333	*8,560	Apr. 28, 1928	0.7	*187	-	-	*159	-
1929	682,1333	*7,230	Feb. 28, 1929	.4	*155	-	-	*219	-
1930	697,1333	*12,400	Oct. 2, 1929	.7	*158	-	-	87.0	-
1931	712	3,400	Aug. 11, 1931	.7	114	-	-	116	-
1932	727	*5,720	Mar. 7, 1932	1.8	137.5	-	-	137	-
1933	742	2,350	Apr. 17, 1933	1.8	139	-	-	92.8	-
1934	757,1333	*12,000	Sept. 8, 1934	.20	*147	-	-	*197	-
1935	802	*6,060	Dec. 1, 1934	3	192	-	-	*161	-
1936	802	*7,650	Jan. 19, 1936	1.6	259	-	-	255	-
1937	822	*7,800	Apr. 26, 1937	3.3	217	-	-	221	-
1938	852	*19,700	July 26, 1938	0	198	-	-	201	-
1939	872	*8,100	Aug. 18, 1939	5.8	224	-	-	209	-
1940	892	4,700	May 25, 1940	4.2	141	-	-	158	-

* Revised.

Yearly discharge, in cubic feet per second, of Flat River at dam, near Bahama, N. C.--Continued

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	822	3,940	Nov. 15, 1940	1.8	82.7	-	-	58.2	-
1942	952	2,350	May 17, 1942	2.1	60.2	-	-	120	-
1943	972	4,840	Oct. 15, 1942	-	166	-	-	105	-
1944	1002,1333	7,940	Sept. 30, 1944	-	*149	-	-	*195	-
1945	1032	14,000	Sept. 18, 1945	6.6	228	-	-	222	-
1946	1052	5,500	Feb. 10, 1946	8	153	-	-	121	-
1947	1082	3,150	Jan. 20, 1947	8	81.3	-	-	125	-
1948	1112	7,050	Feb. 14, 1948	10	206	-	-	240	-
1949	1142	7,330	Nov. 29, 1948	5	201	-	-	142	-
1950	1172	3,030	Nov. 2, 1949	9	108	-	-	-	-

* Revised.

131. Neuse River near Northside, N. C.

Location (revised).--Lat 36°02'07", long 78°44'59", on right bank at Fish Dam Bridge, 1½ miles downstream from Rocky Creek, 2½ miles downstream from Seaboard Airline Railway bridge, and 2½ miles south of Northside, Granville County.

Drainage area.--526 sq mi.

Gage.--Water-stage recorder. Datum of gage is 226.32 ft above mean sea level (levels by Corps of Engineers). Prior to June 1, 1928, staff or chain gage at same site and datum.

Average discharge.--23 years (1927-50), 551 cfs (revised).

Extremes.--1927-50: Maximum discharge, 36,600 cfs Sept. 18, 1945; maximum gage height, 31.02 ft, from floodmarks, Sept. 18, 1945; minimum discharge, 3.1 cfs Sept. 20, 1932, (gage height, 0.87 ft).

Remarks.--Flow slightly regulated by Lake Michie. For regulation and diversion see records for Flat River at dam, near Bahama.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	229	195	-
1928	296	96.4	*1,070	311	710	*609	*1,300	429	376	109	239	*1,810	*610
1929	216	112	93.1	112	802	*2,130	*745	530	*673	*639	444	147	*553
1930	*2,290	686	589	602	*836	328	321	199	233	408	85.7	47.3	*552
1931	22.8	50.2	254	326	165	286	*991	812	204	210	1,050	89.8	373
1932	40.4	24.9	130	931	561	1,020	470	161	152	42.8	30.8	7.46	297
1933	231	674	1,260	779	768	375	*715	278	115	79.1	115	26.4	*449
1934	9.96	8.89	19.3	18.0	172	707	1,460	518	765	245	247	965	426
1935	150	575	1,360	799	565	915	1,585	469	130	281	39.5	326	599
1936	80.3	300	441	2,672	1,936	1,512	2,159	203	229	381	435	146	870
1937	258	114	699	2,387	991	639	1,370	390	501	209	1,188	611	763
1938	305	278	238	806	340	563	490	166	1,225	2,451	394	84.3	615
1939	95.0	275	557	695	2,015	1,446	821	737	315	678	1,916	505	816
1940	134	113	170	336	1,154	665	656	618	430	127	667	118	429
1941	39.3	714	315	479	321	649	599	117	142	124	18.2	14.7	293
1942	7.93	8.17	27.8	17.9	245	546	138	619	130	177	557	295	232
1943	715	558	997	1,205	957	987	755	239	182	244	27.9	28.7	574
1944	11.4	19.3	44.0	442	972	1,478	1,228	298	71.8	293	164	875	488
1945	1,305	554	748	612	1,370	535	315	224	125	1,336	504	5,314	906
1946	237	181	1,350	1,350	1,803	413	338	489	229	637	117	99.8	594
1947	222	231	207	1,378	357	671	465	193	149	106	167	168	361
1948	351	1,572	302	644	2,152	1,120	1,204	308	376	324	366	95.5	726
1949	484	1,414	1,436	1,062	1,189	539	523	631	170	358	464	218	705
1950	224	790	302	423	394	508	194	545	481	1,208	123	124	444

* Revised.

Monthly and yearly runoff, in inches, of Neuse River near Northside, N. C.

Water year	Monthly and yearly runoff, in inches, of Neuse River near Northside, N. C.											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1927	-	-	-	-	-	-	-	-	-	-	0.50	0.41	-
1928	0.65	0.20	*2.34	0.68	1.46	*1.34	*2.77	0.94	0.80	0.24	.53	*3.85	*15.80
1929	.47	.24	.20	.24	1.59	*4.66	*1.58	1.16	*1.43	*1.40	.97	.31	*14.25
1930	*5.01	1.47	1.29	1.32	*1.65	.72	.68	.44	.49	.89	.19	.10	*14.23
1931	.05	.11	.56	.71	.33	.63	*2.10	1.78	.43	.46	*2.29	.19	9.64
1932	.09	.05	.29	2.04	1.15	2.23	1.00	.35	.32	.09	.07	.02	7.70
1933	.51	1.43	2.75	1.71	1.52	.92	*1.52	.61	.24	.17	.25	.06	*11.59
1934	.02	.02	.04	.04	.34	1.85	3.10	1.14	1.62	.54	.54	2.05	11.00
1935	.33	1.22	2.98	1.75	1.12	2.01	3.36	1.03	.28	.62	.09	.69	15.48
1936	.18	.64	.97	5.86	3.97	3.31	4.58	.44	.49	.83	.95	.31	22.53
1937	.56	.24	1.53	5.23	1.96	1.40	2.90	.85	.64	.46	2.61	1.29	19.67
1938	.67	.59	.52	1.76	.67	1.23	1.04	.36	2.60	5.37	.86	1.18	15.85
1939	.21	.58	1.22	1.52	3.99	3.17	1.74	1.61	.67	1.49	4.20	.65	21.05
1940	.29	.24	.37	.74	2.37	1.46	1.39	1.36	.91	.28	1.46	.25	11.12
1941	.09	1.52	.69	1.05	.63	1.42	1.27	.26	.30	.27	.04	.03	7.57
1942	.02	.02	.06	.04	.49	1.20	2.29	1.36	.28	.39	1.22	.63	6.00
1943	1.57	1.18	2.19	2.64	1.89	2.16	1.60	.52	.39	.54	.06	.06	14.80
1944	.02	.04	.10	.97	1.99	3.24	2.61	.65	.15	.64	.36	1.86	12.63
1945	2.86	1.18	1.64	1.34	2.71	1.17	.67	.49	.27	2.93	1.10	7.03	23.39
1946	.52	.38	2.96	2.86	3.57	.91	.72	1.07	.48	1.40	.27	.21	15.35
1947	.49	.49	.45	3.02	.71	1.47	.99	.42	.32	.23	.37	.36	9.32
1948	.77	3.33	.66	1.41	4.41	2.45	2.55	.67	.30	.71	.80	.20	18.76
1949	1.06	3.00	3.15	2.33	2.35	1.18	1.11	1.38	.36	.78	1.02	.46	18.18
1950	.49	1.67	.66	.93	.78	1.11	.41	1.19	1.02	2.65	.27	.26	11.44

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1927	662	-	-	-	-	-	-	-	-	-
1928	662,1333	*15,800	Apr. 28, 1928	28	*610	*1.16	*15.80	*522	*13.52	
1929	682,1333	*13,800	Mar. 1, 1929	57	*553	*1.05	*14.25	*818	*21.09	
1930	697,1333	26,600	Oct. 3, 1929	13	*552	*1.05	*14.23	*279	*7.20	
1931	712,1333	5,680	Apr. 7, 1931	11	373	.709	9.64	363	9.35	
1932	727	9,300	Mar. 7, 1932	3.1	297	.565	7.70	462	11.96	
1933	742,1333	4,470	Dec. 27, 1932	5.5	*449	*.854	*11.59	*271	*6.98	
1934	757	*14,000	Apr. 10, 1934	5.9	426	.810	11.00	598	15.45	
1935	782,1032	11,300	Nov. 30, 1934	17	599	1.14	15.48	493	12.72	
1936	802,1032	14,400	Apr. 7, 1936	18	870	1.65	22.53	692	23.07	
1937	822	10,600	Apr. 27, 1937	62	763	1.45	19.67	741	19.12	
1938	852,1032	22,100	July 27, 1938	25	615	1.17	15.85	624	16.08	
1939	872,1032	15,200	Aug. 19, 1939	45	816	1.55	21.05	773	19.94	
1940	892	4,500	May 26, 1940	31	429	.816	11.12	483	12.52	
1941	922	6,180	Nov. 15, 1940	9.2	293	.557	7.57	208	5.37	
1942	952	4,260	May 17, 1942	5.8	232	.441	6.00	419	10.84	
1943	972	5,280	Apr. 20, 1943	13	574	1.09	14.80	389	10.02	
1944	1002	ae,400	Apr. 13, 1944	7	488	.928	12.63	701	18.15	
1945	1032	36,600	Sept. 18, 1945	48	906	1.72	23.39	836	21.57	
1946	1052	10,200	Feb. 11, 1946	37	594	1.13	15.35	500	12.92	
1947	1082	6,040	Jan. 21, 1947	21	361	.686	9.32	490	12.65	
1948	1112	12,200	Feb. 15, 1948	30	726	1.38	18.76	820	21.21	
1949	1142	10,700	Nov. 30, 1948	50	705	1.34	18.18	535	13.79	
1950	1172	6,030	Nov. 3, 1949	59	444	.844	11.44	-	-	

* Revised.

a Maximum peak discharge; maximum discharge during year, 14,000 cfs at 12 p.m. Sept. 30, stage rising.

132. Neuse River near Clayton, N. C.

Location--Lat 35°39', long 78°25', on left bank 5 ft downstream from bridge on State Highway 42, 1.8 miles upstream from Mill Creek, and 3 miles east of Clayton, Johnston County.

Drainage area--1,140 sq mi, approximately.

Supplemental records available--Records of chemical analyses and suspended-sediment for the period October 1943 to September 1944 are published in report of Geological Survey.

Gage--Water-stage recorder. Datum of gage is 128.12 ft above mean sea level (levels by Corps of Engineers). Prior to Mar. 18, 1942, water-stage recorder at site on right bank 1,100 ft upstream at same datum.

Average discharge--23 years (1927-50), 1,253 cfs (revised).

Extremes--1927-50: Maximum discharge, 22,900 cfs Sept. 19, 1945 (gage height, 22.12 ft); minimum, 44 cfs Sept. 15, 1932 (gage height, 0.28 ft, site then in use). Flood of July 23, 1919, reached a stage of 21.15 ft at former site, from floodmarks (discharge, 21,200 cfs).

NEUSE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Neuse River near Clayton, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	1,020	625	-
1928	749	542	2,450	802	1,540	1,370	1,980	1,660	1,010	553	1,480	6,100	1,670
1929	716	440	404	479	1,670	4,800	1,410	1,440	1,610	2,170	1,110	504	1,400
1930	5,027	1,900	1,480	1,340	1,730	838	918	507	955	680	275	241	1,324
1931	184	290	728	914	477	716	1,870	1,840	538	992	3,050	367	1,000
1932	185	167	505	1,970	1,400	2,410	1,070	601	507	185	162	71.6	770
1933	659	1,320	2,700	1,940	1,750	912	1,880	585	310	256	463	154	1,070
1934	76.5	119	115	133	519	1,600	3,110	918	1,610	660	1,020	1,770	951
1935	336	1,047	*3,289	1,811	1,325	2,083	3,058	1,012	383	660	195	1,002	*1,350
1936	261	679	916	5,149	4,108	3,015	4,170	502	945	1,080	1,085	574	1,864
1937	988	510	2,331	4,746	2,534	1,573	2,749	1,109	694	686	2,517	1,471	1,820
1938	675	658	660	1,482	797	1,094	1,096	546	2,182	3,026	1,238	381	1,157
1939	318	608	1,076	1,195	4,630	2,899	1,599	1,351	676	1,521	3,600	1,327	1,717
1940	404	401	501	836	2,083	1,371	1,764	1,129	806	324	2,071	320	997
1941	359	1,110	653	910	673	1,380	403	401	1,158	180	113	610	715
1942	110	121	332	203	854	1,287	483	1,100	341	370	1,198	795	598
1943	1,507	898	1,729	2,768	1,889	1,985	1,537	577	741	800	150	160	1,227
1944	128	186	293	1,444	2,284	3,194	2,608	766	283	630	545	1,073	1,114
1945	2,899	811	1,745	1,397	2,704	1,317	739	560	292	2,196	1,382	5,960	1,825
1946	601	510	2,509	2,870	3,572	997	1,147	1,589	708	1,382	485	389	1,386
1947	671	733	692	2,718	779	1,400	1,128	471	426	400	431	1,006	907
1948	791	2,936	814	1,445	4,559	2,305	1,882	658	756	570	704	259	1,457
1949	1,040	2,551	3,201	*2,149	2,242	1,163	1,095	1,423	679	1,185	1,580	973	*1,587
1950	406	1,511	733	925	871	1,035	539	1,288	879	2,224	292	343	922

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	1.03	0.61	-
1928	0.76	0.33	2.48	0.81	1.46	1.36	1.94	1.68	0.99	0.56	1.49	5.97	19.85
1929	.72	.43	.41	.48	1.53	4.86	1.38	1.46	1.57	2.20	1.12	.49	16.65
1930	5.08	1.86	1.50	1.35	1.58	.85	.90	.51	.93	.69	.28	.24	15.77
1931	.19	.28	.74	.92	.44	.72	1.83	1.86	.53	1.00	3.08	.36	11.95
1932	.19	.16	.51	1.99	1.33	2.44	1.05	.61	.50	.19	.16	.07	9.20
1933	.67	1.29	2.73	1.96	1.60	.92	1.84	.59	.30	.26	.47	.15	12.78
1934	.08	.12	.12	.13	.29	1.62	3.05	.93	1.57	.67	1.03	.73	11.84
1935	.54	1.02	*3.33	1.83	1.21	2.11	2.99	1.02	.37	.67	.20	.98	*16.07
1936	.26	.66	.93	5.21	3.89	3.05	4.08	.51	.92	1.09	1.10	.56	22.26
1937	1.00	.50	2.35	4.80	2.31	1.59	2.69	1.12	.68	.69	2.55	1.44	21.72
1938	.68	.64	.67	1.50	.73	1.11	1.07	.55	2.13	3.06	1.26	.37	13.77
1939	.32	.59	1.09	1.21	4.23	2.93	1.56	1.37	.66	1.53	3.64	1.29	20.42
1940	.41	.39	.51	.85	1.97	1.39	1.73	1.14	.79	.33	2.09	.31	11.91
1941	.16	1.09	.66	.92	.61	1.40	1.50	.33	.39	1.17	.18	.11	8.52
1942	.11	.12	.34	.21	.76	1.30	.47	1.11	.33	.37	1.21	.76	7.11
1943	1.52	.88	1.75	2.80	1.72	2.01	1.50	.58	.72	.81	.15	.16	14.60
1944	.13	.18	.30	1.46	2.16	3.23	2.55	.77	.28	.64	.55	1.05	13.30
1945	2.93	.79	1.76	1.41	2.47	1.33	.72	.57	.29	2.22	1.40	5.83	21.72
1946	.61	.50	2.54	2.90	3.26	1.01	1.12	1.61	.69	1.40	.49	.38	16.51
1947	.68	.72	.70	2.75	.71	1.42	1.10	.48	.42	.40	.44	.98	10.80
1948	.80	2.87	.82	1.46	4.31	2.33	1.84	.67	.74	.58	.71	.25	17.58
1949	1.05	2.50	3.24	*2.17	2.05	1.18	1.07	1.44	.66	1.20	1.40	.95	*18.91
1950	.41	1.48	.74	.94	.80	1.05	.53	1.30	.86	2.25	.30	.34	11.00

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	662	-	-	-	-	-	-	-	-
1928	662	16,000	Sept. 20, 1928	114	1,670	1.46	19.85	1,495	17.84
1929	682	13,800	Mar. 6, 1929	308	1,400	1.23	16.65	1,976	23.53
1930	697,1032	22,000	Oct. 3, 1929	125	1,324	1.16	15.77	717	8.54
1931	712	11,000	Aug. 6, 1931	87	1,000	.877	11.95	974	11.60
1932	727	9,900	Mar. 8, 1932	45	770	.675	9.20	1,090	13.03
1933	742	7,500	Apr. 18, 1933	68	1,070	.938	12.78	706	8.41
1934	757	9,000	Apr. 10-15, 1934	48	951	.854	11.34	*1,519	*15.71
1935	782,1333	17,500	Dec. 1, 1934	109	1,350	*1.18	*16.07	1,112	13.23
1936	802	12,600	Apr. 8, 1936	148	1,864	1.64	22.26	2,032	23.55
1937	822	9,920	Jan. 30, 1937	290	1,820	1.60	21.72	1,669	19.86
1938	852	12,000	July 30, 1938	196	1,157	1.01	13.77	1,158	13.78
1939	872	12,300	Feb. 11, 1939	243	1,717	1.51	20.42	1,658	19.73
1940	892	11,500	Aug. 16, 1940	173	915	.875	11.91	1,047	12.51
1941	929	6,520	Apr. 6, 1941	76	797	.627	8.52	603	7.18
1942	952	6,030	Feb. 19, 1942	57	598	.525	7.11	899	10.69
1943	972	8,250	Jan. 20, 1943	74	1,227	1.08	14.60	930	11.06
1944	1002	9,120	Mar. 21, 1944	92	1,114	.977	13.30	1,523	18.17
1945	1032	22,900	Sept. 19, 1945	158	1,825	1.60	21.72	1,670	19.89
1946	1052	8,950	Feb. 12, 1946	231	1,386	1.22	16.51	1,256	14.96
1947	1082	8,950	Sept. 22, 1947	147	907	.796	10.80	1,108	13.19
1948	1112	11,200	Feb. 15, 1948	119	1,457	1.28	17.38	1,648	19.68
1949	1142,1503	9,150	Nov. 30, 1948	219	*1,587	1.39	*18.91	*1,239	*14.75
1950	1172	6,790	May 16, 1950	175	922	.809	11.00	-	-

* Revised.

133. Middle Creek near Clayton, N. C.

Location.--Lat 35°34'10", long 78°35'30", on right bank 300 ft downstream from bridge on State Highway 50, a quarter of a mile upstream from Buffalo Branch, 3¼ miles downstream from county line, and 9¼ miles southwest of Clayton, Johnston County.

Drainage area.--80.7 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 177 ft (by barometer). Nov. 1-20, 1939, staff gage at same site and datum.

Average discharge.--11 years (1939-50), 92.0 cfs (revised).

Extremes.--1939-50: Maximum discharge, 3,460 cfs (revised) Sept. 18, 1945 (gage height, 11.70 ft); minimum, 1.0 cfs Sept. 21, 1948.

Remarks.--Occasional slight diurnal fluctuation at low flow caused by gristmills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#27	32.1	42.0	68.9	126	140	134	53.2	21.2	8.55	37.0	12.2	#58.2
1941	5.54	18.7	31.1	47.6	46.2	102	153	20.4	17.9	257	32.3	10.2	62.1
1942	8.69	7.27	53.7	31.6	71.9	150	65.1	56.7	69.2	36.1	148	121	68.5
1943	112	76.3	128	251	154	143	97.2	35.4	112	206	28.9	37.2	115
1944	15.5	28.8	71.3	211	204	340	225	68.0	16.0	17.2	44.0	15.6	105
1945	119	49.2	120	91.7	167	126	67.5	40.6	12.8	26.2	189	*345	*112
1946	59.6	46.7	236	272	207	101	137	137	42.5	66.3	44.4	41.3	116
1947	76.0	79.5	71.2	157	65.2	90.0	94.2	43.0	33.1	22.3	14.4	72.8	88.2
1948	33.0	167	71.1	116	374	208	128	35.4	19.4	10.8	11.0	15.0	97.7
1949	54.6	171	212	141	189	105	76.8	*228	98.0	90.8	*340	94.9	*150
1950	38.4	74.7	61.9	91.8	81.2	85.6	43.8	64.6	23.6	111	13.3	16.6	58.8

* Revised.

* Not previously published; estimated on basis of records for Neuse River near Clayton and Little River near Princeton.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#0.39	0.44	0.60	0.98	1.69	1.99	1.86	0.76	0.29	0.12	0.53	0.17	#9.82
1941	.08	.26	.44	.68	.60	1.46	2.11	.29	.25	3.67	.46	.14	10.44
1942	.12	.10	.77	.45	.93	2.14	.90	.81	.96	.54	2.12	1.68	11.52
1943	1.60	1.06	1.79	3.59	1.99	2.05	1.34	.51	1.55	2.94	.38	.51	19.31
1944	.22	.40	1.02	3.01	2.73	4.65	3.11	.97	.25	.25	.63	.22	17.66
1945	1.70	.68	1.72	1.31	2.15	1.80	.93	.58	.18	.37	2.70	*4.77	*18.89
1946	.85	.65	3.37	3.88	2.68	1.45	1.90	1.95	.59	.95	.63	.57	19.47
1947	1.09	1.10	1.02	2.24	.84	1.29	1.30	.61	.46	.32	.21	1.01	11.49
1948	4.47	2.31	1.02	1.65	5.00	2.97	1.77	.51	.27	.15	.16	.21	16.49
1949	.78	2.36	3.02	2.02	2.44	1.50	1.06	*3.26	1.35	1.30	*4.86	1.31	*25.26
1950	.55	1.03	.88	1.31	1.05	1.19	.61	.92	.33	1.59	.19	.23	9.88

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	577	Apr. 22, 1940	#2.0	#58.2	#0.721	#9.82	54.4	9.17
1941	922, 952	1,350	July 15, 1941	3.6	62.1	.770	10.44	63.3	10.65
1942	952	1,430	Sept. 8, 1942	3.1	68.5	.849	11.52	89.0	14.98
1943	972	*2,260	July 14, 1943	9.4	115	1.43	19.31	98.1	16.50
1944	1002	1,600	Mar. 21, 1944	6.8	105	1.30	17.66	119	20.12
1945	1032, 1233	*3,460	Sept. 18, 1945	5	*112	*1.39	*18.89	*117	*19.66
1946	1052	950	Apr. 27, 1946	8.9	116	1.44	19.47	106	17.81
1947	1082	850	Sept. 22, 1947	7.0	68.2	.845	11.49	71.8	12.08
1948	1112	1,550	Feb. 14, 1948	1.3	97.7	1.21	16.49	112	18.85
1949	1142, 1233	*3,260	May 11, 1949	12.0	*150	*1.86	*25.26	*128	*21.56
1950	1172	426	May 17, 1950	5.4	58.8	.729	9.88	-	-

* Revised.

* Not previously published.

134. Little River near Princeton, N. C.

Location.--Lat 35°30'20" (revised), long 78°09'30", on left bank a quarter of a mile upstream from bridge on county road, three-quarters of a mile upstream from Little Creek, and 3 miles north of Princeton, Johnston County.

Drainage area.--229 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 108 ft (by barometer). Prior to Nov. 17, 1934, staff gage at same site and datum.

Average discharge.--20 years (1930-50), 251 cfs.

Extremes.--1930-50: Maximum discharge, 4,470 cfs (revised) Dec. 2, 1934 (gage height, 12.68 ft); minimum, 1.0 cfs several times in September and October 1932 (gage height, 0.30 ft).

Flood of July 1919 reached a stage of 14.57 ft; September 1924, 14.90 ft; September 1928, 13.3 ft; October 1929, 13.47 ft; from information by local resident.

Remarks.--Diurnal fluctuation and regulation for short periods during low flow from a mill upstream was considerable until 1941 but only slight thereafter.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	239	220	76.0	336	62.6	20.0	20.4	-
1931	12.2	24.8	99.2	178	119	139	332	436	88.9	369	783	142	229
1932	34.2	22.0	161	284	295	359	173	111	141	30.9	31.4	5.21	137
1933	37.0	130	401	435	455	235	324	88.2	31.8	34.8	66.5	45.2	189
1934	46	415	416	424.1	49.6	212	381	94.2	327	206	322	285	461
1935	68.9	121	631	485	250	373	385	248	58.7	211	37.9	271	262
1936	45.0	161	201	985	980	648	820	71.6	279	221	275	88.7	395
1937	287	315	717	892	838	420	697	169	88.8	218	305	191	426
1938	67.7	83.2	109	199	121	128	241	96.6	478	231	87.4	423	188
1939	99.3	107	245	285	953	678	251	180	153	793	612	203	377
1940	66.9	63.8	84.5	165	325	323	300	147	102	66.9	501	72.7	185
1941	29.7	88.7	107	155	161	288	264	56.0	80.0	538	69.8	19.7	155
1942	11.1	31.0	67.1	66.3	149	328	159	278	75.5	70.1	298	214	144
1943	907	189	361	589	412	430	253	93.3	358	51.6	40.3	31.3	349
1944	19.3	35.9	76.5	453	528	985	650	115	43.8	131	121	34.8	265
1945	267	86.4	267	271	453	319	120	93.8	39.7	218	502	679	275
1946	114	97.1	512	663	576	219	275	458	187	184	106	56.2	283
1947	67.6	197	175	403	159	265	267	66.3	72.7	184	68.3	123	171
1948	119	645	285	394	1,285	533	224	84.4	110	73.5	116	41.1	321
1949	263	469	624	389	419	275	200	357	92.9	357	317	479	352
1950	96.4	176	143	227	177	193	101	250	88.3	228	43.2	61.8	147

* Not previously published; estimated or partly estimated on the basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	1.20	1.07	0.38	1.64	0.32	0.10	0.10	-
1931	0.06	0.12	0.50	0.90	0.54	.70	1.62	2.19	.43	1.86	3.94	.69	13.55
1932	.17	.11	.81	1.43	1.39	1.81	.84	.56	.69	1.16	.16	.02	8.15
1933	.19	.64	2.02	2.19	2.07	1.18	1.58	.44	.16	.18	.33	.22	11.20
1934	*0.03	*0.06	*0.08	*1.12	.23	1.07	1.86	.47	1.59	1.04	1.62	1.39	*9.56
1935	.35	.59	3.18	2.44	1.14	1.88	1.87	1.25	.29	1.06	.19	1.32	15.56
1936	.23	.28	1.01	4.96	4.62	3.26	4.00	.36	1.36	1.11	1.39	.43	23.51
1937	1.44	1.54	3.61	4.50	3.81	2.11	3.39	.85	.43	1.10	1.53	.93	25.24
1938	.54	.40	.55	1.00	.55	.64	1.17	.49	2.33	1.16	.44	2.06	11.13
1939	.50	.52	1.23	1.43	4.33	3.41	1.23	.91	.75	3.99	3.08	.99	22.37
1940	.34	.31	.43	.83	1.53	1.63	1.46	.74	.50	.34	2.52	.35	10.98
1941	.15	.43	.54	.78	.73	1.45	1.28	.28	.39	2.71	.35	.10	9.19
1942	.06	.15	.34	.33	.68	1.65	.68	1.40	.36	.35	1.50	1.04	8.54
1943	4.57	.92	1.82	2.97	1.87	2.16	1.23	.47	1.75	2.60	.20	.15	20.71
1944	.10	.17	.39	2.28	2.49	4.96	3.16	.58	.21	6.66	.61	.17	15.78
1945	1.55	.42	1.34	1.36	2.06	1.61	.58	.47	.19	1.10	2.53	3.31	16.32
1946	.57	.47	2.58	3.34	2.62	1.10	1.34	2.31	.91	.74	.54	.27	16.79
1947	.34	.96	.88	2.03	.72	1.34	1.30	.33	.35	.93	.34	.60	10.12
1948	.60	3.14	1.43	1.98	6.05	2.68	1.09	.42	.53	.37	.59	.20	19.08
1949	1.32	2.28	3.14	1.96	1.90	1.38	.97	1.80	.45	1.70	1.60	2.33	20.83
1950	.49	.86	.72	1.15	.81	.97	.49	1.16	.43	1.15	.22	.30	8.75

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Little River near Princeton, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	10	-	-	-	-	-
1931	712	2,360	Aug. 15, 1931	7.2	229	1.00	13.55	235	13.95
1932	727	1,160	Mar. 10, 1932	1.0	157	.598	8.15	166	9.91
1933	742	1,430	Jan. 27, 1933	1.0	189	.825	11.20	144	8.52
1934	757	2,450	June 20, 1934	-	161	1.703	19.56	228	13.51
1935	782	*4,470	Dec. 2, 1934	3.8	262	1.14	15.56	227	13.46
1936	802	3,340	Apr. 8, 1936	12	395	1.72	23.51	472	28.08
1937	822	3,680	Jan. 31, 1937	21	426	1.86	25.24	337	19.94
1938	852	3,270	Sept. 21, 1938	17	188	.821	11.13	204	12.09
1939	872	3,010	July 22, 1939	27	377	1.65	22.37	358	21.20
1940	892	3,270	Aug. 19, 1940	16	185	.808	10.98	185	11.02
1941	922	2,580	July 14, 1941	9.0	155	.677	9.19	146	8.62
1942	952	1,260	Sept. 10, 1942	2.2	144	.629	8.54	258	15.30
1943	972	3,780	Oct. 17, 1942	3.2	349	1.52	20.71	237	14.06
1944	1002	2,640	Mar. 22, 1944	13	265	1.16	15.78	307	18.23
1945	1032	3,600	Sept. 20, 1945	21	275	1.20	16.32	284	16.83
1946	1052	1,850	Feb. 11, 1946	28	283	1.24	16.79	259	15.35
1947	1082	1,080	Nov. 26, 1946	10	171	.747	10.12	221	13.11
1948	1112	3,750	Feb. 16, 1948	16	321	1.40	19.08	328	20.65
1949	1142	2,400	May 12, 1949	50	352	1.54	20.83	273	16.16
1950	1172	808	July 16, 1950	24	147	.642	8.75	-	-

* Revised.

* Not previously published.

135. Neuse River near Goldsboro, N. C.

Location.--Lat 35°20', long 78°00', on left bank 5 ft downstream from highway bridge, 0.2 mile upstream from Stony Creek, 1.5 miles downstream from Atlantic Coast Line Railroad bridge, 3 miles south of Goldsboro, Wayne County, and 4.3 miles downstream from Little River.

Drainage area.--2,390 sq mi. At sites used July 24, 1931, to Aug. 31, 1948, 2,370 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 42.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 24, 1931, chain gage at railroad bridge 1.5 miles upstream at datum 2.00 ft higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 miles upstream at datum 1.71 ft higher than present datum.

Average discharge.--20 years (1930-50), 2,521 cfs.

Extremes.--1930-50: Maximum discharge, 30,700 cfs Sept. 23, 1945; maximum gage height, 28.72 ft Sept. 23, 1945, site and datum then in use; minimum discharge, 85 cfs Sept. 14, 1932 (gage height, 1.03 ft), site and datum then in use.

Maximum discharge known, 38,600 cfs (corrected) Oct. 5, 1929 (gage height, 27.3 ft, corrected, at railroad bridge and present datum).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	2,450	2,140	809	2,120	987	419	347	-
1931	217	*425	1,150	2,070	1,140	1,470	3,820	3,430	972	1,900	7,280	938	*2,080
1932	359	303	1,170	3,310	2,840	4,090	1,980	1,100	1,220	451	292	116	1,450
1933	774	2,060	4,630	5,070	5,120	2,660	4,000	1,480	420	417	1,132	779	2,370
1934	169	207	242	319	578	2,630	5,130	1,360	2,850	3,170	2,090	3,150	1,820
1935	785	716	*6,645	4,156	2,512	3,668	4,983	1,935	661	1,618	363	2,643	*2,561
1936	533	1,484	2,035	9,555	8,878	6,090	9,725	1,023	1,934	1,946	3,277	1,355	3,963
1937	3,654	2,646	6,294	7,453	9,217	4,075	5,198	3,407	981	1,632	2,496	3,717	4,168
1938	924	1,029	1,241	2,408	1,437	1,742	2,858	915	3,576	3,928	3,469	2,488	2,170
1939	971	1,183	2,092	2,737	6,332	7,429	2,879	2,211	1,324	3,288	4,634	3,364	3,342
1940	838	743	898	1,608	3,687	3,096	3,422	1,625	1,398	618	3,224	645	1,826
1941	278	1,366	1,078	1,635	1,568	2,705	3,423	670	786	3,791	669	237	1,517
1942	165	213	622	559	1,400	3,180	1,442	1,850	1,087	570	2,645	2,072	1,318
1943	5,042	1,926	3,179	4,887	4,519	4,041	3,423	1,329	2,510	3,731	591	538	2,973
1944	258	399	792	4,056	5,006	7,498	5,882	1,610	544	766	1,193	876	2,398
1945	3,235	865	3,214	2,576	3,932	3,501	1,233	941	578	2,902	4,949	9,134	3,083
1946	2,027	1,257	4,230	6,835	6,523	2,425	2,488	3,398	1,804	2,285	1,236	793	2,927
1947	1,361	1,743	1,717	4,653	1,740	2,775	3,148	862	698	1,365	1,090	1,872	1,921
1948	1,560	6,493	2,567	3,372	10,760	5,389	3,389	1,094	1,446	759	1,058	352	3,140
1949	2,061	4,123	7,406	4,652	4,412	2,961	2,164	4,183	1,140	2,937	2,716	5,343	3,674
1950	913	2,356	1,547	1,925	1,704	1,937	1,079	2,253	1,336	4,126	770	574	1,714

* Revised.

Monthly and yearly runoff, in inches, of Neuse River near Goldsboro, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	1.19	1.01	0.39	1.00	0.48	0.20	0.16	-
1931	0.11	*0.20	0.56	1.01	0.50	.71	1.80	1.67	.46	.95	3.54	.44	*11.93
1932	.17	.14	.67	1.61	1.29	1.99	.95	.54	.58	.22	.14	.05	8.33
1933	.38	.97	2.25	2.46	2.25	1.29	1.86	.72	.23	.20	.55	.37	13.55
1934	.08	.10	.12	.16	.25	1.28	2.41	.66	1.34	1.54	1.02	1.48	10.44
1935	.38	.34	*3.23	2.02	1.10	1.78	2.35	.94	.31	.79	.18	1.24	*14.66
1936	.26	.70	.99	4.65	4.04	2.96	4.58	.50	.91	.95	1.59	.64	22.77
1937	1.78	1.25	3.07	3.62	4.05	1.98	2.44	1.66	.46	.60	1.21	1.75	23.87
1938	.45	.48	.60	1.18	.63	.85	1.35	.44	1.68	1.91	1.68	1.17	12.42
1939	.47	.56	1.02	1.33	3.66	3.61	1.35	1.08	.62	1.60	2.26	1.56	19.14
1940	.41	.35	.44	.88	1.68	1.51	1.61	.79	.66	.30	1.57	.30	10.50
1941	.14	.64	.52	.80	.69	1.32	1.61	.33	.37	1.84	.33	.11	8.70
1942	.08	.10	.30	.27	.62	1.55	.68	.90	.51	.28	1.29	.98	7.56
1943	2.45	.91	1.55	2.38	1.99	1.97	1.61	.65	1.18	1.81	.29	.25	17.04
1944	.13	.19	.39	1.97	2.28	3.65	2.77	.78	.26	.37	.58	.41	13.78
1945	1.57	.41	1.56	1.25	1.73	1.70	.58	.46	.27	1.41	2.41	4.30	17.65
1946	.99	.59	2.06	3.33	2.87	1.18	1.17	1.65	.85	1.11	.60	.37	16.77
1947	.86	.82	.84	2.26	.76	1.35	1.48	.42	.33	.66	.55	.88	10.99
1948	.76	3.06	1.25	1.64	4.90	2.62	1.60	.53	.63	.37	.51	.17	18.04
1949	.99	1.92	3.57	2.24	1.92	1.43	1.01	2.02	.53	1.42	1.31	2.49	20.85
1950	.44	1.10	.75	.93	.74	.93	.50	1.09	.62	1.99	.37	.27	9.73

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	38,600	Oct. 5, 1929	-	-	-	-	-	-
1931	712,1333	11,400	Aug. 18, 1931	-	*2,080	*0.878	*11.93	2,100	12.04
1932	727	10,900	Mar. 14, 1932	90	1,450	.612	8.33	1,910	10.95
1933	742	9,660	Apr. 24, 1933	110	2,370	1.00	13.55	1,790	10.25
1934	757	9,300	Apr. 19, 1934	138	1,820	.768	10.44	*2,462	*14.10
1935	782,1333	*21,400	Dec. 6, 1934	254	*2,561	*1.08	*14.66	2,211	12.66
1936	802	26,300	Apr. 11, 1936	316	3,963	1.67	22.77	4,684	26.92
1937	822	22,000	Feb. 3, 1937	558	4,168	1.76	23.67	3,374	19.30
1938	852	11,400	Aug. 4, 1938	490	2,170	.916	12.42	2,259	12.94
1939	872	15,500	Mar. 6, 7, 1939	549	3,342	1.41	19.14	3,193	18.29
1940	892	11,400	Aug. 22, 1940	227	1,826	.770	10.50	1,845	10.59
1941	922	9,560	July 20, 1941	144	1,517	.640	8.70	1,374	7.88
1942	952	7,100	Sept. 12, 1942	106	1,318	.556	7.56	2,090	11.99
1943	972	12,200	Oct. 19, 1942	213	2,973	1.25	17.04	2,239	12.84
1944	1002	13,000	Mar. 26, 1944	173	2,398	1.01	13.78	2,893	16.61
1945	1032	30,700	Sept. 23, 1945	377	3,083	1.30	17.65	3,099	17.75
1946	1052	10,600	Jan. 6, 1946	454	2,927	1.24	16.77	2,697	15.45
1947	1082	8,400	Jan. 24, 1947	363	1,921	.811	10.99	2,400	13.74
1948	1112	20,300	Feb. 19, 1948	250	3,140	1.32	18.04	3,398	19.45
1949	1142	13,000	Dec. 8, Sept. 5	605	3,674	1.54	20.85	2,934	16.66
1950	1172	7,660	July 19, 1950	364	1,714	.717	9.73	-	-

* Revised.

136. Neuse River at Kinston, N. C.

Location.--Lat 35°15'30", long 77°35'10", on left bank at Kinston, Lenoir County, two city blocks downstream from bridge on State Highway 11.

Drainage area.--2,690 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in reports of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 10.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 25, 1934, chain gage at highway bridge 1 mile downstream at datum 0.80 ft lower.

Average discharge.--20 years (1930-50), 2,921 cfs (revised).

Extremes.--1930-50: Maximum discharge, 25,900 cfs Sept. 27, 1945; maximum gage height, 22.44 ft Sept. 27, 1945; minimum discharge, 124 cfs Sept. 26, 1932 (gage height, 1.29 ft, site and datum then in use).

Maximum stage known, 25.0 ft, present site and datum, July 1919 (discharge, about 39,000 cfs), from information by North Carolina State Highway and Public Works Commission. Flood of Oct. 9, 10, 1929, reached a stage of 22.48 ft (discharge, 28,000 cfs), from information by North Carolina State Highway and Public Works Commission.

NEUSE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Neuse River at Kinston, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	2,740	1,040	2,190	1,170	635	569	-
1931	383	603	1,270	2,440	1,400	1,600	4,040	3,500	*1,280	2,220	7,990	*1,320	2,350
1932	472	*390	1,510	3,650	3,360	4,390	2,390	1,410	1,520	*548	397	166	*1,681
1933	859	2,430	4,980	5,690	6,350	3,300	4,490	2,110	732	670	1,510	1,150	2,840
1934	248	264	282	380	762	2,620	5,910	1,540	3,030	3,780	2,320	4,060	2,100
1935	1,150	876	7,181	4,735	3,095	3,851	5,535	2,552	956	1,974	754	3,638	3,010
1936	824	1,746	2,538	10,930	10,130	7,150	10,730	1,395	2,135	2,189	3,703	1,575	4,563
1937	4,369	3,133	7,434	7,885	11,340	5,222	5,881	4,641	1,113	1,387	2,398	4,626	4,913
1938	1,034	1,210	1,546	2,767	1,695	1,991	3,744	1,082	3,335	4,333	4,227	3,030	2,903
1939	1,314	1,305	2,142	3,159	9,317	9,533	3,434	2,563	1,658	3,297	4,792	4,666	3,500
1940	1,046	970	1,048	2,225	3,941	3,539	3,528	1,653	1,707	822	3,399	844	2,036
1941	404	1,399	1,170	1,810	1,875	3,113	4,087	949	888	4,247	962	360	1,772
1942	226	335	786	782	1,614	3,588	1,810	2,024	1,248	695	3,077	2,451	1,552
1943	6,513	2,239	3,713	5,142	5,396	4,313	4,173	1,749	2,681	3,991	613	679	3,445
1944	384	522	865	4,531	5,412	8,376	7,285	2,068	685	905	1,385	916	2,768
1945	3,364	1,006	3,527	2,942	3,787	4,216	1,304	1,072	726	2,805	5,659	8,668	3,292
1946	3,937	1,495	4,040	7,658	7,397	2,918	2,646	3,772	2,324	3,294	1,964	1,088	3,560
1947	1,712	1,910	2,122	4,796	2,226	3,174	3,694	1,115	852	1,906	1,569	1,966	2,255
1948	2,221	6,966	3,626	4,018	12,940	6,779	3,824	1,147	1,605	856	1,152	389	3,759
1949	2,181	4,206	8,605	5,384	4,675	3,600	2,566	4,702	1,442	3,362	2,755	6,008	4,125
1950	1,120	2,650	1,769	2,088	1,882	2,065	1,296	2,390	1,596	4,951	1,339	808	2,002

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	1.18	0.97	0.45	0.91	0.50	0.27	0.24	-
1931	0.16	0.25	0.55	1.04	0.54	0.69	1.50	*.53	.95	3.43	*.55	*11.86	
1932	0.20	*.16	.65	1.56	1.35	1.88	.99	.61	.63	*.23	.17	.07	*8.50
1933	.57	1.01	2.13	2.44	2.46	1.42	1.86	.91	.30	.29	.65	.48	14.32
1934	.11	.11	.12	.16	.30	1.12	2.45	.66	1.26	1.62	.99	1.68	10.58
1935	.49	.36	3.08	1.06	1.20	1.65	2.30	1.01	.40	.85	.32	1.51	15.20
1936	.35	.72	1.09	4.69	4.06	3.06	4.45	.60	.89	.94	1.59	.65	23.09
1937	1.87	1.29	3.18	3.58	4.39	2.24	2.44	1.99	1.46	.59	1.03	1.92	24.78
1938	.44	.50	.66	1.19	.66	.85	1.55	.46	1.38	1.86	1.81	1.26	12.62
1939	.56	.54	.92	1.35	3.60	4.08	1.43	1.10	.69	1.42	2.05	1.93	19.67
1940	.45	.40	.45	.95	1.58	1.43	1.46	.71	.71	.55	1.46	.35	10.30
1941	.17	.58	.50	.78	.73	1.33	1.70	.41	.37	1.82	.41	.15	8.95
1942	.10	.14	.34	.34	.62	1.54	.75	.87	.52	.30	1.32	1.01	7.85
1943	2.79	.93	1.59	2.20	2.09	1.85	1.73	.75	1.11	1.71	.35	.28	17.38
1944	.16	.22	.37	1.94	2.17	3.59	3.02	.89	.28	.39	.59	.38	14.00
1945	1.44	.42	1.51	1.26	1.47	1.81	.54	.46	.32	1.20	2.51	3.68	16.62
1946	1.69	.62	1.89	3.27	2.86	1.25	1.10	1.62	.96	1.41	.84	.45	17.96
1947	.73	.79	.91	2.06	.86	1.36	1.53	.48	.35	.82	.67	.82	11.36
1948	.95	2.89	1.55	1.72	5.19	2.91	1.59	.53	.67	.37	.49	.16	19.02
1949	.93	1.74	3.69	2.31	1.81	1.54	1.06	2.02	.60	1.44	1.18	2.49	20.81
1950	.48	1.10	.76	.89	.73	.88	.54	1.02	.66	2.12	.57	.34	10.09

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	-	-	-	-	-	-
1931	712, 1333	11,600	Aug. 23, 1931	290	2,350	0.874	*11.86	*2,360	*11.91
1932	727, 1333	12,000	Mar. 16, 1932	126	*1,681	*.625	*8.50	*2,176	*11.00
1933	742	9,800	Apr. 26, 1933	144	2,840	1.06	14.32	2,206	11.15
1934	757	9,320	Apr. 22, 1934	174	2,100	.781	10.58	2,811	14.17
1935	782	18,500	Dec. 9, 1934	490	3,010	1.12	15.20	2,660	13.43
1936	802	24,400	Apr. 14, 1936	505	4,563	1.70	23.09	5,391	27.22
1937	822	21,200	Feb. 6, 1937	660	4,913	1.83	24.78	3,972	20.04
1938	852	11,800	Aug. 7, 1938	628	2,505	.930	12.62	2,585	13.04
1939	872	17,200	Mar. 9, 1939	800	3,900	1.45	19.67	3,757	18.95
1940	892	10,900	Aug. 25, 1940	349	2,036	.757	10.30	2,027	10.25
1941	922	9,880	July 23, 1941	235	1,772	.659	8.95	1,637	8.28
1942	952	6,690	Sept. 15, 1942	170	1,552	.577	7.85	2,491	12.58
1943	972	13,400	Oct. 23, 1942	351	3,445	1.28	17.38	2,541	12.82
1944	1002	13,600	Mar. 30, 1944†	291	2,768	1.03	14.00	3,285	16.62
1945	1032	25,900	Sept. 27, 1945	532	3,292	1.22	16.62	3,456	17.45
1946	1052	all, 500	Feb. 21, 22, 1946	683	3,560	1.32	17.96	3,211	16.19
1947	1082	8,740	Jan. 27, 1947	514	2,255	.838	11.38	2,842	14.34
1948	1112	21,100	Feb. 22, 1948	306	3,759	1.40	19.02	3,951	19.99
1949	1142	13,600	Dec. 11, 1948	770	4,125	1.53	20.81	3,327	16.79
1950	1172	7,620	July 21, 1950	532	2,002	.744	10.09	-	-

* Revised.

† Corrected.

* Not previously published.

* Maximum peak discharge; maximum discharge during year, 21,100 cfs at 12:01 a.m. Oct. 1, 1945, stage falling.

137. Little Creek near Zebulon, N. C.

Location.--Lat 36°48'40" long 78°16'00", at County line about three-quarters of a mile above mouth and 2½ miles southeast of Zebulon, Wake County.

Drainage area.--5.2 sq mi.

Gage.--Staff gage. Altitude of gage about 200 ft from topographic map.

Extremes.--1924-26: Maximum discharge not determined; no flow during several periods in July, August, and September 1926.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	4.70	18.9	12.3	7.40	5.34	7.04	3.47	2.02	1.30	1.41	-
1926	0.78	2.74	3.85	9.14	15.8	14.9	6.93	.96	6.32	.82	.77	.16	45.20

* Not previously published; partly estimated on basis of records for stations on Dial Creek near Bahama and Fishing Creek near Enfield.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	1.04	4.18	2.47	1.64	1.15	1.56	0.74	0.45	0.29	0.30	-
1926	0.17	0.59	.85	2.03	3.17	3.31	1.48	.21	1.36	.18	.17	.03	13.55

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	Mar. 1, 1925	0.1	-	-	-	45.51	14.39
1926	622	a200	June 23, 1926	0	45.20	1.00	13.55	-	-

* Not previously published.
a Discharge estimated; may have been higher during period of no gage-height record Feb. 1-7, 1926.

138. Contentnea Creek near Wilson, N. C.

Location.--Lat 35°41'15" long 77°56'15", at bridge on U. S. Highway 301, 250 ft downstream from dam for municipal powerplant, 1 mile upstream from Atlantic Coast Line Railroad bridge, and 3 miles southwest of Wilson, Wilson County.

Drainage area.--236 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 78 ft (from topographic map). Prior to June 24, 1934, staff gage at tailrace of municipal powerplant 250 ft upstream at same datum.

Average discharge.--20 years (1930-50), 247 cfs.

Extremes.--1930-50: Maximum discharge, 4,830 cfs Aug. 17, 1940 (gage height, 13.80 ft); minimum, about 0.2 cfs Oct. 6-15, 1932, Nov. 24 to Dec. 26, 1933.
Maximum stage known, about 22.2 ft (revised) in September 1924, from information furnished by North Carolina Highway and Public Works Commission.

Remarks.--City of Wilson has diverted water for municipal supply since 1896. Amount of diversion has increased through the years up to about 3 cfs. Extreme diurnal fluctuation and considerable regulation during low flow caused by municipal reservoir and powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	281	246	53.1	306	66.1	20.1	21.1	-
1931	1.60	25.0	102	185	133	170	346	375	69.3	278	596	249	212
1932	30.9	17.6	205	281	319	328	152	109	100	7.75	18.8	2.21	131
1933	35.0	125	389	497	471	263	338	85.9	48.8	51.5	41.9	9.33	195
1934	1.63	.30	1.79	9.35	34.3	185	370	75.0	228	375	434	284	167
1935	70.3	106	475	553	258	402	441	203	33.2	334	34.8	224	264
1936	27.0	119	161	900	921	608	819	56.3	367	171	221	26.8	364
1937	182	294	618	927	821	398	859	175	30.2	167	241	184	405
1938	48.2	71.5	133	210	118	149	292	106	462	301	134	350	197
1939	79.2	90.3	219	284	955	712	265	196	213	1,227.819	232	439	868
1940	57.4	70.2	97.1	167	296	299	275	118	140	74.6	596	72.5	188
1941	22.3	82.8	105	175	215	323	246	37.1	38.9	350	56.5	12.6	138
1942	2.70	11.6	54.9	56.8	141	353	144	257	33.9	22.0	194	260	128
1943	891	187	342	609	411	426	278	119	200	558	15.7	7.3	338
1944	8.22	15.9	55.3	325	436	958	617	91.3	20.8	51.2	156	8.13	228
1945	231	78.8	241	274	485	334	102	99.5	52.1	384	440	656	280
1946	107	121	512	686	565	232	270	417	182	117	84.3	54.3	278
1947	70.6	245	184	410	162	259	290	67.1	48.2	178	52.5	178	179
1948	145	749	628	294	2,261	608	243	85.6	122	90.8	147	22.5	333
1949	273	495	628	370	386	283	161	211	71.7	190	231	517	318
1950	72.0	180	145	235	184	204	117	207	62.7	296	137	48.3	158

† Corrected.

Monthly and yearly runoff, in inches, of Contentnea Creek near Wilson, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	1.37	1.16	0.26	1.45	0.32	0.10	0.10	-
1931	0.01	0.12	0.50	0.90	0.59	.83	1.64	1.83	.33	1.36	2.91	1.18	12.20
1932	.15	.08	1.00	1.37	1.46	1.60	.72	.53	.47	.04	.09	.01	7.52
1933	.17	.59	†1.90	2.43	2.08	1.29	1.60	.42	.23	.25	.20	.04	11.22
1934	.008	.001	.009	.05	.15	.91	1.75	.37	1.08	1.83	2.12	1.34	9.62
1935	.34	.50	2.32	2.70	1.14	1.97	2.09	.99	.16	1.63	.17	1.15	15.16
1936	.13	.56	.79	4.40	4.21	2.97	3.87	.28	1.74	.84	1.08	.13	21.00
1937	.89	1.40	3.02	4.53	3.62	1.95	4.06	.86	.14	.92	1.18	.87	23.34
1938	.24	.34	.65	1.03	.52	.73	1.38	.52	2.19	1.49	.65	1.65	11.38
1939	.39	.43	1.07	1.59	4.22	3.48	1.25	.96	1.01	6.00	4.00	1.10	25.29
1940	.28	.33	.47	.82	1.35	1.46	1.30	.58	.66	.36	2.91	.34	10.86
1941	.11	.39	.51	.86	.95	1.58	1.16	.18	.18	1.71	.28	.06	7.97
1942	.01	.05	.27	.28	.62	1.72	.68	1.25	.16	.11	.95	1.23	7.33
1943	4.35	.89	1.67	2.97	1.81	2.08	1.31	.58	.95	2.73	.08	.03	19.45
1944	.03	.08	.27	1.59	1.99	4.68	2.92	.45	.10	.25	.76	.04	13.16
1945	1.13	.37	1.17	1.34	2.14	1.63	.48	.49	.25	1.98	2.15	3.10	16.13
1946	.52	.57	2.50	3.35	2.49	1.13	2.28	2.04	.86	.57	.41	.26	15.98
1947	.34	1.16	9.0	2.00	.71	1.27	1.37	.33	.23	.87	.26	.84	10.28
1948	.71	3.54	1.59	1.43	5.76	2.97	1.15	.42	.58	.44	.72	.11	19.22
1949	1.34	2.34	3.07	1.81	1.70	1.38	.76	1.03	.34	.93	1.13	2.44	18.27
1950	.35	.85	.71	1.15	.81	1.00	.55	1.01	.30	1.45	.67	.23	9.08

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	-	-	-	-	-	-
1931	712	2,140	Aug. 15, 1931	1.4	212	0.898	12.20	223	12.80
1932	727	1,020	Mar. 9, 1932	.6	131	.555	7.52	†155	†8.95
1933	742	1,400	Jan. 29, 1933	.2	195	.826	†11.20	149	8.56
1934	782	2,220	July 24, 1934	.2	167	.708	9.62	222	12.76
1935	782	2,580	Dec. 2, 1934	4.2	264	1.12	15.16	234	13.48
1936	802	4,220	Apr. 9, 1936	13	364	1.54	21.00	430	24.83
1937	822	4,820	Jan. 31, 1937	4	405	1.72	23.34	355	19.25
1938	852	2,790	Sept. 22, 1938	6	197	.835	11.38	209	12.04
1939	872	3,510	July 22, 1939	2	439	1.86	25.29	426	24.48
1940	892	4,830	Aug. 17, 1940	11	188	.797	10.86	187	10.79
1941	922	1,340	July 18, 1941	5.6	138	.585	7.97	127	7.29
1942	952	1,640	Sept. 10, 1942	.7	128	.542	7.33	242	13.91
1943	972	3,430	Oct. 17, 1942	2	338	1.43	19.45	225	12.92
1944	1002	2,730	Mar. 22, 1944	3.4	228	.966	13.16	268	15.45
1945	1032	3,770	Sept. 20, 1945	11	280	1.19	16.13	296	17.05
1946	1052	1,750	Feb. 11, 1946	14	278	1.18	15.98	257	14.79
1947	1082	1,150	Nov. 26, 1946	1	179	.758	10.28	235	13.52
1948	1112	4,070	Feb. 16, 1948	.5	333	1.41	19.22	352	20.33
1949	1142	1,750	Dec. 2, 1948	23	318	1.35	18.27	233	13.43
1950	1172	892	May 1, 1950	21	158	.669	9.08	-	-

† Corrected.

139. Contentnea Creek at Hookerton, N. C.

Location.--Lat 35°25'40", long 77°35'05", on right bank at Hookerton, Greene County, 0.3 mile upstream from bridge on State Highway 123 and 2½ miles upstream from Wheat Swamp Creek.

Drainage area.--729 sq mi (revised).

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 16 ft (from topographic map). Prior to Nov. 26, 1934, staff gage 200 ft downstream at same datum.

Average discharge.--21 years (1929-50), 751 cfs.

Extremes.--1928-50: Maximum discharge, 11,100 cfs Oct. 6, 1929 (gage height, 18.9 ft), from rating curve extended above 7,200 cfs; minimum, 13 cfs Sept. 16, 17, 1932 (gage height, 1.17 ft).

Maximum stage known, 23.3 ft in September 1928, from floodmarks. High water of autumn 1924 was at practically the same stage (from information by local resident).

Monthly and yearly mean discharge, in cubic feet per second, of Contentnea Creek at Hookerton, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	684	1,740	1,780	3,170	874	1,220	1,250	2,200	829	1,020	-
1930	5,670	2,130	1,910	1,550	1,510	866	697	185	936	201	*92.8	*125	*1,150
1931	*62.5	103	293	591	376	432	1,010	802	199	*725	*1,630	*518	*565
1932	217	99.8	*462	*749	1,090	*792	*464	*536	*401	74.5	105	25.7	*599
1933	*124	*324	972	1,190	1,810	998	1,090	465	185	*416	298	*166	*632
1934	58.4	45.2	84.7	92.5	259	529	1,180	340	*587	1,090	1,000	1,360	*546
1935	279	270	1,185	1,395	706	778	1,251	604	430	1,181	*525	1,062	*607
1936	150	435	653	2,429	2,659	1,940	2,463	250	850	704	953	181	1,132
1937	1,000	1,036	1,981	1,955	3,381	1,433	2,048	1,210	209	447	592	510	1,304
1938	155	239	459	668	422	428	1,134	260	946	838	404	816	563
1939	326	288	480	820	2,471	2,530	737	535	458	2,158	2,110	1,177	1,169
1940	259	317	328	686	867	825	770	307	355	203	1,540	245	559
1941	109	277	286	454	657	984	1,080	196	193	1,663	286	81.7	521
1942	49.4	71.5	191	189	364	1,068	485	583	157	141	446	44.5	346
1943	2,732	628	968	1,425	1,393	1,196	1,116	477	586	1,353	188	98.6	1,015
1944	56.6	85.5	192	963	1,345	2,809	1,722	387	118	121	372	56.6	686
1945	419	205	655	696	1,099	984	248	214	160	805	1,200	2,006	722
1946	398	463	1,195	2,043	1,859	726	580	1,214	454	497	360	248	832
1947	240	414	562	1,060	500	788	1,046	232	172	587	292	622	543
1948	549	2,150	1,149	1,349	4,316	2,056	794	348	570	181	288	76.2	1,138
1949	757	1,448	2,349	1,419	1,180	1,057	677	885	254	623	627	1,736	1,082
1950	242	379	403	569	466	496	286	596	252	1,000	359	270	461

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	1.08	2.76	2.54	5.01	1.34	1.94	1.92	3.48	1.31	1.57	-
1930	5.80	3.25	3.02	2.45	2.16	1.37	1.07	.29	1.43	.32	*.15	*.19	*21.50
1931	*.10	.16	.46	.93	.54	.68	1.55	1.27	.31	*1.15	*2.56	*.79	*10.52
1932	.34	.15	*.73	*1.18	1.61	*1.25	*.71	*.53	*.61	.12	.17	.04	*7.44
1933	*.20	*.50	1.54	1.87	2.59	1.58	1.66	.73	.28	*.66	.47	*.25	*12.33
1934	.06	.07	.10	.15	.34	.84	1.78	.54	*.90	1.73	1.58	2.08	*10.17
1935	.44	.41	1.87	2.21	1.01	1.23	1.91	.95	.66	1.87	*.83	1.62	*15.01
1936	.24	.67	1.03	3.84	3.93	3.07	3.77	.40	1.30	1.11	1.51	.28	21.15
1937	1.58	1.59	3.13	3.09	4.83	2.27	3.15	1.91	.32	.71	.94	.78	24.28
1938	.25	.37	.73	1.06	.60	.68	1.74	.41	1.45	1.32	.64	1.25	10.50
1939	.52	.44	.76	1.30	3.53	4.00	1.13	.84	.70	3.41	3.34	1.80	21.77
1940	.41	.49	.52	1.09	1.28	1.31	1.18	.49	.54	.32	2.44	.38	10.45
1941	.17	.42	.45	.72	.94	1.56	1.62	.31	.29	2.63	.45	.13	9.69
1942	.08	.11	.30	.27	.52	1.89	.74	.89	.24	.22	.71	.68	6.45
1943	4.32	.96	1.53	2.25	1.99	1.89	1.71	.75	.90	2.14	.30	.15	16.89
1944	.09	.13	.30	1.52	1.99	4.44	2.64	.61	.19	.19	.59	.09	12.77
1945	.66	.31	1.04	1.10	1.57	1.56	.38	.34	.25	1.27	1.90	3.07	13.45
1946	.63	.71	1.89	3.23	2.65	1.15	.89	1.92	.70	.79	.57	.38	15.51
1947	.58	.63	.89	1.68	.71	1.25	1.60	.37	.26	.93	.46	.95	10.11
1948	.87	3.29	1.82	2.13	6.38	3.25	1.21	.55	.87	.29	.45	1.12	21.23
1949	1.17	2.22	3.71	2.24	1.69	1.67	1.04	1.40	.39	.98	.99	2.66	20.16
1950	.58	.89	.64	.90	.70	.78	.44	.94	.59	1.58	.54	.41	8.59

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	4,870	Mar. 9, 1929	-	-	-	1,820	33.94	
1930	1333	11,100	Oct. 6, 1929	*46	*1,150	*1.56	*21.50	*545	*10.15
1931	1333	*2,400	Aug. 17-19, 1931	*53	*565	*.775	*10.52	*592	*11.02
1932	1333	1,720	Mar. 12, 1932	-	*399	*.547	*7.44	*453	*8.46
1933	1333	2,620	Apr. 23, 1933	26	*662	*.908	*12.33	*555	*10.32
1934	1333	2,470	Sept. 22, 1934	15	*546	*.749	*10.17	*680	*12.66
1935	1333	2,980	Sept. 13, 1935	110	*807	*1.11	*15.01	*764	*14.23
1936	802	6,670	Apr. 11, 1936	100	1,132	1.55	21.15	1,366	25.51
1937	822	7,450	Feb. 3, 1937	96	1,304	1.79	24.28	1,037	19.33
1938	852	2,590	Apr. 10-11, 1938	91	563	.772	10.50	583	10.87
1939	872	5,650	July 31, 1939	154	1,169	1.60	21.77	1,153	21.47
1940	892	6,100	Aug. 21, 1940	60	559	.767	10.45	539	10.07
1941	922	4,340	July 19, 1941	57	521	.715	9.69	491	9.14
1942	952	2,040	Mar. 15, 1942	34	346	.475	6.45	686	12.77
1943	972	6,620	Oct. 16, 1942	53	1,015	1.39	18.89	677	12.60
1944	1002	5,110	Mar. 26, 1944	43	686	.941	12.77	764	14.26
1945	1032	5,840	Sept. 24, 1945	80	722	.990	13.45	787	14.67
1946	1052	3,630	Jan. 23, 1946	100	832	1.14	15.51	761	14.16
1947	1082	2,210	Apr. 18, 1947	76	543	.745	10.11	762	14.19
1948	1112	10,000	Feb. 17, 1948	45	1,138	1.56	21.23	1,198	22.35
1949	1142	4,040	Dec. 5, 1948	128	1,082	1.48	20.16	804	14.97
1950	1172	4,500	July 19-21, 1950	97	461	.632	8.59	-	-

* Revised.

a Maximum mean daily discharge.

Note.--Figures of daily discharge for September 1932 previously published in WSP 727 have been found in error on basis of restudy of original data and comparison with records at nearby stations. These figures should not be used.

140. Swift Creek near Vanceboro, N. C.

Location.--Lat 35°20'42", long 77°11'44", on left bank at bridge on county road 2½ miles upstream from bridge on State Highway 118, 2½ miles downstream from Clayroot Swamp, and 3½ miles northwest of Vanceboro, Craven County.

Drainage area.--182 sq mi.

Gage.--Staff gage. Altitude of gage is 5 ft (from topographic map).

Extremes.--January to September 1950: Maximum discharge, 2,330 cfs July 10 (gage height, 9.54 ft); minimum, 6 cfs Aug. 31, Sept. 1 (gage height, 2.84 ft). Flood of 1909 reached a stage of 16 ft, and flood of 1928 reached a stage of 11.7 ft, from information by local residents (discharge not determined).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	*116	73.5	69.5	38.3	163	44.5	843	98.1	66.9	-

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	*0.73	0.42	0.44	0.23	1.03	0.27	5.34	0.62	0.41	-

* Not previously published; partly estimated on basis of records for nearby streams.

NEW RIVER BASIN

141. New River near Gum Branch, N. C.

Location.--Lat 34°51'05", long 77°31'05", at highway bridge half a mile downstream from Jenkins Swamp, 1¼ miles southwest of Gum Branch, Onslow County, and 3¼ miles southeast of Richlands.

Drainage area.--74.5 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 3 ft above mean sea level (Corps of Engineers benchmark). Prior to Mar. 23, 1950 (revised), staff gage at same site and datum.

Extremes.--1949-50: Maximum discharge, 3,120 cfs July 9, 1950 (gage height, 16.16 ft); minimum, 12 cfs June 29, 1950 (gage height, 1.26 ft). Flood of 1908 reached a stage 2 ft higher than flood of 1950 (from information by local resident).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	135	-
1950	29.9	71.3	61.9	64.4	54.5	76.6	33.1	108	76.5	501	52.5	67.5	101

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	2.01	-
1950	0.46	1.07	0.96	1.00	0.76	1.19	0.50	1.68	1.15	7.76	0.81	1.01	18.35

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1949	1172	-	-	-	-	-	-	-	-	-	-	-
1950	1172	3,120	July 9, 1950	-	14	101	1.36	18.35	-	-	-	-

142. Haw River near Benaja, N. C.

Location.--Lat 36°15', long 79°34', on left bank 200 ft upstream from site of old High Rock Mill, 500 ft upstream from highway bridge, half a mile upstream from county line, 6 miles downstream from Troublesome Creek, and 6 miles east of Benaja, Rockingham County.

Drainage area.--168 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 629 ft (by barometer).

Average discharge.--22 years (1928-50), 169 cfs.

Extremes.--1928-50: Maximum discharge, 12,300 cfs Sept. 25, 1947 (gage height, 19.22 ft, from high-water mark), from rating curve extended above 4,000 cfs on basis of slope-area determination of peak flow; minimum, 6.3 cfs Sept. 1, 1932 (gage height, 0.73 ft). Flood of 1916 reached a stage of about 17.5 ft, from floodmarks 500 ft downstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	91.1	78.4	75.8	89.3	237	404	240	133	354	207	195	77.5	181
1930	479	219	203	231	227	151	126	76.0	106	40.4	34.3	30.0	160
1931	25.4	67.4	127	140	82.9	115	260	215	47.5	96.1	314	48.0	129
1932	31.2	35.9	110	293	168	301	150	81.5	101	31.0	20.8	24.9	112
1933	231	186	341	238	234	162	154	123	39.8	32.1	71.4	89.0	158
1934	29.2	39.4	59.6	64.8	111	401	374	189	173	119	94.9	249	159
1935	96.4	89.9	257	235	187	301	380	150	71.4	106	32.1	94.4	167
1936	39.8	132	89.6	700	460	391	485	88.2	178	147	136	43.9	240
1937	235	90.6	247	786	278	179	277	210	108	120	229	179	244
1938	489	176	136	196	151	164	135	85.7	121	245	87.3	41.9	170
1939	45.6	183	175	156	388	330	181	192	111	173	402	63.2	199
1940	58.7	88.9	115	154	298	170	170	99.1	176	85.3	565	92.3	173
1941	51.5	257	133	165	114	150	171	65.4	*77.2	*199	50.5	79.7	*126
1942	23.5	34.3	65.9	73.8	181	271	80.6	164	156	51.4	126	49.1	106
1943	98.7	74.0	141	182	322	304	262	102	137	145	43.3	55.5	155
1944	39.6	55.0	79.5	196	291	403	457	143	70.7	92.6	46.1	119	165
1945	284	127	198	198	311	167	119	129	63.9	102	†43.4	794	210
1946	85.7	121	373	275	370	160	123	148	65.8	51.7	67.6	36.3	155
1947	52.7	81.7	82.4	298	91.4	200	160	81.9	65.9	74.4	43.7	692	160
1948	135	332	130	156	401	263	374	155	114	45.9	79.8	43.0	184
1949	88.9	260	288	231	238	182	195	275	121	264	249	141	211
1950	157	364	128	134	169	197	114	186	107	190	60.9	64.2	156

* Revised.
† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	0.62	0.52	0.52	0.61	1.47	2.77	1.60	0.91	2.35	1.42	1.34	0.51	14.64
1930	3.29	1.45	1.40	1.59	1.41	1.04	.84	.52	.70	1.28	.24	.20	12.96
1931	.17	.45	.87	.96	.51	.79	1.73	1.48	.32	.66	2.16	.32	10.42
1932	.21	.24	.76	2.01	1.08	2.06	1.00	.56	.76	.21	.14	.17	9.11
1933	1.59	1.24	2.34	1.64	1.45	1.11	1.02	.84	.26	.22	.49	.59	12.79
1934	.20	.26	.41	.45	.69	2.76	2.49	1.29	1.15	.82	.65	1.65	12.82
1935	.66	.60	1.76	1.61	1.16	2.06	2.52	1.03	.47	.73	.22	.63	13.45
1936	.27	.88	.61	4.81	2.96	2.69	3.22	.61	1.18	1.01	.93	.29	19.46
1937	1.61	.60	1.70	5.26	1.72	1.23	1.84	1.44	.72	.82	1.57	1.19	19.70
1938	3.36	1.17	.93	1.35	.94	1.13	.90	.59	.80	1.68	.60	.28	13.73
1939	.31	1.22	1.20	1.07	2.40	2.26	1.20	1.31	.74	1.19	2.76	.42	16.08
1940	.40	.59	.79	1.06	1.91	1.17	1.13	.68	1.17	.59	3.68	.61	13.98
1941	.35	1.70	.91	1.13	.71	1.03	1.14	.45	*.51	*1.36	.35	.53	*10.17
1942	.16	.23	.45	.51	1.12	1.86	.54	1.13	1.03	.35	.86	.33	8.57
1943	.68	.49	.97	1.25	2.00	2.09	1.74	.70	.91	1.00	.30	.37	12.50
1944	.27	.57	.55	1.35	1.87	2.76	3.03	.98	.47	.64	.32	.79	13.40
1945	1.95	.84	1.36	1.36	1.93	1.14	.79	.88	.42	.70	.30	5.27	16.94
1946	.59	.80	2.56	1.89	2.29	1.10	.82	1.01	.44	.35	.46	.24	12.55
1947	.36	.54	.57	2.05	.57	1.37	1.06	.56	.44	.51	.30	4.59	12.92
1948	.92	2.21	.89	1.07	2.57	1.80	2.48	1.07	.76	.31	.55	.29	14.92
1949	.61	1.73	1.97	1.58	1.47	1.25	1.30	1.89	.81	1.81	1.71	.94	17.07
1950	1.08	2.42	.88	.92	1.05	1.35	.76	1.27	.71	1.31	.42	.43	12.60

* Revised.

Yearly discharge, in cubic feet per second, of Haw River near Benaja, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	2,180	Mar. 1, 1929	54	181	1.08	14.64	237	19.12
1930	697	5,020	Oct. 3, 1929	10.1	160	.952	12.96	103	8.31
1931	712	1,680	Aug. 24, 1931	15.0	129	.768	10.42	125	10.14
1932	727	1,710	Mar. 7, 1932	7.0	112	.667	9.11	161	13.07
1933	742	*1,880	May 30, 1933*	14.6	158	.943	12.79	105	8.49
1934	757	1,640	Apr. 10, 1934	20	159	.946	12.82	185	14.97
1935	782	1,680	Dec. 2, 1934	20	167	.994	13.45	151	12.19
1936	802	2,250	Jan. 20, 1936	24	240	1.43	19.46	267	21.61
1937	822	2,270	Jan. 20, 1937	46	244	1.45	19.70	263	21.25
1938	852	3,570	Oct. 5, 1937	31	170	1.01	13.73	156	11.00
1939	872	1,770	Aug. 20, 1939	30	199	1.18	16.08	187	15.13
1940	892	5,200	Aug. 15, 1940	41	173	1.03	13.98	187	15.16
1941	922,1583	1,570	Nov. 15, 1940	20	*126	*.750	*10.17	*99.6	*8.05
1942	952	1,510	Mar. 10, 1942	17	106	.631	8.57	122	9.87
1943	972	1,540	Apr. 20, 1943	17	155	.922	12.50	143	11.55
1944	1002	a1,770	Apr. 13, 1944	16	165	.982	13.40	202	16.36
1945	1032	10,100	Sept. 18-19, 1945	24	210	1.25	16.94	207	16.74
1946	1052	1,410	Feb. 12, 1946	22	155	.923	12.55	125	10.07
1947	1082	12,300	Sept. 25, 1947	16	160	.952	12.92	192	15.47
1948	1112	1,670	Apr. 2, 1948	26	184	1.10	14.92	187	15.16
1949	1142	1,640	Nov. 30, 1948	42	211	1.26	17.07	212	17.14
1950	1172	3,190	Nov. 1, 1949	40	156	.929	12.60	-	-

* Revised.

a Maximum peak discharge; maximum discharge during year, 2,120 cfs at 12 p.m. Sept. 30, stage rising.

143. Horsepen Creek at Battle Ground, N. C.

Location (revised).--Lat 36°08'34" long 79°51'24", on right bank at highway bridge 0.5 mile downstream from bridge on U. S. Highway 220, three-quarters of a mile north of Battle Ground, Guilford County, and 2 miles upstream from mouth.

Drainage area.--15.9 sq mi.

Gage.--Water-stage recorder and Parshall flume. Datum of gage is 737.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 12, 1934, staff gage at present site and datum. Nov. 9, 1925, to July 31, 1931, water-stage recorder 1,000 ft upstream at datum 1.45 ft higher.

Average discharge.--25 years (1925-50), 15.0 cfs.

Extremes.--1925-31, 1934-50: Maximum discharge, 6,400 cfs Sept. 24, 1947 (gage height, 10.36 ft), from rating curve extended above 600 cfs on basis of contracted-opening determination of peak flow; minimum, 0.7 cfs July 24, 1926.

Remarks.--Some diurnal fluctuation at low flows 1925-31.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	*7.1	*6.45	*8.35	*28.6	33.4	16.5	17.5	*5.5	3.79	4.62	3.32	*2.87	*11.3
1927	3.65	8.86	20.2	10.0	*17.2	18.6	18.6	4.81	13.6	28.8	*21.2	*6.0	*14.0
1928	*30.7	9.69	*36.7	*11.1	20.1	19.9	*27.2	*10.7	*12.1	*6.13	*24.4	*48.0	*21.3
1929	*8.41	*6.76	6.65	*7.69	41.8	29.4	26.0	14.2	14.6	9.55	9.26	5.62	*14.8
1930	37.0	21.3	18.0	17.9	20.6	10.7	9.52	9.59	7.20	3.84	4.15	3.35	13.6
1931	3.83	7.28	10.2	10.9	5.50	10.7	30.4	17.7	6.89	10.4	*25	*4.1	*12.0
1932	*2.8	*3.3	*9.1	*25	*16	*31	*10	*7.3	*14	*5.2	*3.2	*3.0	*10.8
1933	*25	*17	*43	*22	*28	*16	*16	*7.6	*4.7	*5.2	*23	*3.6	*17.6
1934	*2.4	*3.0	*4.1	*5.6	*22	*29	*23	*14.2	23.8	29.0	5.97	18.7	*15.0
1935	6.12	8.87	17.6	17.9	14.5	33.6	35.7	21.5	6.78	4.99	3.39	10.1	15.1
1936	3.37	9.04	6.75	67.1	46.1	35.0	51.9	10.6	19.4	20.2	7.52	11.0	23.9
1937	18.3	6.74	20.1	51.0	21.1	14.7	24.2	17.5	7.28	5.20	11.6	8.64	17.2
1938	16.2	11.4	7.76	16.2	9.05	13.9	8.11	5.79	7.07	16.4	4.57	2.33	9.93
1939	2.60	9.02	12.3	14.1	45.7	20.0	9.13	8.76	6.01	8.13	29.0	4.36	13.9
1940	5.01	4.58	8.52	10.2	27.2	11.5	14.5	21.4	8.65	7.34	43.9	4.54	14.3
1941	4.24	25.4	11.6	13.8	9.10	15.2	13.1	4.98	17.2	22.8	3.57	4.19	12.1
1942	2.04	2.53	4.48	5.78	18.4	34.3	5.50	9.73	11.1	7.47	7.15	3.90	9.32
1943	9.32	5.97	16.9	31.0	25.2	28.7	18.5	7.95	14.4	12.4	3.82	3.15	14.7
1944	3.53	4.72	6.80	22.2	29.1	38.8	30.5	10.4	5.33	9.95	8.37	22.4	15.9
1945	12.1	17.4	15.4	16.8	36.4	12.9	9.32	10.9	5.20	4.98	2.49	60.7	16.8
1946	7.40	10.9	38.6	22.9	37.7	12.0	9.79	14.8	5.65	14.4	7.86	5.19	15.5
1947	5.82	8.34	8.36	34.4	8.89	19.2	13.3	6.09	3.59	3.96	4.03	69.6	15.4
1948	7.48	30.7	9.32	16.2	39.8	23.3	23.4	10.3	9.56	4.89	6.03	3.84	15.3
1949	8.61	43.9	26.4	19.8	24.9	15.6	16.3	15.0	6.77	31.1	44.1	8.78	21.8
1950	27.5	20.2	10.3	10.3	11.6	17.0	9.74	18.5	10.3	16.3	4.84	4.02	13.4

* Estimated.

* Not previously published; estimated or partly estimated on basis of records for stations on East and West Forks Deep River near High Point and Deep River at Ramseur.

Monthly and yearly runoff, in inches, of Horsepen Creek at Battle Ground, N. C.

Water year	Monthly and yearly runoff, in inches, of Horsepen Creek at Battle Ground, N. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	*0.51	*0.45	*0.61	*2.06	2.19	1.20	1.23	*0.40	0.27	0.34	0.24	*0.20	*9.70
1927	.27	.62	1.46	.73	*1.13	1.35	1.18	.35	.95	1.95	*1.53	*4.2	*11.92
1928	*2.23	*2.68	*2.66	*1.80	1.36	1.44	*1.21	*.78	*.85	*.44	*1.74	*3.37	*12.26
1929	*.61	*.47	.48	*.56	2.74	2.13	1.83	1.03	1.02	.69	.67	.39	*12.62
1930	2.69	1.50	1.30	1.30	1.35	.78	.67	.70	.51	.28	.30	.24	11.62
1931	.28	.51	.74	.79	.36	.78	2.13	1.28	.48	.75	*1.81	*.29	*10.20
1932	*.20	*.25	*.66	*1.81	*1.09	*2.25	*.70	*.53	*.98	*.38	*.23	*.21	*9.27
1933	*1.81	*1.19	*3.12	*1.60	*1.83	*1.16	*1.12	*.55	*.33	*.38	*1.67	*.25	*15.01
1934	*.17	*.21	*.30	*.41	*1.44	*2.10	*1.61	*1.03	1.67	2.10	.43	1.32	*12.79
1935	.44	.62	1.28	1.30	.95	2.43	2.51	1.56	.48	.36	.25	.71	12.89
1936	.24	.63	.49	4.86	3.13	2.54	3.64	.77	1.36	1.46	.55	.77	20.44
1937	1.33	.47	1.45	3.70	1.38	1.07	1.70	1.27	.51	.38	.84	.61	14.71
1938	1.18	.80	.756	1.18	.59	1.01	.57	.42	.50	1.19	.33	.16	8.49
1939	.19	.63	.89	1.02	2.99	1.45	.64	.64	.42	.59	2.10	.31	11.87
1940	.36	.32	.62	.74	1.84	.83	1.02	1.55	.61	.53	3.18	.67	12.27
1941	.31	1.78	.84	1.00	.60	1.11	.92	.36	1.20	1.66	.26	.29	10.33
1942	.15	.18	.32	.42	1.20	1.44	.39	.71	.78	.54	.52	.27	7.96
1943	.68	.42	1.23	2.25	1.65	2.08	1.30	.58	1.01	.90	.28	.22	12.60
1944	.26	.33	.49	1.61	1.97	2.81	2.14	.76	.37	.72	.61	1.57	13.64
1945	.88	1.22	1.11	1.22	2.39	.93	.65	.79	.36	.36	.18	4.26	14.35
1946	.54	.76	2.80	1.66	2.47	.87	.69	1.08	.40	1.04	.57	.36	13.24
1947	.42	.59	.61	2.49	.58	1.39	.94	.44	.25	.29	.29	4.89	13.18
1948	.54	2.15	.68	1.17	2.70	1.69	1.64	.75	.67	.35	.44	.27	13.05
1949	.62	3.08	1.91	1.44	1.63	1.12	1.14	1.09	.47	2.26	3.20	.62	18.58
1950	1.99	1.42	.75	.74	.76	1.23	1.68	1.34	.72	1.18	.35	.28	11.44

* Revised.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622,1383	766	Jan. 18, 1926	-	*11.3	*0.711	*9.70	*12.2	*10.47
1927	642	*515	July 9, 1927	2.4	*14.0	*.881	*11.92	*17.7	*15.14
1928	662	269	Apr. 12, 1928	-	*21.3	*1.34	*18.26	*16.7	*14.25
1929	682,1383	750	Feb. 28, 1929	4.3	*14.8	*.931	*12.62	*19.4	*16.55
1930	697	680	Oct. 2, 1929	1.9	13.6	.855	11.62	8.94	7.66
1931	712	a316	May 21, 1931	-	*12.0	*.755	*10.20	*11.5	*9.76
1932	-	-	-	-	*10.8	*.679	*9.27	*16.7	*14.30
1933	-	-	-	-	*17.6	*1.11	*15.01	*11.2	*9.57
1934	757	b675	June 8, 1934	-	*15.0	*.943	*12.79	*16.9	*14.45
1935	782	520	Dec. 1, 1934	2.2	15.1	.950	12.89	13.9	11.91
1936	802	980	Jan. 19, 1936	2.5	23.9	1.50	20.44	26.1	22.33
1937	822	o440	Jan. 20, 1937	3.6	17.2	1.08	14.71	16.4	14.00
1938	852	296	July 24, 1938	1.8	9.93	.625	8.49	8.96	7.66
1939	872	382	Feb. 10, 1939	2.1	13.9	.874	11.87	13.4	11.46
1940	892	820	Aug. 14, 1940	3.0	14.3	.899	12.27	16.2	13.90
1941	922	595	June 13, 1941	1.9	12.1	.761	10.33	9.42	8.05
1942	952	1,240	Mar. 9, 1942	1.8	9.32	.586	7.96	11.3	9.64
1943	972	812	Jan. 13, 1943	2	14.7	.925	12.60	13.3	11.35
1944	1002	568	Sept. 30, 1944	2.3	15.9	1.00	13.64	18.4	15.77
1945	1032	1,540	Sept. 18, 1945	1.5	16.8	1.06	14.35	17.9	15.24
1946	1052	852	Feb. 10, 1946	3.2	15.5	.975	13.24	12.6	10.76
1947	1082	6,400	Sept. 24, 1947	1.8	15.4	.969	13.18	17.5	14.93
1948	1112	262	Feb. 14, 1948	2.0	15.3	.962	13.05	17.9	15.29
1949	1142	838	Nov. 28, 1948	3.5	21.8	1.37	18.58	20.1	17.13
1950	1172	850	Oct. 31, 1949	2.8	13.4	.843	11.44	-	-

* Revised.

‡ Not previously published.

a Maximum during period October to July.

b Maximum during period May to September.

c Maximum peak discharge; maximum discharge during year, 620 cfs at 12:01 a.m. Oct. 1, stage falling.

144, Reedy Fork near Gibsonville, N. C.

Location.--Lat 36°11', long 79°27', on right bank a quarter of a mile downstream from Huffines Mill, 1 1/2 miles upstream from Buffalo Creek, and 6 miles northwest of Gibsonville, Guilford County.

Drainage area.--133 sq mi.

Gage.--Water-stage recorder. Datum of gage is 626.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--22 years (1928-50), 116 cfs (revised).

Extremes.--1928-50: Maximum discharge, 11,600 cfs Sept. 25, 1947 (gage height, 20.77 ft); minimum, 0.6 cfs sometime during period Nov. 12 to Dec. 8, 1941; minimum daily, 0.9 cfs Sept. 25, 1942.

Flood of 1916 reached a stage of 17.90 ft, from information by local resident (discharge, 8,640 cfs).

Remarks.--Flow partly regulated since 1923 by Lake Brandt (capacity, 113,256,000 cu ft) 14 miles above station and also since 1943 by Richland Lake 12 miles above station. Diversion by city of Greensboro from Lake Brandt for water supply, after increasing over period of years, averaged about 13.0 cfs during 1947-50. Diversion by Cone Mills from Richland Lake has averaged about 3.0 cfs.

CAPE FEAR RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Reedy Fork near Gibsonville, N. C.												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	*386
1929	79.0	57.3	*55.0	70.1	245	*333	181	94.9	189	111	97.0	38.5
1930	*317	186	157	181	174	97.5	89.5	63.4	75.6	30.2	13.8	10.7
1931	12.0	41.4	89.0	89.2	56.6	72.4	196	141	36.2	97.4	201	30.8
1932	15.0	18.4	66.5	199	115	252	90.2	49.5	71.3	11.2	11.7	30.2
1933	209	140	275	200	182	115	107	66.3	18.5	15.2	118	28.0
1934	*16.9	20.4	50.4	44.0	93.0	252	240	96.2	170	181	45.7	123
1935	71.8	65.6	189	167	136	235	339	170	65.2	40.2	21.9	59.6
1936	24.3	70.5	52.6	600	347	303	464	55.9	154	87.2	77.3	26.4
1937	176	47.1	150	560	202	123	191	172	73.7	67.3	159	83.8
1938	158	108	83.6	137	82.9	107	83.3	46.5	77.1	151	53.3	25.6
1939	23.0	109	98.0	96.8	319	214	112	107	37.8	104	235	41.0
1940	33.8	38.8	76.2	91.9	206	110	112	104	122	72.1	315	73.9
1941	21.3	208	97.1	105	78.4	110	131	39.4	101	166	25.8	50.1
1942	8.68	10.8	34.1	41.7	139	222	47.6	99.0	141	36.1	79.1	15.7
1943	46.1	40.9	90.1	153	243	217	177	67.0	113	95.8	14.6	24.6
1944	12.3	24.8	43.4	140	217	335	355	87.0	26.3	65.9	32.2	78.5
1945	143	79.0	122	120	255	100	74.0	105	25.6	47.4	11.1	508
1946	55.0	76.4	249	186	327	110	76.4	103	28.1	52.1	73.0	24.7
1947	27.6	49.9	51.2	227	68.2	140	97.9	35.5	20.8	27.5	21.3	534
1948	48.9	232	83.0	*87.5	272	169	219	81.4	57.7	22.7	63.5	15.6
1949	50.9	225	175	168	199	122	123	133	88.5	284	209	79.8
1950	114	233	78.8	80.2	95.9	121	64.8	125	69.8	85.4	38.1	31.5

* Revised.

* Not previously published; partly estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928		*2,750	Sept. 21, 22, 1928	-	-	-	-	-	
1929	682, 1383	*2,730	Mar. 1, 1929	9.5	*128	-	-	*168	
1930	697, 1383	*3,830	Oct. 3, 1929	1.8	*116	-	-	72.5	
1931	712	1,650	Aug. 11, 1931	3.0	89.0	-	-	85.5	
1932	727	2,040	Mar. 6, 1932	2.0	77.6	-	-	122	
1933	742	*2,470	Oct. 18, 1932	3.2	123	-	-	*76.0	
1934	757, 1383	2,410	July 10, 1934	5.8	109	-	-	131	
1935	782	1,460	Dec. 1, 1934	12	130	-	-	115	
1936	802	4,390	Jan. 20, 1936	5	188	-	-	207	
1937	822	*2,730	Jan. 20, 1937	28	168	-	-	165	
1938	852	942	Oct. 20, 1937	13	93.1	-	-	83.0	
1939	872	*3,100	Aug. 20, 1939	5.8	124	-	-	117	
1940	892	*3,880	Aug. 15, 1940	16	113	-	-	127	
1941	922	*2,140	June 13, 1941	4.7	94.2	-	-	71.5	
1942	952	*2,580	Mar. 10, 1942	.9	72.6	-	-	83.0	
1943	972	1,760	June 15, 1943	3.6	107	-	-	98.6	
1944	1002	3,000	Apr. 13, 1944	2.5	117	-	-	139	
1945	1032	7,340	Sept. 18, 1945	2.0	131	-	-	134	
1946	1052	2,160	Feb. 12, 1946	1.5	112	-	-	90.9	
1947	1082	11,600	Sept. 25, 1947	1.2	108	-	-	127	
1948	1112, 1383	1,190	Apr. 2, 1948	8.7	*112	-	-	*119	
1949	1142	2,880	July 16, 1949	20	155	-	-	153	
1950	1172	2,800	Nov. 1, 1949	20	94.8	-	-	-	

* Revised.

* Not previously published; may have gone higher prior to beginning of record.

Note.--Figures of discharge in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers for the years 1929-40 may be subject to appreciable error because of storage in Lake Brandt and diversion by city of Greensboro. These figures are not published herein and should not be used.

145. South Buffalo Creek near Greensboro, N. C. 1/

Location (revised).--Lat 36°03'37", long 79°43'33", on left bank 5 ft downstream from bridge on McConnel road, 3.8 miles east of post office in Greensboro, Guilford County, and 6 miles upstream from North Buffalo Creek.

Drainage area.--33.6 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 696.2 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--22 years (1928-50), 38.7 cfs (revised).

Extremes.--1928-50: Maximum discharge, 10,000 cfs July 15, 1949 (gage height, 11.54 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening determinations at 8.69, 10.64, and 11.54 ft; minimum, 0.2 cfs Oct. 2, 1930.

Remarks.--Sewage from Greensboro enters above station affecting low-water flow.

1/ Previously published as Buffalo Creek.

Monthly and yearly mean discharge, in cubic feet per second, of South Buffalo Creek near Greensboro, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	162	-
1929	15.6	8.14	8.66	10.2	127	87.4	52.5	33.6	34.7	34.7	8.37	6.36	34.9
1930	109	54.6	48.8	62.3	52.0	22.5	19.1	12.9	9.13	17.0	5.38	2.26	34.6
1931	1.82	7.26	29.1	25.0	14.0	26.5	74.5	25.9	8.86	*36.0	44.3	5.13	25.0
1932	2.80	5.53	18.3	72.7	42.9	72.4	22.3	10.7	32.2	2.62	2.32	14.2	24.7
1933	66.7	57.0	108	51.9	61.6	33.0	28.4	13.6	4.40	5.45	11.0	4.29	37.1
1934	4.03	5.35	6.87	10.1	48.1	77.2	60.7	34.4	98.3	44.8	11.2	65.2	36.6
1935	11.4	34.9	61.0	61.5	42.2	90.4	83.9	59.9	12.8	11.8	4.63	26.6	41.9
1936	4.83	15.0	17.3	177	109	93.0	127	6.52	27.7	31.7	12.5	13.5	52.7
1937	54.4	16.4	49.2	179	55.8	34.8	54.6	20.6	7.40	14.2	25.2	22.4	44.6
1938	38.0	26.8	19.5	42.5	20.6	32.3	18.1	8.30	12.9	31.4	9.54	2.95	22.0
1939	3.36	35.5	46.0	41.7	118	76.0	27.3	19.2	8.10	35.0	79.5	20.2	41.8
1940	11.0	11.0	19.6	30.2	66.5	30.7	24.2	42.8	16.5	8.08	64.6	9.73	27.8
1941	4.31	57.4	33.3	31.6	19.5	34.1	35.2	6.74	12.5	46.9	4.94	4.05	24.2
1942	2.73	3.73	7.35	7.87	38.3	63.0	11.9	39.8	46.3	18.1	7.08	6.95	21.0
1943	15.0	9.37	40.4	83.3	64.5	79.1	47.3	16.2	58.7	130	16.6	9.52	47.4
1944	5.07	9.16	22.6	67.1	85.9	119	94.6	13.3	5.30	29.7	6.08	44.6	41.7
1945	37.8	27.5	36.5	37.5	93.0	36.9	23.0	42.1	5.81	9.64	7.53	158	42.4
1946	17.8	20.7	98.3	58.5	122	26.9	20.0	71.4	10.2	15.3	18.1	7.97	40.2
1947	14.0	15.6	13.4	105	20.2	48.3	38.6	11.3	8.13	6.22	7.02	146	36.1
1948	20.4	99.7	25.5	44.9	109	64.4	65.5	13.6	26.6	11.6	26.6	9.62	42.5
1949	19.7	109	71.9	51.7	74.5	53.2	54.4	44.7	13.9	307	58.5	16.1	73.2
1950	37.1	42.1	22.4	27.6	33.0	48.6	18.6	55.1	24.8	44.0	9.53	9.10	31.1

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	662, 972	a2,420	Sept. 19, 1928	-	-	-	-	-	-
1929	682, 972	2,680	Feb. 28, 1929	2.7	34.9	-	-	50.1	-
1930	697, 972	2,230	Oct. 2, 1929	.5	34.6	-	-	19.9	-
1931	(b)	1,120	July 27, 1931	.6	25.0	-	-	*23.8	-
1932	727, 972	1,700	Mar. 6, 1932	1.1	24.7	-	-	42.1	-
1933	742, 972	2,110	Oct. 17, 1932	1.4	37.1	-	-	18.9	-
1934	757, 972	959	Feb. 26, 1934	2	38.6	-	-	46.2	-
1935	782, 972	1,200	Dec. 1, 1934	1.9	41.9	-	-	36.0	-
1936	802, 972	1,990	Apr. 6, 1936	3.0	52.7	-	-	59.7	-
1937	822, 972	1,170	Jan. 19, 1937	4.5	44.6	-	-	41.6	-
1938	852	-	July 24, 1938	2.1	22.0	-	-	21.9	-
1939	872, 972	1,180	Aug. 19, 1939	2.0	41.8	-	-	38.4	-
1940	892	1,060	Aug. 14, 1940	4.4	27.8	-	-	32.2	-
1941	922	*842	Nov. 15, 1940	2.4	24.2	-	-	17.5	-
1942	952	822	Mar. 9, 1942	1.8	21.0	-	-	25.1	-
1943	972	2,610	July 11, 1943	2.8	47.4	-	-	45.2	-
1944	1002	1,990	Sept. 30, 1944	2.2	41.7	-	-	47.1	-
1945	1032	3,780	Sept. 18, 1945	3.5	42.4	-	-	45.4	-
1946	1052	2,110	Feb. 10, 1946	4.4	40.2	-	-	32.2	-
1947	1082	8,000	Sept. 25, 1947	2.9	36.1	-	-	44.4	-
1948	1112	590	Feb. 14, 1948	5.0	42.5	-	-	47.3	-
1949	1142	10,000	July 15, 1949	6.1	73.2	-	-	65.0	-
1950	1172	1,100	Oct. 31, 1949	6.4	31.1	-	-	-	-

* Revised.

a Maximum for September; may have gone higher prior to beginning of record.

b WSP 712, 972, 1383.

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff, in inches, for the years 1934, 1938, and 1940-42, published in WSP 757, 852, 892, 922, and 952 have been found subject to considerable error because of diversion into the basin above the station. These figures are not published herein and should not be used.

146. North Buffalo Creek near Greensboro, N. C.

Location (revised).--Lat 36°07'13", long 79°42'30", at county highway bridge, 4.2 miles upstream from mouth and 5.8 miles northeast of post office in Greensboro, Guilford County.

Drainage area.--37.0 sq mi (revised)

Gage.--Water-stage recorder. Altitude of gage is 679 ft (from topographic map).

Average discharge.--22 years (1928-50), 45.4 cfs.

Extremes.--1928-50: Maximum discharge, 6,000 cfs Sept. 25, 1947 (gage height, 15.96 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening determinations at gage height 14.15 and 15.96 ft; minimum, 1.6 cfs Aug. 28, 1932.

Remarks.--Diurnal fluctuation at low flow caused by mills above station. Diversion into the basin from Greensboro and Proximity Mills enters above station.

Monthly and yearly mean discharge, in cubic feet per second, of North Buffalo Creek near Greensboro, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	146	-
1929	18.6	16.4	17.4	20.2	122	87.8	65.6	43.2	51.7	*38.1	21.1	11.8	*42.2
1930	83.0	50.4	51.6	80.7	60.4	33.3	29.7	29.2	24.3	20.9	15.2	8.62	40.6
1931	7.71	16.7	34.3	31.3	22.0	31.4	74.7	39.9	19.9	44.6	61.1	13.7	33.2
1932	8.55	8.76	23.5	71.2	45.3	84.6	29.5	17.3	50.5	11.2	7.81	30.9	32.4
1933	66.4	61.5	104	57.9	65.4	37.1	38.2	20.1	10.2	13.6	28.9	11.0	42.8
1934	9.23	11.0	13.0	17.2	60.3	88.2	68.7	40.6	60.8	55.9	19.9	55.2	41.4
1935	16.8	39.4	67.5	62.6	46.1	99.5	118	76.5	22.4	23.2	13.0	37.3	51.9
1936	12.7	19.9	21.7	183	130	114	151	20.0	47.2	42.0	23.0	31.1	66.0
1937	53.7	21.1	63.0	172	60.1	42.0	73.1	36.8	28.0	26.6	45.5	37.4	55.1
1938	51.8	32.9	24.8	51.9	29.5	40.9	25.8	16.2	28.7	36.1	18.0	9.88	30.6
1939	15.8	45.9	55.1	48.0	133	68.7	33.7	33.4	21.8	51.3	89.5	37.9	52.4
1940	18.3	20.0	31.5	35.2	77.6	39.5	34.6	43.5	29.6	29.6	78.8	24.5	38.5
1941	11.9	69.4	41.7	42.7	29.8	40.1	40.5	17.8	44.5	74.4	16.4	16.9	37.2
1942	11.4	11.6	18.9	18.9	47.4	68.5	20.3	55.5	65.8	26.8	23.2	19.9	32.3
1943	23.8	17.7	48.0	91.3	65.2	82.5	66.4	30.5	57.4	119	21.3	23.4	54.0
1944	16.5	18.3	28.1	64.6	80.0	127	94.4	29.0	23.1	21.3	19.3	38.5	46.7
1945	38.4	40.6	41.1	44.5	90.3	43.9	33.0	30.7	17.0	23.4	16.1	159	47.7
1946	26.9	30.2	117	67.7	111	38.3	30.2	59.9	21.0	44.1	33.4	18.1	49.6
1947	23.0	26.6	22.5	97.3	28.4	55.4	52.3	22.6	20.0	19.5	17.1	132	43.0
1948	46.5	86.2	30.7	47.5	102	73.6	83.5	29.2	45.3	18.3	39.5	20.0	51.5
1949	29.2	101	77.1	62.5	69.3	57.1	55.6	46.6	37.8	137	81.4	34.4	65.7
1950	67.2	43.6	34.8	38.8	39.7	58.5	32.9	72.4	40.8	49.8	24.5	24.0	44.0

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	662	*1,860	Sept. 19, 1928	-	-	-	-	-	-
1929	682,1383	*1,910	Feb. 28, 1929	7.5	*42.2	-	-	*53.4	-
1930	697	1,320	Oct. 2, 1929	4.6	40.6	-	-	29.9	-
1931	712	882	Aug. 11, 1931	4.1	33.2	-	-	31.7	-
1932	727	1,360	Mar. 6, 1932	3.4	32.4	-	-	48.4	-
1933	742	*1,960	Oct. 17, 1932	4.8	42.8	-	-	26.1	-
1934	757	*1,430	July 9, 1934*	5.2	41.4	-	-	49.0	-
1935	782	1,360	Dec. 1, 1934	6.9	51.9	-	-	46.0	-
1936	802	*2,230	Jan. 19, 1936	6.3	66.0	-	-	73.1	-
1937	822	927	Apr. 25, 1937	7.2	55.1	-	-	52.6	-
1938	852	912	Oct. 20, 1937	6.2	30.6	-	-	31.2	-
1939	872	1,420	Sept. 18, 1939	6.2	52.4	-	-	48.5	-
1940	892	1,200	Aug. 14, 1940	6.3	38.5	-	-	42.8	-
1941	922	*2,860	June 13, 1941	7	37.2	-	-	30.5	-
1942	952	1,150	May 22, 1942	6.8	32.3	-	-	36.2	-
1943	972	*4,470	July 11, 1943	5.5	54.0	-	-	51.9	-
1944	1002	1,940	Sept. 30, 1944	6	46.7	-	-	51.5	-
1945	1032	*4,640	Sept. 18, 1945	8.0	47.7	-	-	52.3	-
1946	1052	2,120	Feb. 10, 1946	11	49.6	-	-	40.9	-
1947	1082	6,000	Sept. 25, 1947	8.8	43.0	-	-	50.6	-
1948	1112	1,290	Apr. 15, 1948	9.3	51.5	-	-	55.1	-
1949	1142	4,060	July 15, 1949	14	65.7	-	-	60.6	-
1950	1172	1,600	Oct. 31, 1949	15	44.0	-	-	-	-

* Revised.

a Maximum for August and September.

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff, in inches, published in water-supply papers for water years 1929 and 1931-42 have been found subject to considerable error because of diversion into the basin above the station; these figures are not published herein and should not be used.

147. Haw River at Haw River, N. C.

Location.--Lat 36°05', long 79°22', on left bank at town of Haw River, Alamance County, 650 ft downstream from Southern Railway bridge and 3 miles downstream from Stony Creek.

Drainage area.--599 sq mi.

Gage.--Water-stage recorder. Datum of gage is 471.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--22 years (1928-50), 597 cfs.

Extremes.--1928-50: Maximum discharge, 37,000 cfs Sept. 18, 1945 (gage height, 31.10 ft from high-water mark on gage shelter), from rating curve extended above 26,000 cfs on basis of contracted-opening determination of peak flow; minimum, 3 cfs Sept. 5, 1930 (gage height, 0.92 ft); minimum daily, 5 cfs Sept. 6, 1930.

Remarks.--Large diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. City of Burlington diverts an average of about 2 cfs for municipal water supply.

Monthly and yearly mean discharge, in cubic feet per second, of Haw River at Haw River, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	302	224	233	268	1,290	1,630	790	443	922	807	482	246	632
1930	*1,510	754	755	871	865	456	373	307	285	288	128	60.2	*554
1931	59.3	181	442	498	272	364	1,060	649	187	385	1,180	142	454
1932	59.6	80.2	298	1,120	640	1,210	464	207	362	70.9	76.7	108	392
1933	788	786	1,460	848	903	489	512	447	155	101	291	175	579
1934	56.2	73.1	118	176	480	1,231	1,261	586	806	591	222	815	533
1935	231	279	851	715	570	1,115	1,593	639	233	270	102	234	569
1936	112	419	311	2,794	1,656	1,641	2,189	*247	520	432	354	124	*897
1937	691	222	891	2,977	997	589	1,109	556	367	372	894	846	861
1938	871	473	359	709	420	565	423	215	543	1,471	344	93.4	543
1939	88.6	538	625	528	1,697	1,150	504	620	322	679	1,682	252	718
1940	151	234	359	501	1,313	570	531	484	544	403	1,486	290	570
1941	127	1,054	459	585	382	562	709	172	414	655	134	211	454
1942	48.9	62.2	147	173	641	901	234	739	805	172	392	194	374
1943	321	230	624	*1,078	1,180	1,163	890	322	601	856	135	197	629
1944	76.0	162	282	973	1,211	1,737	1,616	446	171	413	158	550	647
1945	834	448	609	648	1,360	550	367	420	131	280	122	2,884	713
1946	266	338	1,487	1,042	1,675	525	374	575	202	227	293	123	589
1947	161	248	240	1,243	322	759	526	201	167	165	123	1,776	494
1948	410	1,286	432	576	1,630	928	1,056	374	364	162	373	120	637
1949	279	1,251	1,037	884	1,064	755	732	822	358	1,050	767	418	784
1950	658	1,017	395	442	508	662	339	688	473	579	174	170	509

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	0.58	0.42	0.45	0.52	2.25	3.14	1.47	0.85	1.72	1.55	0.93	0.46	14.34
1930	*2.91	1.41	1.45	1.68	1.50	.88	.69	.59	.53	.55	.25	.11	*12.55
1931	.11	.34	.85	.96	.47	.70	1.98	1.25	.35	.74	2.27	.26	10.28
1932	.11	.15	.57	2.15	1.15	2.33	.87	.40	.67	.14	.15	.20	8.89
1933	1.52	1.46	2.81	1.63	1.57	.94	.95	.86	.29	.19	.56	.53	13.11
1934	.11	.14	.23	.34	.83	2.37	2.35	1.13	1.50	1.14	.43	1.52	12.09
1935	.45	.52	1.64	1.38	.99	2.15	2.97	1.23	.43	.52	.20	.44	12.92
1936	.22	.78	.60	5.38	2.98	3.16	4.08	*.48	.97	.83	.68	.23	*20.39
1937	1.33	.41	1.72	5.73	1.73	1.13	2.06	1.07	.68	.72	1.72	1.20	19.50
1938	1.67	.88	.69	1.36	.73	1.09	.79	.41	1.01	2.84	.66	.17	12.30
1939	1.17	1.00	1.21	1.02	2.95	2.21	.94	1.20	1.60	1.30	5.19	.47	16.26
1940	.29	.44	.69	.96	2.36	1.10	.99	.93	1.01	.78	2.86	.54	12.95
1941	24	1.96	.88	1.13	.66	1.08	1.32	.33	.77	1.26	.26	.59	10.28
1942	.09	.12	.28	.33	1.11	1.75	.44	1.42	1.50	.33	.75	.36	8.46
1943	.62	.43	1.20	*2.06	2.05	2.24	1.66	.62	1.12	1.65	.26	.37	*14.28
1944	.15	.30	.54	1.87	2.18	3.34	3.01	.86	.32	.80	.30	1.03	*14.70
1945	1.61	.83	1.17	1.25	2.36	1.06	.68	.81	.24	.54	.24	5.37	16.16
1946	.51	.63	2.86	2.00	2.91	1.01	.70	1.10	.38	.44	.56	.23	13.33
1947	.31	.46	.46	2.39	.56	1.46	.98	.39	.31	.32	.24	3.31	11.19
1948	79	2.40	.83	1.11	2.93	1.79	1.97	.72	.68	.31	.72	.22	14.67
1949	.54	2.33	2.00	1.70	1.85	1.45	1.36	1.83	.67	2.02	1.89	.78	17.76
1950	1.27	1.89	.76	.85	.88	1.27	.63	1.32	.88	1.11	.33	.32	11.51

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	18,400	Feb. 28, 1929	135	632	1.06	14.34	*823	*18.66
1930	697,1383	*15,100	Oct. 2, 1929	5	*554	*.925	*12.55	357	8.08
1931	712	5,800	Apr. 6, 1931	34	454	.758	10.28	433	9.81
1932	727	*13,500	Mar. 6, 1932	19	392	.654	8.89	609	13.85
1933	742	*8,760	May 30, 1933*	16	579	.967	13.11	344	7.80
1934	782	15,800	Apr. 9, 1934	10	533	.890	12.09	627	14.22
1935	782	9,820	Apr. 1, 1935	58	569	.950	12.92	525	11.91
1936	802,1383	14,400	Apr. 6, 1936	22	*897	*1.50	*20.39	*979	*22.25
1937	822	11,800	Jan. 3, 1937	53	861	1.44	19.50	852	19.28
1938	852	11,000	July 26, 1938	29	543	.907	12.30	505	11.44
1939	872	11,000	July 21, 1939	24	718	1.20	16.26	675	15.30
1940	892	12,700	Aug. 16, 1940	42	570	.952	12.95	644	14.61
1941	922	10,800	Nov. 15, 1940	14	454	.758	10.28	340	7.69
1942	952	13,500	May 22, 1942	22	374	.624	8.46	452	10.22
1943	972,1383	9,700	July 11, 1943	28	829	1.05	*14.28	*574	*13.02
1944	1002	*14,400	Apr. 12, 1944	16	647	1.08	14.70	762	17.32
1945	1032	37,000	Sept. 18, 1945	28	713	1.19	16.16	731	16.55
1946	1052	13,400	Feb. 10, 1946	61	589	.983	13.33	666	10.56
1947	1082	27,200	Sept. 26, 1947	32	494	.825	11.19	417	13.98
1948	1112	9,500	Feb. 14, 1948	40	637	1.06	14.47	674	15.32
1949	1142	11,100	Nov. 28, 1948	116	784	1.31	17.76	742	16.81
1950	1172	10,500	Nov. 1, 1949	39	509	.850	11.51	-	-

* Revised.

148. Haw River near Pittsboro, N. C.

Location (revised).--Lat 35°42', long 79°05', on left bank 100 ft upstream from Robeson Creek (formerly called Robinsons Creek), 2 miles downstream from bridge on U. S. Highway 64, and 5 miles east of Pittsboro, Chatham County.

Drainage area.--1,310 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 180.06 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 15, 1929, staff gage at same site and datum.

Average discharge.--22 years (1928-50), 1,283 cfs (revised).

Extremes.--1928-50: Maximum discharge, 79,000 cfs during night of Sept. 18 (revised), 1945 (gage height, 28.58 ft, from floodmark in gage shelter), from rating curve extended above 46,000 cfs and confirmed by current-meter measurement made at site 6 miles upstream; minimum, 4.5 cfs Sept. 27, 1948; minimum daily, 7.3 cfs Sept. 26, 1948.
Flood of August 1908 reached a stage of 32.1 ft, from floodmarks, 1,000 ft upstream (discharge, 98,000 cfs). Flood of September 1928 reached a stage of 20.3 ft, from floodmarks (discharge 39,200 cfs). Flood of 1865 reached a stage about 1 ft lower than flood of 1908, from information by local residents.

Remarks.--Considerable diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*598	446	401	419	2,660	4,350	1,780	1,250	1,450	1,710	998	417	*1,364
1930	5,490	1,800	1,610	1,780	1,900	905	740	492	592	522	210	417	1,170
1931	59.5	242	865	1,050	491	775	2,250	1,670	360	*719	2,590	239	948
1932	85.9	99.1	574	2,680	1,470	2,580	1,030	438	1,260	180	164	130	890
1933	*1,290	1,760	3,370	1,850	2,010	1,080	1,170	598	247	151	465	244	*1,182
1934	68.5	85.0	171	270	812	*2,210	2,780	969	2,070	1,060	632	2,260	*1,111
1935	51.0	67.6	2,129	1,926	1,432	2,502	3,366	1,541	415	556	150	862	1,338
1936	135	787	742	6,456	4,129	3,784	4,972	440	1,152	1,056	815	241	2,051
1937	1,389	412	2,088	6,387	2,598	1,460	2,445	995	656	*697	1,809	1,374	*1,845
1938	1,186	773	633	1,609	809	1,218	1,100	449	1,409	3,007	663	250	1,095
1939	161	959	1,378	1,367	4,262	3,031	1,395	1,485	630	1,157	3,528	463	1,639
1940	247	363	581	959	2,895	1,388	1,253	820	854	498	2,364	432	1,046
1941	133	1,943	861	1,221	848	1,364	1,606	329	901	996	203	287	888
1942	60.1	75.8	216	250	1,242	1,793	449	1,544	1,433	353	789	570	711
1943	585	706	1,732	2,567	2,167	2,342	1,826	656	1,087	2,049	290	481	1,371
1944	126	246	463	1,938	2,714	3,801	2,987	989	271	1,109	489	826	1,324
1945	2,396	1,033	1,267	1,317	3,018	1,253	857	851	265	1,046	418	7,771	1,772
1946	604	544	2,983	2,468	4,030	1,100	872	1,532	705	588	725	291	1,357
1947	489	633	503	3,170	752	1,648	1,174	396	328	350	239	1,974	971
1948	720	2,694	821	1,370	3,953	2,195	2,093	846	646	*356	691	178	*1,366
1949	669	3,294	2,643	1,957	2,459	1,521	1,492	1,601	488	1,875	1,559	828	1,695
1950	1,655	2,037	902	987	1,017	1,437	615	1,330	831	1,476	316	367	1,083

* Revised.

† Not previously published; estimated or partly estimated on basis of records for station on Haw River at Haw River.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.53	*0.38	0.35	0.37	2.12	3.83	1.49	1.08	1.24	1.50	0.88	0.36	*14.13
1930	3.07	1.53	1.42	1.57	1.51	.80	.63	.43	.50	.46	.19	.06	12.17
1931	.05	.21	.76	.91	.39	.68	1.92	1.47	.32	*.63	2.28	.20	9.82
1932	.07	.08	.50	2.36	1.21	2.27	.88	.39	1.07	.16	.14	.11	9.24
1933	*1.13	1.50	2.96	1.62	1.59	.95	1.00	.53	2.21	.13	.41	.21	*12.24
1934	.06	.07	.15	.24	.65	*1.95	2.36	.85	1.77	.93	.56	1.92	*11.51
1935	.45	.58	1.87	1.70	1.14	2.20	2.87	1.36	.35	.49	.13	.73	13.87
1936	.12	.67	.65	5.68	3.40	3.33	4.23	.39	.98	.93	.72	.21	21.31
1937	1.22	.35	1.83	5.63	1.91	1.28	2.09	.88	.56	*.61	1.59	1.17	*19.12
1938	1.04	.86	.56	1.42	.84	1.07	.94	.40	1.20	2.65	.58	.20	11.36
1939	.14	.82	1.21	1.20	3.38	2.66	1.18	1.30	5.54	1.02	3.10	.40	16.95
1940	.22	.31	.51	.83	2.38	1.22	1.07	.72	.75	.44	2.08	.37	10.88
1941	.12	1.65	.76	1.07	.67	1.20	1.37	.29	.77	.88	.18	.24	9.20
1942	.05	.06	.19	.22	.99	1.58	.38	1.18	1.22	.31	.69	.49	7.36
1943	.51	.60	1.52	2.26	1.72	2.06	1.55	.58	.93	1.80	.26	.41	14.20
1944	.11	.21	.40	1.71	2.23	3.35	2.54	.87	.23	.98	.43	.70	13.76
1945	2.11	.88	1.11	1.16	2.40	1.10	.73	.73	.23	.92	.37	6.62	18.36
1946	.53	.46	2.63	2.17	3.20	.97	7.4	1.35	.60	.52	.64	.25	14.06
1947	.43	.54	.44	2.79	.60	1.45	1.00	.35	.28	.29	.21	1.68	10.06
1948	.63	2.29	.72	1.21	3.25	1.93	1.78	.74	.55	*.31	.61	.15	*14.17
1949	.59	2.81	2.33	1.72	1.95	1.34	1.27	1.41	.42	1.65	1.37	.71	17.57
1950	1.46	1.73	.73	.87	.81	1.26	.52	1.17	.71	1.30	.28	.31	11.21

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Haw River near Pittsboro, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	*31,200	Mar. 5, 1929	-	1,364	*1.04	*14.13	1,822	18.89
1930	697	47,300	Oct. 2, 1929	21	1,170	.893	12.17	692	7.17
1931	712,1383	16,000	May 21, 1931	22	948	.724	9.82	*914	*9.45
1932	727	29,700	Mar. 7, 1932	24	890	.679	9.24	*1,365	*14.18
1933	742,1383	15,100	Oct. 17, 1932	18	*1,182	*.902	*12.24	669	6.93
1934	757,1383	31,200	Apr. 10, 1934	18	*1,111	*.848	*11.51	*1,363	*14.13
1935	782	23,300	Dec. 1, 1934	49	1,358	1.02	13.87	1,198	12.41
1936	802	41,000	Apr. 7, 1936	33	2,051	1.57	21.31	2,240	23.27
1937	822,1383	22,700	Apr. 26, 1937	169	*1,845	1.41	*19.12	*1,734	17.97
1938	852	27,400	July 26, 1938	94	1,095	.836	11.36	1,087	11.27
1939	872	28,900	Aug. 19, 1939	66	1,639	1.25	16.95	1,529	15.82
1940	892	18,900	Aug. 14, 1940	42	1,046	.798	10.88	1,190	12.37
1941	922	21,100	Nov. 15, 1940	20	888	.678	9.20	674	6.97
1942	952	17,400	May 22, 1942	19	711	.543	7.36	936	9.69
1943	972	21,100	July 13, 1943	42	1,371	1.05	14.20	1,186	12.29
1944	1002	a22,700	Apr. 12, 1944	25	1,324	1.01	13.78	1,650	17.14
1945	1032	79,000	Sept. 18, 1945*	84	1,772	1.35	18.36	1,725	17.88
1946	1052	32,400	Feb. 11, 1946	46	1,357	1.04	14.06	1,144	11.85
1947	1082	23,300	Sept. 26, 1947	19	971	.741	10.06	1,187	12.29
1948	1112,1383	20,500	Feb. 14, 1948	7.3	*1,366	1.04	*14.17	*1,565	*16.26
1949	1142	28,600	Nov. 29, 1948	54	1,695	1.29	17.57	1,527	15.82
1950	1172	23,700	Oct. 8, 1949	29	1,083	.827	11.21	-	-

* Revised.

* Not previously published.

a Maximum peak discharge; maximum discharge during year, about 41,000 cfs at 12:00 p.m. Sept. 30, stage rising.

149. Morgan Creek near Chapel Hill, N. C.

Location.--Lat 35°53'51", long 79°05'27" 600 ft downstream from site of University Lake dam which was completed in 1932, 1,100 ft downstream from Neville Creek, 1½ miles southwest of Carboro, 2½ miles southwest of Chapel Hill, Orange County, and 7 miles upstream from mouth.

Drainage area.--29.1 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage 315.41 ft above mean sea level, datum of 1929 (levels by North Carolina Department of Conservation and Development). Prior to Dec. 8, 1924, staff gage and Dec. 8, 1924, to Oct. 22, 1931, water-stage recorder at site 600 ft upstream at datum 1.96 ft higher.

Average discharge.--8 years (1923-31), 32.6 cfs.

Extremes.--1923-32: Maximum discharge, about 30,000 cfs Aug. 4, 1924 (gage height, about 25.0 ft, from floodmarks), from rating curve extended above 4,500 cfs on basis of velocity-area studies; minimum daily discharge, 0.47 cfs Sept. 11, 13, 1925.

Remarks.--A diversion by city of Chapel Hill for water supply, beginning July 9, 1925, and ranging up to about 1 cfs, is included in the published discharge records. Station discontinued when University Lake dam was completed.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	48.9	99.8	35.3	19.8	9.26	9.50	8.22	9.80	-
1924	4.35	7.56	15.5	26.3	35.5	36.7	35.2	36.9	*48.2	*59.6	227.7	133	*55.6
1925	42.3	36.2	30.6	134	34.6	21.9	13.7	9.2	4.7	2.3	3.4	10.3	28.7
1926	2.12	3.96	5.75	23.4	54.9	45.0	28.2	8.29	4.24	29.9	4.04	7.71	17.9
1927	1.83	*4.94	16.6	14.2	39.1	50.2	20.0	7.53	6.93	41.6	16.5	11.4	*43.8
1928	20.7	7.34	55.9	22.6	43.6	33.8	*85.2	29.1	18.5	12.6	58.8	140	*19.2
1929	29.5	12.7	10.4	11.1	81.1	95.0	36.1	*34.5	*35.7	62.0	22.2	9.86	*36.4
1930	138	59.3	39.9	40.6	45.1	23.3	24.3	11.0	47.2	10.4	3.86	2.29	37.1
1931	3.22	5.57	*17.9	20.7	10.4	14.8	51.8	*30.2	6.53	17.1	78.9	5.02	22.0
1932	2.97	2.75	17.5	63.2	32.6	54.6	18.3	10.1	-	-	-	-	-

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	1.75	3.95	1.35	0.78	0.35	0.38	0.33	0.38	-
1924	0.17	0.29	0.61	1.04	1.31	1.45	1.35	1.46	*1.85	*2.36	9.01	5.11	*26.01
1925	1.68	1.39	1.21	5.29	1.24	.87	.53	.36	.18	.09	.14	.39	13.37
1926	.08	.15	.23	.93	1.97	1.78	1.08	.33	.16	1.18	.16	.30	8.35
1927	.07	*.19	.66	.56	1.40	1.99	.77	.30	.27	1.65	.65	.44	*8.95
1928	.82	.28	2.22	.90	1.62	1.34	*3.27	1.15	.71	.50	2.33	5.37	*20.51
1929	1.17	.49	.41	.44	2.90	3.76	1.38	*1.37	*1.37	2.46	.88	.38	*17.01
1930	5.49	2.27	1.58	1.61	1.62	.93	.93	.44	1.81	.41	.15	.09	17.33
1931	.13	.21	*.71	.82	.37	.59	1.99	*1.20	.25	.68	3.13	.19	10.27
1932	.12	.11	.69	2.51	1.21	2.16	.70	.40	-	-	-	-	-

* Revised.

CAPE FEAR RIVER BASIN

Yearly discharge, in cubic feet per second, of Morgan Creek near Chapel Hill, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1923	562	*a1,690	Mar. 13, 1923	-	-	-	-	-	-
1924	582,1383	30,000	Aug. 4, 1924	3.8	*55.6	*1.91	*26.01	*62.5	*29.22
1925	602	*1,570	Jan. 11, 1925	.47	28.7	.986	13.37	20.5	9.55
1926	622	3,570	July 24, 1926	1.0	17.9	.615	8.35	*18.9	*8.81
1927	642,1383	1,620	July 8, 1927	1.1	*19.2	*.660	*8.95	24.3	11.35
1928	662,1383	4,240	Apr. 27, 1928	2.7	*43.8	*1.51	*20.51	*41.2	*19.26
1929	682,1383	3,000	Mar. 5, 1929	6.9	*36.4	*1.25	*17.01	*52.0	*24.28
1930	697	7,730	Oct. 2, 1929	1.30	-	-	17.33	*19.4	*9.04
1931	712,1383	5,770	Aug. 20, 1931	1.08	22.0	.756	10.27	*21.7	*10.14
1932	727	*b2,450	Mar. 6, 1932	-	-	-	-	-	-

* Revised.

a Maximum for period January to September.

b Maximum for period October to June.

150. New Hope River near Pittsboro, N. C.

Location.--Lat 35°44', long 79°02', on right bank at bridge on U. S. Highway 64, a quarter of a mile downstream from Whitecreek Creek and 8 $\frac{1}{2}$ miles east of Pittsboro, Chatham County.

Drainage area.--285 sq mi.

Gage.--Water-stage recorder. Datum of gage is 176.42 ft above mean sea level (from Corps of Engineers benchmark). Prior to Mar. 18, 1950, staff gage at same site and datum.

Extremes.--1949-50: Maximum discharge, 3,530 cfs Aug. 30, 1949 (gage height, 16.70 ft); minimum, 13 cfs Aug. 30, 31, 1950 (gage height, 1.85 ft).
Flood of September 1945 reached a stage of 27.65 ft; 1929 flood, 25.3 ft; 1908 flood, 23.85 ft, from information by State Highway and Public Works Commission (discharge not determined).

Remarks.--City of Durham discharges an average of about 4 cfs sewage effluent from Neuse River into basin upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	500	246	173	105	303	43.1	122	398	238	-
1950	109	186	193	242	187	314	74.7	303	120	474	29.1	34.5	190

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	2.02	1.89	0.70	0.41	1.23	0.17	0.49	1.61	0.93	-
1950	0.44	0.73	0.78	1.00	.68	1.27	.29	1.23	.47	1.92	.12	.14	9.07

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1949	1172	a3,530	Aug. 30, 1949	-	-	-	-	239	11.40
1950	1172	1,670	May 15, 1950	14	190	0.667	9.07	-	-

a Maximum for period February to September.

151. West Fork Deep River near High Point, N. C.

Location.--Lat 36°00'15", long 79°58'42", on left bank 2,300 ft upstream from highway bridge and High Point Lake, 2.3 miles west of Jamestown, and 2.5 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--32.1 sq mi.

Gage.--Water-stage recorder with modified Parshall Flume since July 28, 1934. Altitude of gage is 758 ft (from topographic map). June 14, 1923, to Sept. 30, 1926, staff gage at site 2,300 ft downstream at different datum.

Average discharge.--27 years (1923-50), 32.4 cfs (revised).

Extremes.--1923-50: Maximum discharge, 8,450 cfs Sept. 24, 1947 (gage height, 19.92 ft, from floodmarks), from rating curve extended above 2,000 cfs on basis of contracted-opening determination of peak flow; minimum, 0.3 cfs Sept. 1, 1932.

Remarks.--Occasionally some diurnal fluctuation at low flow caused by gristmill 4 miles upstream.

Monthly and yearly mean discharge, in cubic feet per second, of West Fork Deep River near High Point, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	*9.43	37.5	132	16.7	-
1924	15.8	26.2	*31.3	39.8	39.2	*45.2	*65.9	47.9	21.8	51.1	31.8	*66.8	*40.2
1925	17.9	17.0	45.0	113	74.5	38.2	*17.3	35.0	*12.0	5.81	*23.2	7.80	*33.8
1926	14.4	13.0	19.3	75.3	75.3	38.5	30.4	11.1	8.67	23.6	11.3	4.43	26.8
1927	*4.6	*14	*44	*20	*43	*44	*30	*10	*28	*52	*35	*12	*28.0
1928	*65	*18	*80	*23	*47	*40	*74	*40	*27	*12.9	62.2	103	*49.3
1929	17.9	14.9	13.3	17.4	92.9	76.6	55.8	25.7	26.7	23.2	21.3	9.10	32.5
1930	75.3	40.5	34.4	*33.0	41.1	23.0	21.0	24.9	23.9	6.39	5.50	5.90	*27.9
1931	4.24	12.3	*39.1	26.1	12.6	29.5	63.7	58.4	9.66	*23.5	50.1	6.55	*28.2
1932	3.53	5.16	17.4	49.5	33.1	68.0	19.7	14.8	20.2	7.96	3.82	3.08	20.5
1933	51.6	31.0	85.1	41.3	48.1	31.2	30.4	15.4	8.86	8.81	43.6	6.02	35.3
1934	3.90	5.98	8.69	11.0	47.2	67.9	51.1	19.3	22.1	45.2	8.79	53.6	28.5
1935	10.8	15.3	30.8	34.2	31.5	66.6	85.8	36.1	13.1	21.3	5.53	9.78	28.4
1936	5.34	22.7	12.3	156	95.4	67.2	121	11.3	10.1	27.4	16.3	28.3	47.5
1937	44.6	12.1	49.2	153	46.0	29.5	53.3	29.4	15.8	17.5	20.5	20.2	41.1
1938	26.7.	18.8	17.7	33.1	20.4	30.9	17.1	23.6	24.3	64.2	9.73	5.49	24.4
1939	5.41	31.3	35.5	32.2	103	47.9	23.5	17.9	14.0	20.1	87.3	8.19	35.1
1940	8.28	9.87	17.7	21.6	47.0	24.8	30.3	71.3	17.0	21.0	78.5	14.5	30.2
1941	7.33	47.9	25.5	30.3	36.5	32.9	29.3	9.61	24.0	47.8	5.54	3.95	23.3
1942	3.03	4.26	8.05	9.37	19.5	77.3	11.2	21.1	47.9	24.2	25.2	8.26	23.2
1943	16.9	11.1	31.4	68.1	57.7	63.0	42.7	18.5	19.6	32.1	10.1	6.67	31.4
1944	5.67	7.53	13.3	43.2	67.5	106	85.8	16.4	6.94	24.8	6.48	33.1	34.5
1945	17.8	28.6	27.6	33.7	76.7	26.6	15.2	23.6	8.77	15.5	5.57	105	31.6
1946	11.3	21.9	86.2	55.8	95.1	28.3	22.3	42.5	15.4	25.8	24.0	11.6	36.4
1947	11.3	16.3	16.4	78.0	14.2	39.7	30.6	11.6	7.88	*8.34	7.76	150	*32.6
1948	18.8	56.9	21.5	31.6	89.7	52.3	54.9	21.3	14.2	8.74	28.5	9.00	33.7
1949	12.1	76.0	60.2	42.7	56.5	33.5	33.9	36.9	10.3	70.7	92.8	16.7	45.2
1950	63.3	35.2	19.4	21.5	25.8	36.4	18.1	44.5	16.6	17.2	10.3	10.7	26.8

* Revised.
 † Corrected.
 * Not previously published; estimated or partly estimated on the basis of records for stations on Horsepen Creek at Battle Ground, Deep River near Randleman, and Deep River at Ramseur, and precipitation records in the vicinity.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	*0.32	1.31	0.46	0.56	-
1924	0.55	0.89	*1.09	1.40	1.28	*1.58	*2.23	1.67	1.74	1.79	1.11	*2.26	*16.59
1925	.82	.57	1.57	3.94	2.35	1.34	*.59	1.22	*.40	.20	*.81	.26	*13.87
1926	.50	.44	.67	2.63	2.37	1.35	1.03	.39	.29	.82	.39	.15	.11.03
1927	*.17	*.43	*1.58	*.72	*1.39	*1.58	*1.04	*.36	*.97	*1.87	*1.26	*.42	*11.85
1928	*2.33	*.63	*2.87	*.83	*1.58	*1.44	*2.57	*1.44	*.94	*.46	2.24	3.57	*20.90
1929	.64	.52	.48	.63	3.01	2.75	1.94	.92	.93	.83	.77	.32	13.74
1930	2.71	1.41	1.23	*1.19	1.33	.83	.73	.89	.83	.23	.20	.20	*11.78
1931	.15	.43	1.40	.94	.41	1.06	2.22	2.10	.34	*.84	1.80	.23	*11.92
1932	.13	.18	.62	1.78	1.11	2.44	.69	.53	.70	.29	.14	.11	8.72
1933	1.85	1.08	2.99	1.48	1.56	1.12	1.06	.55	.31	.32	1.56	.21	14.09
1934	.14	.21	.31	.40	1.53	2.44	1.78	.69	.77	1.63	.32	1.86	12.08
1935	.59	.53	1.11	1.23	1.02	2.39	2.29	1.30	.45	.76	.20	.34	12.01
1936	.19	.79	.44	5.59	3.21	2.41	4.21	.41	.35	.99	.59	.98	20.16
1937	1.60	.42	1.77	5.50	1.49	1.06	1.85	1.05	.55	.63	.74	.70	17.36
1938	.96	.65	.64	1.19	.66	1.11	.59	.85	.84	2.31	.35	1.19	10.34
1939	.19	1.09	1.28	1.15	3.34	1.72	.82	.64	.49	.72	3.14	.28	14.86
1940	.30	.34	.64	.78	1.58	.89	1.05	2.56	.59	.75	2.82	.50	12.80
1941	.28	1.67	.92	1.09	.51	1.18	1.02	.35	.84	1.72	.20	.14	9.90
1942	.11	.15	.29	.34	1.28	2.78	.39	.76	1.67	.87	.90	.29	9.83
1943	.61	.38	1.13	2.45	1.87	2.26	1.48	.66	.68	1.15	.36	.23	13.26
1944	.20	.26	.48	1.55	2.27	3.80	2.98	.59	.24	.89	.23	1.15	14.64
1945	.64	1.00	.99	1.21	2.49	.95	.53	.85	.30	.56	.20	3.64	13.36
1946	.41	.76	3.10	2.00	3.08	1.01	.78	1.53	.53	.93	.86	.40	15.39
1947	.41	.57	.59	2.80	.46	1.43	1.06	.42	.27	*.30	.28	5.22	*13.81
1948	.68	1.98	.77	1.14	3.01	1.88	1.91	.76	.49	.31	1.02	.31	14.26
1949	.43	2.64	2.16	1.53	1.83	1.20	1.16	1.33	.36	2.54	3.33	.58	19.11
1950	2.27	1.22	.70	.77	.84	1.31	.63	1.60	.65	.62	.37	.37	11.35

* Revised.
 * Not previously published; see footnote to preceding table.

CAPE FEAR RIVER BASIN

Yearly discharge, in cubic feet per second, of West Fork Deep River near High Point, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1923	562	-	-	-	-	-	-	-	-
1924	582,1383	*1,160	Sept. 29, 1924	4.6	*40.2	*1.22	*16.59	*40.8	*16.82
1925	602,1383	1,010	Feb. 11, 1925	2	*33.8	*1.02	*13.87	*31.0	*12.72
1926	622	1,060	Jan. 18, 1926	3	26.8	.812	11.03	*28.2	*11.66
1927	-	-	-	-	*28.0	*.872	*11.85	*36.5	*15.44
1928	662	1,500	Sept. 19, 1928	5	*49.3	*1.54	*20.90	*59.4	*16.71
1929	682	1,980	Feb. 28, 1929	6.6	32.5	1.01	13.74	41.2	17.45
1930	697,1383	1,200	Oct. 2, 1929	1.8	*27.9	*.869	*11.78	*19.9	*8.41
1931	712,1383	*778	Aug. 22, 1931*	-	*28.2	*.879	*11.92	*25.7	*10.87
1932	727	1,370	Mar. 6, 1932	.6	20.5	.659	8.72	32.3	13.71
1933	742	1,980	Oct. 17, 1932	2.5	33.3	1.04	14.09	20.9	8.83
1934	757	1,050	Feb. 26, 1934	3.0	28.5	.888	12.08	31.8	13.45
1935	782	986	Mar. 13, 1935	3.0	26.4	.885	12.01	27.0	11.40
1936	802	2,880	Jan. 19, 1936	4.4	47.5	1.48	20.16	53.1	22.53
1937	822	1,570	Jan. 19, 1937	4.8	41.1	1.28	17.36	37.4	*15.82
1938	852	1,420	July 23, 1938	4.1	24.4	.760	10.34	25.2	10.66
1939	872	1,780	Aug. 18, 1939	3.2	35.1	1.09	14.86	32.1	13.58
1940	892	2,610	May 30, 1940	5.3	30.2	.941	12.80	33.9	14.37
1941	922	736	June 13, 1941	2.4	23.3	.726	9.90	17.9	7.60
1942	952	2,430	Mar. 9, 1942	2.3	23.2	.723	9.83	26.9	11.40
1943	972	1,310	Jan. 19, 1943	3.5	31.4	.978	13.26	28.6	12.08
1944	1002	1,680	Apr. 12, 1944	3.0	34.5	1.07	14.64	38.5	16.33
1945	1032	2,840	Sept. 18, 1945	3.1	31.6	.984	13.36	35.5	15.00
1946	1052	2,200	Feb. 10, 1946	6.1	36.4	1.13	15.39	30.0	12.69
1947	1082,1383	8,450	Sept. 24, 1947	2.8	*32.6	*1.02	*13.81	*37.0	*15.67
1948	1112	692	Apr. 1, 1948	5.7	33.7	1.05	14.26	37.9	16.06
1949	1142	2,000	July 15, 1949	6.6	45.2	1.41	19.11	42.7	18.07
1950	1172	2,650	Oct. 31, 1949	5.9	26.8	.835	11.35	42.7	-

* Revised.

† Corrected.

‡ Not previously published.

a Maximum during period July to September.

152. East Fork Deep River near High Point, N. C.

Location.--Lat 36°02'15", long 79°56'46", on left bank 5 ft upstream from highway bridge, 3.3 miles upstream from High Point Dam, and 5.2 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--14.7 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 764.02 ft above mean sea level, unadjusted. Intake pipe extended to downstream side of bridge since Mar. 1, 1934.

Average discharge.--22 years (1928-50), 14.8 cfs.

Extremes.--1928-50: Maximum discharge, 6,300 cfs Sept. 24, 1947 (gage height, 10.87 ft, from floodmark), from rating curve extended above 1,600 cfs on basis of computation of peak flow by contracted-opening method using floodmarks at gage height 14.11 ft on upstream side of bridge and at gage height 10.87 ft on downstream side of bridge; minimum, 0.7 cfs Sept. 22, 1941; minimum daily, 1.5 cfs Aug. 26-29, Sept. 12-19, 1932.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	18.2	49.2	-
1929	7.66	6.15	5.86	6.26	43.7	29.4	24.3	12.3	17.6	15.7	12.1	5.20	15.3
1930	33.6	20.9	22.2	24.6	23.2	12.4	10.5	10.6	7.45	4.35	3.70	2.81	14.7
1931	3.09	6.37	17.2	12.1	6.47	13.0	27.3	22.2	5.21	7.72	23.0	4.11	12.4
1932	3.48	3.76	8.75	25.3	16.4	29.6	9.87	6.74	16.7	5.86	4.15	4.13	11.2
1933	24.2	17.4	*48.5	22.4	31.3	15.7	15.3	6.83	4.74	5.51	24.5	4.02	18.4
1934	2.75	3.03	3.76	5.32	35.2	26.7	20.3	10.4	20.7	15.3	3.96	31.0	14.7
1935	5.32	8.86	13.9	15.7	15.0	34.1	29.3	22.2	6.35	6.73	3.71	8.93	14.2
1936	3.71	9.97	6.28	67.2	44.9	29.9	57.8	5.88	6.33	17.2	7.90	14.7	22.5
1937	12.3	5.97	23.3	68.0	21.4	13.5	21.4	14.5	6.99	6.27	7.36	8.25	17.5
1938	11.5	8.07	7.26	14.6	8.62	13.4	7.12	6.35	8.76	24.3	4.51	2.81	9.82
1939	2.83	9.92	13.4	14.3	51.5	19.5	9.86	8.04	10.4	7.32	44.2	4.53	16.1
1940	5.04	4.60	8.33	9.73	22.8	11.4	15.6	32.9	9.08	12.0	40.1	7.98	15.0
1941	4.51	22.8	11.2	14.0	7.38	*14.6	13.7	4.57	10.7	11.8	2.87	2.54	*10.1
1942	1.88	2.35	3.53	4.32	15.4	33.8	5.52	9.57	9.63	10.1	8.42	4.47	9.08
1943	7.83	5.00	14.2	29.7	23.9	26.3	16.9	7.39	12.7	13.2	4.50	3.63	13.7
1944	3.24	3.89	5.75	17.3	26.8	42.4	34.2	8.92	4.51	10.2	5.21	14.5	14.7
1945	9.01	13.5	12.8	15.1	36.1	11.8	7.36	21.9	5.03	4.85	3.52	51.0	15.8
1946	5.87	9.92	40.4	25.5	47.4	12.0	10.0	18.7	6.16	22.5	8.95	5.93	17.6
1947	5.79	7.40	6.69	32.7	7.76	16.6	13.2	5.44	4.23	4.29	4.90	79.2	15.8
1948	6.07	25.5	8.91	13.7	38.1	24.1	21.9	11.1	7.00	5.53	7.93	4.29	14.4
1949	5.60	37.4	26.5	19.0	24.7	14.1	13.6	14.5	5.31	28.0	55.9	7.77	21.1
1950	26.3	15.7	8.17	8.45	10.5	15.0	7.66	18.4	9.05	11.3	6.98	5.00	11.9

* Revised.

† Corrected.

Monthly and yearly runoff, in inches, of East Fork Deep River near High Point, N. C.

Water year	Monthly and yearly runoff, in inches, of East Fork Deep River near High Point, N. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	1.43	3.73
1929	0.60	0.47	0.46	0.49	3.10	2.31	1.84	0.97	1.34	1.23	.95	.39	14.15
1930	2.64	1.58	1.74	1.93	1.64	.97	.80	.83	.57	.34	.29	.21	13.54
1931	.24	.48	1.35	.95	.46	1.02	2.07	1.74	.40	.61	1.81	.31	11.44
1932	.27	.29	.69	1.98	1.20	2.32	.75	.53	1.27	.46	.33	.31	10.40
1933	1.90	1.32	3.81	1.76	2.22	1.23	1.16	.54	.36	.43	1.92	.31	16.86
1934	.22	.23	.29	.42	2.43	2.10	1.54	.81	1.57	1.20	.31	2.35	13.53
1935	.42	.67	1.09	1.23	1.06	2.67	2.23	1.74	.48	.53	.29	.68	13.09
1936	.29	.76	.49	5.27	3.29	2.35	4.39	.46	.48	1.35	.62	1.11	20.86
1937	.96	.45	1.83	5.34	1.52	1.06	1.62	1.14	.53	.49	.58	.63	16.15
1938	.91	.61	.57	1.14	.61	1.05	.54	.50	.66	1.91	.35	.21	9.06
1939	.22	.75	1.05	1.12	3.65	1.53	.75	.63	.79	.57	3.46	.34	14.86
1940	.40	.35	.65	.76	1.68	.90	1.18	2.58	.69	.94	3.14	.61	13.88
1941	.35	1.73	.88	1.10	.52	*1.14	1.04	.36	.61	.93	.23	.19	*9.28
1942	.15	.18	.28	.34	1.09	2.65	.42	.75	.73	.79	.66	.34	8.38
1943	.61	.38	1.12	2.33	1.69	2.06	1.28	.58	.98	1.04	.35	.28	12.68
1944	.25	.30	.45	1.36	1.97	3.33	2.60	.70	.34	.80	.43	1.10	13.61
1945	.71	1.03	1.01	1.19	2.56	.92	.56	1.72	.38	.38	.28	3.87	14.61
1946	.46	.75	3.17	2.00	3.36	.94	.76	1.46	.47	1.77	.70	.45	16.29
1947	.45	.56	.54	2.57	.55	1.46	1.00	.43	.32	.34	.38	6.01	14.61
1948	.48	1.93	.70	1.07	2.79	1.89	1.66	.87	.55	.43	.62	.33	13.30
1949	.44	2.84	2.08	1.49	1.75	1.11	1.03	1.14	.40	2.20	4.38	.59	19.45
1950	2.07	1.19	.64	.66	.75	1.18	.58	1.44	.69	.88	.55	.38	11.01

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1928	662	805	Sept. 19, 1928	-	-	-	-	-	-	
1929	682	1,040	Apr. 15, 1929	4.2	15.3	1.04	14.15	20.1	18.58	
1930	697	750	Oct. 2, 1929	2.2	14.7	1.00	13.54	10.5	9.65	
1931	712	656	Aug. 22, 1931	2.7	12.4	.844	11.44	11.5	10.62	
1932	727	950	Mar. 6, 1932	1.5	11.2	.762	10.40	17.5	16.18	
1933	742	1,160	Oct. 17, 1932	2	18.4	1.25	16.96	11.5	10.67	
1934	757	1,660	June 8, 1934	2.5	14.7	1.00	13.53	16.2	14.97	
1935	782	1,100	May 10, 1935	2.9	14.2	.966	13.09	13.5	12.45	
1936	802	2,170	Jan. 19, 1936	3.1	22.5	1.53	20.86	24.4	22.56	
1937	822	1,570	Jan. 19, 1937	3.5	17.5	1.19	16.15	18.2	15.00	
1938	852	1,820	July 23, 1938	2.5	9.82	.668	9.08	9.76	8.99	
1939	872	2,170	Aug. 24, 1939	2.5	16.1	1.10	14.86	15.4	14.24	
1940	892	2,520	Aug. 14, 1940	3.6	15.0	1.02	13.88	16.7	15.44	
1941	922,1383	830	June 13, 1941	1.6	*10.1	.687	*9.28	*7.50	*6.93	
1942	952	1,970	Mar. 9, 1942	1.6	9.08	.618	8.38	10.7	9.88	
1943	972	1,440	Jan. 19, 1943	2.8	13.7	.932	12.68	12.5	11.57	
1944	1002	1,460	July 14, 1944	2.6	14.7	1.00	13.61	16.6	15.36	
1945	1032	1,820	(b)	2.5	15.8	1.07	14.61	17.6	16.24	
1946	1052	1,870	July 23, 1946	4.1	17.6	1.20	16.29	14.6	13.46	
1947	1082	6,300	Sept. 24, 1947	2.6	15.8	1.07	14.61	17.5	16.17	
1948	1112	679	May 13, 1948	3.4	14.4	.980	13.30	16.8	15.55	
1949	1142	2,180	Aug. 15, 1949	3.9	21.1	1.44	19.45	19.5	17.99	
1950	1172	1,440	Oct. 31, 1949	3.9	11.9	.810	11.01	-	-	

* Revised.

a Maximum during period July to September.

b May 27, Sept. 18, 1945.

153. Deep River near Randleman, N. C.

Location.--Lat 35°54'10", long 79°51'15", on left bank 500 ft downstream from highway bridge, a quarter of a mile downstream from Coltrane's Mill, half a mile south of Guilford County line, 4 1/2 miles upstream from Muddy Creek, and 7 miles north of Randleman, Randolph County.

Drainage area.--124 sq mi.

Gage.--Water-stage recorder. Datum of gage is 638.11 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--22 years (1928-50), 121 cfs.

Extremes.--1928-50: Maximum discharge, 20,000 cfs Sept. 25, 1947 (gage height, 32.2 ft, from floodmark), from rating curve extended above 7,100 cfs on basis of contracted-opening determination of peak flow at bridge 1 1/2 miles upstream; minimum, 0.5 cfs Nov. 28, 1931 (gage height, 1.41 ft); minimum daily, 1.2 cfs Nov. 12, 1933.

Remarks.--Large diurnal fluctuation at low flow caused by Coltrane's Mill. Flow slightly regulated by High Point Lake (capacity, 220,588,000 cu ft). City of High Point diverts above station about 3 cfs from this basin into Pee Dee River basin (see Abbotts Creek at Lexington).

Monthly and yearly mean discharge, in cubic feet per second, of Deep River near Randleman, N. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1929	75.1	58.0	41.1	47.3	463	389	218	150	133	122	55.0	26.0	144
1930	516	203	185	231	197	92.4	82.4	69.8	58.8	41.3	18.6	23.6	126
1931	5.80	15.2	97.4	113	50.2	103	237	153	25.6	116	191	17.3	94.3
1932	10.8	9.57	65.1	256	148	252	104	35.6	101	19.0	22.1	14.3	86.5
1933	250	151	389	173	184	131	95.3	44.0	16.7	20.7	116	15.1	132
1934	9.55	9.63	16.9	38.9	159	271	230	81.8	212	91.6	21.7	151	107
1935	38.7	*55.1	149	150	132	286	261	142	55.5	102	18.6	51.2	120
1936	12.6	57.2	48.6	594	405	299	529	34.1	42.2	103	65.1	44.9	185
1937	178	48.4	176	645	189	116	200	105	36.0	49.3	105	62.3	180
1938	88.3	63.5	59.7	135	471	71.3	115	66.1	52.3	70.6	205	40.1	12.6
1939	13.8	77.7	141	147	490	240	104	83.1	45.4	98.2	288	22.2	144
1940	25.6	27.3	61.9	95.5	231	113	110	266	72.1	64.3	289	45.9	117
1941	16.1	180	*92.8	116	*57.8	126	122	27.8	46.5	171	19.6	10.6	*82.4
1942	7.94	10.6	17.2	15.8	120	273	39.5	95.2	84.0	74.6	49.6	22.2	67.4
1943	33.0	24.3	110	253	220	250	158	61.2	70.0	176	71.4	23.4	121
1944	16.9	20.0	36.1	183	270	375	334	55.1	26.1	144	17.7	166	136
1945	79.3	86.2	108	122	296	116	73.4	84.5	19.6	64.5	17.1	432	123
1946	43.6	51.1	311	210	385	91.8	79.7	136	43.5	59.2	74.8	30.8	125
1947	27.5	36.9	36.8	286	54.9	147	123	33.6	23.0	17.2	20.5	543	112
1948	45.2	223	80.6	127	355	211	198	67.6	55.7	36.3	75.7	21.0	123
1949	25.9	351	236	179	237	145	145	136	24.2	312	311	56.4	178
1950	166	129	63.8	76.2	93.5	151	65.9	166	56.9	60.4	23.1	24.3	89.8

* Revised.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1929	0.70	0.34	0.38	0.44	3.88	3.62	1.96	1.40	1.19	1.13	0.51	0.23	15.78
1930	2.94	1.83	1.72	2.15	1.65	.86	.74	.65	.53	.38	.17	.21	13.83
1931	.05	.14	.90	1.05	.42	.96	2.13	1.42	2.35	1.08	1.78	.16	10.32
1932	.10	.09	.61	2.38	1.28	2.34	.94	.33	.91	.18	.21	.13	9.50
1933	2.33	1.36	3.62	1.61	1.54	1.22	.86	.41	.15	1.19	1.08	.14	14.51
1934	.09	.09	.16	.36	*1.34	2.53	2.06	.76	1.91	.85	.20	1.36	*11.71
1935	.36	*5.0	1.38	1.40	1.10	2.66	2.34	1.33	.50	.95	.17	.46	*13.15
1936	.12	.51	.45	5.52	3.53	2.78	4.76	.32	.38	.96	.61	.40	20.34
1937	1.66	.44	1.64	6.00	1.58	1.08	1.80	.98	.32	.46	.98	.56	17.50
1938	.82	.57	.55	1.26	.60	1.07	.59	.49	.63	1.90	.37	.11	8.96
1939	.13	.70	1.31	1.57	4.11	2.24	.94	.77	.41	.91	2.68	.20	15.77
1940	.24	.25	.58	.89	2.01	1.05	.99	2.48	.65	.60	2.69	.41	12.84
1941	.15	1.62	*.86	1.08	*.49	1.17	1.10	.26	.42	1.59	.18	.09	*9.01
1942	.07	1.10	.16	.15	1.01	2.54	.36	.88	.76	.69	.46	.20	7.38
1943	.31	.22	1.03	2.36	1.85	2.32	1.42	.57	.63	1.64	.66	.21	13.22
1944	.16	.18	.34	1.70	2.35	3.49	3.00	.51	2.4	1.33	.16	1.49	14.95
1945	.74	.78	1.00	1.14	2.49	1.08	.66	.79	.18	.60	.16	3.89	13.51
1946	.41	.46	2.89	1.95	3.23	.85	.72	1.27	.39	.55	.70	.28	13.70
1947	.26	.35	.34	2.66	.46	1.37	1.10	.31	.21	.16	.19	4.88	12.27
1948	.42	2.01	.75	1.18	3.09	1.98	1.78	.63	.50	.34	.70	.19	13.55
1949	.24	2.98	2.19	1.66	1.99	1.35	1.31	1.27	.22	2.90	2.89	.51	19.51
1950	1.55	1.16	.59	.71	.79	1.40	.59	1.54	.51	.56	.21	.22	9.83

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1929	682, 782	8,470	Oct. 28, 1928	12	144	1.16	15.78	191	20.86	
1930	697, 782	5,720	Oct. 2, 1929	4.0	126	1.02	13.83	77.1	8.43	
1931	712	2,930	Aug. 11, 1931	1.9	94.3	.760	10.32	91.5	10.03	
1932	727	(a)	Mar. 6, 1932	1.6	86.5	.698	9.50	146	16.01	
1933	742	(a)	Oct. 17, 1932	2.4	132	1.06	14.51	67.7	7.54	
1934	757, 1383	3,670	Apr. 9, 1934	1.2	107	.863	*11.71	*124	*13.61	
1935	782, 1383	3,730	Mar. 13, 1935	4.0	120	.968	*13.15	110	11.99	
1936	802	7,600	Apr. 6, 1936	4.9	185	1.49	20.34	209	23.00	
1937	822	3,610	Jan. 3, 1937	9.0	160	1.29	17.50	143	15.70	
1938	852	3,170	July 24, 1938	5.2	82.0	.661	8.96	83.8	9.16	
1939	872	4,000	Aug. 18, 1939	3.0	144	1.16	15.77	134	14.70	
1940	892	5,980	May 30, 1940	8.2	117	.944	12.84	131	*14.40	
1941	922, 1383	4,400	July 17, 1941	4.4	*82.4	*.665	*9.01	*61.3	*6.71	
1942	952	5,000	Mar. 9, 1942	4.3	67.4	.544	7.38	78.6	8.61	
1943	972	4,050	Aug. 29, 1943	5.4	121	.978	13.22	113	12.34	
1944	1002	8,470	Sept. 30, 1944	7.4	136	1.10	14.95	153	16.79	
1945	1032	9,530	Sept. 18, 1945	10	123	.992	13.51	134	14.75	
1946	1052	6,580	Feb. 10, 1946	12	125	1.01	13.70	99.3	10.87	
1947	1082	20,000	Sept. 25, 1947	2.4	112	.903	12.27	133	14.52	
1948	1112	2,570	Feb. 14, 1948	7.2	123	.992	13.55	144	15.78	
1949	1142	5,320	Nov. 28, 1948	11	178	1.44	19.51	159	17.40	
1950	1172	4,500	Oct. 31, 1949	10	89.8	.724	9.83	-	-	

* Revised.

a Maximum discharge not determined, occurred during period of no gage-height record.

154. Muddy Creek near Archdale, N. C.

Location.--Lat 35°52'35", long 79°52'45", 600 ft upstream from bridge on county road, 1½ miles downstream from Taylor Branch, 2 miles east of Glendon brick plant, 2½ miles (revised) southwest of Coltrane's Mill, and 6 miles (revised) southeast of Archdale, Randolph County.

Drainage area.--16.2 sq mi.

Gage.--Water-stage recorder and modified Parshall Flume. Altitude of gage is 665 ft (from topographic map). Prior to Aug. 7, 1934, staff gage 100 ft downstream at datum 1.05 ft lower.

Average discharge.--7 years (1934-41), 17.9 cfs.

Extremes.--1934-41: Maximum discharge, 2,180 cfs June 28, 1938 (gage height, 10.46 ft); no flow Sept. 23 to Nov. 7, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	30.7	4.96	0.30	14.1	-
1935	5.74	9.97	26.1	24.9	22.5	51.4	44.3	16.7	3.20	5.84	1.350	1.78	17.7
1936	.538	4.11	3.68	62.6	60.2	43.6	71.6	1.83	4.41	5.85	26.3	12.8	26.3
1937	41.9	6.05	31.6	95.3	29.1	18.0	26.1	14.9	1.54	2.74	8.14	3.20	23.5
1938	11.4	7.72	8.68	20.2	8.89	14.1	11.1	2.01	26.2	36.9	9.61	1.987	13.2
1939	.663	10.5	23.7	24.6	88.9	37.7	13.7	7.88	2.20	12.1	20.0	1.44	19.9
1940	1.89	1.96	6.26	12.7	33.6	18.2	16.0	30.5	15.3	3.92	30.0	1.66	14.3
1941	.711	24.5	13.6	18.8	8.49	18.3	21.0	2.54	1.56	11.2	.595	.739	10.2
1942	0	.156	1.50	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	0.41	-	-	-	-	-	-	-	2.12	0.35	0.02	0.97	-
1935	0.41	0.69	1.86	1.78	1.44	3.66	3.05	1.19	.22	.42	.02	.12	14.86
1936	.04	.28	.26	5.87	4.01	3.11	4.93	.13	.30	.42	1.87	.88	22.10
1937	2.98	.42	2.28	6.78	1.87	1.28	1.93	1.08	.11	.19	.58	.22	19.67
1938	.81	.53	.62	1.44	.57	1.00	.76	.14	1.81	2.63	.68	.07	11.06
1939	.05	.72	1.68	1.75	5.72	2.69	.94	.56	.15	.86	1.42	.10	16.64
1940	.13	.14	.44	.90	2.23	1.29	1.10	2.17	1.05	.28	2.13	.11	11.97
1941	.05	1.68	.97	1.34	.55	1.30	1.45	.18	.11	.80	.04	.05	8.52
1942	0	.01	.11	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	757	637	June 7, 1934	-	-	-	-	-	-
1935	782	600	Dec. 1, 1934	0.06	17.7	1.09	14.86	14.9	12.48
1936	802	2,030	Aug. 7, 1936	.14	26.3	1.62	22.10	32.3	27.17
1937	822	1,310	Oct. 8, 1936	.29	23.5	1.45	19.67	19.1	15.99
1938	852	2,180	June 28, 1938	.49	13.2	1.815	11.06	13.8	11.57
1939	872	952	Feb. 26, 1939	.29	19.9	1.23	16.64	17.8	14.90
1940	892	1,720	May 30, 1940	.49	14.3	.883	11.97	16.7	13.96
1941	922	430	July 10, 1941	0	10.2	.630	8.52	7.07	5.94
1942	952	-	-	0	-	-	-	-	-

a Maximum during period May to September.

155. Deep River at Ramseur, N. C.

Location.--Lat 35°44', long 79°39', on right bank 1,600 ft downstream from railroad station at Ramseur, Randolph County, and 1½ miles downstream from Sandy Creek.

Drainage area.--346 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1946 to September 1947 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 419.50 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--27 years (1923-50), 349 cfs (revised).

Extremes.--1922-50: Maximum discharge, 43,000 cfs Sept. 18, 1945 (gage height, 34.04 ft, from floodmarks), from rating curve extended above 18,000 cfs on basis of slope-area determination of peak flow; minimum, 0.4 cfs May 27, Nov. 28, 29, 1941.

Flood of August 1901 reached a stage of 28.75 ft from floodmarks, about a quarter of a mile upstream (discharge, 30,000 cfs).

Remarks.--Large diurnal fluctuation caused by powerplants above station. Flow slightly regulated by High Point Lake since 1926 (capacity, 220,588,000 cu ft) and several small powerplant reservoirs. City of High Point diverts about 3 cfs from this basin into Pee Dee River basin.

Monthly and yearly mean discharge, in cubic feet per second, of Deep River at Ramseur, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	239	497	597	1,428	551	313	148	455	154	137	-
1924	49.3	103	183	467	522	522	671	416	184	316	137	522	340
1925	177	115	311	1,635	*450	*320	213	223	76.3	73.6	81.9	40.4	*312
1926	32.2	59.2	93.5	492	740	481	442	92.6	87.1	228	134	40.5	240
1927	13.3	85.7	510	190	646	*588	180	117	206	445	255	113	*278
1928	724	156	918	256	575	395	986	563	323	183	573	1,930	630
1929	224	125	124	151	1,210	1,288	567	439	417	481	192	92.1	438
1930	1,010	445	465	577	536	272	219	169	*162	197	57.5	32.2	345
1931	16.8	45.9	249	294	131	285	558	398	79.7	194	453	50.6	231
1932	15.3	20.8	175	814	392	725	249	129	258	50.3	58.3	60.1	246
1933	491	434	1,050	439	569	376	305	106	48.1	46.4	174	39.4	339
1934	38.5	19.7	39.1	79.3	300	679	581	205	578	247	159	875	315
1935	166	213	587	496	411	813	774	409	121	234	44.8	168	370
1936	33.9	123	124	1,514	1,066	926	1,440	111	183	256	*265	72.0	507
1937	685	129	512	1,660	579	405	645	282	110	149	542	256	498
1938	158	153	159	389	189	358	277	155	279	621	191	81.1	249
1939	38.7	205	421	391	1,371	818	313	218	116	342	896	89.9	430
1940	59.1	77.6	134	229	684	382	352	565	202	110	695	93.3	298
1941	29.3	489	241	324	183	400	403	94.2	94.8	351	42.2	29.5	223
1942	8.69	14.1	43.7	40.8	378	678	125	268	209	127	104	227	184
1943	81.6	102	388	704	496	653	473	209	184	578	133	86.8	341
1944	34.1	56.5	125	552	766	1,053	775	205	50.0	458	68.0	553	390
1945	339	229	296	333	844	371	284	216	52.7	324	57.5	1,854	428
1946	154	122	872	606	1,135	282	243	361	433	331	373	85.1	413
1947	115	143	112	939	200	443	345	109	72.2	40.9	48.6	675	270
1948	141	670	212	418	1,165	642	501	185	170	118	297	59.1	377
1949	105	984	696	539	709	412	459	495	79.8	501	667	182	484
1950	406	363	212	241	234	425	194	460	123	254	78.5	55.7	255

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	0.80	1.66	1.80	4.76	1.78	1.04	0.48	1.52	0.51	0.44	-
1924	0.16	0.33	.61	1.56	1.63	1.74	2.17	1.39	.59	1.05	.46	1.68	13.37
1925	.59	.37	1.04	5.51	*1.36	*1.07	.69	.74	.25	.25	.27	.13	*12.27
1926	.11	.19	.31	1.64	2.23	1.60	1.43	.31	.28	.76	.45	.13	9.44
1927	.04	.28	1.70	.63	1.94	*1.96	.58	.39	.66	1.48	.85	.36	*10.87
1928	2.41	.50	3.06	.85	1.79	1.32	3.18	1.88	1.04	.61	1.91	6.23	24.78
1929	.75	.40	.41	.50	3.64	4.29	1.83	1.46	1.34	1.60	.64	.30	17.16
1930	3.37	1.44	1.55	1.92	1.61	.91	.71	.56	.52	.66	.19	.10	13.54
1931	.06	.15	.83	.98	.39	.95	1.80	1.33	.26	.65	1.51	.16	9.07
1932	.05	.07	.58	2.71	1.22	2.42	.80	.43	.83	.17	.19	.19	9.66
1933	1.63	1.40	3.50	1.46	1.71	1.25	.98	.35	.16	.15	.58	.13	13.30
1934	.13	.06	.13	.26	.90	2.26	1.87	.68	1.86	.82	.53	2.82	12.32
1935	.55	.69	1.96	1.65	1.24	2.71	2.50	1.36	.39	.78	.15	.54	14.52
1936	.11	.40	.41	5.05	3.32	3.08	4.64	.37	.59	.85	*.88	.23	19.93
1937	2.28	.42	1.71	5.53	1.74	1.35	2.08	.94	.35	.50	1.81	83	19.54
1938	.53	.49	.53	1.29	.57	1.13	.89	.52	.90	2.06	.64	.20	9.75
1939	.13	.66	1.41	1.30	4.12	2.72	1.01	.73	.37	1.14	2.99	.29	16.87
1940	.20	.25	.45	.76	2.13	1.27	1.14	1.88	.65	.37	2.32	.30	11.72
1941	.10	1.58	.80	1.08	.55	1.33	1.30	.31	.31	1.17	.14	.10	8.77
1942	.03	.05	.15	.14	1.14	2.26	.40	.89	.67	.42	.35	.73	7.23
1943	.27	.33	1.29	2.34	1.49	2.18	1.52	.70	.59	1.93	.44	.28	13.36
1944	.11	.18	.42	1.84	2.39	3.51	2.50	.68	.16	1.53	.23	1.78	15.33
1945	1.13	.74	.98	1.11	2.54	1.24	.92	.72	.17	1.08	.19	5.98	16.80
1946	.51	.39	2.91	2.02	3.43	.94	.78	1.20	1.40	1.10	1.24	.27	16.19
1947	.38	.46	.37	3.13	.60	1.48	1.11	.36	.23	.14	.16	2.18	10.60
1948	.47	2.16	.71	1.39	3.63	2.14	1.61	.62	.55	.39	.99	.19	14.85
1949	.35	3.17	2.32	1.80	2.13	1.37	1.48	1.65	.26	1.67	2.22	.59	19.01
1950	1.35	1.17	.71	.80	.70	1.42	.63	1.53	.40	.85	.26	.18	10.00

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1923	562,1032	13,100	Mar. 13, 1923	-	-	-	-	384	15.09
1924	582,1032	11,900	Sept. 20, 1924	16	340	0.983	13.37	362	14.27
1925	602,1383	9,950	Jan. 11, 1925	10	*312	*.902	*12.27	*277	*10.88
1926	622,1032	8,020	Jan. 18, 1926	10	240	.694	9.44	276	10.85
1927	642,1383	8,860	Dec. 29, 1926	10	*278	*.803	*10.87	*378	*14.82
1928	662	22,400	Sept. 19, 1928	35	630	1.82	24.78	518	20.37
1929	682,1032	18,300	Feb. 28, 1929	49	438	1.27	17.16	560	21.96
1930	697,1383	16,400	Oct. 2, 1929	12	345	.997	13.54	*210	*8.22
1931	712	4,620	Aug. 11, 1931	8	231	.668	9.07	222	8.73
1932	727,1032	13,100	Mar. 6, 1932	6	246	.711	9.66	394	15.49
1933	742,1032	10,400	Oct. 17, 1932	18	339	.980	13.30	181	7.09
1934	757	14,200	Sept. 14, 1934	8	315	.910	12.32	388	15.20
1935	782,1032	12,600	Dec. 1, 1934	10	370	1.07	14.52	312	12.24
1936	802,1383	16,600	Apr. 7, 1936	14	507	1.47	19.93	*596	*23.42
1937	822	20,200	Oct. 8, 1936	30	498	1.44	19.54	425	16.68
1938	852	7,480	July 24, 1938	18	249	.876	9.75	285	10.40
1939	872	9,500	Aug. 19, 1939	11	430	1.24	16.87	397	15.77
1940	892	9,320	May 30, 1940	3	298	.861	11.72	338	13.30

* Revised.

Yearly discharge, in cubic feet per second, of Deep River at Ramseur, N. C.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	922	7,460	Nov. 14, 1940	1.1	223	0.645	8.77	165	6.52
1942	952	8,510	Sept. 7, 1942	.7	184	.532	7.23	227	8.89
1943	972	7,940	Mar. 6, 1943	4.6	341	.986	13.36	311	12.18
1944	1002	30,900	Sept. 30, 1944	10	390	1.13	15.33	444	17.47
1945	1032	43,000	Sept. 18, 1945	14	428	1.24	16.80	453	17.76
1946	1052	16,200	Feb. 10, 1946	17	413	1.19	16.19	347	13.59
1947	1082	21,000	Sept. 25, 1947	13	270	.780	10.60	324	12.73
1948	1112	8,260	Feb. 14, 1948	7.4	377	1.09	14.85	441	17.35
1949	1142	12,700	Nov. 26, 1948	9.3	484	1.40	19.01	418	16.40
1950	1172	6,820	Oct. 31, 1949	11	255	.737	10.00	-	-

156. Bear Creek at Robbins, N. C.

Location--Lat 35°26', long 79°36', on right bank 300 ft downstream from Cabin Creek and half a mile west of Robbins, Moore County.

Drainage area--134 sq mi.

Gage--Water-stage recorder. Datum of gage is 323.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by North Carolina Highway and Public Works Commission). Prior to Dec. 22, 1939, staff gage at same site and datum.

Average discharge--11 years (1939-50), 147 cfs (revised).

Extremes--1939-50: Maximum discharge, 38,800 cfs (revised) Sept. 18, 1945 (gage height, 32.02 ft, from floodmarks), from rating curve extended above 7,000 cfs on basis of slope-area determinations at gage height 27.52 ft and 34.57 ft; no flow Oct. 2, 22-27, 1941 (result of increased storage in gage pool after construction of new station control); minimum unregulated flow, 0.1 cfs Oct. 21, 22, 1941.

Remarks--Diversion of about 300,000 gal daily, from gage pool, for municipal water supply of town of Robbins is included in these records except possibly for 1942-45 when the data collected on low flow was inadequate to apprehend this small diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	34.9	69.9	169	145	126	80.9	37.1	6.86	104	5.76	*67.3
1941	3.22	87.9	69.0	82.9	61.4	168	256	27.9	16.6	45.4	4.36	3.36	68.7
1942	15.7	5.27	51.9	34.9	188	282	76.9	217	65.9	28.3	61.5	63.3	91.3
1943	36.7	72.8	168	323	224	270	237	58.6	28.5	233	18.3	12.5	140
1944	7.65	8.53	46.5	188	320	500	311	117	25.0	*409	51.0	126	*176
1945	109	80.9	90.0	122	278	113	76.0	36.9	11.2	129	162	*1,291	*206
1946	127	81.9	411	267	299	180	210	302	92.9	287	237	67.8	214
1947	191	109	85.8	428	111	214	291	52.0	19.7	32.1	22.8	445	134
1948	37.5	199	85.7	174	556	291	269	123	68.1	70.0	62.9	33.6	161
1949	124	402	432	308	280	163	159	209	35.4	96.0	268	55.3	211
1950	248	124	93.5	162	111	209	86.8	325	79.0	199	134	39.8	152

* Revised.

* Not previously published; partly estimated on basis of records for station on Umharrie River near Eldorado.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The Year
1940	-	-	0.30	0.60	1.36	1.25	1.05	0.70	0.31	0.06	0.89	0.05	*6.83
1941	0.03	0.73	.59	.71	.48	1.45	2.13	.24	.14	.39	.04	.03	6.96
1942	.14	.04	.45	.30	1.46	2.42	.64	1.87	.55	.33	.53	.53	9.26
1943	.32	.61	1.45	2.78	1.74	2.32	1.97	.50	.24	2.01	.16	.10	14.20
1944	.07	.07	.40	1.62	2.58	4.30	2.59	1.01	.21	*3.52	1.44	1.05	*17.86
1945	.94	.67	.77	1.05	2.16	.97	.63	.32	.09	1.11	1.39	*10.75	*20.85
1946	1.09	.68	3.54	2.30	2.32	1.55	1.75	2.60	.77	2.47	2.04	.56	21.67
1947	1.64	.90	.72	3.68	.86	1.85	2.42	.45	.16	.28	.20	.37	13.53
1948	.32	1.66	.74	1.50	4.31	2.50	2.24	1.06	.57	.60	.54	.28	16.32
1949	1.06	3.35	3.72	2.65	2.17	1.40	1.32	1.80	.29	.83	2.31	.46	21.36
1950	2.13	1.03	.80	1.39	.86	1.80	.72	2.79	.66	1.71	1.16	.33	15.38

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Bear Creek at Robbins, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	972	3,420	Aug. 14, 1940	-	*67.3	*0.502	*6.83	75.0	7.62
1941	972	4,810	Apr. 5, 1941	0.2	68.7	.513	6.96	61.5	6.24
1942	972	6,590	May 22, 1942	0	91.3	.681	9.26	109	11.01
1943	972	4,950	Jan. 18, Apr. 19	2.9	140	1.04	14.20	122	12.36
1944	1002, 1433	*13,400	July 15, 1944	3	*176	*1.31	*17.86	*194	*19.70
1945	1032, 1433	*38,800	Sept. 18, 1945	2.4	*206	*1.54	*20.85	*235	*23.78
1946	1052	5,880	July 22, 1946	37	214	1.60	21.67	194	19.62
1947	1082	5,640	Jan. 14, 1947	4	134	1.00	13.53	128	12.99
1948	1112	6,410	Feb. 12, 1948	6	161	1.20	16.32	214	21.73
1949	1142	6,530	Nov. 29, 1948	6	211	1.57	21.36	170	17.19
1950	1172	*9,900	Oct. 8, 1949	18	152	1.13	15.38	-	-

* Revised.

* Not previously published.

157. Deep River at Cumnock, N. C.

Location.--Lat 35°34', long 79°14', at Southern Railway bridge 900 ft northwest of railway station at Cumnock, Lee County, and 10 miles upstream from Rocky River.

Drainage area.--1,110 sq mi, approximately.

Gage.--Wire and weight gage. Altitude of gage is 200 ft (from river profile).

Extremes.--1901-2: Maximum daily discharge, 27,100 cfs Mar. 26, 1901 (gage height, 36.03 ft); minimum daily stage, 0.72 ft July 21, 1900 (previously published discharge unreliable).

Remarks.--Some diurnal fluctuation and slight regulation during low flow caused by mills upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	*260	138	308	-
1901	139	368	878	827	656	3,564	1,958	*1,797	2,129	2,500	4,179	1,805	*1,744
1902	434	286	1,824	1,653	4,597	2,058	286	276	*307	-	-	-	-

* Only monthly figures revised; revised daily figures not available.

* Not previously published; partly estimated on the basis of records for Cape Fear River at Fayetteville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	*0.27	0.14	0.31	-
1901	0.14	0.37	0.91	0.86	0.61	3.70	1.96	*1.87	2.14	2.60	4.34	1.82	*21.32
1902	.45	.29	1.89	1.72	4.31	2.13	.29	.29	*3.31	-	-	-	-

* Only monthly figures revised; revised daily figures not available.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year				
		Maximum daily		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1900	75	-	-	-	-	-	-	-	-	
1901	75	27,100	Mar. 26, 1901	-	-	*1,744	*1.57	*21.32	*1,843	*22.53
1902	83	16,700	Dec. 31, 1901	-	-	-	-	-	-	-

* Only monthly figures revised; revised daily figures not available.

Note.--Daily discharge records below 90 cfs published in WSP 65, 75 and 83 have been found unreliable on basis of restudy of original data; these daily figures should not be used.

158. Deep River at Moncure, N. C.

Location.--Lat 35°36', long 79°05', on right bank 1½ miles northwest of Moncure, Chatham County, 2¼ miles downstream from Rocky River, and 4½ miles upstream from confluence with Haw River.

Drainage area.--1,410 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and suspended-sediment for the period October 1943 to September 1944 are published in report of Geological Survey. May 5, 1898, to Dec. 31, 1899, gage heights and discharge measurements only, for site 2¼ miles downstream.

Gage.--Water-stage recorder. Datum of gage is 185.88 ft above mean sea level (levels by Corps of Engineers). May 1898 to December 1899, wire and weight gage at railway bridge 2¼ miles downstream at different datum.

Average discharge.--20 years (1930-50), 1,426 cfs.

Extremes.--1898-99, 1930-50: Maximum discharge, 80,300 cfs Sept. 18, 1945 (gage height, 17.20 ft), from rating curve extended above 66,000 cfs; minimum, 9 cfs Nov. 11, 1941; minimum daily, 10 cfs Nov. 5-6, 8-12, 1941.

Remarks.--Diurnal fluctuation and considerable regulation at low flow caused by small powerplants upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	147	67.3	-
1931	28.2	85.4	877	991	424	971	2,291	2,794	235	475	3,861	179	1,110
1932	47.0	33.31	229	3,413	1,733	3,008	957	659	1,018	162	333	211	1,069
1933	1,763	1,652	4,490	2,286	2,410	1,265	1,398	594	143	153	433	219	1,360
1934	68.8	43.7	34.6	130	497	1,711	2,292	714	1,900	1,049	579	2,378	946
1935	443	1,041	2,275	2,239	2,261	3,066	2,953	1,052	298	416	113	1,638	1,477
1936	128	804	731	6,427	5,179	4,024	6,455	369	1,588	708	1,130	319	2,307
1937	1,714	391	2,216	5,731	2,911	1,814	2,503	834	318	318	1,242	596	1,714
1938	218	281	390	1,220	494	946	1,368	544	977	2,445	520	339	815
1939	110	553	1,254	1,509	6,330	3,366	1,284	964	432	912	3,174	275	1,653
1940	138	157	312	809	2,737	1,801	1,473	656	580	169	1,266	156	847
1941	44.21	075	667	1,004	674	1,980	2,554	277	288	1,441	144	65.3	851
1942	42.7	14.1	195	170	1,562	2,772	645	1,256	756	255	712	733	755
1943	312	784	1,855	3,524	2,001	2,951	2,242	533	632	3,126	251	214	1,538
1944	43.4	83.0	311	2,147	3,426	4,514	3,242	1,062	142	2,679	937	976	1,626
1945	2,311	762	1,261	1,463	3,701	1,642	1,019	578	148	1,319	921	10,580	2,119
1946	908	462	4,135	3,229	4,342	1,219	1,357	2,676	1,590	2,150	1,983	488	2,058
1947	1,035	956	722	4,556	956	2,085	2,285	420	194	263	176	366	1,212
1948	410	2,276	775	1,810	5,882	2,982	2,409	807	802	419	704	224	1,804
1949	836	4,558	3,994	2,383	2,991	1,490	1,632	2,853	289	860	2,804	945	2,134
1950	1,742	1,631	991	1,473	1,083	2,053	1,708	2,733	550	1,999	532	313	1,325

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	0.12	0.05	-
1931	0.02	0.07	0.72	0.81	0.31	0.79	1.81	2.28	0.19	0.39	3.16	.14	10.69
1932	.04	.03	1.01	2.79	1.33	2.46	.76	.54	.81	.13	.27	.17	10.34
1933	1.44	1.31	3.67	1.87	1.78	1.03	1.11	.32	.11	.13	.35	.17	13.29
1934	.06	.03	.03	.11	.37	1.40	1.81	.58	1.50	.86	.47	1.88	9.10
1935	.36	.82	1.86	1.83	1.67	2.51	2.34	.86	.24	.34	.09	1.30	14.22
1936	.10	.64	.60	5.26	3.96	3.29	5.11	.30	1.26	.58	.92	.25	22.27
1937	1.40	.31	1.81	4.69	2.15	1.48	1.98	.68	.25	.26	1.02	.47	16.50
1938	.18	.22	.32	1.00	.37	.77	1.08	.44	.77	2.00	.43	.27	7.85
1939	.09	.44	1.02	1.23	4.68	2.75	1.02	.79	.54	.75	2.59	.22	15.92
1940	.11	.12	.26	.66	2.09	1.47	1.17	.54	.46	.14	1.04	.12	8.18
1941	.04	.85	.55	.82	.50	1.62	2.02	.23	.23	1.18	.12	.05	8.21
1942	.03	.01	.16	.14	1.15	2.27	.51	1.03	.60	.21	.58	.58	7.27
1943	.26	.62	1.52	2.88	1.48	2.41	1.77	.44	.50	2.56	.21	.17	14.82
1944	.04	.07	.25	1.76	2.62	3.69	2.56	.87	.11	2.19	.77	.77	15.70
1945	1.89	.60	1.03	1.20	2.73	1.34	.81	.47	.12	1.08	.75	8.37	20.39
1946	.74	.37	3.38	2.64	3.21	1.00	1.07	2.19	1.26	1.76	1.62	.39	19.63
1947	.84	.74	.59	3.72	.71	1.71	1.82	.34	.15	.21	.14	.69	11.66
1948	.34	1.80	.63	1.48	4.50	2.44	1.91	.66	.63	.34	.58	.18	15.49
1949	.68	3.61	3.27	1.95	2.21	1.22	1.29	2.33	.23	.72	2.29	.75	20.55
1950	1.42	1.29	.81	1.20	.80	1.68	.56	2.23	.44	1.63	.44	.25	12.75

Yearly discharge, in cubic feet per second, of Deep River at Moncure, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	1082	-	-	-	-	-	-	-	-
1931	1082	17,200	Aug. 22, 1931	19	1,110	0.787	10.69	1,137	10.96
1932	1082	25,000	Mar. 6, 1932	18	1,069	.758	10.34	1,624	15.68
1933	1082	18,600	Oct. 17, 1932	23	1,380	.979	13.29	726	6.99
1934	1082	16,800	Sept. 8, 1934	12	946	.671	9.10	1,250	12.02
1935	1082	22,100	Sept. 6, 1935	38	1,477	1.05	14.22	1,299	12.52
1936	1082	31,400	Apr. 7, 1936	30	2,307	1.64	22.27	2,533	24.45
1937	1082	15,100	Jan. 29, 1937	38	1,714	1.22	16.50	1,423	13.70
1938	1082	21,500	July 26, 1938	45	815	.578	7.85	902	8.68
1939	1082	22,600	Feb. 10, 1939	32	1,653	1.17	15.92	1,543	14.86
1940	1082	13,100	Feb. 7, 1940	52	847	.601	8.18	945	9.13
1941	1082	13,500	Apr. 5, 1941	19	851	.604	8.21	723	6.97
1942	1082	15,400	Feb. 17, 1942	10	755	.535	7.27	982	9.47
1943	1082	22,100	July 14, 1943	38	1,538	1.09	14.82	1,326	12.78
1944	1082	32,100	Sept. 30, 1944	12	1,626	1.15	15.70	1,954	18.66
1945	1082	80,300	Sept. 18, 1945	84	2,119	1.50	20.39	2,219	21.36
1946	1082	23,800	Feb. 11, 1946	103	2,038	1.45	19.63	1,797	17.31
1947	1082	19,100	Jan. 14, 1947	52	1,212	.860	11.66	1,274	12.26
1948	1112	24,400	Feb. 14, 1948	64	1,604	1.14	15.49	2,100	20.28
1949	1142	24,400	Nov. 29, 1948	84	2,134	1.51	20.55	1,715	16.51
1950	1172	20,100	Oct. 8, 1949	68	1,325	.940	12.75	-	-

Note.--Discharge records for May 5, 1898, to Dec. 31, 1899, published in 21st Ann. Rept., Pt. 4 have been found unreliable on basis of restudy of the original data and comparison with records for Cape Fear River at Fayetteville. Those records are not published herein and should not be used.

159. Cape Fear River at Lillington, N. C.

Location--Lat 35°24', long 78°49', near right bank in downstream end of pier of bridge on U. S. Highway 15A, 1,800 ft downstream from Norfolk Southern Railway bridge, 0.5 mile (revised) north of Lillington, Harnett County, and 1 mile downstream from Neill Creek.

Drainage area--3,440 sq mi, approximately.

Supplemental records available--Records of chemical analyses and suspended-sediment for the period November 1944 to October 1945 are published in report of Geological Survey.

Gage--Water-stage recorder. Datum of gage is 105.71 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 8, 1927, chain gage at same site and datum.

Average discharge--26 years (1924-50), 3,364 cfs.

Extremes--1923-50: Maximum discharge uncertain, occurred Sept. 19, 1945 (gage height, 33.19 ft, from floodmarks); minimum discharge, 22 cfs (revised) Oct. 8, 1926 (gage height, 0.01 ft); minimum daily, 22 cfs (revised) Oct. 8, 1926.

Remarks--Large diurnal fluctuation and considerable regulation for short periods at low flow caused by powerplants upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	*1,280	4,220	*5,900	4,320	4,760	*3,570	1,780	4,820	*2,570	*4,530	-
1925	*4,510	*1,410	*2,540	14,700	4,300	3,280	1,620	*1,720	*542	*614	*517	*332	*3,010
1926	*153	*530	*746	*2,830	8,060	4,960	4,180	*550	*730	*1,700	*912	*287	*2,100
1927	*89.8	*300	*2,200	*1,330	*4,350	6,260	1,930	*753	*1,160	*3,500	*2,520	*1,080	*2,120
1928	*3,790	*1,230	*7,430	*1,340	3,820	2,740	*8,140	4,420	*2,840	*1,950	*5,770	23,000	*5,510
1929	2,410	*958	*928	*1,410	*6,970	16,600	4,580	4,170	3,970	4,560	2,540	*1,090	*4,170
1930	13,600	5,680	4,720	4,590	5,360	2,420	2,100	1,050	1,650	1,060	405	166	3,570
1931	101	396	2,010	2,580	1,160	2,150	5,460	5,240	812	1,430	7,360	567	2,460
1932	195	225	2,290	7,200	4,100	6,760	2,450	1,460	3,080	441	553	360	2,430
1933	3,180	3,890	9,350	5,280	5,620	2,780	3,390	1,150	532	333	1,230	803	3,120
1934	132	141	239	458	1,280	4,410	1,810	5,200	2,590	1,640	5,150	2,420	2,420
1935	1,061	2,032	5,639	5,268	4,586	6,726	7,553	3,022	809	1,186	304	3,258	3,410
1936	321	1,801	*1,942	14,940	11,650	9,427	13,730	877	3,138	2,150	2,685	782	*5,257
1937	3,750	1,065	6,352	14,750	6,878	3,963	5,959	2,059	996	1,124	3,882	2,647	4,438
1938	1,541	1,237	1,259	3,451	*1,604	2,618	3,171	1,342	3,104	7,063	1,366	778	2,389
1939	347	1,752	3,138	3,412	14,000	8,414	3,417	2,843	1,206	2,509	6,709	1,068	4,188
1940	503	642	1,078	2,147	6,787	4,002	3,863	1,593	1,723	720	3,817	632	2,274
1941	167	3,289	1,809	2,746	1,961	4,209	5,688	699	1,308	3,569	456	371	2,186
1942	118	107	622	569	3,320	5,829	1,539	2,935	2,387	723	2,040	2,063	1,846
1943	1,300	1,865	4,203	7,899	5,117	6,584	4,989	1,362	2,136	6,660	655	852	3,636
1944	210	389	937	5,384	7,889	11,250	7,976	2,373	507	3,978	1,805	1,610	3,681
1945	6,402	2,036	3,247	3,569	8,238	3,845	2,123	1,536	448	3,087	1,902	*21,630	*4,791
1946	1,972	1,175	8,318	7,529	*10,410	2,751	2,808	5,110	2,652	3,965	3,279	1,107	4,231
1947	2,108	2,143	1,707	9,667	2,100	4,607	4,291	943	585	685	514	3,261	2,724
1948	1,610	6,874	2,044	4,023	13,070	6,719	5,426	1,872	1,825	944	1,654	509	3,833
1949	2,126	9,168	8,583	5,656	6,730	3,518	3,562	5,815	1,018	3,196	5,939	2,576	4,818
1950	3,302	4,748	2,257	3,000	2,504	4,092	1,507	4,838	1,524	4,525	915	777	2,843

* Revised.

† Corrected.

‡ Not previously published.

Monthly and yearly runoff, in inches, of Cape Fear River at Lillington, N. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1924	-	-	*0.43	1.41	*1.85	1.45	1.55	*1.19	0.58	1.62	*0.86	*1.45	-
1925	*1.51	*0.46	*.82	4.91	1.30	1.10	.53	*.58	*.18	*.21	*.17	*.11	*11.88
1926	*.05	*.17	*.25	*.95	2.44	1.66	1.36	*.18	*.24	*.57	*.31	*.09	*8.27
1927	*.05	*.09	*.74	*.45	*1.52	2.10	.85	*.25	*.38	*1.17	*.85	*.35	*8.36
1928	*1.27	*.40	*2.49	*.45	1.20	.92	*2.64	1.48	*.92	*.65	*1.93	7.45	*21.80
1929	.81	*.31	*.31	*.47	*2.11	5.55	1.49	1.40	1.29	1.53	*.85	*.35	*16.47
1930	4.57	1.84	1.58	1.54	1.63	.81	.68	.35	.53	.36	.14	.05	14.08
1931	.03	.13	.67	.87	.35	.72	1.77	1.76	.26	.48	2.46	.18	9.68
1932	.07	.07	.77	2.41	1.29	2.27	.79	.49	1.00	.15	.19	.12	9.62
1933	1.07	1.26	3.13	1.77	1.70	.93	1.10	.58	.17	.11	.41	.26	12.29
1934	.04	.05	.08	.15	.39	1.48	1.99	.61	1.69	.87	.55	1.67	9.57
1935	.36	.66	1.89	1.77	1.33	2.25	2.45	1.01	.26	.40	.10	.98	13.46
1936	.11	.58	*.65	5.01	3.65	3.16	4.45	.29	1.02	.72	.90	.25	*20.79
1937	1.26	.35	2.14	4.95	2.02	1.33	1.93	.69	.32	.38	1.30	.86	17.53
1938	.52	.40	.42	1.15	.49	.88	1.03	.45	1.01	2.36	.46	.25	9.42
1939	1.12	.57	1.05	1.14	4.24	2.82	1.11	.99	.39	.84	2.92	.35	16.54
1940	.17	.21	.36	.72	2.13	1.34	1.25	.55	.56	.24	1.28	.20	8.99
1941	.06	1.07	.61	.92	.59	1.41	1.84	.23	.42	1.20	.15	.12	8.62
1942	.04	.03	.21	.19	1.01	1.95	1.50	.98	.77	.24	.68	.67	7.27
1943	.44	.60	1.41	2.65	1.55	2.21	1.82	.46	.69	2.23	.22	.28	14.36
1944	.07	.13	.31	1.80	2.47	3.77	2.59	.80	.16	1.23	.61	.52	14.56
1945	2.15	.66	1.09	1.20	2.49	1.29	.69	.51	.15	1.03	.64	*7.01	*18.91
1946	.66	.58	2.79	2.52	3.15	.92	.91	1.71	.86	1.33	1.10	.36	16.69
1947	.71	.70	.57	3.24	.64	1.54	1.39	.32	.19	.23	.17	1.06	10.76
1948	.54	2.23	.68	1.35	4.10	2.25	1.76	.63	.59	.32	.55	.17	15.17
1949	.71	2.98	2.88	1.90	2.04	1.18	1.16	1.95	.33	1.07	1.99	.84	19.03
1950	1.11	1.54	.76	1.01	.76	1.37	.49	1.62	.49	1.52	.31	.25	11.23

* Revised.

* Not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	582,1383	*52,400	Sept. 30, 1924	-	-	-	-	*3,730	*14.76
1925	1383	*46,200	Jan. 12, 1925*	*64	*3,010	*0.875	*11.88	*2,420	*9.56
1926	1383	*27,300	Jan. 19, 1926	*78	*2,100	*.610	*8.27	*2,200	*8.66
1927	1383	*33,200	Mar. 7, 1927	*22	*2,120	*.616	*8.36	*2,950	*11.66
1928	1383	84,000	Sept. 20, 1928	*119	*5,510	*1.60	*21.80	*4,820	*19.07
1929	1383	67,700	Mar. 1, 1929	*580	*4,170	*1.21	*16.47	*5,840	*23.03
1930	697	107,000	Oct. 2, 1929	65	3,570	1.04	14.08	1,760	6.92
1931	712	29,200	Aug. 21, 1931	48	2,460	.715	9.68	2,470	9.76
1932	727	50,900	Mar. 7, 1932	48	2,430	.706	9.62	3,580	14.17
1933	742	29,200	Oct. 18, 1932	75	3,120	.907	12.29	1,780	7.00
1934	757	40,000	Apr. 10, 1934	68	2,420	.703	9.57	3,116	12.31
1935	782	41,000	Dec. 2, 1934	68	3,410	.991	13.46	*3,015	*11.89
1936	802,1383	73,200	Apr. 7, 1936	90	*5,257	*1.53	*20.79	5,865	23.20
1937	822	34,800	Jan. 29, 1937	213	4,438	1.29	17.53	3,830	15.12
1938	852	47,000	July 27, 1938	190	2,389	.694	9.42	2,490	9.82
1939	872	47,500	Feb. 10, 1939	80	4,188	1.22	16.54	3,935	15.54
1940	892	32,000	Feb. 8, 1940	146	2,274	.661	8.99	2,524	9.99
1941	922	31,600	Nov. 15, 1940	62	2,186	.655	8.62	1,820	7.16
1942	952	30,800	Feb. 18, 1942	37	1,846	.537	7.27	2,395	9.44
1943	972	40,900	July 14, 1943	118	3,636	1.06	14.36	3,145	12.42
1944	1002	*b42,300	Mar. 21, 1944*	81	3,681	1.07	14.56	4,536	17.95
1945	1032,1333	(c)	Sept. 19, 1945	128	*4,791	*1.39	*18.91	*4,775	*18.84
1946	1052	54,400	Feb. 11, 1946	331	4,231	1.23	16.69	3,761	14.84
1947	1082	39,600	Jan. 14, 1947	129	2,724	.792	10.76	3,099	12.23
1948	1112	49,900	Feb. 15, 1948	60	3,833	1.11	15.17	4,620	18.29
1949	1142	53,400	Nov. 29, 1948	124	4,818	1.40	19.03	4,016	15.87
1950	1172	36,900	May 15, 1950	161	2,843	.826	11.23	-	-

* Revised.

a Maximum peak discharge; maximum discharge during year, 52,400 cfs (revised) at 12:01 a.m. Oct. 1, stage falling.

b Maximum peak discharge; maximum discharge during year, 46,500 cfs at 12 p.m. Sept. 30, stage rising.

c The maximum discharge as published in WSP 1032 has been found to be subject to large error on basis of comparisons with other stations and should not be used.

160. Little River at Manchester, N. C.]

Location.--Lat 35°11'40", long 78°59'15", at bridge on State Highway 87 at Manchester, Cumberland County, 0.3 mile upstream from Tank Creek, 1½ miles (revised) downstream from Atlantic Coastline Railway bridge, and 12 miles southwest of Linden.

Drainage area.--348 sq mi.

Gage.--Water-stage recorder. Datum of gage is 127.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--12 years (1938-50), 432 cfs.

Extremes.--1938-50: Maximum discharge not determined, occurred Sept. 18 or 19, 1945 (gage height, 29.00 ft, from floodmarks); minimum, 20 cfs Sept. 18, 19, 1943; minimum daily, 22 cfs Sept. 18, 19, 1943.

Remarks.--Large diurnal fluctuation and considerable regulation for short periods prior to Sept. 18, 1945, caused by powerplant upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*189	*351	481	528	1,104	1,041	438	236	135	329	636	218	*471
1940	137	170	205	365	561	523	436	184	159	82.2	87.8	46.2	245
1941	33.7	142	166	231	218	402	728	145	91.1	430	107	61.7	229
1942	66.6	70.2	218	192	301	802	420	273	165	131	552	381	298
1943	241	223	418	683	601	666	543	227	124	843	199	201	*414
1944	102	156	265	770	996	1,420	1,135	484	146	716	462	232	573
1945	423	310	500	467	719	563	270	173	172	340	669	1,532	509
1946	547	349	924	949	761	506	466	624	252	561	466	249	555
1947	384	392	332	730	380	537	744	297	122	170	225	361	389
1948	308	946	497	563	1,340	992	623	323	318	252	235	154	542
1949	397	654	942	712	617	509	440	583	228	361	804	766	585
1950	453	456	395	403	335	440	265	385	178	765	238	154	374

* Not previously published; estimated or partly estimated on basis of records for station at Linden.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*0.63	*1.13	1.59	1.75	3.30	3.45	1.41	0.78	0.43	1.09	2.11	0.70	*18.37
1940	.45	.54	.68	1.21	1.74	1.73	1.40	.61	.51	.27	.29	.15	9.58
1941	.11	.46	.55	.76	.65	1.33	2.34	.48	.29	1.42	.36	.20	6.95
1942	.22	.22	.72	.64	.90	2.66	1.35	.90	.53	.43	1.83	1.22	11.62
1943	.80	.71	1.39	2.26	1.80	2.21	1.74	.75	.40	2.79	.66	.64	16.15
1944	.34	.50	.88	2.55	3.09	4.70	3.64	1.60	.47	2.37	1.53	.74	22.41
1945	1.40	.99	1.66	1.55	2.15	1.87	.87	.57	.55	1.12	2.22	4.91	19.86
1946	1.81	1.12	3.06	3.14	2.28	1.68	1.49	2.07	.81	1.86	1.55	.80	21.67
1947	1.27	1.26	1.10	2.42	1.14	1.76	2.59	.99	.39	.56	.74	1.16	15.20
1948	1.02	3.03	1.65	1.89	4.15	3.29	2.00	1.07	1.02	.84	.78	.49	*21.20
1949	1.32	2.10	3.12	2.36	1.85	1.69	1.41	1.93	.73	1.90	2.67	2.46	22.84
1950	1.50	1.46	1.31	1.34	1.00	1.46	.85	1.28	.57	2.53	.79	.49	14.58

† Corrected.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	2,960	Mar. 3, 1939	-	*471	1.35	*18.37	428	16.69
1940	892	1,110	Mar. 15, 1940	28	245	.704	9.58	231	9.03
1941	922	2,760	Apr. 7, 1941	23	229	.658	8.95	231	8.99
1942	952	2,540	Aug. 21, 1942	32	298	.856	11.62	342	13.36
1943	972	2,150	July 13, 1943	22	414	1.19	16.15	384	14.97
1944	1002	4,880	Mar. 22, 1944	48	573	1.65	22.41	633	24.74
1945	1032	-	(a)	38	509	1.46	19.86	559	21.80
1946	1052	2,080	Dec. 31, 1945	120	555	1.59	21.67	495	19.31
1947	1082	2,340	Apr. 16, 1947	66	389	1.12	15.20	443	17.27
1948	1112	4,160	Feb. 14, 1948	87	542	1.56	*21.20	563	22.04
1949	1142	4,480	Aug. 29, 1949	101	585	1.68	22.84	527	20.57
1950	1172	2,340	Oct. 10, 1949	100	374	1.07	14.58	-	-

† Corrected.

* Not previously published.
a Sept. 18 or 19, 1945.

✓ Published prior to 1951 as Lower Little River.

161. Little River at Linden, N. C. 1/

Location.--Lat 35°16', long 78°47', on left bank 10 ft downstream from bridge on U. S. Highway 15A, 1½ miles west of Linden, Cumberland County, 2 miles upstream from Stewart Creek, and 4½ miles upstream from mouth.

Drainage area.--460 sq mi.

Supplemental records available.--Records of chemical analyses for period October 1946 to September 1947 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 73.10 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 27, 1934, chain gage at same site and datum. Since June 18, 1948, auxiliary wire-weight gage 2¼ miles downstream read during periods of backwater from Cape Fear River.

Average discharge.--21 years (1929-50), 557 cfs.

Extremes.--1928-50: Maximum discharge, 13,500 cfs Sept. 18, 1945, during period of backwater from Cape Fear River; maximum gage height, 41.47 ft Sept. 19 or 20, 1945 (from floodmarks); minimum discharge, 26 cfs Oct. 14, 1940.
Flood of Sept. 21, 1928, reached a stage of 37.3 ft from floodmarks; maximum discharge, 13,000 cfs Sept. 20 or 21.

Remarks.--Considerable diurnal fluctuation during medium and low flows prior to Sept. 18, 1945, caused by operation of powerplant upstream from station. High stages on Cape Fear River cause backwater at this station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	396	563	1,090	2,500	1,110	672	737	507	543	480	-
1930	2,110	1,290	1,130	810	901	572	549	414	292	213	177	113	*715
1931	116	215	449	*540	309	432	841	858	195	187	1,140	191	*458
1932	102	112	620	871	589	*792	407	487	535	99.7	89.7	56.2	*397
1933	181	410	*851	810	993	607	422	254	73.6	168	570	350	*472
1934	60.7	101	113	115	178	478	693	157	368	483	378	380	294
1935	185	291	737	824	682	809	839	454	154	158	102	866	505
1936	163	450	601	1,565	1,724	1,300	1,910	343	564	295	680	454	850
1937	1,350	806	1,798	*1,686	1,721	982	1,150	460	259	187	564	319	*937
1938	205	296	221	315	281	315	535	208	368	500	259	452	329
1939	250	465	643	683	1,498	1,416	585	308	179	530	838	290	636
1940	176	206	253	467	684	685	586	246	228	108	121	58.8	317
1941	42.8	177	205	291	298	556	869	182	110	568	176	86.8	297
1942	91.0	99.8	286	264	413	1,120	545	349	187	151	†726	496	394
1943	326	288	539	873	781	860	722	292	152	1,084	267	257	535
1944	126	186	370	1,110	1,372	1,888	1,495	616	174	792	539	270	744
1945	509	356	618	601	931	716	337	220	206	441	951	*2,078	*661
1946	721	448	1,316	1,381	1,084	729	637	815	320	622	543	288	743
1947	469	546	429	961	467	673	968	379	†50	198	335	497	506
1948	404	1,350	659	732	1,754	1,327	803	431	437	319	305	194	721
1949	527	829	1,254	901	761	646	560	782	362	493	901	1,048	756
1950	535	533	454	452	387	496	309	447	221	972	269	172	439

* Revised.

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	0.99	1.41	2.47	6.27	2.70	1.69	1.79	1.27	1.36	1.17	-
1930	*5.29	3.14	2.83	2.03	2.04	1.43	1.33	1.04	.71	.53	.44	.27	*21.08
1931	.29	.52	1.13	*1.35	.70	1.08	2.04	2.15	.47	.47	2.86	.46	*13.52
1932	.26	.27	1.15	2.18	1.38	*1.99	.99	1.22	1.29	.25	.22	.14	*11.74
1933	.45	.99	*2.13	2.03	2.25	1.52	1.02	.64	.18	.42	1.43	.85	*15.91
1934	.15	.25	.28	.29	.40	1.20	1.68	.39	.94	1.21	.95	.92	8.66
1935	.46	.71	1.85	2.07	1.54	2.03	2.03	1.14	.37	.35	.26	2.10	14.91
1936	.41	1.09	1.51	3.92	4.04	3.26	4.63	.86	1.37	.74	2.21	1.10	25.14
1937	3.38	1.95	4.51	*4.23	3.90	2.46	2.79	1.15	.63	.47	1.42	.77	*27.66
1938	.51	.72	.55	.79	.64	.79	1.29	.52	.89	1.26	.65	1.10	9.71
1939	.63	1.13	1.61	1.71	3.40	3.55	1.42	.77	.43	1.33	2.10	.70	18.78
1940	.44	.50	.64	1.17	1.60	1.72	1.42	.62	.55	.27	.30	.14	9.37
1941	.11	.43	.51	.73	.67	1.39	2.11	.46	.27	1.42	.44	.21	8.75
1942	.23	.24	.72	.66	.93	2.81	1.32	.87	.45	.38	1.82	1.20	11.63
1943	.82	.70	1.35	2.19	1.72	2.16	1.75	.73	.37	2.72	.67	.62	15.80
1944	.31	.45	.93	2.78	3.22	4.73	3.63	1.54	.42	1.99	1.35	.65	22.00
1945	1.27	.86	1.55	1.51	2.11	1.80	.82	.55	.50	1.11	2.38	*5.04	*19.50
1946	1.81	1.09	3.30	3.46	2.45	1.83	1.54	2.04	.78	1.56	1.36	.70	21.92
1947	1.18	1.32	1.07	2.41	1.08	1.69	2.35	.95	.36	.50	.84	1.21	14.94
1948	1.01	3.27	1.65	1.84	4.11	3.33	1.95	1.08	1.06	.80	.76	.47	21.33
1949	1.32	2.01	3.14	2.26	1.72	1.62	1.36	1.96	.88	1.24	2.26	2.54	22.31
1950	1.34	1.29	1.14	1.13	.88	1.24	.75	1.12	.54	2.44	.67	.42	12.96

* Revised.

1/ Published prior to 1951 as Lower Little River.

Yearly discharge, in cubic feet per second, of Little River at Linden, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	6,160	Mar. 1, 1929	-	-	-	*1,060	*31.39	
1930	697,1383	10,300	Oct. 2, 1929	73	*715	*1.55	*21.08	399	11.76
1931	712,1383	4,980	Aug. 22, 1931	57	*458	*.996	*13.52	*463	*13.66
1932	727,1383	*2,900	Mar. 8, 1932	39	*397	*.863	*11.74	*448	*13.23
1933	742,1383	1,760	Aug. 19, 1933	37	*294	*1.03	*13.91	374	11.02
1934	757	2,280	Apr. 10, 1934	44	294	.639	8.66	373	11.00
1935	782	2,470	Sept. 12, 1935	40	505	1.10	14.91	505	14.90
1936	802	5,630	Apr. 8, 1936	100	850	1.85	25.14	1,081	31.97
1937	822,1383	*4,500	Jan. 30, 1937	101	*937	2.04	*27.66	*664	*19.60
1938	852	2,500	July 26, 1938	59	329	.715	9.71	383	11.30
1939	872	3,600	Mar. 3, 1939	78	636	1.38	18.78	576	16.99
1940	892	1,710	Mar. 15, 1940	31	317	.689	9.37	299	8.84
1941	922	2,840	Apr. 7, 1941	31	297	.646	8.75	301	8.89
1942	952	3,060	Aug. 21, 1942	46	394	.857	11.63	451	13.31
1943	972	2,970	July 14, 1943	48	535	1.16	15.80	495	14.62
1944	1002	4,860	Mar. 22, 1944	75	744	1.62	22.00	811	23.99
1945	1032,1383	*13,500	Sept. 18, 1945	54	*661	*1.44	*19.50	*745	*22.02
1946	1052	2,840	Dec. 31, 1945	153	743	1.62	21.92	654	19.29
1947	1082	3,010	Apr. 16, 1947	75	506	1.10	14.94	586	17.30
1948	1112	4,500	Feb. 15, 1948	102	721	1.57	21.33	739	21.87
1949	1142	5,260	Aug. 29, 1949	143	756	1.64	22.31	664	19.61
1950	1172	2,580	July 15, 1950	115	439	.954	12.96	-	-

* Revised.

* Not previously published; computed from submergence rating.

162. Cape Fear River at Fayetteville, N. C.

Location.--Lat 35°02'15", long 78°51'35", at highway bridge at Fayetteville, Cumberland County, just downstream from Cross Creek.

Drainage area.--4,370 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey. Gage-height records collected at same site since Nov. 7, 1892, are published in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 20.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Mar. 11, 1929, chain, staff, or wire-weight gage at same site and datum.

Average discharge.--26 years (1889-1903, 1928-40), 4,815 cfs (revised).

Extremes.--1889-1903, 1928-40: Maximum discharge, 110,000 cfs Oct. 4, 1929 (gage height, 63.43 ft); minimum indeterminate, probably occurred Oct. 6, 1930; minimum daily discharge (revised) 126 cfs Oct. 16, 1933.

Maximum gage height known, 68.8 ft Sept. 21, 1945; discharge during rising stage prior to the peak, 122,000 cfs (result of discharge measurement). The flood of Aug. 29, 1908 reached a stage of 68.0 ft, from levels run to floodmark as witnessed by local residents; discharge, estimated, 115,000 cfs (revised).

Remarks.--Considerable diurnal fluctuation and slight regulation during low flow caused by powerplant upstream from station. Stage-discharge relation for medium and low stages affected by lock 2 completed in 1917, lock 3 completed in 1935, and since 1917 by diurnal fluctuation on Rockfish Creek which enters Cape Fear River below Fayetteville.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1889	-	-	-	16,100	15,700	5,200	5,210	2,040	6,640	18,500	14,600	3,440	-
1890	3,280	7,500	2,490	1,990	4,880	7,050	3,890	3,610	2,470	2,700	8,920	5,210	4,490
1891	4,020	3,140	4,300	6,620	9,850	13,900	6,270	8,550	5,580	3,830	14,600	4,690	7,100
1892	2,360	1,720	3,520	13,000	4,590	5,660	8,200	3,430	5,270	5,120	1,460	1,330	4,640
1893	606	1,450	2,010	3,910	15,400	4,280	2,050	4,590	3,850	1,020	2,710	9,290	4,170
1894	8,760	2,500	5,910	6,910	7,960	5,840	2,060	2,300	980	1,850	7,030	2,320	4,530
1895	10,300	3,700	3,320	17,700	9,530	14,200	16,500	9,670	2,780	3,790	3,420	1,180	8,020
1896	604	1,740	2,700	6,390	15,100	3,300	3,180	2,740	3,540	11,500	1,090	1,380	4,410
1897	3,180	2,470	4,360	3,720	13,000	12,300	6,910	3,240	1,800	3,180	1,540	632	4,640
1898	483	1,260	2,110	2,000	1,580	3,200	4,340	2,200	1,120	2,670	5,500	3,660	2,520
1899	1,630	2,800	3,240	5,120	24,700	16,600	8,440	3,580	2,130	2,220	1,850	1,080	6,000
1900	2,130	3,070	2,790	3,920	9,970	8,700	11,300	2,850	2,670	1,400	733	972	4,160
1901	540	1,220	2,760	3,320	2,820	4,930	11,400	13,500	5,070	9,670	17,000	8,420	6,760
1902	2,450	1,510	4,370	6,380	14,200	11,500	5,330	2,280	1,510	967	861	1,120	4,340
1903	1,700	1,610	5,960	5,860	13,200	16,300	12,900	*2,640	*3,400	*2,460	*1,670	*1,320	*5,700
1928	-	-	-	-	-	-	-	-	-	-	-	-	31,400
1929	3,920	1,600	1,580	2,370	9,020	21,100	6,470	5,460	5,370	5,620	3,480	2,060	5,670
1930	18,100	8,300	7,250	6,640	7,300	3,630	3,110	1,820	2,280	1,440	*774	*369	5,080

* Revised.

* Not previously published; records computed on basis of U. S. Weather Bureau gage-height record and the stage-discharge relation for 1901-2.

CAPE FEAR RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Cape Fear River at Fayetteville, N. C.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	*315	873	3,010	4,000	1,880	3,020	7,710	7,250	1,160	1,830	10,500	1,030	3,570
1932	360	354	3,430	9,010	5,310	8,180	3,250	2,510	4,410	804	*716	*401	3,230
1933	3,480	4,900	11,500	7,300	8,180	3,920	4,520	1,640	739	689	2,000	1,450	4,180
1934	*233	354	450	717	1,570	5,140	6,830	1,890	6,000	3,410	2,200	5,350	2,840
1935	1,317	1,975	7,025	6,832	5,967	8,830	9,773	4,017	1,019	1,512	489	4,294	4,410
1936	550	2,557	2,835	18,530	15,070	11,740	18,340	1,457	3,903	2,454	4,087	1,467	6,875
1937	6,227	2,638	10,160	19,080	10,600	6,216	8,210	2,869	1,516	1,452	4,785	3,337	6,418
1938	1,804	1,799	1,855	4,201	2,044	2,998	4,519	1,617	3,591	7,895	1,913	1,954	3,024
1939	981	2,539	4,415	4,706	16,880	10,910	4,739	3,598	1,557	3,706	10,990	1,991	5,522
1940	843	971	1,539	3,047	8,429	5,415	5,107	1,841	2,292	856	3,979	714	2,896

* Revised.

Note.--For the period January 1889 to April 1903 monthly figures are revised; revised daily discharges not published.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1889	-	-	-	4.26	3.73	1.37	1.33	0.54	1.70	4.88	3.85	0.88	-
1890	0.87	1.92	0.86	.52	1.16	1.86	.99	.95	.63	.71	2.35	1.33	13.95
1891	1.06	.80	1.13	1.75	2.30	3.67	1.60	2.26	1.43	1.01	3.85	1.20	22.06
1892	.62	.44	.93	3.43	1.13	1.49	2.09	.90	1.35	1.35	.38	.34	14.45
1893	.16	.37	.53	1.03	3.67	1.13	.52	1.21	.96	.27	.71	2.37	12.94
1894	2.31	.64	1.56	1.82	1.90	1.54	.52	.61	.25	.49	1.85	.59	14.07
1895	2.72	.94	.87	4.68	2.27	3.75	4.21	2.55	.71	1.00	.90	.30	24.90
1896	.16	.44	.71	1.69	3.73	.87	.81	.72	.90	3.04	.29	.35	13.71
1897	.84	.63	1.15	.98	3.09	3.24	1.76	.85	.46	.84	.41	.16	14.41
1898	.13	.32	.56	.53	.38	.84	1.11	.58	.29	.70	1.45	.93	7.82
1899	.43	.72	.86	1.35	5.89	4.58	2.15	.94	.54	.59	.49	.27	18.61
1900	.56	.78	.74	1.03	2.38	2.29	2.88	.75	.68	.37	.19	.25	12.90
1901	.14	.31	.73	.88	.67	1.30	2.91	3.56	1.29	2.55	4.49	2.15	20.98
1902	.65	.38	1.15	1.68	3.38	3.03	1.41	.60	.39	.26	.25	.29	13.47
1903	.45	.41	1.57	1.55	3.15	4.31	3.29	*7.0	*.87	*.65	*.44	*.34	*17.73
1928	-	-	-	-	-	-	-	-	-	-	-	8.00	-
1929	1.04	.741	.42	.63	2.15	5.58	1.65	1.44	1.37	1.48	.92	.53	17.62
1930	4.76	2.12	1.91	1.75	1.74	.96	.79	.48	.58	.38	*.20	.09	*15.76
1931	*.08	.22	.79	1.05	.45	.80	1.97	1.91	.30	.48	2.76	.26	*11.07
1932	.10	.10	.90	2.38	1.29	2.16	.83	.66	1.13	.21	.19	*.10	*10.05
1933	.92	1.25	3.04	1.93	1.95	1.04	1.15	.43	.19	.18	.53	.37	12.98
1934	*.06	.09	.12	.19	.37	1.36	1.75	.50	1.53	.90	.58	1.37	*8.82
1935	.35	.50	1.85	1.80	1.42	2.33	2.50	1.06	.26	.40	.13	1.10	13.70
1936	.15	.65	.75	4.89	3.72	3.10	4.68	.38	1.00	.65	1.08	.37	21.42
1937	1.64	.67	2.68	5.04	2.53	1.64	2.10	.76	.39	.38	1.26	.85	19.94
1938	.48	.46	.49	1.11	.49	.79	1.15	.43	.92	2.09	1.50	.50	9.41
1939	.26	.65	1.16	1.24	4.02	2.88	1.20	.95	.40	.98	2.89	.51	17.14
1940	.22	.25	.41	.80	2.08	1.43	1.30	.49	.59	.23	1.05	.16	9.03

* Revised.

† Not previously published; records computed on basis of U. S. Weather Bureau gage-height record and the stage-discharge relation for 1901-2.

Note.--For the period January 1889 to April 1903 monthly figures are revised; revised daily discharges not published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1889	-	a51,100	July 29, 1889	-	-	-	-	4,360	26.00
1890	-	a26,800	Nov. 25, 1889	550	4,490	1.03	13.95	4,350	13.49
1891	-	a51,300	May 30, 1891	1,340	7,100	1.62	22.06	6,770	21.06
1892	-	a60,500	Jan. 21, 1892	440	4,640	1.06	14.45	4,340	13.52
1893	-	a44,600	Feb. 15, 1893	440	3,170	.954	12.94	5,280	16.39
1894	-	a44,000	Oct. 24, 1893	490	4,530	1.04	14.07	4,550	14.09
1895	-	a83,000	Jan. 12, 1895	580	8,020	1.83	24.90	6,980	21.68
1896	-	a60,500	July 11, 1896	415	4,410	1.01	13.71	4,820	15.02
1897	-	a36,000	Mar. 16, 17, 1897	315	4,640	1.06	14.41	4,120	12.80
1898	-	a22,900	Aug. 22, 1898	295	2,520	.577	7.82	2,840	8.82
1899	-	a66,500	Feb. 9, 1899	610	6,000	1.37	18.61	6,020	18.68
1900	-	a48,000	Apr. 21, 22, 1900	315	4,160	.952	12.90	3,870	12.00
1901	-	a84,500	May 24, 1901	365	6,760	1.55	20.98	7,080	21.98
1902	-	a43,400	Mar. 2, 1902	450	4,340	.993	13.47	4,420	13.72
1903	-	a62,700	Mar. 25, 1903	†690	†5,700	†1.30	†17.73	-	-
1928	682	107,000	Sept. 21, 1928	-	-	-	-	-	-
1929	682	61,600	Mar. 2, 1929	1,040	5,670	1.30	17.62	7,900	24.54
1930	697,1433	110,000	Oct. 4, 1929	*238	5,080	*1.16	*15.76	*2,600	*8.06
1931	712,1433	35,300	Aug. 23, 1931	*160	3,570	*.817	*11.07	3,570	11.08
1932	727,1433	46,500	Mar. 8, 1932	*134	3,230	*.739	*10.05	*4,550	*14.16
1933	742	30,500	Dec. 16, 1932	217	4,180	.957	12.98	*2,590	*8.04
1934	757,1433	36,700	Apr. 11, 1934	*126	2,840	*.650	*8.82	3,620	11.25
1935	782	39,700	Dec. 2, 1934	200	4,410	1.01	13.70	4,037	12.55

* Revised.

† Not previously published.

a Revised maximum observed discharge.

CAPE FEAR RIVER BASIN

Year	W. S. P. no.	Water year ending Sept. 30										Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1936	802	75,000	Apr. 8, 1936	320	6,875	1.57	21.42	7,984	24.86				
1937	822	41,700	Jan. 30, 1937	400	6,418	1.47	19.94	5,268	16.38				
1938	872	44,200	July 27, 1938	630	3,024	.692	9.41	3,233	10.05				
1939	872	45,600	Feb. 11, 1939	515	5,522	1.26	17.14	5,137	15.95				
1940	892	32,400	Feb. 8, 1940	201	2,896	.653	9.03	-	-				

Note.--For the period January 1889 to April 1903 monthly figures are revised. Revised daily discharges not published. Instantaneous minimum discharge records below 400 cfs previously published for the water years 1930-34 have been found unreliable on basis of restudy of the original data and should not be used.

163. Rockfish Creek near Hope Mills, N. C. 1/

Location.--Lat 34°58', long 78°55', on left bank 50 ft upstream from bridge on U. S. Highway 301, at mouth of Little Rockfish Creek, 1½ miles east of town of Hope Mills, Cumberland County, and 5½ miles upstream from mouth.

Drainage area.--284 sq mi, including that of Little Rockfish Creek. At site used 1929-32, 292 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey. Sept. 6, 1902, to June 6, 1903, gage heights and discharge measurements only.

Gage.--Water-stage recorder. Datum of gage is 52.25 ft (revised) above mean sea level, datum of 1929, supplemental adjustment of 1936. Prior to Feb. 23, 1939, wire or chain gage at site 4 miles downstream at different datum.

Average discharge.--13 years (1929-31, 1939-50), 399 cfs.

Extremes.--1928-31, 1939-50: Maximum discharge, 8,000 cfs Sept. 18, 1945 (gage height, 31.75 ft), from rating curve extended above 4,500 cfs on basis of computation of peak flows over dams three-quarters of a mile upstream on Rockfish Creek and 1½ miles upstream on Little Rockfish Creek; minimum, 2.6 cfs Oct. 24, Nov. 22, 23, 1941.

Remarks.--Large diurnal fluctuation and considerable regulation caused by mills and reservoirs upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	437	478	951	1,590	710	681	762	794	725	551	-
1930	1,080	1,030	936	721	758	542	523	400	416	348	251	197	600
1931	196	295	406	485	312	371	593	654	223	271	1,010	220	421
1932	163	176	468	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	712	439	323	265	460	516	314	-
1940	275	297	284	359	350	362	353	258	178	148	191	140	264
1941	127	224	224	238	225	289	338	160	169	328	200	161	224
1942	145	175	318	278	289	565	332	298	256	227	583	468	327
1943	310	289	363	391	346	456	413	321	226	703	282	262	364
1944	187	266	329	502	604	715	631	424	274	390	367	254	411
1945	261	270	324	323	346	303	232	162	170	266	630	1,097	366
1946	433	388	638	650	557	484	417	412	317	611	500	335	479
1947	414	475	387	519	371	412	535	295	196	245	262	348	373
1948	297	802	501	491	813	684	606	426	367	292	325	275	468
1949	406	475	636	524	471	421	383	456	335	466	744	721	504
1950	394	473	434	412	332	364	267	374	257	553	307	261	370

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	1.73	1.69	3.40	6.28	-2.71	2.69	2.91	3.14	2.86	2.11	-
1930	4.27	3.94	3.70	2.85	2.71	2.14	2.00	1.56	1.58	1.37	.99	.75	27.88
1931	.77	1.13	1.60	1.91	1.11	1.46	2.26	2.58	.85	1.07	3.99	.84	19.57
1932	.64	.67	1.64	-	-	-	-	-	-	-	-	-	-
1939	-	-	-	-	-	2.89	1.73	1.31	1.04	1.87	2.10	1.24	-
1940	1.12	1.17	1.15	1.46	1.33	1.47	1.39	.96	.70	.60	.77	.55	12.67
1941	.52	.86	.91	.97	.83	1.17	1.33	.65	.66	1.33	.61	.63	10.69
1942	.59	.69	1.29	1.13	1.06	2.30	1.30	1.21	.93	.92	2.37	1.84	15.63
1943	1.26	1.13	1.47	1.59	1.27	1.85	1.62	1.30	1.89	2.85	1.14	1.03	17.40
1944	.76	1.05	1.34	2.04	2.29	2.90	2.48	1.72	1.08	1.58	1.49	1.00	19.73
1945	1.14	1.06	1.31	1.31	1.27	1.23	.91	.66	.67	1.08	2.56	4.31	17.51
1946	1.76	1.52	2.59	2.64	2.04	1.96	1.64	1.67	1.25	2.48	2.03	1.31	22.89
1947	1.68	1.67	1.57	2.11	1.56	1.67	2.10	1.20	.77	.99	1.15	1.37	17.84
1948	1.21	3.15	2.03	1.99	3.09	2.76	2.36	1.73	1.44	1.19	1.32	1.06	23.39
1949	1.66	1.87	2.58	2.13	1.73	1.71	1.50	1.85	1.32	1.89	3.02	2.83	24.09
1950	1.60	1.86	1.76	1.67	1.22	1.48	1.05	1.52	1.01	2.25	1.25	1.03	17.70

1/ Published as "at Brunt," 1902-3 and as "near Fayetteville," 1929-32.

Yearly discharge, in cubic feet per second, of Rockfish Creek near Hope Mills, N. C.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	858	39.90	
1930	697	-	-	29	600	2.05	27.88	419	19.47
1931	712	-	-	32	421	1.44	19.57	414	19.22
1932	712	-	-	-	-	-	-	-	-
1939	872	2,280	Feb. 26, 1939	-	-	-	-	-	-
1940	892	813	Jan. 15, 1940	23	264	.930	12.67	241	11.54
1941	922	835	Aug. 29, 1941	23	224	.789	10.69	229	10.95
1942	952	4,530	Aug. 13, 1942	2.8	327	1.15	15.63	354	16.92
1943	972	2,090	July 9, 1943	37	364	1.28	17.40	349	16.69
1944	1002	1,810	Aug. 2, 1944	35	411	1.45	19.73	419	20.09
1945	1032	8,000	Sept. 18, 1945	42	366	1.29	17.51	416	19.87
1946	1052	3,020	July 14, 1946	104	479	1.69	22.89	463	22.14
1947	1082	1,680	Sept. 24, 1947	13	373	1.31	17.84	400	19.11
1948	1112	1,700	Feb. 15, 1948	19	488	1.72	23.39	482	23.11
1949	1142	4,000	Aug. 29, 1949	27	504	1.77	24.09	485	23.20
1950	1172	2,950	July 3, 1950	12	370	1.30	17.70	-	-

Note.--Figures of momentary maximum discharge for 1929-31, published in WSP 682, 697, and 712 have been found unreliable on basis of restudy of the original data; these figures are not published herein and should not be used.

164. Cape Fear River at lock 3, near Tarheel, N. C.

Location.--Lat 34°50', long 78°48', on right bank 100 ft upstream from lock 3, 1 mile downstream from county line, 7 miles north of Tarheel, Bladen County, 9 miles upstream from Philips Creek, and at mile 95.

Drainage area.--4,810 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for the period October 1946 to September 1947 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 28.935 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 8, 1939, staff gage on upper lock wall 100 ft downstream at same datum.

Average discharge.--13 years (1937-50), 4,970 cfs.

Extremes.--1937-50: Maximum gage height, 43.44 ft Sept. 22, 1945 (discharge not determined); minimum discharge, 200 cfs Oct. 20, 1940 (gage height, 0.42 ft).

Remarks.--Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants upstream from station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	1,997	2,122	2,158	4,416	2,227	3,320	5,168	1,954	4,215	8,532	2,155	2,450	3,401
1939	1,139	2,719	4,657	4,892	18,530	12,640	5,391	4,105	1,914	4,301	12,190	2,592	6,189
1940	1,286	1,423	1,954	3,618	8,955	5,949	5,698	2,154	2,656	1,090	4,256	942	3,308
1941	405	3,807	2,232	3,454	2,759	5,688	7,979	1,269	1,698	5,300	1,183	743	3,040
1942	436	462	1,434	1,312	4,300	8,949	2,873	4,074	3,016	1,177	5,309	3,691	3,082
1943	2,320	2,686	5,490	10,930	7,444	8,885	7,331	2,249	2,908	10,060	1,485	1,662	5,287
1944	679	1,013	1,966	8,951	12,010	16,670	12,720	4,044	1,130	5,904	3,180	1,719	5,817
1945	8,585	2,316	5,359	5,051	10,160	5,831	2,920	2,141	1,059	4,445	4,879	28,090	6,688
1946	3,646	2,341	11,610	11,850	14,030	4,947	4,302	7,551	3,757	5,673	4,728	1,931	6,336
1947	3,373	3,755	3,055	12,560	3,430	6,601	7,160	1,899	1,111	1,416	1,603	4,738	4,232
1948	2,758	10,990	4,025	6,175	18,360	10,510	7,785	3,025	3,460	1,874	2,655	1,049	5,991
1949	3,772	10,200	13,350	8,995	9,114	5,389	5,065	8,442	1,958	4,943	8,277	6,312	7,149
1950	3,884	6,374	3,549	4,363	3,654	5,390	2,337	6,013	2,269	7,645	1,948	1,455	4,087

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	0.48	0.49	0.52	1.06	0.48	0.80	1.19	0.47	0.98	2.04	0.52	0.57	9.60
1939	.27	.63	1.12	1.18	4.01	3.03	1.25	.98	.44	1.03	2.92	.60	17.46
1940	.31	.33	.47	.87	2.01	1.43	1.32	.52	.62	2.26	1.02	.22	9.38
1941	.10	.88	.53	.83	.60	1.36	1.85	.30	.39	1.27	.28	.17	8.56
1942	.10	.11	.34	.31	.93	2.14	.67	.98	.70	.28	1.27	.85	8.68
1943	.56	.62	1.32	2.62	1.61	2.15	1.70	.54	.67	2.41	.36	.39	14.93
1944	.16	.24	.47	2.15	2.69	4.00	2.95	.97	.26	1.61	.76	.40	16.46
1945	2.06	.54	1.28	1.21	2.20	1.40	.68	.51	.25	1.06	1.17	.62	18.88
1946	.87	.54	2.78	2.84	3.04	1.19	1.00	1.81	.87	1.36	1.13	.45	17.88
1947	.81	.87	.73	3.01	.74	1.58	1.66	.46	.26	.34	.38	1.10	11.94
1948	.66	2.55	.96	1.48	4.12	2.52	1.81	.73	.80	.45	.64	.24	16.96
1949	.90	2.36	3.20	2.16	1.97	1.29	1.17	2.02	.45	1.18	1.98	1.46	20.14
1950	.95	1.48	.85	1.05	.79	1.29	.54	1.44	.53	1.83	.47	.34	11.54

Yearly discharge, in cubic feet per second, of Cape Fear River at lock 3, near Tarheel, N. C.									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	872	-	July 28, 1938	760	3,401	0.707	9.60	3,590	10.13
1939	872	-	Mar. 3, 1939	535	6,189	1.29	17.46	5,865	16.55
1940	892	-	Feb. 9, 1940	411	3,308	.688	9.38	3,452	9.78
1941	922	30,000	Nov. 16, 1941	260	3,040	.632	8.56	2,700	7.60
1942	952	25,900	Mar. 10, 1942	280	3,082	.641	8.68	3,770	10.63
1943	972	39,700	Jan. 20, 1943	514	5,287	1.10	14.93	4,711	13.30
1944	1002	42,500	Mar. 22, 1944	505	5,817	1.21	16.46	6,881	19.47
1945	1032	-	Sept. 22, 1945	662	6,688	1.39	18.88	6,801	19.19
1946	1052	-	Feb. 13, 1946	1,120	6,336	1.32	17.88	5,703	16.10
1947	1082	38,300	Jan. 22, 1947	624	4,232	.880	11.94	4,856	13.70
1948	1112	-	Feb. 16, 1948	505	5,991	1.25	16.96	6,801	19.25
1949	1142	-	Dec. 1, 1948	805	7,149	1.49	20.14	6,012	16.94
1950	1172	31,800	Nov. 3, 1949	642	4,087	.850	11.54	-	-

165. Little Coharie Creek near Roseboro, N. C.

Location--Lat 34°57', long 78°29', on downstream side of bridge on State Highway 24, 1½ miles east of Roseboro, Sampson County, and 1½ miles upstream from Bearskin Swamp.

Drainage area--96.4 sq mi.

Gage--Wire-weight gage. Altitude of gage 81 ft (estimated from approximate location of benchmark at site, previously destroyed).

Extremes--January to September 1950: Maximum discharge observed, 553 cfs July 29 (gage height, 6.95 ft); minimum observed, 4.1 cfs June 20 (gage height, 1.58 ft).
Flood of 1924 reached a stage of 11.6 ft, from information by North Carolina Highway and Public Works Commission.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	64.9	50.5	63.7	28.8	58.7	14.1	151	30.0	17.1	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	0.78	0.55	0.76	0.33	0.70	0.16	1.81	0.36	0.20	-

166. Colly Creek near Kelly, N. C.

Location--Lat 34°27'50", long 78°15'28", at bridge on State Highway 53, 4 miles east of Kelly, Bladen County, and 6½ miles upstream from mouth.

Drainage area--108 sq mi (revised).

Gage--Staff gage. Datum of gage is 15.4 ft above mean sea level, unadjusted.

Extremes--January to September 1950: Maximum discharge observed, 647 cfs July 16 (gage height, 6.30 ft); minimum observed, 3.3 cfs July 6 (gage height, 1.18 ft).
Flood of 1908 reached a stage of 11.1 ft and that of September 1945, 10.2 ft, from information by local resident. Flood of 1928 reached a stage of 7.7 ft from information furnished by North Carolina Highway and Public Works Commission.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	101	72.1	76.2	47.5	23.7	75.6	333	172	155	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	1.08	0.70	0.81	0.49	0.25	0.78	3.56	1.84	1.60	-

167. Northeast Cape Fear River near Chinquapin, N. C.

Location.--Lat 34°49', long 77°50', on right bank 540 ft downstream from bridge on State Highway 41, half a mile downstream from Muddy Creek, and 1½ miles west of Chinquapin, Duplin County.

Drainage area.--600 sq mi.

Gage.--Water-stage recorder. Datum of gage is 17.28 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--10 years (1940-50), 690 cfs.

Extremes.--1940-50: Maximum discharge, 11,000 cfs Oct. 16, 1942 (gage height, 16.74 ft); minimum, 10 cfs Oct. 25, 1941.

Flood of 1908 reached a stage of 22.6 ft and flood of 1928 reached a stage of 21.8 ft at old bridge site 1,000 ft upstream from gage, from information by North Carolina State Highway and Public Works Commission.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	373	36.4	-
1941	16.4	56.4	96.5	166	279	1,063	708	123	90.4	653	271	38.5	296
1942	17.9	31.6	170	231	413	1,213	342	97.3	240	157	1,276	1,049	437
1943	2,446	436	656	975	1,190	1,113	1,229	471	252	1,112	124	39.9	655
1944	16.6	36.7	166	963	1,415	1,743	1,307	210	28.5	64.5	390	90.4	535
1945	197	126	485	576	761	539	151	106	101	605	1,726	2,063	619
1946	376	391	1,136	1,533	966	576	444	866	293	1,080	961	523	765
1947	1,118	517	512	1,066	396	879	1,294	179	98.6	380	421	1,162	670
1948	860	1,652	1,161	1,536	3,584	1,692	443	148	363	185	267	41.6	1,004
1949	412	1,189	2,225	1,291	1,406	837	745	1,418	972	1,111	1,109	978	1,141
1950	141	514	432	483	312	398	205	532	233	2,663	390	539	576

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	0.72	0.07	-
1941	0.04	0.10	0.19	0.32	0.48	2.04	1.32	0.24	0.17	1.26	.52	.07	6.75
1942	.03	.06	.33	.44	.72	2.33	.64	1.19	.45	.30	2.45	1.95	9.89
1943	4.70	.81	1.64	1.87	2.06	2.14	2.29	.91	.47	2.14	.24	.07	19.34
1944	.03	.07	.32	1.85	2.54	3.35	2.43	.40	.05	.16	.75	.17	12.12
1945	.38	.23	.93	1.11	1.32	1.04	.28	.20	.19	1.16	3.32	3.64	14.00
1946	.72	.73	2.18	2.95	1.66	1.11	.83	1.67	.54	2.08	1.85	.97	17.31
1947	2.15	.96	.98	2.05	.69	1.69	2.41	.34	.18	.73	.81	2.16	15.15
1948	1.65	3.44	2.27	2.95	6.44	3.25	.82	.28	.71	.36	.51	.08	22.76
1949	.79	2.21	4.27	2.48	2.44	1.61	1.39	2.72	1.81	2.14	2.13	1.82	25.61
1950	.27	.96	.63	.93	.54	.76	.38	1.02	.43	5.16	.75	1.00	13.03

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	-	-	-	-	-	-	-	-
1941	922	2,610	Mar. 12, 1941	15	296	0.497	6.75	302	6.84
1942	952	3,650	Sept. 11, 1942	10	437	.726	9.69	735	16.62
1943	972	11,000	Oct. 16, 1942	17	655	1.42	19.34	557	12.61
1944	1002	2,610	Feb. 17, 1944	12	535	.892	12.12	584	13.24
1945	1032	4,370	Sept. 20, 1945	24	619	1.03	14.00	711	16.09
1946	1052	2,700	Jan. 21, 1946	86	765	1.28	17.31	765	17.77
1947	1082	3,500	Oct. 12, 1946	40	670	1.12	15.15	814	16.42
1948	1112	6,700	Feb. 16, 1948	14	1,004	1.67	22.76	1,000	22.67
1949	1142	4,400	May 5, 1949	97	1,141	1.90	25.81	910	20.80
1950	1172	7,600	July 11, 1950	41	576	.960	13.03	-	-

WACCAMAW RIVER BASIN

168. Middle Swamp near Elkton, N. C.

Location.--Lat 34°27'25", long 78°33'30", at bridge on State Highway 211, 2 miles east of Elkton, Bladen County.

Drainage area.--3.7 sq mi.

Gage.--Water-stage recorder.

Extremes.--1940-42: Maximum discharge, 179 cfs Mar. 8, 1941 (gage height, 4.03 ft), from rating curve extended above 90 cfs; no flow on many days each year.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	1.21	0	1.26	0	-
1941	0	0	0	0	0	9.69	3.32	0.010	.003	1.51	.216	0	1.26
1942	0	0	1.39	2.51	6.60	16.2	-	-	-	-	-	-	-

WACCAMAW RIVER BASIN

Monthly and yearly runoff, in inches, of Middle Swamp near Elkton, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	0.36	0	0.39	0	-
1941	0	0	0	0	0	3.08	1.00	0.003	.001	.47	.07	0	4.62
1942	0	0	.43	.78	1.86	5.05	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year							
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1940	892	-	-	0	-	-	-	-	-	-	-	-	-
1941	922	-	179	Mar. 8, 1941	0	-	1.26	0.341	4.62	1.38	5.05	-	-
1942	952	-	-	-	0	-	-	-	-	-	-	-	-

169. Waccamaw River at Freeland, N. C.

Location (revised).--Lat 34°05'43", long 78°32'56", on left bank 150 ft downstream from bridge on State Highway 130, 1 mile southwest of Freeland, Brunswick County, and 7 miles downstream from Juniper Creek.

Drainage area.--626 sq mi.

Gage.--Water-stage recorder. Datum of gage is 15.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 15, 1943, staff gage at site 150 ft upstream at same datum. Auxiliary staff gage at site 3.3 miles downstream since Oct. 7, 1949.

Average discharge.--11 years (1939-50), 708 cfs.

Extremes.--1939-50: Maximum discharge, 7,500 cfs (corrected) Feb. 14, 1948 (gage height, 15.92 ft); minimum observed, 0.5 cfs Nov. 10, 11, 1940.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	530	355	-	-
1940	78.3	81.0	61.6	168	1,156	708	429	85.1	163	27.1	193	52.4	263
1941	1.14	.69	5.92	23.6	44.6	782	620	71.6	44.6	596	471	73.2	230
1942	4.43	.86	54.0	310	507	2,273	756	107	46.4	40.4	108	80.8	356
1943	31.4	21.3	41.4	161	654	562	953	421	118	771	995	957	472
1944	331	48.5	68.3	989	1,752	2,850	1,398	277	45.0	122	1,517	151	795
1945	121	109	249	396	838	542	140	83.9	126	1,726	1,516	2,956	732
1946	555	157	1,118	2,275	954	704	1,005	835	237	1,780	2,685	1,125	1,126
1947	700	1,018	471	935	450	845	1,710	287	1,045	1,057	1,769	866	866
1948	1,778	2,055	2,303	1,933	4,197	2,014	1,195	394	718	130	62.1	53.2	1,392
1949	314	825	3,080	1,216	1,732	1,163	406	447	640	1,732	860	1,286	1,141
1950	211	125	155	518	510	506	290	35.6	125	1,651	552	296	416

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	0.98	0.63	-	-
1940	0.14	0.14	0.11	0.31	1.99	1.30	0.76	0.16	0.29	0.05	.56	.09	5.70
1941	.002	.001	.01	.04	.07	1.44	1.11	.13	.08	1.10	.87	.13	4.98
1942	.008	.002	.10	.57	.84	4.19	1.31	.20	.08	.07	.20	.14	7.71
1943	.06	.04	.08	.30	1.09	1.03	1.70	.78	.21	1.42	1.83	1.71	10.25
1944	.61	.09	.13	1.82	3.02	5.25	2.49	.51	.08	.23	2.79	.27	17.29
1945	.22	.19	.46	.73	1.39	1.00	.25	.15	.22	3.18	2.79	5.27	15.85
1946	1.02	.28	2.06	4.19	1.59	1.30	1.79	1.54	.42	3.28	4.94	2.01	24.42
1947	1.29	1.82	.87	1.72	.75	1.56	3.05	.53	1.17	1.95	3.15	1.18	18.79
1948	3.27	3.66	4.24	3.56	7.23	3.71	2.13	.72	1.28	.24	.11	.09	30.24
1949	.58	1.47	5.67	2.24	2.88	2.14	.72	.82	1.14	3.19	1.58	2.29	24.72
1950	.39	.22	.28	.95	.85	.93	.52	.07	.22	3.04	1.02	.53	9.02

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year							
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1939	892	-	-	-	-	-	-	-	-	-	-	-	-
1940	892	-	1,910	Feb. 23, 24, 1940	-	3.9	263	0.420	5.70	-	245	-	5.32
1941	922	-	1,860	Mar. 17, 1941	-	.5	250	.367	4.98	-	234	-	5.08
1942	952	-	3,090	Mar. 14-16, 1942	-	.7	356	.569	7.71	-	359	-	7.78
1943	972	-	2,050	Sept. 27, 1943	-	9.8	472	.754	10.25	-	502	-	10.90
1944	1002	-	3,720	Mar. 13, 14, 1944	-	12	795	1.27	17.29	-	797	-	17.33
1945	1032	-	5,600	Sept. 23, 1945	-	21	732	1.17	15.85	-	846	-	18.34
1946	1052	-	4,840	Aug. 27, 1946	-	115	1,126	1.80	24.42	-	1,154	-	25.04
1947	1082	-	4,570	Sept. 28, 1947	-	26	866	1.38	18.79	-	1,198	-	25.98
1948	1112	-	17,500	Feb. 14, 1948	-	17	1,392	2.22	30.24	-	1,233	-	18.79
1949	1142	-	5,440	Dec. 3, 1948	-	42	1,141	1.82	24.72	-	826	-	17.89
1950	1172	-	2,800	July 13, 1950	-	24	416	.665	9.02	-	-	-	-

† Corrected.

170. Beaverdam Swamp at Lebanon, N. C.

Location.--Lat 34°14'15", long 78°44'50", at bridge on U. S. Highway 701, half a mile up-stream from Big Pond Branch and 1 mile north of Lebanon, Columbus County.

Drainage area.--21.3 sq mi.

Gage.--Water-stage recorder.

Extremes.--1940-42: Maximum discharge, 545 cfs Mar. 8, 1941 (gage height, 5.30 ft), from rating curve extended above 170 cfs by logarithmic plotting; no flow during several days each year.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	16.5	0.132	2.58	0.453	-
1941	0	0	0	0	0	31.8	9.59	0.171	0	.719	6.70	0	4.14
1942	0	0	3.21	8.78	21.8	58.3	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	0.86	0.007	0.13	0.02	-
1941	0	0	0	0	0	1.72	0.50	0.009	0	.04	.36	0	2.63
1942	0	0	.17	.48	1.07	3.15	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1940	922	-	-	0	-	-	-	-	-	-	-	-
1941	922	545	Mar. 8, 1941	0	4.14	0.194	2.63	4.41	2.80	-	-	-
1942	952	-	-	0	-	-	-	-	-	-	-	-

171. Waccamaw River near Longs, S. C.

Location.--Lat 33°54'45", long 78°42'55", at bridge on State Highway 9, 500 ft downstream from Buck Creek and 2.1 miles southeast of Longs, Horry County.

Drainage area.--1,030 sq mi, approximately.

Gage.--Wire-weight gage. Datum of gage is 5.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Extremes.--March to September 1950: Maximum discharge, 5,370 cfs July 14-16; maximum gage height, 11.22 ft July 15, from graph based on gage readings; minimum discharge, 44 cfs May 30.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	-	-	-	559	66.7	176	3,003	1,244	601	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	-	-	-	0.61	0.07	0.19	3.37	1.40	0.65	-

PREE DEE RIVER BASIN

172. Yadkin River at Patterson, N. C.

Location.--Lat 35°59'30", long 81°33'30", on left bank 200 ft upstream from bridge on State Highway 268, half a mile south of Patterson, Caldwell County, three-quarters of a mile upstream from Warrior Creek, and 2 miles downstream from Walnut Creek.

Drainage area.--28.8 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 1,212.47 ft above mean sea level, unadjusted. Prior to Feb. 9, 1940, staff gage at same site and datum.

Average discharge.--11 years (1939-50), 48.8 cfs.

Extremes.--1939-50: Maximum discharge, 16,200 cfs Aug. 13, 1940 (gage height, 12.70 ft), from rating curve extended above 1,000 cfs on basis of computation of peak flow over dam; minimum observed (corrected), 3.0 cfs May 15, 1940.

Remarks.--Some diurnal fluctuation prior to 1948 caused by operation of mills above station.

Monthly and yearly mean discharge, in cubic feet per second, of Yadkin River at Patterson, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*17.8	*18.8	28.5	27.0	35.1	36.6	42.5	20.5	32.6	29.2	194	41.4	*43.9
1941	25.8	29.2	38.0	33.9	27.6	32.6	39.9	21.5	20.1	98.9	41.0	21.5	36.0
1942	18.1	19.1	38.5	34.4	53.2	74.5	34.7	84.5	95.3	47.8	68.2	103	55.9
1943	38.8	34.3	63.0	66.9	73.2	65.2	72.5	73.4	42.7	84.7	28.4	19.7	55.2
1944	17.4	23.4	21.2	32.2	58.3	84.0	59.6	40.5	24.3	20.7	18.9	29.3	35.5
1945	36.1	23.7	22.2	30.9	47.5	42.8	63.8	52.8	20.5	19.8	23.1	95.5	39.7
1946	30.5	27.4	55.1	132	73.7	77.0	49.8	56.9	31.9	27.9	21.5	14.6	49.9
1947	15.6	19.4	20.7	61.8	27.7	38.4	42.4	23.5	41.9	47.7	38.2	24.4	33.5
1948	71.5	94.6	39.5	33.8	68.0	85.8	74.7	38.5	29.4	46.2	46.0	49.4	56.3
1949	31.2	86.4	76.9	67.4	70.3	58.9	83.2	76.8	62.4	80.7	158	65.3	76.5
1950	73.6	68.0	51.1	45.1	60.9	57.9	43.1	64.0	43.3	49.2	36.3	67.4	54.9

* Not previously published; estimated or partly estimated on basis of records for station on Linville River at Branch.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*0.71	*0.73	1.14	1.08	1.32	1.46	1.65	0.82	1.26	1.17	7.79	1.61	*20.74
1941	1.03	1.13	1.52	1.36	1.00	1.30	1.54	.86	.78	3.96	1.64	.83	16.95
1942	.72	.74	1.54	1.38	1.92	2.98	1.34	3.38	3.69	1.91	2.73	3.98	26.31
1943	1.55	1.33	2.52	2.68	2.65	2.61	2.81	2.94	1.65	3.39	1.14	.76	26.03
1944	.70	.91	.85	1.29	2.18	3.36	2.31	1.62	.94	.83	.68	1.13	16.80
1945	1.44	.92	.89	1.24	1.72	1.71	2.47	2.12	.79	.79	.93	3.70	18.72
1946	1.22	1.06	2.21	5.30	2.66	3.08	1.93	2.28	1.23	1.12	.86	.57	23.52
1947	.62	.75	.83	2.48	1.00	1.54	1.64	.94	1.62	1.91	1.53	.95	15.81
1948	2.86	3.66	1.58	1.35	2.55	3.44	2.89	1.54	1.14	1.85	1.84	1.91	26.61
1949	1.25	3.35	3.08	2.70	2.54	2.36	3.22	3.07	2.42	3.23	6.31	2.53	36.06
1950	2.95	2.63	2.04	1.81	2.20	2.32	1.67	2.56	1.68	1.97	1.45	2.61	25.89

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	16,200	Aug. 13, 1940	-	*43.9	*1.52	*20.74	46.2	21.83
1941	922	1,020	July 7, 1941	9.0	36.0	1.25	16.95	34.5	16.27
1942	952	2,960	Sept. 6, 1942	11	55.9	1.94	26.31	61.0	28.71
1943	972	1,160	July 12, 1943	16	55.2	1.92	26.03	49.0	23.09
1944	1002	-	Sept. 30, 1944	10	35.5	1.23	16.80	37.2	17.59
1945	1032	1,510	Sept. 17, 1945	11	39.7	1.38	18.72	42.3	19.96
1946	1052	1,330	Jan. 7, 1946	11	49.9	1.73	23.52	45.0	21.23
1947	1082	*700	July 17, 1947	10	33.5	1.16	15.81	46.1	21.71
1948	1112	*1,040	Oct. 17, 1947	17	56.3	1.95	26.61	55.4	26.19
1949	1142	1,500	Aug. 28, 1949	25	76.5	2.66	36.06	76.4	36.00
1950	1172	1,020	Oct. 6, 1949	24	54.9	1.91	25.89	-	-

* Revised.

* Not previously published.

173. Reddies River at North Wilkesboro, N. C.

Location.--Lat 36°10', long 81°10', on left bank 400 ft upstream from highway bridge, 1¼ miles northwest of North Wilkesboro, Wilkes County, 1¼ miles upstream from North Wilkesboro municipal dam, and 2 miles upstream from mouth.

Drainage area.--93.9 sq mi.

Supplemental records available.--Records of chemical analyses for period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 978.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--11 years (1939-50), 146 cfs.

Extremes.--1939-50: Maximum discharge, 27,000 cfs Aug. 14, 1940 (gage height, 22.02 ft), from rating curve extended above 2,100 cfs on basis of computation of peak flow over dam; minimum, 43 cfs Jan. 6, 1940, but may have been less at times during periods of ice effect in January and February 1940.

Monthly and yearly mean discharge, in cubic feet per second, of Reddies River at North Wilkesboro, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*62.1	*58.7	*63.6	60.9	105	77.3	108	73.3	88.0	93.1	587	141	*127
1941	82.7	93.7	154	114	89.6	108	108	68.6	73.8	335	104	70.4	117
1942	81.5	70.3	110	95.4	122	164	96.6	233	279	126	119	327	150
1943	103	93.5	166	171	190	177	206	199	129	248	126	78.5	157
1944	64.2	85.3	77.4	110	155	230	164	142	102	*98.5	89.5	187	*125
1945	182	106	110	151	152	147	155	127	91.4	117	90.8	479	159
1946	133	114	159	278	203	233	171	172	111	120	83.8	73.0	154
1947	70.7	66.4	65.2	111	83.7	125	121	80.0	155	69.5	89.0	77.3	96.2
1948	248	241	127	152	185	199	224	147	118	113	131	85.4	161
1949	78.5	171	198	162	168	157	199	217	151	293	360	219	198
1950	177	169	137	123	166	137	111	210	170	139	175	162	158

* Revised.
 † Not previously published; estimated or partly estimated on basis of records for station on Yadkin River at Wilkesboro.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*0.76	*0.70	*0.78	0.75	1.19	0.95	1.28	0.90	1.05	1.14	7.20	1.68	*18.38
1941	1.02	1.11	1.89	1.39	.99	1.32	1.28	.84	.88	4.11	1.28	.84	16.95
1942	.76	.63	1.35	1.17	1.56	2.01	1.15	2.86	3.32	1.54	1.46	3.89	21.70
1943	1.27	1.11	2.04	2.09	2.10	2.17	2.45	2.44	1.53	3.05	1.55	93	22.73
1944	.79	1.01	.95	1.35	1.78	2.83	1.94	1.75	1.21	*1.21	1.10	2.22	*18.14
1945	2.23	1.26	1.35	1.65	1.69	1.81	1.85	1.57	1.09	1.44	1.12	5.69	22.95
1946	1.63	1.36	1.95	3.41	2.25	2.86	2.03	2.11	1.32	1.47	1.03	.87	22.29
1947	.87	.81	.80	1.85	.93	1.53	1.43	.98	1.85	.85	1.09	.92	13.91
1948	3.05	2.87	1.56	1.38	2.13	2.45	2.66	1.80	1.41	1.39	1.61	1.01	23.32
1949	.96	2.03	2.44	1.99	1.86	1.92	2.36	2.66	1.80	3.59	4.42	2.60	28.63
1950	2.17	2.01	1.68	1.51	1.85	1.69	1.32	2.58	2.02	1.70	2.15	2.17	22.85

* Revised.
 † Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	27,000	Aug. 14, 1940	-	*127	*1.35	*18.38	139	20.16
1941	922	7,330	July 19, 1941	49	117	1.25	16.95	110	15.87
1942	952	7,200	Sept. 6, 1942	52	150	1.60	21.70	160	23.18
1943	972	3,380	July 9, 1943	65	157	1.67	22.73	146	21.06
1944	1002	4,500	Sept. 30, 1944	53	*125	*1.33	*18.14	140	*20.23
1945	1032	8,780	Sept. 17, 1945	59	159	1.69	22.95	159	23.05
1946	1052	2,030	Jan. 7, 1946	57	154	1.64	22.29	†137	19.38
1947	1082	3,540	June 14, 1947	50	96.2	1.02	13.91	131	16.91
1948	1112	2,680	Oct. 17, 1947	58	161	1.71	23.32	147	21.27
1949	1142	5,600	Aug. 28, 1949	68	198	2.11	28.63	201	29.06
1950	1172	2,210	May 12, 1950	87	158	1.68	22.85	-	-

* Revised.
 † Corrected.
 ‡ Not previously published.

174. Yadkin River at Wilkesboro, N. C. 1/

Location--Lat 36°09', long 81°09', on right bank 150 ft upstream from bridge on U. S. Highway 421 between North Wilkesboro and Wilkesboro, 150 ft downstream from Reddies River, and half a mile northeast of Wilkesboro, Wilkes County.

Drainage area--493 sq mi. At site used 1903-9 and 1920-28, 513 sq mi (revised).

Supplemental records available--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage--Water-stage recorder since Jan. 9, 1930, and chain gage Apr. 11, 1929, to Jan. 9, 1930, at present site. Datum of gage is 942.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Apr. 10, 1903, to June 30, 1909, and Oct. 17, 1920, to Apr. 10, 1929, staff or chain gage at site 1 1/2 miles (revised) downstream at different datums. Datum used 1920-29 was about 1.2 ft lower than that used 1903-9.

Average discharge--35 years (1903-8, 1920-50), 832 cfs (revised).

Extremes--1903-9, 1920-50: Maximum discharge, 160,000 cfs Aug. 14, 1940 (gage height, 37.6 ft, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area determination of peak flow; minimum, 101 cfs Jan. 20, 1940, result of freezeup; minimum daily, 162 cfs July 21, 24, 1926.

Flood of July 1916 reached a stage of 34.5 ft (present site and datum), from floodmarks (discharge, 116,000 cfs, from rating extended above 20,000 cfs as explained above).

Remarks--Slight diurnal fluctuation at low flow caused by powerplants on Reddies River 1 mile above station.

1/ Published as "at North Wilkesboro", 1903-9 and 1920-28.

Monthly and yearly mean discharge, in cubic feet per second, of Yadkin River at Wilkesboro, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	\$2,650	\$1,490	\$1,450	\$911	\$813	\$641	-
1904	*741	*563	*504	*452	*624	*1,040	*604	*1,350	*1,230	*993	*1,080	*601	*816
1905	*389	*469	*515	*757	*984	*819	*833	*1,080	*623	*1,640	*1,040	*722	*824
1906	*572	*485	*1,240	*2,070	*1,010	*1,390	*1,190	*965	*1,730	*1,480	*2,880	*1,980	*1,420
1907	*3,210	*2,420	*1,640	*1,480	*1,110	*1,230	*1,350	*1,030	*1,910	*1,060	*825	*1,070	*1,530
1908	*647	*860	*1,570	*1,570	*2,300	*1,460	*1,440	*1,300	*1,230	*1,440	*1,450	*930	*1,350
1909	*1,450	*1,050	*1,200	*1,350	*1,430	*1,540	*1,250	*2,350	*2,490	-	-	-	-
1921	649	756	1,490	1,160	1,440	925	1,270	1,200	820	715	599	506	958
1922	*650	648	664	714	1,150	1,560	1,200	1,670	1,320	1,280	828	542	1,020
1923	717	474	598	763	830	1,530	796	905	640	543	557	492	738
1924	361	472	588	1,060	647	835	1,060	807	596	1,280	547	1,030	773
1925	795	602	1,100	1,160	764	723	620	588	373	315	247	266	631
1926	269	371	302	855	826	568	660	366	324	286	652	374	486
1927	326	556	817	475	540	426	424	487	484	424	437	289	474
1928	441	498	716	757	750	703	917	986	892	787	2,350	2,460	1,020
1929	952	728	684	668	1,120	1,680	958	1,070	906	774	603	665	896
1930	*1,710	1,200	996	849	789	891	665	550	422	288	361	349	*756
1931	308	416	544	563	318	518	958	761	473	496	543	261	515
1932	232	255	516	1,030	691	726	675	719	584	*345	578	309	*555
1933	1,210	1,110	1,200	956	1,000	928	1,140	1,230	643	520	391	399	894
1934	320	303	300	349	364	1,080	1,110	452	430	490	*532	*595	*528
1935	757	808	868	1,362	825	1,196	1,017	733	499	955	595	841	871
1936	477	620	542	1,820	1,100	1,240	1,590	734	576	474	563	429	847
1937	1,492	559	853	2,269	1,161	885	856	852	654	441	850	599	940
1938	1,635	855	859	722	650	738	604	676	800	1,218	896	503	835
1939	353	642	497	669	1,803	1,082	839	631	700	691	885	375	757
1940	326	308	355	331	604	489	607	402	548	488	4,088	864	787
1941	475	585	819	619	483	600	617	368	352	1,559	531	327	614
1942	285	353	606	566	813	1,049	527	1,113	1,191	566	697	1,216	747
1943	517	469	912	1,069	1,034	973	1,116	1,064	695	1,203	592	405	835
1944	344	473	435	660	939	1,294	896	730	509	497	376	685	652
1945	820	464	498	719	859	702	808	680	428	506	416	1,877	729
1946	675	606	941	1,576	1,112	1,139	800	872	545	549	383	312	792
1947	360	371	350	868	472	707	666	450	1,035	610	501	382	563
1948	1,250	1,424	680	630	1,168	1,286	1,245	797	677	690	864	639	946
1949	491	1,129	1,225	1,031	1,070	1,003	1,191	1,315	860	1,278	2,119	1,001	1,153
1950	928	979	759	746	966	895	663	1,047	781	766	769	1,040	860

* Revised.

† Not previously published; partly estimated on basis of records for Yadkin River near Salisbury.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	\$5.76	\$3.36	\$3.15	\$2.05	\$1.83	\$1.39	-
1904	*1.67	*1.22	*1.13	*1.02	*1.31	*2.35	*1.31	*2.99	*2.67	*2.23	*2.44	*1.31	*21.65
1905	*.88	*1.02	*1.16	*1.70	*2.00	*1.84	*1.81	*2.43	*1.36	*3.69	*2.34	*1.57	*21.80
1906	*1.29	*1.05	*2.80	*4.66	*2.05	*3.13	*2.60	*2.17	*3.77	*3.34	*6.48	*4.31	*37.65
1907	*7.21	*5.27	*3.68	*3.32	*2.26	*2.77	*2.93	*2.30	*4.16	*2.39	*1.86	*2.33	*40.48
1908	*1.45	*1.87	*3.52	*3.52	*4.83	*3.27	*3.13	*2.92	*2.67	*3.23	*3.26	*2.02	*35.69
1909	*3.25	*2.29	*2.70	*3.03	*2.90	*3.45	*3.73	*5.25	*5.42	-	-	-	-
1921	1.46	1.64	3.35	2.62	2.92	2.08	2.76	2.70	1.78	1.61	1.35	1.10	25.37
1922	*1.46	1.41	1.49	1.60	2.33	3.51	2.60	3.75	2.86	2.89	1.86	1.18	*26.94
1923	1.61	1.03	1.34	1.71	1.68	3.43	1.73	2.03	1.59	1.22	1.25	1.07	19.49
1924	1.81	1.05	1.32	2.37	1.36	1.88	2.31	1.81	1.30	2.87	1.23	2.23	20.52
1925	1.79	1.31	2.48	2.61	1.55	1.63	1.35	1.32	.81	.71	.55	.58	16.89
1926	.60	.81	.68	1.92	1.68	1.28	1.43	.82	.70	.64	1.47	.81	12.84
1927	.73	1.21	1.84	1.07	1.10	.96	.92	1.09	1.05	.95	.98	1.63	12.53
1928	.99	1.08	1.61	1.66	1.58	1.58	1.99	2.22	1.94	1.77	5.28	5.36	27.06
1929	2.23	2.65	1.55	1.56	2.36	3.92	2.17	2.50	2.05	1.81	1.41	1.50	24.71
1930	*4.00	1.70	2.33	1.98	1.67	2.08	1.50	1.29	.95	.67	.84	.79	*20.80
1931	.72	.94	1.27	1.32	.67	1.21	2.17	1.78	1.07	1.16	1.27	.59	14.17
1932	.54	.57	1.21	2.41	1.51	1.70	1.53	1.69	1.32	*.81	1.35	.70	*15.33
1933	2.83	2.51	2.81	2.24	2.12	2.17	2.57	2.89	1.45	1.22	.91	.90	24.62
1934	.75	.69	.70	.82	.77	2.52	2.52	1.06	.98	1.15	*1.24	*1.35	*14.55
1935	1.72	1.83	2.03	3.19	1.74	2.80	2.30	1.71	1.13	2.23	1.39	1.90	23.97
1936	1.12	1.40	1.27	4.26	2.40	2.91	3.61	1.72	1.30	1.11	1.32	.97	23.39
1937	3.49	1.22	2.02	5.30	2.50	2.08	1.90	1.99	1.48	1.03	1.52	1.36	25.89
1938	3.83	1.93	1.61	1.68	1.38	1.73	1.37	1.58	1.81	2.85	2.10	1.14	23.01
1939	3.85	1.45	1.16	1.57	3.81	2.52	1.90	1.48	1.58	1.61	2.08	1.85	20.84
1940	.76	.70	.83	.77	1.32	1.14	1.37	.94	1.24	1.14	9.56	1.96	21.74
1941	1.11	1.32	1.91	1.45	1.02	1.40	1.40	.86	.80	3.65	1.24	.74	16.90
1942	.67	.80	1.42	1.32	1.72	2.45	1.19	2.60	2.70	1.32	1.63	2.75	20.57
1943	1.21	1.06	2.13	2.50	2.18	2.28	2.53	2.49	1.51	2.81	1.38	.92	23.00
1944	.80	1.07	1.02	1.54	2.05	3.03	2.03	1.71	1.15	1.16	.88	1.55	17.99
1945	1.92	1.05	1.17	1.68	1.81	1.64	1.83	1.59	.97	1.18	.97	1.28	20.06
1946	1.58	1.37	2.20	3.69	2.35	2.66	1.81	2.04	1.23	1.28	.90	.71	21.82
1947	.84	.84	.82	2.03	1.00	1.65	1.51	1.00	2.34	1.43	1.17	.87	15.50
1948	2.92	3.22	1.59	1.47	2.60	3.61	2.82	1.86	1.53	1.61	2.02	1.45	26.10
1949	1.15	2.56	2.87	2.41	2.26	2.35	2.70	3.09	1.95	2.99	4.95	2.49	31.76
1950	2.17	2.22	1.78	1.74	2.04	2.09	1.50	2.45	1.77	1.79	1.80	2.35	23.70

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Yadkin River at Wilkesboro, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	1433	-	-	-	-	-	-	-	-
1904	1433	*a9,250	May 18, 1904	*309	*816	*1.59	*21.65	*779	*20.69
1905	1433	*16,000	July 13, 1905	*184	*824	*1.61	*21.80	*902	*23.88
1906	1433	*26,800	Aug. 29, 1906	*436	*1,420	*2.77	*37.65	*1,840	*48.67
1907	1433	*24,200	Nov. 19, 1906	*610	*1,530	*2.98	*40.48	*1,180	*31.18
1908	1433	*14,700	Feb. 15, 1908	*570	*1,350	*2.63	*35.69	*1,400	*37.09
1909	1433	*22,600	May 21, 1909	-	-	-	-	-	-
1921	522	10,700	Dec. 14, 1920	376	958	1.87	25.37	*679	*23.28
1922	542,1433	11,300	July 15, 1922	358	1,020	*1.99	*26.94	1,000	26.56
1923	562	a13,600	Mar. 16, 1923	358	738	1.44	19.49	706	18.67
1924	582	13,700	Jan. 16, 1924	290	773	1.51	20.52	864	22.94
1925	602	*12,300	Dec. 8, 1924	173	651	1.23	16.69	499	13.20
1926	622	*12,000	Jan. 18, 1926	162	486	.947	12.84	549	14.53
1927	642	4,020	Nov. 16, 1926	210	474	.924	12.53	470	12.43
1928	662	22,000	Aug. 16, 1928	230	1,020	1.99	27.06	1,090	28.80
1929	682	10,300	Feb. 28, 1929	417	896	1.82	24.71	*1,030	*28.31
1930	697,1433	29,000	Oct. 2, 1929	215	*756	*1.53	*20.80	535	14.70
1931	712	6,030	Jan. 5, 1931	215	515	1.04	14.17	493	13.56
1932	727,1433	7,500	Jan. 1, 1932	185	*555	*1.13	*15.33	*766	*21.16
1933	742	19,200	Oct. 17, 1932	255	894	1.61	24.62	676	16.61
1934	757,1433	10,800	Apr. 10, 1934	233	*528	*1.07	*14.55	*653	*17.99
1935	782	11,000	Nov. 29, 1934	372	871	1.77	23.97	806	22.18
1936	802	10,800	Jan. 19, 1936	300	847	1.72	23.39	953	26.33
1937	822	17,100	Oct. 16, 1936	310	940	1.91	25.89	963	26.53
1938	852	19,300	Oct. 19, 1937	340	835	1.69	23.01	993	19.08
1939	872	11,600	Aug. 18, 1939	300	757	1.54	20.84	715	19.69
1940	892	160,000	Aug. 14, 1940	200	787	1.60	21.74	862	23.78
1941	922	10,200	July 19, 1941	224	614	1.25	16.90	560	15.45
1942	952	13,200	Sept. 6, 1942	229	747	1.52	20.57	802	22.08
1943	972	9,530	Apr. 19, 1943	326	635	1.69	23.00	780	21.49
1944	1002	11,800	Sept. 30, 1944	210	652	1.32	17.99	697	19.24
1945	1032	23,200	Sept. 18, 1945	252	729	1.46	20.06	766	21.07
1946	1052	*9,350	Jan. 8, 1946	239	792	1.61	21.82	696	19.17
1947	1082	*14,200	June 14, 1947	263	563	1.14	15.50	753	20.73
1948	1112	*9,250	Oct. 9, 1947	277	946	1.92	26.10	903	24.95
1949	1142	12,800	Aug. 29, 1949	419	1,155	2.34	31.76	1,158	51.35
1950	1172	5,770	May 15, 1950	405	860	1.74	23.70	-	-

* Revised.

* Not previously published.

a Maximum observed.

175. Fisher River near Dobson, N. C.

Location (revised).--Lat 36°23'05", long 80°40'20" at Turkey Ford bridge on Dobson-Ararat road, 1½ miles upstream from Chapman Creek and 3 miles east of Dobson, Surry County.

Drainage area.--109 sq mi.

Gage.--Chain gage. Altitude of gage 1,020 ft (from topographic map). Prior to Aug. 30, 1921, staff gage at same site and datum.

Average discharge.--11 years (1921-32), 157 cfs (revised).

Extremes.--1921-32: Maximum discharge, 8,300 cfs Oct. 2, 1929 (gage height, 12.1 ft, from graph based on gage readings), from rating curve extended above 600 cfs on basis of comparison with Ararat River; minimum, 16 cfs Aug. 30, 1925 (gage height, 0.03 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1922	134	145	131	137	255	374	225	328	519	350	174	117	241
1923	139	104	127	173	187	396	165	156	104	61.5	152	173	163
1924	96.6	142	167	356	179	181	204	169	140	218	145	195	163
1925	147	128	241	239	179	148	133	124	61.0	49.3	32.6	76.5	131
1926	68.0	97.1	70.9	186	196	127	120	77.5	76.8	175	78.5	57.2	110
1927	55.4	162	135	118	168	144	150	106	83.9	99.6	136	78.3	121
1928	108	85.7	280	*134	127	143	204	168	139	105	485	460	*205
1929	206	154	139	147	254	377	205	252	248	163	139	124	200
1930	415	223	185	169	173	206	145	114	73.1	35.4	54.0	40.8	153
1931	38.8	58.2	116	117	62.4	133	208	166	97.6	143	183	65.4	116
1932	49.0	42.1	83.3	179	114	157	153	139	136	64.2	59.1	53.0	102
1933	236	310	238	-	-	-	-	-	-	-	-	-	-

* Revised.

Monthly and yearly runoff, in inches, of Fisher River near Dobson, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1922	1.42	1.48	1.38	1.45	2.44	3.95	2.30	3.47	5.31	3.70	1.84	1.19	29.93
1923	1.48	1.06	1.35	1.83	1.79	4.18	1.68	1.65	1.06	.86	1.60	1.77	20.31
1924	1.02	1.45	1.76	3.55	1.77	1.91	2.09	1.99	1.43	2.31	1.53	2.00	22.81
1925	1.56	1.30	2.55	2.52	1.71	1.57	1.36	1.31	.83	.52	.34	.78	16.35
1926	.72	.99	.75	1.97	1.87	1.35	1.23	.82	.79	1.86	.83	.59	13.77
1927	.59	1.66	1.43	1.24	1.79	1.52	1.54	1.12	.86	1.05	1.46	.80	15.06
1928	1.14	.88	2.96	*1.42	1.26	1.51	2.09	1.78	1.43	1.11	5.13	4.91	*25.62
1929	2.18	1.57	1.48	1.56	2.43	3.99	2.10	2.66	2.54	1.73	1.48	1.27	24.99
1930	4.39	2.29	1.96	1.79	1.66	2.20	1.48	1.21	2.75	.37	.57	.42	19.09
1931	.41	.60	1.22	1.23	.60	1.41	2.13	1.75	1.00	1.51	1.94	.67	14.47
1932	.52	.43	.88	1.89	1.13	1.66	1.56	1.48	1.40	.68	.62	.54	12.79
1933	2.50	3.17	2.51	-	-	-	-	-	-	-	-	-	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1922	542	3,540	June 5, 1922	65	241	2.21	29.93	237	29.54
1923	562	6,700	Mar. 16, 1923	42	163	1.50	20.31	166	20.65
1924	582	*6,540	Jan. 16, 1924	76	183	1.68	22.81	192	23.99
1925	602	*4,320	Dec. 8, 1924	17	131	1.20	16.35	108	13.40
1926	622	*3,200	Jan. 18, 1926	22	110	1.01	13.77	120	14.99
1927	642	3,420	Nov. 16, 1926	33	121	1.11	15.06	132	16.36
1928	662,1433	*6,700	Sept. 6, 1928	33	*205	*1.88	*25.62	*207	*25.87
1929	682	*3,720	Feb. 28, 1929	85	200	1.83	24.99	228	28.40
1930	697	8,500	Oct. 2, 1929	22	153	1.40	19.09	102	12.68
1931	712	*4,100	Apr. 1, 1931	23	116	1.06	14.47	113	14.07
1932	727	1,640	Jan. 1, 1932	19	102	1.48	12.79	153	19.14
1933	727	*7,580	Oct. 17, 1932	-	-	-	-	-	-

* Revised.

Note.--Records for September 1920 to September 1921 published in WSP 522 have been found in error on the basis of restudy of the original data and comparison with records at nearby streams. Those records are not published herein and should not be used.

176. Fisher River near Copeland, N. C.

Location (revised).--Lat 36°20', long 80°40', on left bank 500 ft upstream from bridge on State Highway 268, 1 mile upstream from Cody Creek, and 2 miles northwest of Copeland, Surry County.

Drainage area.--121 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 913 ft (by barometer). Prior to Sept. 5, 1936, staff gage at same site and datum.

Average discharge.--19 years (1931-50), 185 cfs.

Extremes.--1931-50: Maximum discharge, 27,300 cfs Aug. 14, 1940 (gage height, 18.4 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of slope-area determination of peak flow; minimum, 21 cfs Sept. 16, 1932 (gage height, 1.70 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	51.0	55.7	98.6	225	144	198	168	144	160	67.3	65.3	73.3	121
1933	288	306	229	192	213	221	220	188	94.3	96.0	114	66.8	186
1934	55.6	60.9	72.6	74.9	68.8	245	258	91.8	108	252	234	208	143
1935	326	344	214	281	182	261	206	165	151	278	149	372	244
1936	120	142	120	526	300	308	381	151	151	110	144	161	218
1937	252	107	220	500	252	192	220	209	122	94.8	313	139	219
1938	580	222	181	195	167	154	143	190	154	202	147	91.6	203
1939	72.5	177	126	177	412	233	182	135	148	188	336	78.3	187
1940	66.8	74.5	86.4	93.7	135	113	180	151	149	135	510	154	154
1941	89.9	123	152	131	103	122	126	77.6	68.0	178	67.2	66.6	109
1942	40.2	65.0	154	117	147	182	107	187	194	113	149	223	140
1943	138	118	214	262	242	258	274	282	282	397	196	113	232
1944	91.5	102	107	158	212	310	212	173	137	182	96.8	235	168
1945	237	131	150	206	202	192	175	213	119	197	113	300	186
1946	133	140	219	318	246	252	184	253	165	193	111	99.6	193
1947	102	107	101	221	117	187	178	120	491	145	124	112	167
1948	296	264	150	156	241	253	327	171	146	104	154	86.5	194
1949	96.2	209	265	210	207	225	261	325	302	271	378	274	252
1950	193	193	158	147	204	161	133	367	203	190	206	176	196

178. Little Yadkin River near Donnah, N. C.

Location.--Lat 36°15'40", long 80°26'35", at county highway bridge just upstream from Spainhour's Mill, 1 $\frac{1}{4}$ miles upstream from mouth and $\frac{2}{2}$ miles northwest of Donnah, Forsyth County.

Drainage area.--59.7 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 756 ft (from 1940 flood-crest stages).

Extremes.--April to September 1940: Maximum discharge, 3,470 cfs Aug. 14 (gage height, 10.57 ft); maximum gage height, 11.54 ft Aug. 14 (affected by backwater from Yadkin River); minimum discharge, 10 cfs Aug. 10.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	*54.2	46.0	39.9	64.2	147	22.3	-

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	*1.01	0.89	0.75	1.24	2.83	0.42	-

* Not previously published; partly estimated on basis of records for nearby streams.

179. Forbush Creek near Yadkinville, N. C.

Location (revised).--Lat 36°08', long 80°33', on left bank 900 ft upstream from highway bridge, three-quarters of a mile north of Forbush Church, 2 $\frac{1}{2}$ miles upstream from Logan Creek, 3 $\frac{1}{2}$ miles upstream from mouth, and 6 miles east of Yadkinville, Yadkin County.

Drainage area.--21.7 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 728 ft (by barometer).

Average discharge.--10 years (1940-50), 22.0 cfs.

Extremes.--1940-50: Maximum discharge, 2,450 cfs Sept. 30, 1944 (gage height, 11.02 ft), from rating curve extended above 700 cfs on basis of velocity-area study; minimum, 2.1 cfs Sept. 22, 24, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	*21.4	24.2	27.2	33.3	32.8	8.02	-
1941	7.09	17.3	13.4	17.1	13.1	14.9	15.3	9.75	13.2	31.0	7.6	6.64	13.8
1942	4.33	6.20	11.8	13.3	25.3	27.4	10.8	29.7	17.2	8.32	20.6	20.4	16.2
1943	9.61	8.75	33.9	35.3	34.2	38.3	34.3	24.9	14.5	36.7	13.1	7.47	24.3
1944	7.19	8.22	10.6	22.3	32.7	55.1	42.0	20.7	19.6	53.4	17.4	60.9	29.1
1945	32.5	20.9	29.0	25.1	35.8	33.4	21.9	24.2	13.5	11.5	10.4	56.2	26.1
1946	13.0	23.8	40.3	55.1	40.1	24.1	20.2	28.0	14.8	13.5	9.51	7.51	24.1
1947	11.9	12.8	12.7	44.7	13.5	21.6	27.1	14.8	14.8	12.6	8.42	9.11	17.0
1948	14.4	37.9	14.0	18.9	38.1	36.6	40.6	30.0	18.7	11.3	11.6	7.56	23.2
1949	12.6	35.5	38.5	28.1	26.3	22.0	26.3	31.8	28.1	22.1	26.3	19.3	26.4
1950	18.2	24.3	14.6	15.8	18.4	25.8	15.1	38.8	26.2	13.0	14.8	18.0	20.3

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	*1.10	1.28	1.40	1.77	1.74	0.41	-
1941	0.38	0.89	0.71	0.91	0.63	0.79	.79	.52	.68	1.65	.38	.34	8.67
1942	.23	.32	.63	.71	1.21	1.46	.56	1.58	.89	1.44	1.09	1.05	10.17
1943	.51	.45	1.80	1.87	1.64	2.03	1.77	1.32	.75	1.95	.70	.58	15.17
1944	.38	.42	.56	1.18	1.82	2.93	2.16	1.10	1.01	2.84	.92	3.13	18.25
1945	1.73	1.07	1.54	1.34	1.72	1.77	1.13	1.28	.69	.61	.55	2.89	16.32
1946	.69	1.23	2.14	2.93	1.92	1.28	1.04	1.49	.76	.72	.51	.39	15.10
1947	.63	.66	.68	2.37	.65	1.15	1.39	.79	.76	.67	.45	.47	10.67
1948	.77	1.95	.74	1.00	1.89	1.95	2.09	1.60	.96	.60	.61	.39	14.55
1949	.67	1.82	2.05	1.49	1.26	1.17	1.35	1.69	1.45	1.18	1.40	.99	16.52
1950	.97	1.25	.78	.84	.88	1.37	.78	2.06	1.35	.69	.78	.92	12.67

* Not previously published; partly estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of Forbush Creek near Yadkinville, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	819	Aug. 14, 1940	-	-	-	-	-	-
1941	922	598	June 28, 1941	2.5	13.8	0.636	8.67	12.6	7.87
1942	952	754	Sept. 7, 1942	3.1	16.2	.747	10.17	18.8	11.75
1943	972	624	July 7, 1943	4.8	24.3	1.12	15.17	22.0	13.77
1944	1002	2,450	Sept. 30, 1944	5.1	29.1	1.34	18.25	33.8	21.23
1945	1032	882	Sept. 17, 1945	4.4	26.1	1.20	16.32	25.6	16.04
1946	1052	1,020	Jan. 7, 1946	4.7	24.1	1.11	15.10	20.8	13.01
1947	1082	559	Jan. 20, 1947	5.0	17.0	.783	10.67	19.4	12.16
1948	1112	611	Mar. 31, 1948	5.4	23.2	1.07	14.55	24.9	15.63
1949	1142	738	Nov. 28, 1948	8.4	26.4	1.22	16.52	23.9	14.98
1950	1172	1,120	May 15, 1950	7.2	20.3	.935	12.67	-	-

180. Reedy Creek near Yadkin College, N. C.

Location.--Lat 35°54'45", long 80°20'05", at bridge on State Highway 703, about 700 ft upstream from Huffines Creek, 3 miles upstream from mouth, and 4 miles northeast of Yadkin College, Davidson County.

Drainage area.--13.3 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 700 ft (from Yadkin River 1940 flood-crest stages).

Extremes.--1940-42: Maximum discharge, 738 cfs Aug. 14, 1940 (gage height, 5.46 ft) from rating curve extended above 380 cfs; minimum, 0.1 cfs Oct. 9, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	8.36	4.74	10.2	22.5	5.07	-
1941	2.88	18.4	7.28	9.12	9.18	10.4	8.53	2.64	13.3	18.1	1.78	1.78	8.59
1942	.629	1.62	4.31	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	0.73	0.40	0.88	1.95	0.43	-
1941	0.25	1.54	0.63	0.79	0.72	0.90	0.72	.23	1.12	1.57	.15	.15	8.77
1942	.05	.14	.37	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	738	Aug. 14, 1940	-	-	-	-	-	-
1941	922	642	June 27, 1941	0.5	8.59	0.646	8.77	6.77	6.91
1942	952	-	-	-	-	-	-	-	-

181. Yadkin River at Yadkin College, N. C.

Location.--Lat 35°51'24", long 80°23'09" (revised), on left bank 80 ft downstream (revised) from bridge on U. S. Highway 64, 1½ miles south of Yadkin College, Davidson County, and 6¼ miles downstream from Reedy Creek.

Drainage area.--2,280 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and suspended-sediment for period October 1943 to September 1944 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 638.65 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--22 years (1928-50), 2,953 cfs.

Extremes.--1928-50: Maximum discharge, 80,200 cfs Aug. 15, 1940 (gage height, 33.75 ft); minimum, 395 cfs Sept. 20, 1932 (gage height, 0.05 ft).
Maximum stage known, 36.3 ft (revised), from floodmarks, sometime in July 1916 (discharge, 94,300 cfs, revised).

Remarks.--Slight diurnal fluctuation during low flow caused by small powerplant 10 miles upstream from station.

Monthly and yearly mean discharge, in cubic feet per second, of Yadkin River at Yadkin College, N.C.

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1928	-	-	-	-	-	-	-	-	-	-	7,860	7,980	-
1929	3,300	2,460	2,280	2,460	4,230	6,630	3,580	3,620	3,470	2,800	2,530	2,190	3,290
1930	8,120	4,310	3,460	3,260	3,280	3,160	2,440	2,000	1,690	884	1,140	1,100	2,900
1931	845	1,260	1,970	2,300	1,370	2,180	3,940	3,080	1,460	2,110	2,750	1,140	2,040
1932	819	846	1,850	4,210	2,950	3,330	2,820	2,310	2,320	1,370	1,900	1,150	2,160
1933	5,710	5,630	5,080	3,840	4,040	3,370	3,440	3,380	1,720	1,460	1,740	1,350	†3,330
1934	1,060	1,080	1,210	1,370	1,670	4,600	4,250	1,860	2,070	2,160	2,420	2,800	2,220
1935	2,320	2,672	4,124	4,559	3,268	4,853	4,034	2,616	1,878	3,234	1,659	2,373	3,153
1936	1,606	2,122	1,755	8,636	5,268	5,111	6,532	2,615	2,111	1,794	2,219	1,441	3,428
1937	4,985	1,857	3,256	10,590	4,378	3,256	3,385	3,373	2,416	1,855	3,675	2,487	3,800
1938	8,057	3,293	2,679	2,990	2,730	2,815	2,420	2,428	3,000	4,060	3,124	1,723	3,288
1939	1,284	2,864	2,373	2,568	7,051	4,604	3,057	2,299	2,555	3,130	4,588	1,420	3,125
1940	1,243	1,274	1,566	1,585	2,436	2,092	2,755	1,997	2,394	2,291	7,815	2,803	2,523
1941	1,547	2,445	2,327	2,245	1,847	2,126	2,169	1,340	1,384	4,826	1,537	1,115	2,081
1942	803	1,049	1,968	1,803	2,933	3,52	1,792	3,773	3,640	2,045	2,967	3,773	2,512
1943	2,004	1,730	3,514	4,232	4,192	3,896	3,833	3,578	2,709	4,861	2,218	1,415	3,192
1944	1,238	1,498	1,561	2,480	3,538	5,604	3,982	2,691	2,017	3,033	1,625	2,615	2,653
1945	4,636	2,296	2,879	3,365	3,892	3,072	3,101	2,859	1,798	2,477	1,725	6,754	3,245
1946	2,580	2,891	4,379	6,129	4,372	3,978	2,967	3,786	2,225	2,218	1,505	1,302	3,194
1947	1,483	1,609	1,497	4,227	1,845	2,793	2,873	1,824	4,537	2,095	1,844	1,702	2,561
1948	3,897	4,828	2,314	2,409	4,622	4,493	5,395	3,547	2,740	2,041	2,895	1,596	3,589
1949	1,758	3,898	4,726	3,857	3,775	3,442	4,014	5,003	3,428	4,145	5,730	3,864	3,973
1950	2,985	3,708	2,456	2,349	3,131	3,095	2,274	4,913	3,195	2,624	2,690	3,062	3,039

† Corrected.

Monthly and yearly runoff, in inches

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1928	-	-	-	-	-	-	-	-	-	-	3.97	3.91	-
1929	1.67	1.21	1.15	1.24	1.93	3.35	1.75	1.83	1.70	1.42	1.28	1.07	19.60
1930	4.11	2.11	1.75	1.65	1.50	1.60	1.19	1.01	1.83	.45	.58	.49	17.27
1931	.43	.62	1.00	1.16	.63	1.10	1.93	1.56	.71	1.07	1.39	.56	12.16
1932	.41	.41	.93	2.13	1.40	1.69	1.38	1.17	1.14	.69	.56	.66	12.87
1933	2.89	2.76	2.57	1.94	1.84	1.71	1.68	1.71	.84	.74	.88	.56	20.22
1934	.54	.53	.61	.69	.76	2.33	2.08	.95	1.01	1.09	1.22	1.37	13.18
1935	1.17	1.31	2.09	2.31	1.49	2.45	1.97	1.32	.92	1.64	.94	1.16	18.77
1936	.81	1.04	.89	4.37	2.49	2.58	3.20	1.32	1.03	.91	1.12	.71	20.47
1937	2.52	.90	1.65	5.35	2.00	1.65	1.65	1.71	1.18	.94	1.86	1.22	22.63
1938	4.07	1.62	1.36	1.51	1.25	1.42	1.18	1.22	1.47	2.05	1.58	.84	19.57
1939	.65	1.41	1.20	1.30	3.22	2.33	1.50	1.16	1.25	1.58	2.32	.70	18.62
1940	.63	.62	.79	.80	1.15	1.06	1.35	1.01	1.17	1.16	3.95	1.37	15.06
1941	.78	1.20	1.18	1.14	1.84	1.08	1.06	.68	.68	2.44	.78	.55	12.41
1942	.41	.51	1.00	.91	1.34	1.85	.88	1.91	1.78	1.03	1.50	1.69	14.97
1943	1.01	.85	1.68	2.17	1.92	2.02	1.95	1.61	1.35	2.46	1.12	.69	19.01
1944	.63	.73	.79	1.25	1.97	2.83	1.95	1.36	.93	1.33	.82	1.28	15.83
1945	2.45	1.12	1.46	1.70	1.78	1.55	1.52	1.45	.88	1.25	.87	3.30	19.33
1946	1.30	1.41	2.21	3.10	2.00	2.01	1.45	1.91	1.09	1.12	.76	.64	19.00
1947	.75	.79	.76	2.14	.84	1.41	1.41	.92	2.22	1.06	.93	.83	14.06
1948	1.97	2.36	1.17	1.22	2.19	2.27	2.64	1.79	1.34	1.03	1.46	.78	20.22
1949	.89	1.91	2.39	1.95	1.72	1.74	1.96	2.53	1.68	2.10	2.90	1.89	23.66
1950	1.51	1.81	1.24	1.19	1.43	1.56	1.11	2.48	1.56	1.33	1.36	1.50	18.08

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	662	50,200	Aug. 18, 1928	-	-	-	-	-	
1929	682	24,600	Mar. 1, 1929	1,580	3,290	1.44	19.60	3,950	23.54
1930	697	67,600	Oct. 3, 1929	658	2,900	1.27	17.27	1,900	11.35
1931	712	16,600	Apr. 2, 1931	719	2,040	.895	12.16	1,990	11.86
1932	727	16,000	Jan. 9, 1932	584	2,160	.947	12.87	3,240	19.34
1933	742	52,200	Oct. 18, 1932	782	†3,390	1.49	20.22	2,300	13.68
1934	757	22,400	Mar. 28, 1934	830	2,220	.974	13.18	2,701	16.07
1935	782	27,900	Dec. 2, 1934	1,320	3,153	1.38	18.77	2,845	16.94
1936	802	47,900	Jan. 20, 1936	1,000	3,428	1.50	20.47	3,618	22.80
1937	822	35,700	Oct. 18, 1936	1,290	3,800	1.67	22.63	4,132	24.61
1938	842	58,400	Oct. 21, 1937	1,220	3,288	1.44	19.57	2,652	15.78
1939	872	36,200	Aug. 19, 1939	1,100	3,125	1.37	18.62	2,921	17.40
1940	892	60,200	Aug. 15, 1940	750	2,523	1.11	15.06	2,710	16.18
1941	922	18,000	July 17, 1941	731	2,081	.913	12.41	1,873	11.17
1942	952	28,100	Sept. 8, 1942	670	2,512	1.10	14.97	2,785	16.59
1943	972	26,000	Jan. 29, 1943	1,140	3,192	1.40	19.01	2,959	17.62
1944	1002	a20,600	Mar. 30, 1944	898	2,653	1.16	15.83	3,135	18.71
1945	1032	46,600	Sept. 19, 1945	1,100	3,245	1.42	19.33	3,230	19.22
1946	1052	24,500	Jan. 9, 1946	965	3,194	1.40	19.00	2,751	16.38
1947	1082	46,000	June 16, 1947	1,000	2,361	1.04	14.06	2,900	17.25
1948	1112	20,800	Apr. 2, 1948	1,120	3,389	1.49	20.22	3,356	19.91
1949	1142	24,800	Aug. 30, 1949	1,350	3,973	1.74	23.66	3,869	23.03
1950	1172	23,000	May 16, 1950	1,520	3,039	1.33	18.08	-	-

† Corrected.

a Maximum peak discharge; maximum discharge during year, 27,800 cfs at 12 p.m. Sept. 30, stage rising.

182. Dutchmans Creek near Cornatzer, N. C.

Location.--Lat 35°56', long 80°30', at bridge on county road, 100 ft downstream from Cedar Creek and 1½ miles west of Cornatzer, Davie County.

Drainage area.--83.6 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 630 ft (from topographic map).

Extremes.--1940-42: Maximum discharge, 3,300 cfs Aug. 15, 1940 (gage height, 10.58 ft); maximum gage height, 10.63 ft Aug. 15, 1940; minimum discharge, 4.5 cfs Oct. 26, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	96.8	85.1	54.9	56.3	160	22.5
1941	15.2	85.6	54.9	70.3	56.2	76.3	76.5	22.4	55.6	245	18.9	19.4	66.6
1942	6.55	10.0	23.1	†33.6	-	-	-	-	-	-	-	-	-

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	1.29	1.17	0.73	0.78	2.20	0.30	-
1941	0.21	1.14	0.76	0.97	0.70	1.05	1.02	.31	.74	3.58	.26	.26	10.80
1942	.09	.13	.32	†.46	-	-	-	-	-	-	-	-	-

* Not previously published; partly estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	3,300	Aug. 15, 1940	-	-	-	-	-	-
1941	922	3,140	July 17, 1941	7.0	66.6	0.797	10.80	56.9	9.23
1942	952	-	-	4.5	-	-	-	-	-

183. Rocky Creek at Turnersburg, N. C. 1/

Location.--Lat 35°54', long 80°48', on right bank 1,000 ft (revised) downstream from bridge on U. S. Highway 21 at Turnersburg, Iredell County, 1 mile downstream from Mud Creek, and 1½ miles upstream from mouth.

Drainage area.--102 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 724.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 19, 1950, at site 170 ft (revised) upstream at same datum.

Average discharge.--10 years (1940-50), 114 cfs.

Extremes.--1940-50: Maximum discharge, 5,120 cfs (revised) Sept. 18, 1945 (gage height, 12.08 ft); minimum, 1 cfs Oct. 18, 1940, Oct. 26, 1941; minimum daily, 22 cfs Oct. 26, 1941.

A stage of about 18.0 ft was reached by a flood sometime during years 1936 to 1938, from information by local residents.

Remarks.--Considerable diurnal fluctuation at low flow caused by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	†93.2	60.1	55.5	50.1	175	47.2	-
1941	37.2	65.5	76.4	75.4	62.1	75.8	90.4	49.8	45.0	233	53.0	39.9	75.6
1942	29.2	40.9	58.1	63.9	131	157	71.9	93.1	103	50.7	89.0	93.8	81.5
1943	46.6	50.7	154	197	147	137	146	109	76.1	175	71.2	50.7	113
1944	45.7	49.8	58.0	99.0	138	211	171	122	77.8	80.3	47.4	126	102
1945	202	86.7	101	108	145	119	102	99.6	58.9	52.0	45.0	394	126
1946	71.1	91.6	192	291	207	143	106	208	100	73.8	60.0	52.1	133
1947	63.8	71.7	65.8	194	81.1	113	118	85.5	146	76.1	75.5	50.3	95.2
1948	107	204	92.8	111	225	247	256	137	95.4	80.6	97.0	54.2	142
1949	61.3	159	187	138	159	122	159	182	101	179	267	158	154
1950	109	123	92.3	95.6	114	155	97.8	236	113	103	95.9	95.0	119

* Not previously published; partly estimated on the basis of records for station on South Yadkin River near Mocksville.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	†1.02	0.68	0.61	0.57	1.97	0.52	-
1941	0.42	0.72	0.86	0.85	0.63	0.86	.99	.56	.49	2.64	.60	.44	10.06
1942	.33	.45	.66	.72	1.34	1.78	.79	1.05	1.13	.57	1.01	1.03	10.86
1943	.53	.55	1.75	2.23	1.50	1.55	1.60	1.23	.83	1.97	.80	.55	15.09
1944	.52	.54	.66	1.12	1.46	2.39	1.87	1.38	.85	.91	.54	1.37	13.61
1945	2.28	.95	1.14	1.22	1.48	1.35	1.11	1.13	.64	.59	.51	4.31	16.71
1946	.80	1.00	2.17	3.29	2.12	1.62	1.16	2.36	1.10	.83	.68	.57	17.70
1947	.72	.78	.74	2.19	.83	1.27	1.30	.97	1.60	.86	.85	.55	12.66
1948	1.21	2.24	1.05	1.26	2.38	2.80	2.80	1.55	1.04	.91	1.10	.59	18.93
1949	.69	1.74	2.11	1.55	1.42	1.58	1.73	2.05	1.10	2.02	3.01	1.73	20.53
1950	1.23	1.34	1.04	1.08	1.17	1.75	1.07	2.67	1.23	1.17	1.08	1.02	15.85

* Not previously published; see footnote to preceding table.

1/ Previously published as Rocky River.

Yearly discharge, in cubic feet per second, of Rocky Creek at Turnersburg, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	2,840	Aug. 14, 1940	-	-	-	-	-	-
1941	922	3,800	July 17, 1941	24	75.6	0.741	10.06	71.3	9.50
1942	952	2,700	Sept. 6, 1942	22	81.5	.799	10.86	92.0	12.25
1943	972	2,010	Dec. 29, 1942	35	113	1.17	15.09	105	13.98
1944	1002	3,430	Sept. 30, 1944	31	102	1.00	13.61	122	16.26
1945	1032	*5,120	Sept. 18, 1945	30	126	1.24	16.71	123	16.31
1946	1052	3,570	Jan. 7, 1946	36	133	1.30	17.70	120	15.97
1947	1082	2,600	June 15, 1947	39	95.2	.933	12.66	112	14.92
1948	1112	1,860	Mar. 21, 1948	44	142	1.39	18.93	142	18.97
1949	1142	2,200	Aug. 31, 1949	54	154	1.51	20.53	147	19.60
1950	1172	2,320	May 15, 1950	60	119	1.17	15.85	-	-

* Revised.

184. South Yadkin River near Mocksville, N. C.

Location.--Lat 35°51', long 80°40', on right bank at downstream side of highway bridge, 1 mile upstream from Little Creek, 4 miles downstream from Fifth Creek, 4½ miles upstream from Hunting Creek, and 6½ miles (revised) southwest of Mocksville, Davie County.

Drainage area.--313 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 660 ft (by barometer).

Average discharge.--12 years (1938-50), 322 cfs.

Extremes.--1938-50: Maximum discharge, 8,000 cfs Sept. 19, 1945 (gage height, 16.02 ft); minimum, 68 cfs Oct. 12, 1941 (gage height, 1.48 ft).

Maximum stage known, 22.6 ft Oct. 3, 1929, from floodmark established by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	127	317	273	274	953	632	318	231	246	246	325	129	335
1940	140	139	184	218	314	271	217	193	170	138	550	157	229
1941	103	202	225	229	181	225	284	146	136	628	137	96.2	217
1942	80.6	108	156	169	417	514	203	275	311	150	280	315	247
1943	145	141	441	665	453	436	415	317	236	601	186	145	349
1944	123	144	168	308	445	694	557	371	224	250	148	276	308
1945	670	277	335	344	481	367	301	280	159	166	125	678	364
1946	207	271	567	801	679	406	283	530	257	227	167	146	378
1947	189	208	191	584	223	313	324	229	354	201	189	137	262
1948	278	563	264	331	648	630	768	361	249	196	326	144	395
1949	168	469	554	435	464	360	452	509	285	543	538	422	433
1950	267	378	249	273	358	478	281	756	342	319	276	257	353

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	0.47	1.13	1.01	1.01	3.17	2.33	1.14	0.85	0.88	0.91	1.20	0.46	14.56
1940	.52	.50	.68	.80	1.08	1.00	.97	.71	.60	.51	2.03	.56	9.96
1941	.38	.72	.83	.84	.60	.83	1.01	.54	.48	2.31	.51	.34	9.39
1942	.30	.39	.57	.62	1.39	1.89	.72	1.01	1.11	.55	1.03	1.12	10.70
1943	.53	.50	1.62	2.45	1.51	1.61	1.48	1.17	.84	2.21	.68	.52	15.12
1944	.45	.51	.62	1.13	1.53	2.56	1.99	1.37	.80	.92	.54	.98	13.40
1945	2.47	.99	1.23	1.27	1.60	1.35	1.07	1.03	.57	.61	.46	3.13	15.78
1946	.76	.97	2.09	2.95	2.26	1.49	1.01	1.95	.92	.84	.62	.52	16.38
1947	.70	.74	.70	2.15	.74	1.15	1.16	.84	1.26	.74	.70	.49	11.37
1948	1.02	2.01	.97	1.22	2.23	2.32	2.74	1.33	.89	.72	1.20	.51	17.16
1949	.62	1.67	2.04	1.60	1.54	1.33	1.61	1.88	1.01	2.00	1.98	1.50	18.78
1950	1.06	1.35	.92	1.00	1.12	1.76	1.00	2.78	1.22	1.18	1.02	.91	15.32

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	3,110	Mar. 1, 1939	112	335	1.07	14.56	314	13.65
1940	892	4,600	Aug. 15, 1940	79	229	.732	9.96	234	10.19
1941	922	3,900	July 18, 1941	73	217	.693	9.39	209	8.72
1942	952	3,390	Sept. 7, 1942	73	247	.789	10.70	271	12.09
1943	972	†4,150	Jan. 30, 1943	120	349	1.12	15.42	324	14.05
1944	1002	‡2,230	Mar. 29, 1944	98	308	.984	13.40	380	16.51
1945	1032	8,000	Sept. 19, 1945	90	364	1.16	15.78	344	14.91
1946	1052	4,570	Jan. 7 or 8, 1946	110	378	1.21	16.38	339	14.70
1947	1082	2,750	June 16, 1947	102	262	.837	11.37	305	13.23
1948	1112	2,710	Apr. 1, 1948	115	395	1.26	17.16	402	17.49
1949	1142	2,950	Nov. 30, 1948	144	433	1.38	18.78	410	17.78
1950	1172	2,760	May 14, 1950	176	353	1.15	15.32	-	-

† Corrected.

‡ A maximum peak discharge; maximum discharge during year, 3,330 cfs at 12 p.m. Sept. 30, stage rising.

185. South Yadkin River at Cooleemee, N. C.

Location (revised).--Lat 35°48', long 80°34', on left bank 150 ft downstream from tailrace of Erwin Cotton Mill at Cooleemee, Davie County, 550 ft upstream from bridge on State Highway 801, 2 1/4 miles downstream from Bear Creek, and 2 1/2 miles upstream from Third Creek.

Drainage area.--569 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 624.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--22 years (1928-50), 633 cfs.

Extremes.--1928-50: Maximum discharge, 24,800 cfs Oct. 3, 1929 (gage height, 32.25 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam; minimum, 10 cfs Nov. 25, 1931 (gage height, 0.40 ft); minimum daily, 23 cfs Oct. 12, 19, 1941.

Flood of July 16, 1916, reached a stage of 27.2 ft, from floodmarks in Erwin Cotton Mill, 150 ft upstream.

Remarks.--Large diurnal fluctuation and slight regulation during low and medium flows caused by Erwin Cotton Mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	333	2,140	1,840	-
1929	617	403	373	403	1,200	1,790	696	639	510	477	3,370	4,415	6,654
1930	*1,330	1,110	850	810	856	702	528	403	382	222	255	189	*635
1931	*165	281	518	534	321	536	1,170	752	*309	493	366	179	470
1932	151	168	440	1,140	558	807	627	462	634	315	550	171	503
1933	1,370	1,590	1,370	897	960	707	650	762	332	317	392	400	812
1934	277	223	253	313	509	1,110	1,040	480	426	418	495	463	501
1935	417	476	820	874	775	1,188	1,084	537	341	497	314	381	642
1936	291	380	312	2,228	1,386	1,271	1,881	522	665	437	632	509	857
1937	1,283	442	891	2,667	1,136	815	870	775	511	427	855	309	934
1938	1,280	640	528	642	540	639	541	432	543	581	474	251	601
1939	210	564	506	479	1,675	1,108	561	396	400	502	708	241	606
1940	243	236	346	399	597	496	525	415	335	329	1,082	310	443
1941	190	422	432	458	372	451	521	280	268	1,171	280	197	421
1942	140	195	310	326	804	989	408	617	610	309	623	656	497
1943	284	275	752	1,243	920	894	834	562	409	984	321	245	643
1944	202	237	289	585	830	1,379	1,059	616	408	429	263	490	564
1945	1,277	526	633	637	951	659	534	557	290	335	237	1,673	690
1946	567	480	1,171	1,524	1,322	776	557	979	469	399	295	241	713
1947	320	362	348	1,164	388	557	570	382	653	319	324	245	470
1948	568	1,233	497	619	1,392	1,270	1,476	769	508	380	571	260	788
1949	301	862	1,107	837	888	701	857	1,018	655	979	1,051	792	837
1950	586	798	462	492	590	874	532	1,370	638	523	460	484	652

* Revised.

* Not previously published; estimated or partly estimated on the basis of records for Yadkin River at North Wilkesboro or at Wilkesboro.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	0.58	0.67	4.33	-
1929	1.25	0.79	0.76	0.82	2.19	3.62	1.36	*1.30	1.00	.97	*.75	*.81	*15.62
1930	*2.69	2.17	1.72	1.64	1.57	1.42	1.04	.82	.75	.45	.52	.37	*15.16
1931	*.33	.55	1.05	1.08	.59	1.09	2.30	1.52	.61	1.00	.74	.35	*11.21
1932	.31	.33	.89	2.31	1.06	1.63	1.23	.94	1.24	.64	1.11	.34	12.03
1933	2.78	3.11	2.77	1.82	1.76	1.43	1.27	1.54	.65	.64	.79	.78	19.34
1934	.56	.44	.51	.63	.93	2.25	2.05	.97	.84	.85	1.00	.91	11.94
1935	.85	.93	1.66	1.77	1.42	2.41	2.13	1.09	.67	1.01	.64	.75	15.33
1936	.59	.75	.63	4.52	2.63	2.57	3.69	1.06	1.30	.89	1.28	.61	20.52
1937	2.59	.97	1.81	5.41	2.06	1.65	1.71	1.57	1.63	1.73	1.00	.62	22.28
1938	2.89	1.25	1.07	1.30	.99	1.29	1.06	.88	1.06	1.38	.96	.49	14.32
1939	.43	1.11	1.02	.97	3.06	2.25	1.10	.80	.78	1.02	1.43	.47	14.44
1940	.49	.46	.70	.81	1.13	1.00	1.03	.84	.66	.67	2.19	.61	10.59
1941	.39	.83	.88	.93	.68	.91	1.02	.57	.52	2.37	.57	.39	10.06
1942	.28	.38	.63	.66	1.47	2.00	.80	1.25	1.20	.63	1.26	1.29	11.85
1943	.57	.54	1.52	2.52	1.68	1.81	1.64	1.14	.80	1.99	.85	.48	15.34
1944	.41	.46	.58	1.18	1.57	2.79	2.08	1.25	.80	.87	.53	.96	13.48
1945	2.59	1.03	1.28	1.29	1.74	1.34	1.05	1.13	.57	.68	.48	3.28	16.46
1946	.74	.94	2.37	3.09	2.42	1.57	1.09	1.98	.92	.81	.60	.47	17.00
1947	.65	.71	.70	2.36	.71	1.13	1.12	.77	1.28	.65	.66	.48	11.22
1948	1.15	2.42	1.01	1.25	2.64	2.45	2.94	1.56	1.00	.77	1.16	.51	18.85
1949	.61	1.69	2.24	1.70	1.63	1.42	1.68	2.06	1.28	1.98	2.13	1.55	19.97
1950	1.19	1.57	.94	1.00	1.08	1.77	1.04	2.78	1.25	1.06	.93	.95	15.55

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of South Yadkin River at Coolee, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	662	12,700	Aug. 17, 1928	-	-	-	-	-	-
1929	682	7,080	Mar. 1, 1929	-	#654	#1.15	#15.62	#813	#19.40
1930	697	24,800	Oct. 3, 1929	54	#635	#1.12	#15.16	#440	#10.51
1931	712, 1433	4,560	Apr. 2, 1931	72	470	.826	*11.21	*453	*10.81
1932	727	4,900	Jan. 10, 1932	46	503	.884	12.03	801	19.16
1933	742	16,200	Oct. 18, 1932	96	812	1.43	19.34	512	12.19
1934	757	6,630	Mar. 4, 1934	111	501	.880	11.94	581	13.87
1935	782	5,130	Dec. 2, 1934	139	642	1.13	15.33	580	13.86
1936	802	9,220	Jan. 20, 1936	133	857	1.51	20.52	995	23.82
1937	822	9,180	Oct. 18, 1936	233	934	1.64	22.28	919	21.92
1938	852	9,280	Oct. 21, 1937	110	601	1.06	14.32	502	11.97
1939	872	5,980	Mar. 1, 1939	96	606	1.07	14.44	568	13.53
1940	892	8,230	Aug. 16, 1940	55	443	.779	10.59	461	11.04
1941	922	5,350	July 18, 1941	24	421	.740	10.06	388	9.25
1942	952	6,650	Sept. 8, 1942	23	497	.873	11.85	553	13.19
1943	972	6,070	Jan. 30, 1943	68	843	1.13	15.34	594	14.16
1944	1002	4,770	Mar. 30, 1944	84	564	.991	13.48	708	16.93
1945	1032	10,900	Sept. 19, 1945	90	690	1.21	16.46	654	15.61
1946	1052	6,800	Jan. 9, 1946	78	713	1.25	17.00	630	15.01
1947	1092	5,140	Jan. 21, 1947	67	470	.826	11.22	575	13.74
1948	1112	5,480	Apr. 2, 1948	87	788	1.38	18.85	786	18.82
1949	1142	5,930	Nov. 30, 1948	167	837	1.47	19.97	802	19.13
1950	1172	4,440	May 16, 1950	229	652	1.15	15.55	-	-

* Revised.

* Not previously published.

A maximum peak discharge; maximum discharge, 6,450 cfs at 12:00 p.m. Sept. 30, stage rising.

Note.--Momentary maximum discharges are subject to considerable error due to variable but unknown amounts of backwater and should be used with caution.

186. Third Creek at Cleveland, N. C.

Location.--Lat 35°45', long 80°41', on left bank 200 ft downstream from highway bridge, three-quarters of a mile north of Cleveland, Rowan County, and 7 miles upstream from Fourth Creek.

Drainage area.--87.4 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 684.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 22, 1950, on right bank at site 200 ft upstream at same datum.

Average discharge.--10 years (1940-50), 93.0 cfs.

Extremes.--1940-50: Maximum discharge, 3,080 cfs about Sept. 19, 1945 (gage height, 15.76 ft, from floodmarks), from rating curve extended above 900 cfs by logarithmic plotting; minimum, 19 cfs Oct. 9, 24, 1941.

Maximum stage known, 22.5 ft sometime in July 1916, from floodmark witnessed by local resident. Creek channel improved considerably by dredging since 1916.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	54.1	52.1	36.6	125	46.0	-
1941	29.0	77.8	70.2	66.1	54.8	69.8	76.9	34.0	59.0	176	46.2	26.5	65.7
1942	21.8	26.9	45.2	47.2	120	159	58.2	80.6	82.1	41.5	89.4	75.1	70.3
1943	44.6	42.4	103	187	135	140	104	62.7	106	180	68.5	47.7	100
1944	38.5	39.7	47.0	107	139	218	162	79.1	53.2	69.0	41.4	150	94.9
1945	209	96.5	110	108	163	108	98.1	79.8	46.4	79.8	42.3	352	123
1946	64.9	83.4	82.2	204	229	110	87.0	117	61.0	51.4	46.2	36.7	109
1947	53.6	56.7	222	156	64.1	92.7	80.7	64.4	47.2	41.1	40.8	45.2	67.2
1948	87.4	167	72.1	99.2	213	153	162	96.2	65.5	46.5	95.2	36.6	107
1949	44.1	144	133	111	131	98.7	128	112	55.1	101	82.9	72.8	101
1950	89.3	107	63.1	70.5	79.1	106	69.3	197	106	90.9	67.8	61.2	92.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	0.71	0.66	0.51	1.65	0.59	-
1941	0.38	0.99	0.93	0.87	0.65	0.92	0.98	.45	.75	2.32	.61	.34	10.19
1942	.29	.34	.80	.62	1.43	2.10	.74	1.08	1.05	.55	1.18	.96	10.92
1943	.59	.54	1.35	2.47	1.61	1.84	1.33	.83	1.35	2.11	.90	.61	15.53
1944	.47	.51	.82	1.41	1.71	2.89	2.07	1.04	.68	.91	.55	1.92	14.77
1945	2.76	1.23	1.45	1.43	1.95	1.43	1.13	1.05	.59	1.05	.56	4.49	19.12
1946	.86	1.06	2.93	2.69	2.73	1.45	1.11	1.54	.78	.68	.64	.47	16.94
1947	.71	.72	.82	2.06	.76	1.22	1.03	.85	.60	.54	.54	.58	10.43
1948	1.15	2.14	.95	1.31	2.62	2.02	2.07	1.27	.84	.64	1.26	.47	16.74
1949	.58	1.93	1.75	1.47	1.57	1.30	1.63	1.48	.70	1.33	1.09	.93	15.66
1950	1.16	1.36	.63	.93	.94	1.40	.89	2.59	1.35	1.20	.89	.78	14.34

Yearly discharge, in cubic feet per second, of Third Creek at Cleveland, N. C.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	1,380	Aug. 14, 1940	-	-	-	-	-	-
1941	922	1,000	July 17, 1941	21	65.7	0.752	10.19	58.8	9.12
1942	952	1,420	Feb. 17, 1942	20	70.3	.804	10.92	78.4	12.17
1943	972	1,450	July 10, 1943	30	100	1.34	15.53	94.3	14.65
1944	1112	2,890	Sept. 30, 1944	28	94.9	1.09	14.77	120	18.61
1945	1112	3,080	Sept. 19, 1945	29	123	1.41	19.12	119	18.53
1946	1112	1,650	Feb. 11, 1946	28	109	1.25	16.94	92.2	14.34
1947	1082	1,060	Jan. 20, 1947	23	67.2	.769	10.43	80.0	12.42
1948	1112	1,080	Apr. 1, 1948	28	107	1.22	16.74	107	16.63
1949	1142	1,120	Nov. 29, 1948	36	101	1.16	15.66	95.8	14.87
1950	1172	932	May 15, 1950	46	92.4	1.06	14.34	-	-

187. Yadkin River near Salisbury, N. C.

Location.--Lat 35°43'30", long 80°23'50", at old highway bridge known as Piedmont toll bridge, 1,600 ft (revised) upstream from Southern Railway bridge, 4 miles downstream from South Yadkin River, 6 miles northeast of Salisbury, Rowan County, and at mile 267.

Drainage area.--3,470 sq mi (revised), approximately.

Gage.--Wire-weight, chain or staff gage at toll bridge June 1, 1900, to Apr. 14, 1903, Jan. 1, 1906, to Dec. 31, 1909, and Sept. 1, 1911, to Dec. 31, 1927. Altitude of gage 610 ft (from topographic map and river profile). Wire-weight or chain gage at Southern Railway bridge, 1,600 ft downstream and at slightly different datum, Sept. 24, 1895, to May 31, 1900, and Apr. 15, 1903, to Dec. 31, 1905.

Average discharge.--32 years (1895-1927), 4,925 cfs.

Extremes.--1895-1927: Maximum discharge, 121,000 cfs July 18, 1916 (gage height, 23.8 ft), from rating curve extended above 92,000 cfs on basis of logarithmic plotting; minimum, 670 cfs (revised) Sept. 13, 14, 15, 1900.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	1,465	2,201	2,819	4,485	7,700	3,432	5,236	2,673	3,258	12,590	2,399	3,306	4,285
1897	3,518	5,118	5,932	4,050	12,760	11,160	8,173	5,725	5,805	4,760	2,878	1,576	5,881
1898	3,860	2,681	2,444	3,525	2,442	3,929	3,738	3,321	2,035	2,936	5,234	7,530	3,646
1899	4,597	2,345	3,417	7,295	11,850	22,450	10,180	6,666	4,994	3,724	2,469	2,579	6,860
1900	2,352	2,249	2,803	4,954	8,025	9,586	8,654	3,803	5,883	2,955	1,786	2,019	4,560
1901	3,118	3,505	4,857	5,630	3,584	6,105	14,240	11,040	10,970	8,407	16,920	6,650	7,945
1902	5,065	3,741	11,540	6,651	8,548	9,693	5,720	4,124	7,805	3,196	3,304	2,992	6,022
1903	4,542	4,257	6,941	7,900	12,460	15,820	12,290	5,322	7,768	3,898	4,770	4,511	7,506
1904	2,668	2,652	2,402	2,256	4,341	4,312	2,071	3,445	4,980	3,745	4,604	2,384	3,319
1905	1,061	1,875	2,566	3,896	7,086	3,325	4,023	5,813	2,240	7,840	6,575	2,296	4,040
1906	2,111	1,707	6,405	9,840	3,822	5,622	4,242	3,031	5,816	7,140	10,350	6,968	5,612
1907	7,251	5,865	4,361	5,016	3,626	4,618	5,237	3,224	6,757	3,729	2,862	3,378	4,662
1908	2,080	4,407	8,169	8,655	10,460	6,914	5,443	4,928	4,668	5,562	8,745	4,467	6,201
1909	6,307	4,749	6,654	5,936	5,708	6,342	5,658	10,100	12,180	5,153	6,011	2,912	6,483
1910	2,632	2,444	3,099	4,180	46,190	5,680	5,030	3,280	16,460	3,620	4,910	4,210	3,950
1911	3,290	11,970	2,750	4,390	43,780	44,080	5,860	42,600	2,250	11,870	42,110	2,570	3,120
1912	4,360	3,180	4,900	3,530	5,840	13,300	6,020	8,520	5,550	4,190	2,180	4,100	5,320
1913	2,230	2,950	2,330	4,380	3,500	12,000	5,850	5,640	3,330	2,600	4,850	4,110	4,490
1914	3,700	3,360	4,530	4,820	6,370	4,480	5,490	2,950	2,050	2,400	2,070	1,680	3,640
1915	4,470	2,510	12,000	11,300	8,170	5,060	3,810	3,960	5,560	2,540	6,340	4,520	5,850
1916	6,130	3,910	7,270	5,010	9,180	3,950	3,860	4,270	6,120	20,700	6,000	3,500	6,670
1917	3,740	2,790	3,290	4,640	4,990	11,100	5,700	3,380	3,060	5,170	2,860	5,100	4,660
1918	2,290	2,110	2,120	5,740	4,270	2,910	5,480	3,570	2,290	2,500	3,530	2,530	3,270
1919	5,270	6,850	9,370	9,260	6,630	9,740	5,440	8,230	5,100	11,500	3,990	2,410	6,850
1920	2,940	2,610	3,970	3,730	5,470	6,720	9,780	3,520	4,190	3,520	6,490	4,040	4,770
1921	2,980	4,960	9,550	7,820	10,100	4,680	6,820	5,720	3,530	3,280	2,150	2,090	5,260
1922	1,850	3,920	2,560	3,200	7,370	8,390	5,240	7,900	6,580	5,880	3,710	2,330	4,900
1923	2,920	2,000	2,700	3,890	4,480	11,000	5,260	4,420	2,710	2,460	3,510	2,750	4,020
1924	1,700	2,520	4,010	6,600	4,240	4,640	5,240	4,360	3,070	5,810	3,320	5,610	4,260
1925	5,900	2,650	5,210	9,900	4,750	3,990	3,190	3,610	1,920	1,570	1,300	1,260	3,720
1926	1,660	2,120	1,790	4,590	5,930	3,620	3,470	1,910	1,500	2,490	2,170	1,560	2,710
1927	1,200	2,850	4,620	2,750	6,030	5,100	3,130	2,400	2,790	3,000	2,290	1,550	3,120
1928	2,520	1,800	7,430	-	-	-	-	-	-	-	-	-	-

* Revised.

† Not previously published; estimated or partly estimated on the basis of records for station near Pee Dee.

Note.--Records October 1895 to December 1909, are revised.

Monthly and yearly runoff, in inches, of Yadkin River near Salisbury, N. C.

Water year	Monthly and yearly runoff, in inches, of Yadkin River near Salisbury, N. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	0.49	0.71	0.94	1.49	2.39	1.14	1.68	0.89	1.04	4.18	0.80	1.06	16.81
1897	1.10	1.65	1.97	1.55	3.85	3.71	2.65	1.90	1.87	1.58	.96	.51	23.06
1898	1.28	.86	.81	1.17	.73	1.31	1.20	1.10	.65	.98	1.74	2.42	14.25
1899	1.53	.75	1.14	2.42	3.56	7.46	3.27	2.21	1.61	1.24	.82	.83	26.84
1900	.78	.72	.93	1.65	2.41	3.18	2.78	1.26	1.89	.98	.59	.65	17.82
1901	1.04	1.13	1.61	1.87	1.08	2.03	4.58	3.67	3.53	2.79	5.62	2.14	31.09
1902	1.68	1.20	3.83	2.21	2.57	3.22	1.84	1.37	2.51	1.06	1.10	.96	23.55
1903	1.51	1.37	2.31	2.62	3.74	5.26	3.95	1.77	2.50	1.30	1.58	1.45	29.36
1904	.89	.85	.80	.75	1.35	1.43	.67	1.14	1.60	1.24	1.53	.77	13.02
1905	.35	.80	.85	1.29	2.13	1.10	1.29	1.93	.72	2.60	2.18	.74	15.78
1906	.70	.55	2.13	3.27	1.15	1.87	1.36	1.01	1.87	2.37	3.44	2.24	21.96
1907	2.41	1.89	1.45	1.67	1.09	1.53	1.68	1.07	2.17	1.24	.95	1.09	18.24
1908	.69	1.42	2.71	2.88	3.25	2.30	1.75	1.64	1.50	1.85	2.91	1.44	24.34
1909	2.10	1.53	2.21	1.97	1.71	2.11	1.82	3.35	3.92	1.71	2.00	.94	25.37
1910	.87	.79	1.03	*1.39	*1.83	*1.89	*.97	*1.09	*2.08	*1.20	*.97	*1.35	*15.46
1911	*1.09	*.63	*.91	*1.46	*1.13	*1.35	*1.88	*.86	*.72	*.62	*.70	.83	*12.18
1912	1.45	1.02	1.63	1.17	1.82	*4.42	1.94	2.85	1.14	1.39	.72	1.32	*20.85
1913	.74	.95	.77	1.46	1.05	3.98	1.88	1.87	1.07	.86	1.61	1.32	17.53
1914	1.23	1.08	1.50	1.60	1.91	1.49	1.77	.98	.66	.80	.69	.54	14.25
1915	1.49	.81	3.98	3.75	2.45	1.68	1.22	1.32	1.79	.84	2.11	1.45	22.89
1916	2.04	1.26	2.42	1.66	2.85	1.31	1.24	1.42	1.97	6.88	2.00	1.62	26.17
1917	1.24	.90	1.09	1.54	1.50	3.70	1.83	1.12	.98	1.72	.95	1.64	18.21
1918	.73	.68	.70	1.91	1.28	.97	1.76	1.19	.74	.83	1.17	.81	12.77
1919	1.75	1.56	3.11	3.08	1.99	3.24	1.75	2.73	1.64	3.83	1.32	.78	26.78
1920	.98	.94	1.32	1.24	1.70	2.23	3.14	1.17	1.35	1.17	2.16	1.30	18.70
1921	.99	1.50	3.17	2.60	3.04	1.55	2.19	1.90	1.14	1.09	.72	.67	20.56
1922	.82	1.26	.85	1.06	2.21	2.78	1.69	2.22	2.11	1.95	1.23	.75	19.14
1923	.97	.64	.90	1.29	1.35	3.66	1.69	1.47	.87	.82	1.16	.88	15.70
1924	.56	.81	1.33	2.19	1.32	1.54	1.69	1.45	.99	1.93	1.10	*1.81	*16.72
1925	1.96	.85	1.73	3.05	1.43	1.33	1.03	1.20	.62	.52	.43	.41	14.56
1926	.55	.68	.60	1.52	1.78	1.20	1.11	.63	.48	.83	.72	.50	10.60
1927	.40	.91	1.53	.92	1.81	1.70	1.01	.80	.90	1.00	.76	.50	12.24
1928	.84	.58	2.47	-	-	-	-	-	-	-	-	-	-

* Revised.

* Not previously published; see footnote to preceding table.

Note.--Records October 1895 to December 1909 are revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1896	1433	a80,000	July 10, 1896	1,050	4,285	1.23	16.81	4,945	19.39
1897	1433	a50,000	Feb. 7, 1897	1,160	5,891	1.70	23.25	5,440	21.29
1898	1433	*79,300	Sept. 24, 1898	940	3,648	1.05	14.25	3,763	14.72
1899	1433	*115,000	Mar. 20, 1899	1,500	6,860	1.98	26.84	6,609	25.85
1900	1433	*54,900	Apr. 19, 1900	670	4,560	1.31	17.82	4,902	19.17
1901	1433	*82,600	Apr. 21, 1901	1,320	7,945	2.29	31.09	8,698	34.02
1902	1433	*95,200	Dec. 30, 1901	1,220	6,022	1.74	23.55	5,629	22.03
1903	1433	*76,600	Mar. 24, 1903	1,060	7,506	2.16	29.36	6,829	26.71
1904	1433	*20,800	May 19, 1904	1,110	3,319	.956	13.02	3,133	12.28
1905	1433	*58,800	July 14, 1905	740	4,040	1.16	15.78	4,442	17.36
1906	1433	*50,000	Aug. 31, 1906	1,450	5,612	1.62	21.96	6,217	24.33
1907	1433	*38,500	Oct. 20, 1906	1,260	4,662	1.34	18.24	4,426	17.31
1908	1433	*70,000	Aug. 27, 1908	1,400	6,201	1.79	24.34	6,459	25.38
1909	1433	*53,000	May 22, 1909	1,950	6,483	1.87	25.37	5,679	22.22
1910	1433	-	-	-	*3,950	*1.14	*15.46	*3,940	*15.40
1911	302	-	-	-	*3,120	*.899	*12.18	*3,490	*13.65
1912	322, 1433	*a91,000	Mar. 16, 1912	1,250	*5,320	*1.53	*20.85	*4,900	*19.21
1913	352	a77,200	Mar. 16, 1913	1,530	4,490	1.23	17.56	4,840	18.91
1914	382	*25,300	Jan. 4, 1914	1,130	3,640	1.05	14.25	4,270	16.72
1915	402	*56,000	Jan. 8, 1915	1,250	5,850	1.69	22.89	5,710	22.33
1916	432	121,000	July 18, 1916	2,060	6,670	1.92	26.17	6,040	23.68
1917	452	45,800	Mar. 5, 1917	1,530	4,660	1.34	18.21	4,370	17.09
1918	472	*25,700	Apr. 22, 1918	1,340	3,270	.942	12.77	4,370	17.08
1919	502	80,000	July 20, 1919	1,360	6,850	1.97	26.78	6,030	23.60
1920	502	*42,200	Apr. 3, 1920	1,420	4,770	1.37	18.70	5,380	21.12
1921	522	*45,200	Feb. 11, 1921	1,400	5,260	1.52	20.56	4,510	17.63
1922	542	*27,200	May 19, 1922	1,400	4,900	1.41	19.14	4,840	18.92
1923	562	68,600	Mar. 18, 1923	1,560	4,020	1.16	15.70	4,070	15.89
1924	582, 1433	*b41,400	Jan. 17, 1924	1,260	*4,260	*1.23	*16.72	*4,730	*18.56
1925	602	*66,600	Oct. 1, 1924	700	3,720	1.07	14.56	3,020	11.85
1926	622	*38,400	Jan. 19, 1926	816	2,710	.781	10.60	2,970	11.61
1927	642	*28,800	Feb. 21, 1927	922	3,120	.899	12.24	3,390	13.29
1928	662	c27,800	Dec. 5, 1927	-	-	-	-	-	-

* Revised.

* Not previously published.

a Maximum daily discharge.

b Maximum peak discharge; maximum discharge during year, 57,600 cfs at 12 p.m. Sept. 30, stage rising.

c Maximum during period October to Dec. 3.

Note.--Records October 1895 to December 1909 are revised.

188. Abbotts Creek at Lexington, N. C.

Location (revised).--Lat 35°48'24", long 80°14'06", on right bank 200 ft downstream from small tributary, 300 ft upstream from highway bridge, 0.6 mile downstream from bridge on U. S. Highway 64, 1½ miles southeast of Lexington, Davidson County, and 4.9 miles downstream from Rich Fork.

Drainage area.--174 sq mi.

Supplemental records available.--Records of chemical analyses for period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 622.55 ft above mean sea level, datum of 1929, adjustment of 1936. Prior to July 28, 1949, at site 600 ft upstream at same datum.

Average discharge.--10 years (1940-50), 164 cfs (revised).

Extremes.--1940-50: Maximum discharge, 14,800 cfs Sept. 25, 1947 (gage height, 22.12 ft, site then in use, from floodmarks); minimum, 1.8 cfs Oct. 22, 1941.

Remarks.--The town of Lexington diverts an average of about 2 cfs above station for water supply. City of High Point discharges about 3 cfs sewage effluent, diverted from Deep River (Cape Fear River basin), into Rich Fork above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	160	138	81.3	87.6	370	65.2	-
1941	19.2	249	148	175	69.2	169	176	34.7	49.3	287	15.8	11.9	121
1942	4.65	9.89	23.4	35.0	167	*398	*53	*126	*189	*118	126	34.6	*107
1943	69.9	41.5	164	405	317	276	266	91.6	261	179	85.1	56.4	184
1944	22.1	29.8	66.4	252	355	553	521	72.9	35.7	186	29.0	141	188
1945	190	106	161	174	432	150	93.9	74.5	28.1	149	18.8	478	169
1946	60.3	87.8	495	318	554	126	104	151	71.9	49.4	76.6	44.7	175
1947	41.6	53.3	56.9	434	79.2	198	169	61.4	30.2	32.4	29.9	672	155
1948	87.7	352	116	214	590	304	280	64.7	49.9	51.1	108	24.2	185
1949	46.3	420	341	268	343	192	202	344	45.0	138	226	71.1	219
1950	*180	*282	90.7	107	136	215	90.1	270	71.9	88.4	70.3	59.4	*139

* Revised.

* Not previously published; estimated on the basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	1.03	0.91	0.52	0.58	2.45	0.42	-
1941	0.13	1.60	0.98	1.16	0.53	1.26	1.13	.23	.32	1.90	.10	.08	9.42
1942	.03	.06	.15	.23	1.00	*2.64	*.34	*.63	*1.21	*.78	.63	.22	*8.32
1943	.46	.27	1.09	2.68	1.90	1.83	1.70	.61	1.67	1.19	.56	.36	14.32
1944	.15	.19	.44	1.67	2.20	3.66	3.34	.46	.22	1.24	.19	.90	14.68
1945	1.26	.68	1.07	1.15	2.58	.99	.60	.49	.18	.98	.12	3.06	13.16
1946	.40	.56	3.28	2.11	3.19	.83	.67	1.00	.46	.33	.51	.29	13.63
1947	.28	.34	.38	2.87	.47	1.31	1.08	.41	.19	.21	.20	4.31	12.05
1948	.58	2.26	.77	1.41	3.65	2.01	1.79	.43	.32	.34	.72	.16	14.44
1949	.31	2.69	2.26	1.77	2.05	1.27	1.29	2.28	.29	.91	1.50	.46	17.08
1950	*1.19	*1.81	.60	.71	.81	1.43	.58	1.79	.46	.59	.47	.38	*10.82

* Revised.

* Not previously published; estimated on the basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	6,820	Aug. 15, 1940	-	-	-	-	-	-
1941	922	2,550	July 17, 1941	3.5	121	0.695	9.42	69.2	6.95
1942	952	-	-	2.0	*107	*.615	*6.32	*127	9.90
1943	972	3,510	June 9, 1943	9.0	164	1.06	14.32	170	13.28
1944	1002	4,740	Sept. 30, 1944	5.0	168	1.08	14.68	216	16.91
1945	1032	7,740	Sept. 18, 1945	5	169	.971	13.16	185	14.39
1946	1052	6,300	Feb. 11, 1946	17	175	1.01	13.63	133	10.39
1947	1082	14,800	Sept. 25, 1947	2.9	155	.868	12.05	188	14.66
1948	1112	2,410	Feb. 14, 1948	10	185	1.06	14.44	206	16.09
1949	1142	4,660	Nov. 29, 1948	17	219	1.26	17.08	*198	*15.42
1950	1172, 1453	5,160	Oct. 31, 1949	24	*139	*.799	*10.82	-	-

* Revised.

* Not previously published.

189. Fourmile Branch near Southmont, N. C.

Location (revised).--Lat 35°40'51", long 80°10'29", at bridge on county highway, 1.4 miles upstream from mouth and High Rock Lake, and 5 miles east of Southmont, Davidson County.

Drainage area.--14.3 sq mi (revised).

Gage.--Water-stage recorder. Altitude of gage is about 630 ft (from planimetric map).

Extremes.--1940-42: Maximum discharge, 1,800 cfs Aug. 14, 1940 (gage height, 6.95 ft), from rating curve extended above 360 cfs on basis of slope-area determination of peak flow; no flow several days 1940-41.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	0	15.8	8.91	11.7	6.91	18.9	14.8	8.52	1.56	1.88	28.2	0.237	-
1942	.002	0	.340	-	-	-	21.6	.852	.085	2.90	.004	0	7.29

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	0	1.23	0.72	0.94	0.50	1.52	1.16	0.69	0.12	0.15	2.28	0.02	-
1942	.0002	0	.03	-	-	-	1.69	.07	.007	.23	.0003	-	6.91

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
Discharge	Date								
1940	892	1,800	Aug. 14, 1940	-	-	-	-	-	-
1941	922	364	Apr. 5, 1941	0	7.29	0.510	6.91	5.26	4.99
1942	952	-	-	0	-	-	-	-	-

190. High Rock Lake at High Rock, N. C. 1/

Location (revised).--Lat 35°36'02" long 80°14'06", on Yadkin River 0.8 mile northwest of High Rock, Davidson County, 2 miles upstream from Lick Creek, and at mile 252.3.

Drainage area.--4,000 sq mi (revised), approximately.

Gage.--Water-stage recorder and staff gage. Datum of gage is 31.32 ft below mean sea level, datum of 1929.

Remarks.--Lake used for hydroelectric power development was first put in operation Nov. 7, 1927, and has a usable capacity of 10,230,000,000 cu ft between elevations 625 ft and 655 ft (top of gates).

Cooperation.--Records furnished by Carolina Aluminum Co.

Monthly and yearly change in contents, equivalent in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	+2,961	-1,296	+979	+593	+973	+12	-38	-461	+449	+37	-
1929	0	-443	-637	-606	+1,715	+134	-13	-24	+38	-206	-808	-1,143	-179
1930	+2,097	+25	0	-61	-107	+49	-764	-886	+1,566	-2,717	+74	-410	-97
1931	-470	+192	+629	+503	-708	+935	+2,171	+24	-890	+140	+685	-1,079	+186
1932	-1,364	-725	+607	+2,538	-307	+130	+138	-65	-267	-1,791	+28	-774	-151
1933	+2,847	+7	-73	+70	-260	+189	+47	-307	-532	-665	+290	+841	+202
1934	-2,710	-467	-24	-142	+1,577	+2,344	-20	+56	-291	+268	+17	-20	+39
1935	-584	-65	+461	-5	+14	-129	+47	+41	-1,260	+888	-1,074	-117	-131
1936	-1,203	-171	-885	+3,755	-130	+97	+20	-746	+42	-273	+584	-1,485	-24
1937	+3,544	-1,953	+1,748	+489	+148	-194	+211	-296	-1,031	-1,369	+1,928	-1,170	-4
1938	+1,887	-480	-1,331	-102	-754	+336	-397	+257	+167	+765	-721	-1,643	-35
1939	-918	+753	+675	+190	+1,839	+24	-125	-1,038	-688	+1,728	-49	-1,610	+52
1940	-1,617	-359	+297	-306	+995	+156	+1,008	+395	+165	-21	+1,006	-955	+60
1941	-1,926	+1,153	-102	-16	-489	+718	+228	-1,621	0	+2,856	-549	-1,356	-90
1942	-1,220	-140	+232	-98	+1,718	+1,355	-1,305	+1,372	-533	-867	+846	-537	+63
1943	-1,235	+540	+1,669	+359	-858	+702	-90	-1,013	+540	+389	-235	-359	+40
1944	-489	-398	-816	+473	+2,170	+7	-103	-423	-1,197	+1,335	-1,492	+1,829	+65
1945	-126	-374	-171	-2	+796	-387	+106	-433	-1,446	+1,532	-1,147	+1,812	+7
1946	-780	-475	+1,206	-92	+30	+51	-497	+363	-1,718	-862	+562	-632	-233
1947	-185	-187	-217	+3,208	-1,751	+36	+629	-179	+1,053	-1,431	-799	+919	+101
1948	+1,529	+18	-898	0	+866	+90	-458	+249	-775	-827	+890	-1,625	-77
1949	-390	+2,939	0	-441	+447	+37	-28	-498	-65	+446	+129	-245	+187
1950	+217	0	-866	+86	+167	+581	-484	+517	-938	+245	+212	-600	-69

1/ Published in WSP 1066 as Yadkin River at High Rock Reservoir, at High Rock.

191. Yadkin River at High Rock, N. C.

Location (revised).--Lat 35°35'46", long 80°13'59", on right bank, 0.3 mile downstream from High Rock Dam, 0.6 mile west of High Rock, Davidson County, 1 1/2 miles upstream from Lick Creek, and at mile 252.

Drainage area.--4,000 sq mi (revised), approximately.

Supplemental records available.--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 558.68 ft above mean sea level, datum of 1929, and 590.00 ft above Carolina Aluminum Co. datum. January 1919 to November 1927 at datum 590.00 ft lower.

Average discharge.--16 years (1919-27, 1942-50), 4,877 cfs, revised (adjusted for storage).

Extremes (revised).--1919-27, 1941-50: Maximum discharge, 85,000 cfs (estimated) July 21, 1919; minimum, 10 cfs Aug. 10, 1942 (gage height, 1.84 ft); minimum daily, 12 cfs Aug. 9, 1942.

Maximum stage known, 22.1 ft (present datum) in July 1916, from floodmarks, from records by Tallassee Power Co.

Remarks.--Except for major floods, flow completely regulated by High Rock Lake since 1927 (usable capacity, 10,280,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1919	-	-	-	*11,300	*7,230	*10,700	*5,990	*9,680	*5,970	*13,400	*4,490	2,670	-
1920	3,470	3,470	4,510	4,500	*6,710	7,650	11,100	3,820	5,250	*4,050	*7,700	4,770	*5,570
1921	3,460	5,180	10,700	9,090	*11,900	5,440	7,480	6,450	4,060	3,830	2,520	2,220	*5,990
1922	*1,860	4,530	*3,000	4,120	9,000	9,990	6,480	9,860	7,660	*6,940	*4,570	2,680	*5,870
1923	3,260	2,230	*3,070	*4,480	*5,150	12,300	6,570	5,380	3,020	*2,810	3,880	3,460	*4,640
1924	*1,820	2,980	4,610	7,430	5,400	5,830	6,720	5,490	3,850	6,450	3,840	*5,750	*5,010
1925	6,880	3,120	6,170	11,700	6,100	5,040	3,660	4,320	2,130	1,740	1,610	1,430	4,500
1926	1,970	2,650	*2,060	*5,810	7,420	4,820	4,470	2,120	1,730	*3,060	2,740	1,770	*3,360
1927	*1,220	*2,990	*5,050	*3,050	7,140	5,620	3,170	2,440	3,340	3,620	2,520	*1,650	*3,460
1928	3,070	1,570	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	2,358	2,634	3,708	5,824	3,924	4,566	6,015	3,859	3,678	5,813	-
1943	4,228	1,997	4,285	7,936	7,556	6,286	6,385	5,680	3,688	7,383	3,211	2,390	5,081
1944	2,055	2,324	3,003	4,182	4,682	10,460	7,832	4,240	3,729	2,992	3,467	2,633	4,299
1945	8,073	3,901	4,739	4,968	6,294	5,204	4,058	4,540	3,456	1,999	3,102	10,510	5,055
1946	3,694	3,964	7,167	9,407	9,059	5,421	4,503	5,419	4,823	3,776	2,361	2,460	5,153
1947	2,411	2,529	2,448	5,007	4,521	4,672	3,866	2,791	4,225	4,109	3,094	2,623	3,519
1948	4,503	9,025	4,835	4,382	8,881	7,962	9,522	4,958	4,627	3,574	3,876	3,716	5,795
1949	2,961	4,440	7,941	6,850	6,114	5,352	6,517	8,420	4,377	5,434	7,862	5,397	5,979
1950	4,337	6,183	4,507	3,743	4,617	4,921	4,133	7,453	5,569	3,441	3,340	4,526	4,728

* Revised.

† Not previously published; estimated or partly estimated on basis of records for station near Salisbury.

Monthly and yearly runoff, in inches (adjusted)a/

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1919	-	-	-	*3.26	*1.88	*3.08	*1.67	*2.79	*1.66	*3.86	*1.29	0.74	-
1920	1.00	0.97	1.30	1.30	*1.81	2.20	3.09	1.10	1.47	*1.17	*2.22	1.33	*18.96
1921	1.00	1.45	3.08	2.62	*3.09	1.57	2.09	1.86	1.13	1.10	.72	.62	*20.33
1922	*.54	1.26	*.86	1.19	2.34	2.88	1.81	2.84	2.14	*2.00	*1.32	.75	*19.93
1923	.94	.62	*.89	*1.29	*1.34	3.56	1.83	1.55	.84	*.81	1.12	.97	*15.75
1924	*.52	.83	1.33	2.14	1.45	1.68	1.87	1.58	1.07	1.86	1.11	*1.60	*17.04
1925	1.98	.87	1.78	3.58	1.59	1.45	1.02	1.24	.60	.50	.46	.40	15.27
1926	.57	.74	*.59	*1.68	1.93	1.39	1.25	.61	.48	*.88	.79	.49	*11.40
1927	*.35	*.84	*1.45	*.88	1.86	1.62	.88	.70	.93	1.04	.73	*.45	*11.73
1928	.88	.44	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	.75	.73	1.42	2.06	.73	1.71	1.53	.86	1.30	1.47	-
1943	.86	.71	1.72	2.39	1.74	2.02	1.75	1.35	1.18	2.24	.86	.57	17.39
1944	.45	.54	.63	1.34	1.84	3.02	2.15	1.10	.71	1.24	.57	1.25	14.84
1945	2.29	.98	1.31	1.43	1.84	1.38	1.16	1.19	.56	1.02	.56	3.44	17.16
1946	.84	.97	2.41	2.69	2.36	1.58	1.12	1.67	.87	.84	.84	.51	16.70
1947	.64	.65	.64	2.36	.72	1.36	1.25	.75	1.47	.77	.66	.99	12.26
1948	1.74	2.52	1.13	1.27	2.63	2.32	2.53	1.50	1.07	.79	1.37	.58	19.45
1949	.74	2.05	2.29	1.84	1.71	1.56	1.81	2.28	1.20	1.70	2.31	1.44	20.93
1950	1.31	1.73	1.05	1.10	1.25	1.59	1.02	2.29	1.29	1.06	1.02	1.10	15.81

* Revised.

† Not previously published; see footnote to preceding table.

a/ Adjusted for change in contents in High Rock Lake since December 1941; no regulation prior to December 1927.

Yearly discharge, in cubic feet per second, of Yadkin River at High Rock, N. C.

Year	W.S.P. no.	Water year ending Sept. 30									Calendar year		
		Observed				Adjusted a/					Observed	Adjusted a/	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1919	1503	*85,000	July 21, 1919	-	-	-	-	-	-	-	#6,930	-	#23.50
1920	562,1503	#47,600	Feb. 5, 1920	*2,030	*5,570	-	1.39	*18.96	-	-	#6,230	-	*21.22
1921	562,1503	#43,800	Feb. 11, 1921	1,390	*5,990	-	*1.50	*20.33	-	-	*5,150	-	*17.46
1922	562,1503	#29,200	Mar. 20, 1922	*1,430	*5,870	-	*1.47	*19.93	-	-	*5,810	-	*19.71
1923	562,1503	#76,900	Mar. 18, 1923	1,660	*4,640	-	*1.16	*15.75	-	-	*4,710	-	*15.99
1924	582,1503	#37,200	Jan. 18, 1924	*1,310	*5,010	-	*1.25	*17.04	-	-	*5,590	-	*18.99
1925	602	#73,000	Oct. 1, 1924	916	4,500	-	1.12	15.27	-	-	*3,700	-	*12.54
1926	622,1503	-	-	972	*3,360	-	*.840	*11.40	-	-	*3,580	-	*12.14
1927	642,1503	31,600	Feb. 21, 1927	940	*3,460	-	*.865	*11.73	-	-	-	-	-
1928	682	-	-	-	-	-	-	-	-	-	-	-	-
1942	972	40,100	Mar. 9, 1942	-	-	-	-	-	-	-	4,212	4,451	15.10
1943	972	37,200	Jan. 29, 1943	14	5,081	5,121	1.28	17.39	4,815	4,631	15.72	15.72	15.72
1944	1002	41,600	Sept. 30, 1944	18	4,299	4,364	1.09	14.84	5,085	5,236	17.80	17.80	17.80
1945	1032	71,900	Sept. 18, 1945	50	5,055	5,062	1.27	17.16	4,895	4,955	16.80	16.80	16.80
1946	1052	49,200	Feb. 10, 1946	64	5,153	4,920	1.23	16.70	4,525	4,245	14.41	14.41	14.41
1947	1082	42,300	June 16, 1947	31	3,519	3,620	.905	12.26	4,433	4,638	15.72	15.72	15.72
1948	1112	39,400	Apr. 1, 1948	34	5,795	5,718	1.43	19.45	5,552	5,628	19.14	19.14	19.14
1949	1142	39,400	Nov. 30, 1948	44	5,979	6,166	1.54	20.93	5,948	5,872	19.94	19.94	19.94
1950	1172	36,500	Nov. 1, 1949	26	4,728	4,659	1.16	15.81	-	-	-	-	-

* Revised.
 † Not previously published.
 a/ Adjusted for change in contents in High Rock Lake since December 1941; no regulation prior to December 1927.
 b Gage-height record missing or doubtful; discharge estimated.
 c Maximum peak discharge; maximum discharge during year, 59,000 cfs (revised) at 12 p.m. Sept. 30, stage rising.

192. Uwharrie River near Trinity, N. C.

Location.--Lat 35°52'00", long 79°59'20", 500 ft downstream from bridge on county highway, and 2 miles south of Trinity, Randolph County.

Drainage area.--11.3 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 670 ft (from topographic map). Prior to July 17, 1934, staff gage 100 ft downstream at same datum.

Average discharge.--7 years (1934-41), 10.9 cfs.

Extremes.--1934-41: Maximum discharge, 2,190 cfs July 17, 1941 (gage height, 7.0 ft from floodmarks); no flow Oct. 9-15, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	*22.6	*9.02	1.93	1.16	-
1935	4.05	4.74	12.6	13.4	14.8	29.5	23.6	9.81	2.57	7.38	.882	3.50	10.6
1936	1.20	5.02	2.92	51.9	38.0	23.7	44.8	2.94	2.45	3.72	9.15	7.76	16.0
1937	22.7	3.53	19.4	55.6	16.1	10.8	21.3	9.18	2.42	2.97	6.75	2.00	14.5
1938	4.55	3.80	4.68	10.2	4.83	8.53	6.45	1.90	6.33	12.6	5.04	1.02	5.84
1939	.693	8.89	14.9	15.5	54.0	22.3	7.53	4.31	2.24	6.85	18.0	1.34	12.8
1940	2.92	1.91	4.91	8.17	18.2	10.8	10.3	22.6	4.47	4.33	25.2	1.74	9.64
1941	.857	14.6	7.78	12.0	5.23	12.4	11.3	2.98	2.54	15.0	.813	.300	7.17
1942	.078	.370	1.69	*1.40	-	-	-	-	-	-	-	-	-

* Revised.
 † Not previously published; partly estimated on the basis of records for East Fork and West Fork Deep River near High Point.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	*2.23	*0.92	0.20	0.11	-
1935	0.41	0.47	1.29	1.37	1.36	3.01	2.33	1.00	.25	.75	.09	.35	12.68
1936	.12	.50	.30	5.29	3.62	2.42	4.42	.30	.24	.38	.93	.77	19.29
1937	2.32	.35	1.98	5.67	1.48	1.10	2.10	.94	.24	.30	.69	.20	17.37
1938	.46	.37	.48	1.04	.43	.87	.64	.19	.62	1.29	.51	.10	7.00
1939	.07	.88	1.52	1.58	4.98	2.27	.74	.44	.22	.70	1.83	.13	15.36
1940	.30	.19	.50	.85	1.74	1.10	1.02	2.31	.44	.44	2.57	.17	11.61
1941	.09	1.44	.79	1.22	.48	1.27	1.12	.30	.25	1.53	.08	.03	8.60
1942	.008	.04	.17	*.14	-	-	-	-	-	-	-	-	-

* Revised.
 † Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Uwharrie River near Trinity, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	757,1433	*1,150	June 6, 1934	-	-	-	-	-	-
1935	782	748	July 13, 1935	0.39	10.6	0.938	12.68	9.51	11.43
1936	802	1,500	Apr. 6, 1936	.23	16.0	1.42	19.29	19.1	23.02
1937	822	1,540	Oct. 8, 1936	.40	14.5	1.28	17.37	11.7	14.03
1938	852	609	July 23, 1938	.50	5.84	.517	7.00	6.79	8.16
1939	872	1,040	Feb. 26, 1939	.40	12.8	1.13	15.36	11.6	13.88
1940	892	2,140	Aug. 14, 1940	.56	9.64	.853	11.61	10.7	12.94
1941	922	2,190	July 17, 1941	.03	7.17	.635	8.60	5.41	6.50
1942	952	-	-	0	-	-	-	-	-

* Revised maximum during period May 16 to Sept. 30.

193. Uwharrie River near Eldorado, N. C.

Location.--Lat 35°25'30", long 80°01'00", on right bank 300 ft downstream from State Highway 109, 1 mile upstream from McLeans Creek, and 3 miles south of Eldorado, Montgomery County.

Drainage area.--347 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 297 ft (by barometer).

Average discharge.--12 years (1938-50), 327 cfs.

Extremes.--1938-50: Maximum discharge, 23,300 cfs Sept. 18, 1945 (gage height, 26.22 ft, from floodmark); from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 0.5 cfs Sept. 21, Oct. 13, 14, 1941; minimum daily, 0.5 cfs Oct. 13, 1941.

Flood of August 1928 reached a stage of 22.2 ft, from floodmark established by local resident (discharge, 17,900 cfs).

Remarks.--Marked diurnal fluctuation and some regulation for short periods at low flow caused by gristmill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	29.1	182	418	364	1,529	933	390	192	111	226	558	62.2	409
1940	42.5	52.3	105	196	582	402	389	243	126	53.2	282	31.6	207
1941	9.25	344	153	240	147	432	498	80.4	63.3	174	15.2	12.8	181
1942	2.31	2.23	36.7	29.9	371	676	126	342	212	84.2	172	528	214
1943	72.5	97.6	419	811	416	748	459	206	229	645	60.8	78.8	355
1944	17.2	28.6	79.8	507	804	1,094	794	159	66.7	606	73.4	200	368
1945	543	188	269	323	852	376	394	175	41.1	374	60.2	1,833	447
1946	135	102	899	582	1,097	262	228	279	131	165	419	63.9	360
1947	125	118	92.5	988	208	456	319	124	102	41.0	67.2	616	272
1948	135	620	206	503	1,338	725	547	240	191	83.1	253	53.7	403
1949	80.1	953	723	539	679	328	449	704	94.0	130	666	138	456
1950	224	320	200	267	234	473	219	483	129	237	157	120	256

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	0.10	0.58	1.38	1.21	4.59	3.10	1.25	0.64	0.36	0.75	1.86	0.20	16.02
1940	.14	.17	.35	.65	1.81	1.34	1.25	.81	.41	.18	.94	1.10	8.15
1941	.03	1.11	.51	.80	.44	1.43	1.60	.27	.20	.58	.05	.04	7.06
1942	.008	.007	.12	1.10	1.11	2.24	1.40	1.14	.68	.28	.57	1.70	8.36
1943	.24	.31	1.39	2.70	1.25	2.48	1.48	.68	.74	2.14	.20	.25	13.86
1944	.06	.09	.27	1.68	2.50	3.63	2.55	.53	.21	2.01	.24	.64	14.41
1945	1.80	.61	.89	1.07	2.56	1.25	1.27	.58	.13	1.24	.20	5.89	17.49
1946	.45	.33	2.99	1.93	3.29	.87	.73	.93	.42	.55	1.39	.21	14.09
1947	.42	.38	.31	3.28	.62	1.52	1.03	.41	.33	.14	.22	1.98	10.64
1948	.45	1.99	.68	1.67	4.16	2.41	1.76	.80	.61	.28	.84	.17	15.82
1949	.27	3.07	2.40	1.79	2.04	1.09	1.44	2.34	.30	.43	2.21	.44	17.82
1950	.74	1.03	.66	.89	.70	1.57	.70	1.60	.41	.79	.52	.39	10.00

Yearly discharge, in cubic feet per second, of Uwharrrie River near Eldorado, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	892	9,400	Aug. 18, 1939	8	409	1.18	16.02	373	14.62
1940	892	4,810	Aug. 15, 1940	9	207	.597	8.15	255	9.14
1941	922	4,380	Nov. 15, 1940	.6	181	.522	7.06	142	5.54
1942	952	10,300	Sept. 8, 1942	.5	214	.817	8.38	280	10.17
1943	972	8,480	July 12, 1943	7.8	355	1.02	13.86	315	12.34
1944	1002	7,160	July 15, 1944	5.0	368	1.06	14.41	441	17.29
1945	1032	23,300	Sept. 18, 1945	15	447	1.29	17.49	459	17.96
1946	1052	10,400	Feb. 11, 1946	37	360	1.04	14.09	292	11.43
1947	1082	11,200	Sept. 26, 1947	9.0	272	.784	10.64	323	12.65
1948	1112	7,570	Feb. 12, 1948	11	403	1.16	15.82	470	18.44
1949	1142	8,810	Nov. 28, 1948	16	456	1.31	17.82	371	14.51
1950	1172	7,670	May 15, 1950	34	256	.738	10.00	-	-

194. Lakes on Yadkin-Pee Dee River between High Rock and Ansonville gaging stations, N. C.

Location.--The following two lakes equipped with water-stage recorders and staff gages are located on the main stem of the Yadkin-Pee Dee River.

Badin Lake¹: Lat 35°25'10", long 80°05'30", 1½ miles northeast of Badin, Stanly County, 2½ miles upstream from Falls Dam, 4 miles upstream from Uwharrrie River, and at mile 236. Datum of gage is 31.63 ft below mean sea level, datum of 1929. Drainage area, 4,180 sq mi (revised), approximately.

Lake Tillery²: Lat 35°12'24", long 80°03'57", 700 ft upstream from Norfolk Southern Railroad bridge, 3½ miles southeast of Norwood, Stanly County, 5 miles upstream from Rocky River, and at mile 218. Datum of gage is 38.11 ft (revised) above mean sea level, datum of 1929 (levels by Corps of Engineers). Drainage area, 4,600 sq mi (approximately).

Remarks.--Both lakes used for hydroelectric power development. Badin Lake was first put in operation Aug. 6, 1917, and has a usable capacity of 6,202,584,000 cu ft between elevations 505.0 ft and 541.1 ft (top of gates). Lake Tillery was first put in operation in 1928 and has a usable capacity of 5,976,432,000 cu ft between elevations 200.5 ft and 239.5 ft (top of gates).

Cooperation.--Records for Badin Lake furnished by Carolina Aluminum Co. Records for Lake Tillery furnished by Carolina Power & Light Co.

Monthly and yearly change in contents, equivalent in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	+693	+371	-37	-115	-114	+229	+4	-
1929	-102	-5	-81	-75	+266	+49	-13	-42	+30	-196	+102	+8	-7
1930	-207	+310	+29	-65	-169	-216	-233	-386	+518	-898	-733	-819	-205
1931	+99	+736	+729	+429	-15	+208	+128	-26	-73	-84	+178	-8	+193
1932	-211	-559	+649	+347	-167	+44	+10	-277	+91	-115	+268	-213	-9
1933	+94	+150	-32	+80	-16	-91	-171	-80	+5	-41	-29	+284	+11
1934	-862	-741	-546	-143	-561	+2,926	-477	+365	-101	+80	+72	+116	+19
1935	-177	-329	+83	-121	-4	+504	-294	-314	+435	-86	-199	+266	-20
1936	-288	-220	-1,099	+1,378	+158	+212	-110	+26	-178	+132	-57	+41	0
1937	+62	-130	-161	+371	-27	-40	-311	+168	+113	+1	-68	+27	+2
1938	+96	-231	-104	+136	-19	-74	+126	-110	+118	+96	-60	-159	-15
1939	-579	+400	+303	+48	+273	-273	-21	-75	+155	+59	-81	-780	-48
1940	-324	-478	+79	+2	+64	+717	-243	+249	+169	-132	+667	-604	+18
1941	-49	-7	-190	+327	-13	+128	+278	-54	-1,411	+1,469	-29	+31	+44
1942	-798	-343	+206	+49	+847	+192	-189	+200	-143	-150	+241	+391	+36
1943	-119	-863	+709	+388	-122	+3	-108	+177	-223	+13	-36	+11	-42
1944	+96	-31	-175	+177	+55	+223	-88	-149	-51	-25	-195	+219	+4
1945	+67	+88	-114	-262	+369	-269	+123	+56	+76	-83	-22	+199	+15
1946	-119	-132	+341	-135	-148	+151	+84	-59	+15	-140	-69	+5	-16
1947	-370	+129	-694	+1,016	-72	+82	-111	+72	-105	+121	-27	-32	+2
1948	+202	-21	-47	+39	-196	+127	+43	+108	-84	-46	-33	-70	-6
1949	+136	+150	+52	-230	+7	+115	-61	+30	+28	-54	+154	-271	+10
1950	+200	-32	-114	-26	+19	+21	-77	+217	-117	-105	+3	+105	-217

¹ Published in WSP 1066 as Yadkin River at Narrows Reservoir, near Badin, N. C.

² Published in WSP 1066 as Pee Dee River at Tillery Reservoir, near Norwood, N. C.

195. Dutch Buffalo Creek at Mount Pleasant, N. C.

Location.--Lat 35°23'45", long 80°25'15", at bridge on State Highway 73, 1 mile east of Mount Pleasant, Cabarrus County, and 1½ miles downstream from Little Buffalo Creek.

Drainage area.--64.1 sq mi.

Gage.--Water-stage recorder. Datum of gage is 504.50 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--1940-42: Maximum discharge, 7,680 cfs May 30, 1940 (gage height, 15.57 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening determination of peak flow at gage height 14.17 ft; minimum, 0.6 cfs Oct. 24, 25, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	157	16.0	5.76	85.8	3.59	-
1941	3.61	51.3	*34.1	*31.8	*28.1	65.1	*66.1	11.1	36.8	188	22.8	5.81	*45.6
1942	2.09	2.54	19.8	13.6	107	193	-	-	-	-	-	-	-

* Not previously published; estimated or partly estimated on basis of records for stations on nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	2.82	0.28	0.10	1.54	0.06	-
1941	0.06	0.89	*0.61	*0.57	*0.46	1.17	*1.15	.20	.64	3.38	.41	.10	*9.64
1942	.04	.04	.36	.24	1.73	3.48	-	-	-	-	-	-	-

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	972	a7,680	May 30, 1940	-	-	-	-	-	-
1941	972	3,650	July 11, 1941	2.5	*45.6	*0.711	*9.64	*40.2	*8.52
1942	972	b5,370	Mar. 9, 1942	.6	-	-	-	-	-

* Not previously published.
 a Maximum during period May to September.
 b Maximum during period October to March.

196. Richardson Creek near Marshville, N. C.

Location.--Lat 35°05'55", long 80°23'05", at bridge on State Highway 205, a quarter of a mile downstream from Goodman Branch, three-quarters of a mile upstream from Niggerhead Creek, and 7½ miles north of Marshville, Union County.

Drainage area.--170 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 425 ft (from topographic map).

Extremes.--1940-44: Maximum discharge, 11,200 cfs Mar. 20, 1944 (gage height, 20.07 ft), from rating curve extended above 3,700 cfs by logarithmic plotting; no flow Sept. 25 to Oct. 31, 1940.

Remarks.--City of Monroe diverts about 2.7 cfs for water supply of which about 85% is returned as sewage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	15.0	8.68	9.29	9.36	4.56	-
1941	0	84.8	55.5	83.3	51.4	126	154	4.46	65.0	149	149	7.52	100
1942	5.66	1.53	49.1	43.4	24.1	565	68.6	238	62.3	89.7	63.9	20.0	121
1943	6.81	48.9	106	454	284	426	130	24.6	26.6	160	15.4	6.45	140
1944	.929	4.01	21.6	184	586	767	442	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	0.10	0.06	0.06	0.06	0.03	-
1941	0	0.56	0.38	0.57	0.31	0.85	1.01	.03	.43	2.81	1.01	.05	8.01
1942	.04	.01	.33	.29	1.48	3.83	.45	1.61	.41	.61	.43	.13	9.62
1943	.05	.32	.72	3.08	1.74	2.89	.85	.17	.17	1.09	.10	.04	11.22
1944	.006	.03	-	1.25	3.72	5.20	2.90	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	-	-	0	-	-	-	-	-
1941	922	6,460	July 13, 1941	0	100	0.588	8.01	93.4	7.45
1942	952	6,830	Mar. 9, 1942	.6	121	.712	9.62	129	10.33
1943	972	6,450	Feb. 6, 1943	1	140	.824	11.22	129	10.32
1944	1002	all,200	Mar. 20, 1944	.3	-	-	-	-	-

a Maximum during period Oct. 1 to May 9.

197. Rocky River near Norwood, N. C.

Location.--Lat 35°09'00", long 80°10'30", on left bank 1,000 ft downstream from Lanes Creek, 1½ miles upstream from highway bridge, and 6 miles southwest of Norwood, Stanly County.

Drainage area.--1,370 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for period October 1947 to September 1948 are published in report of Geological Survey.

Average discharge.--21 years (1929-50), 1,286 cfs (revised).

Extremes.--1929-50: Maximum discharge, 105,000 cfs (revised) Sept. 18, 1945 (gage height, 46.37 ft, from floodmarks), from rating curve extended above 70,000 cfs by logarithmic plotting; minimum, 19 cfs Oct. 28, 1931, Nov. 13, 1933.

Remarks.--Slight diurnal fluctuation during low flow prior to 1942.

Water year	Monthly and yearly mean discharge, in cubic feet per second												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1930	5,060	2,090	2,420	1,960	1,900	874	401	754	541	667	561	347	1,470
1931	45.9	660	1,650	1,440	372	743	1,990	1,850	267	699	2,630	105	1,060
1932	67.7	71.8	2,760	4,120	1,610	2,320	709	599	1,540	249	412	257	1,230
1933	2,670	1,320	4,560	1,690	2,140	1,260	681	454	358	151	1,180	365	1,400
1934	100	67.4	105	152	532	1,140	1,190	972	2,240	636	417	1,260	731
1935	662	630	1,297	1,906	1,684	3,199	2,213	869	291	*650	145	1,595	*1,259
1936	197	629	322	7,263	4,807	4,496	7,097	183	332	464	753	540	2,244
1937	3,790	310	2,339	5,702	2,780	1,411	3,224	710	801	299	1,305	313	1,916
1938	261	316	611	1,078	321	1,018	1,496	229	1,432	1,836	427	208	772
1939	88.2	403	965	1,413	5,651	3,309	849	449	458	1,476	1,732	193	1,390
1940	85.5	109	172	620	1,740	1,058	854	564	267	168	772	130	542
1941	48.5	970	681	857	536	1,382	1,498	151	348	3,443	464	111	878
1942	65.0	54.1	446	259	2,297	4,308	557	1,847	476	665	495	517	995
1943	204	367	1,303	3,933	1,731	3,139	1,490	481	535	2,765	502	176	1,391
1944	74.9	100	269	1,899	4,214	5,529	3,479	416	154	1,082	649	645	1,533
1945	1,226	496	1,064	1,274	3,158	1,140	821	382	101	1,063	662	*8,262	*1,616
1946	252	221	2,544	2,399	2,980	867	834	853	312	905	944	233	1,104
1947	958	354	319	4,494	700	2,043	1,349	236	155	783	305	664	1,037
1948	802	3,682	1,099	2,383	5,563	3,077	2,160	966	453	252	984	175	1,783
1949	404	4,763	3,252	2,599	2,850	1,099	1,467	2,522	205	1,104	2,023	423	1,887
1950	666	1,427	860	1,211	742	1,423	712	658	205	774	271	176	764

* Revised.

Water year	Monthly and yearly runoff, in inches												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1930	4.26	1.70	2.04	1.65	1.45	0.74	0.33	0.63	0.44	0.56	0.47	0.28	14.55
1931	.04	.54	1.39	1.21	.28	.63	1.62	1.54	.22	.59	2.38	.09	10.53
1932	.06	.06	2.32	3.47	1.27	1.95	.58	.50	1.26	.21	.35	.21	12.24
1933	2.24	1.06	3.84	1.42	1.62	1.06	.55	.38	.29	.13	1.00	.30	13.91
1934	.08	.06	.09	.13	.40	.96	.97	.82	1.62	.53	.35	1.02	7.22
1935	.56	.51	1.09	1.60	1.26	2.69	1.80	.73	.24	*.55	.12	1.30	*12.47
1936	.17	.51	.27	6.11	3.78	3.78	5.78	.15	.27	.39	.63	.44	22.28
1937	3.19	.25	1.97	4.80	2.11	1.19	2.62	.60	.65	.25	1.10	.25	18.98
1938	.22	.26	.51	.91	.24	.86	1.22	.19	1.17	1.54	.36	.17	7.65
1939	.07	.33	.81	1.19	4.29	2.79	.69	.38	.37	1.24	1.45	.16	13.77
1940	.07	.09	.15	.52	1.37	.69	.70	.47	.23	.14	.65	.11	5.39
1941	.04	.79	.57	.72	.41	1.16	1.22	.13	.28	2.90	.39	.09	8.70
1942	.05	.04	.36	.22	1.75	3.63	.45	1.55	.39	.56	.42	.42	9.66
1943	.17	.30	1.10	3.31	1.32	2.64	1.21	.40	.44	2.33	.42	.14	13.78
1944	.06	.08	.23	1.60	3.32	4.65	2.63	.35	.13	.91	.55	.53	15.24
1945	1.03	.41	.90	1.07	2.40	.96	.67	.32	.06	.89	.56	*6.73	*16.02
1946	.21	.16	2.14	2.02	2.26	.73	.68	.72	.25	.76	.79	.19	10.93
1947	61	.29	.27	3.76	.53	1.72	1.10	.20	.13	.66	.28	.54	10.29
1948	.67	3.00	.92	2.01	4.40	2.59	1.76	.61	.37	.21	.83	.14	17.71
1949	.34	3.66	2.74	2.19	2.17	.92	1.19	2.12	.17	.93	1.70	.34	18.69
1950	.56	1.16	.74	1.02	.56	1.20	.58	.55	.17	.65	.23	.14	7.56

* Revised.

Yearly discharge, in cubic feet per second, of Rocky River near Norwood, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	52,500	Oct. 2, 1929	48	1,470	1.07	14.55	860	8.52
1931	712	23,600	Aug. 22, 1931	31	1,060	.774	10.53	1,110	11.00
1932	727	36,100	Jan. 8, 1932	19	1,230	.898	12.24	1,710	16.96
1933	742	44,100	Oct. 17, 1932	41	1,400	1.02	13.91	704	6.97
1934	757	15,600	June 4, 1934	26	731	.554	7.22	926	9.16
1935	782,1503	30,200	Mar. 26, 1935	70	*1,259	.919	*12.47	*1,137	*11.26
1936	802	56,400	Apr. 7, 1936	58	2,244	1.64	22.28	2,693	*26.74
1937	852	42,600	Oct. 9, 1936	75	1,916	1.40	18.98	1,470	14.56
1938	852	16,800	July 26, 1938	48	772	.564	7.65	795	7.87
1939	872	30,200	Feb. 26, 1939	44	1,390	1.01	13.77	1,298	12.07
1940	892	10,400	May 31, 1940	44	542	.396	5.39	653	6.48
1941	922	20,200	July 11, 1941	29	878	.641	8.70	785	7.77
1942	952	31,900	Mar. 9, 1942	24	995	.726	9.86	1,105	10.96
1943	972	29,800	Jan. 19, 1943	70	1,391	1.02	13.78	1,270	12.58
1944	1002	42,000	Mar. 20, 1944	60	1,533	1.12	15.24	1,751	17.21
1945	1032,1503	*105,000	Sept. 18, 1945	63	*1,616	*1.18	*16.02	*1,637	*16.21
1946	1052	28,600	Feb. 11, 1946	82	1,104	.806	10.93	986	9.77
1947	1082	27,200	Jan. 20, 1947	73	1,037	.757	10.29	1,364	13.51
1948	1112	34,000	Feb. 13, 1948	69	1,783	1.30	17.71	2,020	20.08
1949	1142	42,200	Nov. 29, 1948	100	1,887	1.38	18.69	1,433	14.19
1950	1172	19,600	Nov. 1, 1949	69	764	.558	7.56	-	-

* Revised.
 † Corrected.

198. Little Brown Creek near Polkton, N. C.

Location.--Lat 34°58'45", long 80°11'20", 1 mile southwest of State convict camp on U. S. Highway 74, 1½ miles upstream from mouth, and 2 miles southeast of Polkton, Anson County.

Drainage area.--13.5 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 320 ft (from topographic map).

Average discharge.--5 years (1935-40), 13.5 cfs (revised).

Extremes.--1935-41: Maximum discharge, 2,200 cfs July 21, 1939 (gage height, 7.04 ft), from rating curve extended above 410 cfs; no flow on several days of most years.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	13.0	*7.73	*7.29	1.80	1.01	32.6	-
1936	0.998	*14.7	3.96	*77.0	*56.5	*59.5	*71.4	.339	1.63	.507	.385	2.30	*23.9
1937	*26.3	1.30	*31.2	46.6	25.8	16.0	25.5	1.63	*25.6	.945	*11.1	1.61	*17.8
1938	.053	.463	3.33	9.71	.965	3.34	25.2	1.65	7.90	25.8	.809	6.62	*16.68
1939	0	.533	3.12	16.7	67.0	26.9	1.47	.205	.024	41.2	7.64	.437	13.5
1940	.240	.013	.456	13.8	24.3	9.72	10.1	.946	.720	.211	6.26	.019	5.49
1941	0	5.15	3.72	6.08	-	-	-	-	-	-	-	-	-

* Revised.
 † Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	1.07	*0.66	*0.60	0.15	0.09	2.69	-
1936	0.09	*1.21	0.34	*6.57	*4.52	*5.08	*5.90	.03	.14	.04	.03	.19	*24.14
1937	*2.25	.11	*2.67	3.98	1.99	1.37	2.11	.14	*2.12	.08	*.95	.13	*17.90
1938	.005	.04	.28	.83	.07	.28	2.09	.14	.65	2.20	.07	.05	6.70
1939	0	.04	.27	1.43	5.16	2.29	.12	.02	.002	3.52	.65	.04	13.54
1940	.02	.001	.04	1.18	1.94	.83	.84	.08	.06	.02	.53	.002	5.54
1941	0	.43	.32	.52	-	-	-	-	-	-	-	-	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	802,1433	*a735	June 3, 1935	-	-	-	-	-	-
1936	802,1433	*1,500	Mar. 26, 1936	0	*23.9	*1.77	*24.14	*27.5	*27.53
1937	822,1433	*1,400	June 4, 1937	0	*17.8	*1.32	*17.90	*13.1	*13.20
1938	852	1,000	July 25, 1938	0	*6.68	.495	6.70	6.66	6.69
1939	872	2,200	July 21, 1939	0	13.5	1.00	13.54	13.2	13.29
1940	892	668	Aug. 14, 1940	0	5.49	.407	5.54	6.17	6.23
1941	922	-	-	0	-	-	-	-	-

* Revised.
 † Corrected.
 a Maximum during period March to September.

199. Brown Creek near Polkton, N. C.

Location (revised).--Lat 35°02'10", long 80°08'40", on left bank 100 ft downstream from site of Medley's mill, 400 ft downstream from bridge on State Highway 742, 3½ miles downstream from Little Brown Creek, and 4 miles northeast of Polkton, Anson County.

Drainage area.--110 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 216 ft (by barometer).

Average discharge.--13 years (1937-50), 84.5 cfs (revised).

Extremes.--1937-50: Maximum discharge, 17,300 cfs Sept. 18, 1945 (gage height, 17.68 ft, from floodmarks), from rating curve extended above 3,000 cfs by logarithmic plotting; no flow for several days of most years.
Flood of August 1908 reached a stage of 16.4 ft, from floodmarks witnessed by local resident (discharge, 12,500 cfs); July 1916, 15.7 ft (discharge, 10,400 cfs); September 1928, about 15.0 ft (discharge, 8,500 cfs).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	0.664	4.22	24.3	71.2	9.88	25.9	158	5.65	39.7	*191	17.3	8.47	*46.6
1939	.044	4.31	19.1	78.1	471	*261	30.1	7.69	1.57	*265	66.6	8.54	*99.1
1940	1.31	.037	3.14	87.2	144	74.1	58.8	7.53	3.90	1.97	43.2	3.09	35.3
1941	2.36	41.0	32.5	52.4	32.2	107	*202	3.99	19.6	34.7	37.6	2.42	*73.7
1942	.363	150	15.7	10.9	144	*404	62.2	157	26.9	4.50	2.26	16.4	*70.2
1943	2.77	20.2	55.0	256	118	240	91.8	10.9	6.62	14.7	4.90	4.63	80.1
1944	.035	.002	5.91	110	369	514	279	13.2	1.09	23.9	12.4	4.03	110
1945	42.1	11.1	32.7	85.0	20.8	64.6	11.7	8.02	.962	19.4	38.9	928	119
1946	6.32	2.86	243	229	108	49.1	52.2	116	2.85	82.4	37.1	1.19	77.9
1947	32.0	10.9	6.08	285	25.4	211	272	4.80	2.08	18.2	2.85	5.09	73.2
1948	.504	825	94.3	139	402	338	132	7.20	7.60	9.05	3.32	.012	109
1949	19.7	861	236	192	220	64.4	119	196	1.36	15.5	350	259	170
1950	7.58	40.3	87.1	35.3	46.9	98.1	65.8	6.44	2.22	15.1	3.04	1.10	34.0

* Revised.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	0.007	0.04	0.25	0.75	0.09	0.27	1.61	0.06	0.40	*2.00	0.18	0.09	*5.75
1939	.0005	.04	.20	.82	4.46	*2.74	.31	.08	.02	*2.78	.70	.09	*12.24
1940	.01	.0004	.03	.91	1.41	.78	.60	.08	.04	.02	.45	.03	4.36
1941	.02	.42	.34	.55	.30	1.12	*2.05	.04	.20	3.63	.39	.02	*9.08
1942	.004	.002	.16	.11	1.36	*4.23	.63	1.64	.27	.05	.02	.17	*8.65
1943	.03	.20	.58	2.68	1.12	2.52	.93	.11	.07	1.55	.05	.05	9.89
1944	.0004	.00002	.06	1.16	3.62	5.38	2.83	.14	.01	.25	.13	.04	13.62
1945	.44	.11	.34	.89	1.97	.68	.12	.08	.01	.20	.41	9.41	14.66
1946	.07	.03	2.55	2.40	1.02	.51	.53	1.21	.03	.86	.39	.01	9.61
1947	.34	.11	.06	2.97	.24	2.21	2.76	.05	.02	.19	.03	.05	9.03
1948	.005	1.27	.99	2.08	3.94	3.54	1.34	.08	.08	.09	.03	.0001	13.45
1949	.21	5.67	2.47	2.02	2.08	.67	1.20	2.05	.01	1.16	3.66	2.63	21.03
1950	.08	.41	.91	.37	.44	1.03	.67	.07	.02	.16	.03	.01	4.20

* Revised.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	852,1503	*1,870	July 27, 1938	0.05	*46.6	*0.424	*5.75	*46.1	*5.69
1939	872,1503	*3,960	July 21, 1939	0	*99.1	*.901	*12.24	*97.5	*12.04
1940	892	*492	Aug. 14, 1940	0	35.3	.321	4.36	41.3	5.10
1941	922,1503	*2,980	July 11, 1941	.20	*73.7	*.670	*9.08	*68.7	*8.47
1942	952,1503	*1,950	May 23, 1942	0	*70.2	*.638	*8.65	*75.5	*9.29
1943	972	1,270	Mar. 8, 1943	.1	60.1	.728	9.89	74.1	9.14
1944	1002	3,960	Mar. 20, 1944	0	110	1.00	13.62	117	14.45
1945	1032	17,300	Sept. 18, 1945	0	119	1.08	14.66	133	16.42
1946	1052	1,180	Dec. 31, 1945	.11	77.9	.708	9.61	60.6	7.47
1947	1082	1,920	Apr. 16, 1947	.04	75.2	.665	9.03	87.4	10.79
1948	1112	1,790	Feb. 14, 1948	0	109	.991	13.45	143	17.73
1949	1142	3,000	Aug. 22, 1949	0	170	1.55	21.03	129	15.88
1950	1172	503	Mar. 23, 1950	0	34.0	.309	4.20	-	-

* Revised.

200. Pee Dee River near Ansonville, N. C.

Location.--Lat 35°05'07", long 79°59'57", in downstream end of center pier of bridge on State Highway 109, 1 mile downstream from Brown Creek, 6 miles east of Ansonville, Anson County, and at mile 207.

Drainage area.--6,330 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 175 ft (by topographic map).

Extremes.--1938-43: Maximum discharge, 78,700 cfs Aug. 16, 1940; maximum gage height, 28.27 ft Aug. 17, 1940; minimum discharge, 60 cfs Nov. 10, 1941 (gage height, 4.70 ft); minimum daily, 94 cfs Nov. 9, 1941.

Remarks.--Large diurnal fluctuation caused by powerplants above station. Flow largely regulated by High Rock, Badin, and Tillery Lakes (see pp. 210, 214) which have a combined capacity for normal operation of 22,409,016,000 cu ft (revised).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	-	-	-	-	-	6,005	6,470	3,318	4,846	8,110	5,355	4,050	-
1939	3,070	3,666	4,899	6,188	20,900	14,700	5,876	4,868	4,473	5,519	10,160	4,495	7,321
1940	3,533	2,583	2,195	4,172	6,760	4,900	5,236	3,654	3,263	3,506	10,170	5,074	4,581
1941	3,600	4,825	4,854	4,850	4,187	5,546	6,490	3,667	3,869	8,886	3,159	2,765	4,732
1942	3,120	1,874	2,656	2,942	6,630	13,040	5,375	7,382	7,341	4,809	4,530	7,287	5,574
1943	4,673	3,384	5,787	14,100	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year				
		Observed				Adjusted ^{a/}			Observed	Adjusted ^{a/}			
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1938	852	638,500	July 25, 1938	-	-	-	-	-	-	-	-	-	-
1939	872	67,800	Mar. 1, 1939	244	7,321	7,324	11.16	15.75	7,042	6,797	14.52	-	-
1940	892	78,700	Aug. 16, 1940	225	4,581	4,659	7.736	10.02	4,996	5,177	11.13	-	-
1941	922	27,000	Apr. 5, 1941	225	4,732	4,686	7.740	10.04	4,262	4,141	8.88	-	-
1942	952	56,200	Mar. 10, 1942	94	5,574	5,673	8.896	12.16	6,096	6,397	13.71	-	-
1943	972	65,800	Jan. 29, 1943	-	-	-	-	-	-	-	-	-	-

^{a/} Not previously published.

^{b/} Adjusted for change in contents in High Rock, Badin, and Tillery Lakes.

^{c/} Maximum during period February to September.

^{d/} Maximum during period October to January.

Note.--Figures of observed discharge, in cubic feet per second per square mile, and runoff, in inches, previously published for water years 1938-43 in water-supply papers 852, 872, 892, 922, 952, and 972 are subject to appreciable error because of regulation in three large lakes upstream from the station. These figures are not published herein and should not be used.

201. Big Mountain Creek near Ellerbe, N. C. 1/

Location.--Lat 35°07', long 79°49', at bridge on State Highway 73, half a mile downstream from Baldwin Mill, 3 1/4 miles upstream from Little Mountain Creek, and 5 miles northwest of Ellerbe, Richmond County.

Drainage area.--33.4 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 280 ft (from topographic map).

Extremes.--1940-42: Maximum discharge, 855 cfs July 11, 1941 (gage height, 8.00 ft), in rating curve extended above 380 cfs by logarithmic plotting; minimum, 0.1 cfs Aug. 5, Sept. 16, Oct. 14, 1940 (gage height, 0.50 ft); minimum daily, 0.4 cfs Aug. 4, Sept. 30, 1940.

Remarks.--Considerable diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	11.7	5.56	3.66	15.7	3.20	-
1941	3.49	23.2	18.7	21.5	15.5	38.0	53.5	7.94	13.1	52.7	8.41	4.85	21.8
1942	4.43	5.67	13.6	10.1	27.0	84.5	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	0.40	0.19	0.13	0.54	0.11	-
1941	0.12	0.77	0.65	0.74	0.48	1.31	1.79	0.27	0.44	1.82	0.29	0.16	8.84
1942	.15	.19	.47	.35	.84	2.92	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1940	892	-	-	-	-	-	-	-	-	-	-	-	-
1941	922	855	July 11, 1941	-	-	-	-	-	-	-	-	-	-
1942	952	490	Mar. 3, 1942	0.7	21.8	0.652	8.84	20.0	8.11	-	-	-	-

^{a/} Maximum during period October to April.

1/ Previously published as Mountain Creek.

202. Blewett Falls Lake near Rockingham, N. C. 1/

Location (revised).--Lat 35°58'56", long 79°52'41", on Pee Dee River 1½ miles upstream from Cartledge Creek, 6½ miles northwest of Rockingham, Richmond County, and at mile 191.

Drainage area.--6,830 sq mi, approximately.

Gage.--Staff and float gages. Datum of gage is 39.04 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Remarks.--Lake used for hydroelectric power development, was first put in operation in 1911 and has a usable capacity of 1,850,000,000 cu ft between elevation 120.0 ft and 139.0 ft (top of 4-foot flashboards).

Cooperation.--Records furnished by Carolina Power & Light Co.

Monthly and yearly change in contents, equivalent in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	+131	-8	-157	+60	+40	-45	+184	-81	-66	+121	-132	+165	+17
1929	-148	0	-7	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-71	-132	+131	+23	-153	+228	-7	-164	-4	-
1931	+146	-108	+265	-261	-50	+131	-62	+19	+54	+22	-45	+73	+16
1932	-30	-50	+45	+7	+119	-160	-89	+34	+31	-41	+93	+23	-2
1933	-75	-39	+231	-194	+8	-90	+46	+19	+58	+19	+7	+4	-1
1934	+19	-4	-71	+26	-136	+233	-148	-82	-143	-45	+34	+66	-6
1935	-7	+212	-127	+11	-56	+113	-109	+97	+100	-34	+19	-35	-1
1936	+41	-27	+19	+15	-88	+161	-108	0	0	+112	-123	-23	-1
1937	-37	+27	+119	+104	-186	-41	+163	-98	+19	-7	+130	-130	+7
1938	-90	+66	+4	-34	+8	+86	+19	+11	-31	-62	+108	-4	+5
1939	-15	+48	-28	+83	+92	-133	-89	+121	-75	+53	+4	+4	+2
1940	+16	-16	-8	-105	+28	-119	+104	+102	+24	+12	+8	-57	-1
1941	+35	-40	+86	-190	+29	+110	+24	-31	+4	-65	+80	-87	-4
1942	+49	+12	-75	+11	+75	+35	-4	-159	+15	+133	-16	0	+6
1943	-20	-58	+168	-96	-166	-52	+234	-40	0	-116	+155	-56	-3
1944	+11	+40	+8	-39	+115	-22	-282	+11	+123	+105	-97	+174	+14
1945	-356	+301	-161	-56	+189	-70	-30	+52	-42	+26	+7	+46	-18
1946	0	-116	+269	-243	-50	+56	+301	-139	-24	-12	-31	-28	+6
1947	-4	-47	+22	-97	+103	+31	-4	-7	+12	+19	+12	-118	-7
1948	+115	-28	-4	+96	-208	+63	+32	+89	-79	+16	-39	+16	+7
1949	+43	+97	+4	-254	+130	-28	+143	-134	+8	+39	+50	-80	0
1950	+159	-149	+8	-4	+8	-125	+113	+62	-64	-27	+31	+20	+3

203. Pee Dee River near Rockingham, N. C. 2/

Location (revised).--Lat 34°56'40", long 79°52'10", on left bank at bridge on U. S. Highway 74, 2.5 miles upstream from Falling Creek, 3.3 miles downstream from Blewett Falls hydroelectric plant, 6 miles west of Rockingham, Richmond County, and at mile 187.

Drainage area.--6,870 sq mi, approximately. At site used 1906-12, 6,830 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for the period October 1946 to September 1948 are published in reports of Geological Survey.

Gage.--Water-stage recorder at present site and datum since Sept. 27, 1927. Datum of gage is 120.68 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912, staff gage at site near Pee Dee, 3.3 miles (revised) upstream at different datum.

Average discharge.--28 years (1906-11, 1927-50), 8,103 cfs (unadjusted).

Extremes.--1906-11, 1927-50: Maximum discharge, 276,000 cfs Aug. 27, 1908 (stage 31.28 ft, present site and datum, from records of State Highway and Public Works Commission), from rating curve extended above 194,000 cfs; minimum, 96 cfs (revised) Oct. 25, 1943, minimum daily, 152 cfs July 28, 1940.

Remarks.--Large diurnal fluctuations caused by powerplants upstream from station. Flow regulated since Jan. 19, 1912, by Blewett Falls Lake (see preceding station), since Aug. 6, 1917, by Badin Lake (see p. 214), since Nov. 7, 1927, by High Rock Lake (see p. 210), and since 1928 by Lake Tillery (see p. 214). Combined usable capacity of the four lakes for normal operation is 24,259,016,000 cu ft.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	-	-	-	-	-	-	-	-	-	-	-	-	12,190
1907	10,290	7,028	6,603	6,995	7,946	8,139	8,992	5,789	12,670	6,068	4,173	4,569	7,442
1908	3,088	7,464	16,740	19,500	20,620	15,760	7,688	6,464	6,361	9,513	30,600	7,701	12,640
1909	12,680	8,959	12,440	8,946	10,710	9,356	7,133	16,030	19,500	7,371	12,250	4,613	10,840
1910	3,683	3,461	4,409	7,003	10,130	9,571	4,618	5,073	10,290	5,780	4,461	6,646	6,231
1911	5,214	2,883	4,208	7,516	6,060	6,390	9,128	3,789	3,167	2,562	2,980	4,795	4,880
1912	6,227	6,118	11,510	-	-	-	-	-	-	-	-	-	-

Note.--Complete records 1906-12 not previously published; computed on basis of gage-height record and stage-discharge relation.

1/ Published in WSP 1066 as Pee Dee River at Blewett Reservoir, near Rockingham.

2/ Published 1906-12 as Yadin River near Pee Dee.

Monthly and yearly mean discharge, in cubic feet per second, of Fee Dee River near Rockingham, N. C.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	*6,846	*3,841	*12,410	*5,960	*8,004	*6,697	*13,650	*11,370	*7,678	*5,837	*19,180	*35,690	*11,410
1929	*7,404	*4,303	*4,593	*5,981	*15,910	*33,010	*10,250	*9,897	*6,553	*6,932	*5,770	*5,528	*9,824
1930	*23,510	*12,780	*11,270	*10,950	*11,130	*7,616	*5,647	*6,270	*3,919	*5,110	*4,163	*3,329	*8,614
1931	*1,669	*2,477	*5,830	*6,605	*4,147	*4,489	10,010	*11,050	*3,694	*4,647	*10,590	*2,803	*5,690
1932	*2,958	*2,701	*7,410	15,900	*9,854	*11,760	*6,399	*5,222	*7,083	*4,704	*3,165	*2,637	*6,504
1933	*10,670	*12,250	20,300	*11,330	*10,950	*10,160	*7,553	*6,194	*3,364	*3,144	*4,300	*3,436	*6,643
1934	*3,352	*2,880	*2,798	*2,688	*3,704	*5,580	*11,150	*4,753	*9,376	*4,351	*4,494	*7,817	*5,229
1935	*5,153	*5,324	*9,767	11,720	10,180	16,190	13,980	*6,783	*3,934	*4,079	*4,123	*6,427	*8,214
1936	*3,765	*5,134	*5,311	*27,460	21,530	*19,430	*31,340	*4,867	*4,478	*4,271	*5,678	*4,888	*11,460
1937	14,550	*5,536	10,010	*31,270	15,040	9,262	*13,100	*7,695	6,262	*5,198	*5,687	*5,388	10,770
1938	8,631	6,071	6,760	7,500	5,852	6,608	7,824	3,745	5,819	9,602	5,762	4,544	6,555
1939	5,427	4,100	5,658	6,868	23,160	16,430	6,870	5,347	4,996	6,501	11,190	4,973	8,203
1940	5,945	2,967	2,640	4,926	7,624	5,943	6,043	4,122	3,688	3,857	11,320	5,688	5,223
1941	3,844	5,289	5,044	5,562	4,658	6,263	7,731	4,104	4,359	10,020	3,414	3,228	5,300
1942	5,184	2,067	3,077	3,185	7,341	14,640	5,800	8,444	7,832	4,988	4,854	7,593	6,076
1943	4,922	3,627	5,933	15,040	12,230	13,580	10,360	7,091	5,293	13,750	3,987	2,979	8,213
1944	2,253	2,494	4,033	8,458	13,960	22,020	16,440	5,885	4,411	6,869	5,618	3,301	7,960
1945	11,370	4,943	7,664	8,439	13,150	8,813	6,416	5,741	4,252	5,218	5,342	31,570	9,353
1946	4,965	5,204	14,320	18,080	16,190	7,719	6,454	8,490	6,093	6,699	5,798	3,651	8,402
1947	4,519	3,658	4,190	13,520	6,542	9,726	8,343	3,640	4,953	5,509	3,961	4,181	6,091
1948	5,652	15,740	7,379	9,241	21,590	14,910	14,600	6,778	6,880	4,752	5,981	4,393	9,735
1949	3,853	13,580	15,210	13,350	12,430	8,060	9,839	14,630	5,253	8,615	12,670	8,548	10,500
1950	5,301	9,468	6,687	6,488	6,490	8,640	5,808	9,570	6,590	5,624	4,485	5,133	6,691

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	-	-	-	-	-	-	-	-	-	-	2.45	1.99	-
1907	1.74	1.15	1.11	1.18	1.21	1.37	1.47	0.96	2.10	1.02	-	1.70	14.78
1908	5.21	1.22	2.83	3.29	3.26	2.66	1.26	1.09	1.04	1.61	5.16	1.26	25.20
1909	2.14	1.46	2.10	1.51	1.63	1.58	1.17	2.71	3.18	1.24	2.07	1.75	21.54
1910	6.22	1.57	.74	1.18	1.54	1.62	.75	.86	1.68	.98	.76	1.09	12.39
1911	.88	.47	.71	1.27	.92	1.08	1.49	.64	.52	.43	.50	.78	9.69
1912	1.05	1.00	1.94	.78	-	-	-	-	-	-	-	-	-

Note.--Complete records 1906-12 not previously published; computed on basis of gage-height record and stage-discharge relation.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30											
		Observed					Adjusted ^a						
		Momentary maximum		Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date	day									
1906	1503	*78,800	Aug. 31, 1906	-	-	-	-	-	-	-	-	-	-
1907	1503	*42,400	Oct. 20, June 2	*2,210	*7,442	-	-	*1.09	*14.78	*7,727	-	-	*15.35
1908	1503	*276,000	Aug. 27, 1908	*2,380	*12,640	-	-	*1.85	*25.20	*13,210	-	-	*26.33
1909	1503	*b74,000	June 5, 1909	*3,310	*10,840	-	-	*1.59	*21.54	*8,944	-	-	*17.77
1910	1503	*b61,100	June 15, 1910	*2,600	*6,231	-	-	*.912	*12.39	*6,296	-	-	*12.52
1911	1503	*b40,200	Jan. 4, 1911	*1,510	*4,880	-	-	*.714	*9.69	*5,652	-	-	*11.62
1912	1503	*b49,600	Dec. 24, 1911	-	-	-	-	-	-	-	-	-	-
1928	1203	212,000	Sept. 19, 1928	*1,230	*11,410	-	-	-	-	*10,830	-	-	-
1929	1203	147,000	Mar. 1, 1929	*1,400	*9,824	-	-	-	-	*12,450	-	-	-
1930	1203	165,000	Oct. 3, 1929	*548	*8,814	-	-	-	-	*5,652	*5,335	*10.55	-
1931	1203	56,700	May 23, 1931	*460	*5,690	*6,086	.886	*12.03	*5,952	*6,026	*11.90	-	
1932	1203	82,800	Jan. 10, 1932	*250	*6,504	*6,343	*.923	*12.56	*9,032	*9,269	*18.38	-	
1933	1203	69,700	Oct. 19, 1932	*186	*8,643	*8,854	*1.29	*17.51	*5,765	*5,256	*10.38	-	
1934	1203	47,200	June 7, 1934	*204	*5,229	*5,281	*.769	*10.44	*6,175	*6,655	*13.15	-	
1935	1203	69,700	Mar. 26, 1935	*232	*8,214	*8,062	*1.17	*15.88	*7,702	*7,258	*14.39	-	
1936	1203	188,000	Apr. 7, 1936	*183	*11,460	*11,440	*1.67	*22.73	*12,800	*13,190	*26.13	-	
1937	1203	82,300	Jan. 21, 1937	*528	10,770	10,770	1.57	21.31	10,030	9,928	19.61	-	
1938	852	52,800	Oct. 22, 1937	490	6,555	6,510	.948	12.86	5,855	5,670	11.60	-	
1939	872	72,000	Mar. 1, 1939	165	8,203	8,208	1.19	16.22	7,899	7,655	15.12	-	
1940	892	84,000	Apr. 17, 1940	152	5,223	5,300	.771	10.50	5,608	5,796	11.48	-	
1941	922	39,300	Apr. 5, 1941	237	5,300	5,250	.764	10.37	4,812	4,679	9.25	-	
1942	952	61,100	Mar. 10, 1942	170	6,076	6,161	.900	12.21	6,594	6,945	13.71	-	
1943	972	60,800	Jan. 19, 1943	211	8,213	8,240	1.20	16.26	7,732	7,524	14.88	-	
1944	1002	87,000	Mar. 21, 1944	158	7,960	8,043	1.17	15.95	9,240	9,400	18.64	-	
1945	1032	270,000	Sept. 18, 1945	274	9,353	9,357	1.36	16.48	9,396	9,489	18.74	-	
1946	1052	78,300	Feb. 11, 1946	396	8,402	8,160	1.19	16.12	7,376	6,983	13.85	-	
1947	1082	53,100	Jan. 21, 1947	314	6,091	6,186	.900	12.22	7,451	7,151	14.12	-	
1948	1112	83,000	Feb. 14, 1948	458	9,735	9,659	1.41	19.19	10,070	10,170	20.15	-	
1949	1142	68,400	Nov. 30, 1948	446	10,500	10,700	1.56	21.14	9,562	9,462	18.73	-	
1950	1172	56,500	Nov. 2, 1949	695	6,691	6,633	.966	13.11	-	-	-	-	

* Revised.

^a Not previously published.

^b Adjusted for change in contents of Blewett Falls, Badin, High Rock and Tillery Lakes since Jan. 1, 1930; record of lake operations not available prior to that date.

Note.--Yearly minimum stages and discharges for 1928-32 published in WSP 662, 682, 697, 712 and 727 are subject to error and should not be used. Observed monthly and yearly discharges, in cubic feet per second per square mile, and runoff depth, in inches, for 1928-42 published in WSP 662, 682, 697, 712, 727, 742, 757, 782, 802, 822, 852, 872, 892, 922 and 952, and adjusted monthly discharge in cubic feet per second per square mile, and runoff depth, in inches, for 1943-46 published in WSP 972, 1002, 1032 and 1052 are subject to error because of regulation in four storage lakes upstream. These figures are not published herein and should not be used.

204. North Fork Jones Creek near Wadesboro, N. C.

Location (revised).--Lat 34°55'10", long 80°04'29", 300 ft downstream from bridge on county highway, 3½ miles south of Wadesboro, Anson County, 4 miles upstream from Bailey Creek, and 5½ miles upstream from confluence with South Fork Jones Creek.

Drainage area.--10.0 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 308 ft (from topographic map).

Average discharge.--6 years (1935-41), 9.93 cfs.

Extremes.--1935-41: Maximum discharge, 2,410 cfs June 4, 1937, and July 20, 1939, from rating curve extended above 310 cfs on basis of computation of peak flow over concrete control; maximum gage height, 6.39 ft June 4, 1937; minimum discharge, 0.1 cfs July 24, Aug. 2, 1940.

Remarks.--Slight regulation by Wadesboro Reservoir, with a capacity of 290 million gallons, put in operation Feb. 10, 1940. City of Wadesboro has diverted an average of about 0.3 cfs beginning in February 1940 for water supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	11.3	*6.96	*6.85	2.64	2.49	*34.4	-
1936	3.73	*9.95	4.38	*37.4	*38.1	*33.4	*47.1	4.02	*7.78	*3.41	2.21	4.48	*16.2
1937	*11.6	4.37	17.6	*35.6	24.8	14.3	19.1	5.80	*27.7	*9.02	*12.6	*4.70	*15.5
1938	2.06	2.92	3.80	8.28	3.39	3.52	15.9	4.13	4.20	13.2	1.80	2.68	5.50
1939	.83	2.75	4.47	8.95	41.6	23.6	5.45	3.77	2.06	22.3	12.3	2.67	10.7
1940	1.99	1.54	.92	.95	9.64	8.26	7.72	3.67	2.24	1.05	6.33	.25	3.69
1941	.271	6.15	4.53	6.78	4.37	10.0	15.5	1.71	4.62	34.1	5.11	2.03	7.97

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	1.26	*0.80	*0.76	0.30	0.29	*3.64	-
1936	0.43	*1.11	0.50	*4.31	*4.11	*3.86	*5.25	.46	*.87	*.39	.25	.50	*22.04
1937	*1.33	.49	2.03	*4.11	2.58	1.65	2.13	.67	*3.09	*1.04	*1.45	*.52	*21.09
1938	.24	.33	.44	.95	.35	.41	1.77	.48	.47	1.52	.21	.30	7.47
1939	.10	.51	.52	1.03	4.33	2.72	.61	.43	.23	2.57	1.42	.30	14.57
1940	.23	.17	.11	.11	-	-	-	-	-	-	-	-	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	802,1433	*a775	Sept. 5, 1935	-	-	-	-	-	-
1936	802,1433	*910	Mar. 26, 1936	0.5	*16.2	*1.62	*22.04	*17.5	*23.85
1937	822,1433	2,410	June 4, 1937	1.0	*15.5	*1.55	*21.09	*13.4	*18.25
1938	852	860	July 25, 1938	.4	5.50	.550	7.47	5.44	7.39
1939	872	2,410	July 20, 1939	.6	10.7	1.07	14.57	10.4	14.15
1940	892	219	Aug. 14, 1940	.2	3.69	-	-	4.23	-
1941	922	1,430	July 10, 1941	.2	7.97	-	-	-	-

* Revised.

a Maximum during period Mar. 22 to September.

205. Juniper Creek near Cheraw, S. C.

Location.--Lat 34°39', long 79°54', at Eureka Lake Dam, 1½ miles upstream from mouth and 3½ miles south of Cheraw, Chesterfield County.

Drainage area.--64 sq mi, approximately.

Gage.--Water-stage recorder and concrete spillway. Altitude of gage is 90 ft (from Corps of Engineers map).

Average discharge.--10 years (1940-50), 78.9 cfs.

Extremes.--1940-50: Maximum discharge, 3,910 cfs Sept. 18, 1945 (gage height, 5.71 ft), from rating curve extended above 310 cfs by logarithmic plotting and computation of peak flow over dam; no flow May 30 and part of May 29, 1945 (water below spillway crest and gates closed).

Remarks.--Flow regulated by storage in Eureka Lake. During some periods water is drawn below crest of spillway and released through gates in bottom of dam.

Monthly and yearly mean discharge, in cubic feet per second, of Juniper Creek near Cheraw, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	35.0	32.3	55.3	32.6	-
1941	18.2	64.8	52.1	48.4	43.0	70.8	64.8	15.6	32.0	129	51.5	19.9	51.0
1942	17.2	26.9	76.9	56.7	73.5	132	74.3	82.5	59.5	52.2	82.4	72.9	67.3
1943	63.3	63.8	79.3	110	88.6	120	114	65.9	38.4	93.5	30.3	31.1	74.7
1944	20.3	35.6	64.2	99.1	121	155	127	59.1	26.1	51.3	41.0	46.6	70.3
1945	78.0	49.0	65.1	87.2	65.4	89.4	39.8	28.8	14.2	25.6	68.8	35.0	79.9
1946	109	104	110	190	190	76.5	109	124	46.9	76.9	65.7	32.2	102
1947	79.0	67.0	65.6	112	91.2	85.0	118	62.2	41.7	60.0	69.1	54.8	75.4
1948	42.4	190	120	117	209	193	134	78.7	69.2	64.0	47.2	38.5	108
1949	82.0	125	144	120	146	96.9	86.8	108	60.0	53.7	101	89.0	101
1950	60.0	96.1	86.3	96.7	57.2	30.6	58.8	38.2	48.3	61.0	32.2	48.2	59.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	0.61	0.58	1.00	0.57	-
1941	0.33	1.13	0.94	0.87	0.70	1.28	1.13	0.28	.56	2.33	.93	.35	10.83
1942	.31	.47	1.38	1.02	1.20	2.38	1.29	1.49	1.04	.94	1.49	1.27	14.28
1943	1.14	1.11	1.43	1.98	1.44	2.17	1.99	1.15	.67	1.68	.55	.54	15.85
1944	.37	.26	1.15	1.79	2.04	2.79	2.21	1.06	.46	.92	.74	.81	14.96

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	922	256	Aug. 16, 1940	-	-	-	-	-	-
1941	922	395	July 15, 1941	5.7	51.0	0.797	10.83	49.9	10.59
1942	952	332	Aug. 20, 1942	12.0	67.3	1.05	14.28	74.5	15.80
1943	972	295	Jan. 20, 1943	13.2	74.7	1.17	15.85	67.4	14.31
1944	1002	286	Mar. 22, 1944	10.2	70.3	1.10	14.96	76.4	16.26
1945	1032	3,910	Sept. 18, 1945	0	79.9	1.25	16.94	90.8	19.25
1946	1052	410	May 5, 1946	19.5	102	1.59	21.73	93.1	19.75
1947	1082	369	Oct. 10, 1946	14.3	75.4	1.18	15.98	87.1	18.45
1948	1112	430	Feb. 15, 1948	16.8	108	1.69	22.98	108	22.99
1949	1142	459	May 2, 1949	16.8	101	1.59	21.39	91.6	19.45
1950	1172	224	Nov. 3, 1949	1	59.4	.928	12.61	-	-

206. Pee Dee River at Peedee, S. C. 1/

Location.--Lat 34°12'15", long 79°32'55", at bridge on U. S. Highway 76, at Peedee, Marion County, 0.2 mile downstream from Atlantic Coast Line Railroad bridge and 8½ miles downstream from Black Creek.

Drainage area.--8,830 sq mi (revised), approximately. At site used 1938-47, 8,850 sq mi (revised), approximately.

Supplemental records available.--Gage-height records collected at practically same sites since 1923 are contained in reports of U. S. Weather Bureau. Records of chemical analyses and water temperatures for the period October 1948 to September 1949 are published in reports of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 24.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1947, at site 1.6 miles downstream at datum 1.27 ft lower.

Average discharge.--12 years (1938-50), 9,277 cfs.

Extremes.--1938-50: Maximum discharge, 220,000 cfs Sept. 22, 1945 (gage height, 33.30 ft, site and datum then in use), from rating curve extended above 48,000 cfs on basis of discharge measurement of 221,000 cfs at Cheraw; minimum, 900 cfs July 30, 1940 (gage height, 1.66 ft, site and datum then in use).

Remarks.--Flow regulated by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	4,395	4,537	4,273	4,088	25,010	27,890	9,781	6,405	5,608	8,074	12,760	6,202	10,340
1940	4,507	3,411	3,215	5,976	9,453	7,505	7,185	4,475	4,237	3,586	11,670	6,132	5,934
1941	3,859	6,253	5,758	6,492	5,560	7,659	10,030	4,634	4,581	12,360	5,215	3,483	6,332
1942	3,269	2,563	3,849	4,279	8,201	19,030	8,492	9,176	8,924	6,103	6,423	8,555	7,401
1943	6,068	4,578	6,492	14,170	19,690	16,510	13,350	8,248	6,084	16,570	4,957	3,489	9,972
1944	2,701	2,657	4,264	10,540	14,800	24,840	23,630	8,729	5,002	7,568	6,675	4,067	9,603
1945	11,570	5,700	8,645	9,392	12,820	12,420	7,135	6,544	4,651	5,707	6,988	49,130	11,660
1946	7,820	6,420	12,230	25,280	19,160	9,636	8,248	10,930	6,982	7,509	7,294	4,023	10,450
1947	5,679	4,643	5,026	14,890	8,319	11,860	12,720	4,866	5,335	6,092	4,957	4,821	7,432
1948	5,593	18,760	10,320	10,700	28,680	18,950	18,290	7,677	7,652	5,675	6,355	4,588	11,840
1949	5,789	10,800	22,710	19,320	14,920	10,880	11,150	18,310	5,806	8,465	10,410	14,120	12,730
1950	6,035	11,210	8,101	7,880	7,511	9,742	7,161	9,319	7,446	6,456	4,714	5,378	7,628

* Not previously published; estimated on basis of once-daily readings by U. S. Weather Bureau and estimated rating curve.

1/ Published as "near Mars Bluff" prior to 1948.

Yearly discharge, in cubic feet per second, of Pee Dee River at Peedee, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	66,700	Mar. 6, 1939	1,660	10,540	-	-	9,999	-
1940	892	35,300	Aug. 22, 1940	1,000	5,934	-	-	6,328	-
1941	922	17,400	Apr. 9, 1941	1,540	6,332	-	-	5,817	-
1942	952	34,400	Mar. 15, 1942	1,040	7,401	-	-	8,029	-
1943	972	34,400	Feb. 3, 1943	1,360	9,972	-	-	9,239	-
1944	1002	51,800	Mar. 26, 1944	1,040	9,603	-	-	10,970	-
1945	1032	220,000	Sept. 22, 1945	2,020	11,660	-	-	11,710	-
1946	1052	45,400	Jan. 4, 1946	1,620	10,450	-	-	9,510	-
1947	1082	30,900	Jan. 26, 1947	1,520	7,432	-	-	9,035	-
1948	1112	69,300	Feb. 19, 1948	1,560	11,640	-	-	12,250	-
1949	1142	47,800	Dec. 5, 1948	2,760	12,730	-	-	11,540	-
1950	1172	25,600	Nov. 7, 1949	2,580	7,628	-	-	-	-

† Not previously published.

Note.--Figures for discharge, in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers may be subject to error because of regulation in reservoirs upstream. These figures are not included in this report and should not be used.

207. Lynch River near Bishopville, S. C.

Location.--Lat 34°15', long 80°13', at bridge on U. S. Highway 15, 1 mile upstream from Seaboard Air Line Railroad bridge, 2.9 miles northeast of Bishopville, Lee County, and 3.3 miles downstream from Bells Branch.

Drainage area.--675 sq mi.

Supplemental records available.--Records of chemical analyses and water temperatures for the period October 1945 to September 1946 are published in report of Geological Survey.

Gage.--Wire-weight gage. Altitude of gage is 161 ft (by barometer).

Average discharge.--8 years (1942-50), 795 cfs.

Extremes.--1942-50: Maximum discharge, 29,400 cfs Sept. 19, 1945 (gage height, 22.35 ft, from floodmark), from rating curve extended above 12,000 cfs by velocity-area studies; minimum, 138 cfs June 20, 25, July 4, 1945.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	590	595	467	426	-
1943	564	558	701	1,375	1,022	1,437	1,026	573	413	997	385	240	775
1944	212	284	435	748	1,226	1,979	1,565	554	240	482	328	358	699
1945	561	421	573	682	1,056	729	406	287	166	333	664	3,498	777
1946	734	572	1,192	1,493	980	671	924	985	360	422	497	269	779
1947	655	534	460	1,330	552	1,091	1,361	438	318	519	520	458	689
1948	306	1,234	993	1,007	2,376	2,191	1,220	645	568	406	430	372	973
1949	925	1,751	2,005	1,481	1,528	1,051	810	1,518	457	433	1,128	878	1,163
1950	464	685	708	600	549	728	570	341	300	563	254	285	504

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	-	0.98	1.02	0.83	0.70	-
1943	0.96	0.92	1.20	2.35	1.57	2.46	1.70	0.98	.68	1.71	.66	.40	15.59
1944	.36	.47	.74	1.28	1.96	3.38	2.59	.95	.40	.82	.56	.59	14.10
1945	.99	.70	.98	1.16	1.64	1.24	.67	.49	.27	.57	1.13	5.78	15.62
1946	1.26	.94	2.04	2.55	1.51	1.49	1.53	1.68	.63	.72	.85	.48	15.68
1947	1.12	.88	.82	2.27	.65	1.87	2.25	.75	.53	.89	.89	.76	13.88
1948	.52	2.04	1.70	1.72	3.80	3.75	2.02	1.10	.94	.69	.75	.61	19.62
1949	1.58	2.69	3.42	2.52	2.35	1.60	1.34	2.59	.76	.74	1.92	1.45	23.36
1950	.79	1.13	1.21	1.02	.65	1.24	.94	.56	.50	.96	.43	.47	10.12

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952	-	-	-	-	-	-	-	-
1943	972	7,210	Jan. 21, 1943	165	775	1.15	15.59	700	14.08
1944	1002	12,400	Mar. 22, 1944	145	699	1.04	14.10	753	15.20
1945	1032	29,400	Sept. 19, 1945	138	777	1.15	15.62	655	17.19
1946	1052	3,980	Dec. 29, 1945	232	779	1.15	15.68	709	14.26
1947	1082	4,460	Apr. 18, 1947	210	689	1.02	15.88	761	15.32
1948	1112	7,840	Mar. 10, 1948	203	973	1.44	19.62	1,153	23.25
1949	1142	10,900	Dec. 1, 1948	282	1,163	1.72	23.36	926	18.60
1950	1172	1,790	Dec. 18, 1949	184	504	.747	10.12	-	-

208. Lynchess River at Effingham, S. C.

Location.--Lat 34°03'05" long 79°45'15", at bridge on U. S. Highway 52, 75 ft upstream from Atlantic Coast Line Railroad bridge and 1 mile south of Effingham, Florence County.

Drainage area.--1,030 sq mi, approximately.

Supplemental records available.--Gage-height records collected at same site since 1891 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 58.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 7, 1934, staff gage at same site and datum.

Average discharge.--21 years (1929-50), 977 cfs.

Extremes.--1929-50: Maximum discharge, 25,000 cfs Sept. 22, 1945 (gage height, 21.21 ft), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum, 116 cfs July 1, 1935.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	929	-
1930	3,050	1,570	2,540	2,120	1,920	1,310	890	579	488	456	384	492	1,300
1931	328	801	1,250	1,660	631	709	1,080	776	284	414	788	382	777
1932	163	207	645	1,590	1,080	1,410	793	546	586	281	728	302	694
1933	1,500	1,330	2,090	1,960	2,380	1,320	643	454	271	546	479	420	1,110
1934	201	246	276	350	495	695	650	318	893	424	430	457	451
1935	249	230	824	1,046	775	938	670	380	282	284	171	1,351	598
1936	365	532	545	2,624	2,830	2,056	4,930	694	507	420	597	450	1,369
1937	886	656	1,605	1,970	2,877	1,610	1,950	1,385	593	617	426	831	1,265
1938	388	510	648	863	558	500	2,107	521	716	795	1,016	377	758
1939	380	491	626	862	2,099	3,625	975	608	369	660	889	436	997
1940	334	322	418	847	1,352	984	741	453	475	227	726	252	592
1941	163	505	528	658	544	1,159	1,092	271	520	2,305	625	407	734
1942	217	235	786	1,090	1,399	3,309	1,512	1,574	860	1,219	890	460	1,131
1943	572	471	903	1,447	1,520	2,026	1,478	621	514	1,215	494	294	961
1944	220	294	421	1,347	1,708	2,965	1,998	1,064	330	542	412	514	982
1945	620	503	758	873	1,232	1,283	566	534	231	403	911	6,326	1,177
1946	1,262	750	1,703	2,626	1,588	1,193	1,225	1,348	476	466	679	328	1,138
1947	757	726	622	1,373	779	1,482	2,437	519	424	625	768	497	916
1948	580	2,347	1,833	1,582	3,590	3,077	1,905	675	603	474	394	350	1,441
1949	1,090	1,638	3,320	1,807	2,192	1,521	1,025	1,760	497	472	881	1,380	1,471
1950	477	656	961	871	780	1,089	772	366	335	593	339	494	662

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	1.01	-
1930	3.39	1.70	2.62	2.38	1.94	1.46	0.96	0.65	0.53	0.51	0.43	.53	17.07
1931	.37	.87	1.40	1.86	.84	.79	1.17	.87	.31	.46	.88	.41	10.23
1932	.18	.22	.72	1.78	1.13	1.58	.86	.61	.63	.31	.81	.33	9.16
1933	1.66	1.44	2.34	2.19	2.40	1.48	.70	.51	.29	.61	.54	.46	14.64
1934	.22	.27	.31	.39	.50	.78	.70	.36	.97	.48	.48	.50	5.96
1935	.28	.25	.92	1.18	.78	1.05	.73	.43	.31	.32	.19	1.46	7.90
1936	.41	.58	.61	2.94	2.97	2.31	5.34	.78	.55	.47	.67	.49	18.12
1937	.99	.71	1.80	2.10	2.90	1.80	2.11	1.54	.64	.69	.48	.90	16.66
1938	.43	.55	.73	1.08	.56	.56	2.29	.58	.78	.89	1.14	.41	10.00
1939	.43	.53	.70	.96	2.12	4.06	1.06	.68	.40	.74	.99	.47	13.14
1940	.37	.35	.47	.95	1.41	1.10	.80	.51	.51	.25	.81	.27	7.80
1941	.18	.55	.59	.74	.55	1.30	1.18	.30	.56	2.56	.70	.44	9.67
1942	.24	.25	.88	1.22	1.42	3.70	1.64	1.76	.93	1.36	1.00	.50	14.90
1943	.64	.51	1.01	1.61	1.54	2.27	1.60	.70	.56	1.36	.55	.32	12.67
1944	.25	.32	.47	1.51	1.79	3.32	2.15	1.19	.36	.61	.46	.56	12.99
1945	.69	.54	.83	.98	1.25	1.44	.61	.60	.25	.45	1.02	6.85	15.51
1946	1.42	.81	1.90	2.94	1.60	1.34	1.33	1.51	.52	.52	.76	.35	15.00
1947	.85	.79	.70	1.53	.79	1.66	2.64	.58	.46	.70	.86	.54	12.10
1948	.65	2.54	2.05	1.78	3.76	3.45	2.06	.76	.65	.53	.44	.38	19.05
1949	1.22	1.77	3.71	2.13	2.22	1.71	1.11	1.97	.54	.55	.99	1.50	19.40
1950	.53	.93	1.08	.98	.79	1.22	.84	.43	.36	.66	.38	.54	8.74

Yearly discharge, in cubic feet per second, of Lynches River at Effingham, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	682	-	-	-	-	-	-	-	-
1930	697	15,200	Oct. 7, 1929	237	1,300	1.26	17.07	912	12.03
1931	712	2,350	Aug. 31, 1931	168	777	.754	10.23	663	8.71
1932	727	4,780	Jan. 15, 1932	152	694	.674	9.16	1,020	13.50
1933	742	6,850	Oct. 24, 1932	175	1,110	1.08	14.64	757	9.88
1934	757	2,300	June 13, 1934	160	451	.438	5.96	501	6.61
1935	782	3,750	Sept. 14, 1935	120	598	.581	7.90	609	8.05
1936	802	14,400	Apr. 12, 1936	279	1,369	1.33	18.12	1,513	20.02
1937	822	5,200	May 2, 1937	313	1,265	1.23	16.66	1,130	14.87
1938	852	4,880	Aug. 2, 1938	222	758	.736	10.00	754	9.95
1939	872	11,200	Mar. 4, 1939	240	997	.968	13.14	962	12.67
1940	892	1,980	Aug. 18, 1940	154	592	.575	7.80	602	7.93
1941	922	3,420	July 18, 1941	149	754	.713	9.67	758	9.72
1942	952	5,640	May 28, 1942	176	1,131	1.10	14.90	1,191	15.69
1943	972	4,600	Jan. 26, 1943	228	961	.933	12.67	876	11.55
1944	1002	9,050	Mar. 26, 1944	196	982	.953	12.99	1,060	14.01
1945	1032	25,000	Sept. 22, 1945	166	1,177	1.14	15.51	1,334	17.58
1946	1052	4,200	Jan. 2, 1946	280	1,138	1.10	15.00	1,001	13.21
1947	1082	4,700	Apr. 16, 1947	235	918	.891	12.10	1,139	15.00
1948	1112	6,180	Feb. 16, 1948	222	1,441	1.40	19.05	1,552	20.51
1949	1142	8,320	Dec. 5, 1948	302	1,471	1.43	19.40	1,155	15.24
1950	1172	1,630	Dec. 24, 1949	183	662	.643	8.74	-	-

209. Little Pee Dee River near Dillon, S. C.

Location.--Lat 34°24', long 79°20', at bridge on State Highway 9, 1.1 miles east of Dillon, Dillon County, and 3 miles upstream from Maple Swamp.

Drainage area.--524 sq mi.

Gage.--Wire-weight gage. Datum of gage is 75.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Highway Department).

Average discharge.--11 years (1939-50), 521 cfs.

Extremes.--1939-50: Maximum discharge, 9,810 cfs Sept. 20, 1945 (gage height, 14.64 ft), from rating curve extended above 2,800 cfs by velocity-area studies and logarithmic plotting; minimum, 54 cfs June 10, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	613	581	303	635	916	335	-
1940	228	254	296	537	659	597	532	223	167	101	272	125	331
1941	75.7	197	228	281	241	540	598	174	125	931	515	184	342
1942	155	184	375	450	510	1,277	608	333	211	249	318	309	413
1943	167	201	325	626	533	778	696	221	188	761	222	168	409
1944	139	173	264	874	1,070	1,402	1,062	593	188	382	299	204	553
1945	213	211	343	338	422	462	234	256	221	295	597	2,400	497
1946	550	440	998	1,442	961	721	615	568	213	267	416	192	615
1947	224	335	353	615	387	602	1,319	416	219	418	517	381	482
1948	486	1,739	1,132	882	1,994	1,406	929	309	309	471	562	264	868
1949	977	831	1,765	1,208	1,157	747	547	925	368	347	362	669	841
1950	366	598	570	555	408	518	329	238	200	347	231	197	380

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	1.30	0.84	0.64	1.40	2.02	0.71	-
1940	0.50	0.54	0.65	1.18	1.36	1.31	1.14	.49	.36	.22	.60	.27	8.62
1941	.17	.42	.50	.62	.48	1.19	1.27	.38	.27	2.05	1.13	.39	8.87
1942	.30	.33	.83	.99	1.01	2.81	1.29	.73	.45	.55	.70	.66	10.71
1943	.37	.43	.71	1.37	1.10	1.71	1.48	.49	.40	1.67	.49	.36	10.58
1944	.31	.37	.58	1.92	2.20	3.09	2.26	1.30	.40	.84	.66	.43	14.36
1945	.47	.45	.76	.74	.84	1.02	.50	.56	.47	.65	1.31	5.11	12.88
1946	1.21	.94	2.19	3.17	1.91	1.59	1.30	1.24	.45	.59	.92	.41	15.92
1947	.49	.71	.78	1.35	.77	1.33	2.81	.92	.47	.22	1.14	.81	12.50
1948	1.07	3.70	2.49	1.94	4.11	3.09	1.98	.68	.66	1.04	1.23	.56	22.55
1949	2.14	1.77	3.86	2.66	2.50	1.65	1.16	2.04	.78	.76	.80	1.85	21.79
1950	.80	1.27	1.26	1.22	.81	1.14	.70	.52	.43	.76	.51	.42	9.84

Yearly discharge, in cubic feet per second, of Little Pee Dee River near Dillon, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	-	-	-	-	-	-	-	-
1940	892	1,080	Feb. 13, 1940	64	331	0.632	8.62	308	8.02
1941	922	2,130	July 19, 1941	54	342	.653	8.87	359	9.30
1942	952	2,770	Mar. 13, 1942	113	413	.788	10.71	413	10.70
1943	972	2,020	July 12, 1943	124	409	.781	10.58	399	10.33
1944	1002	2,130	Mar. 25, 1944	111	553	1.06	14.36	569	14.78
1945	1052	9,810	Sept. 20, 1945	113	497	.948	12.88	600	15.54
1946	1052	2,020	(a)	130	615	1.17	15.92	524	15.56
1947	1082	2,470	Apr. 22, 1947	89	482	.920	12.50	686	17.78
1948	1112	3,750	Feb. 15, 1948	148	868	1.66	22.55	889	23.08
1949	1142	3,330	Nov. 30, 1948	124	841	1.60	21.79	669	17.33
1950	1172	915	Nov. 7, 1949	70	380	.725	9.84	-	-

a Dec. 31, 1945, Jan. 2, 3, 1946.

210. Deep Creek near Roseland, N. C.

Location--Lat 35°07'23", long 79°32'34", at bridge on county highway, 2 miles southwest of Roseland, Moore County, 2 1/4 miles (revised) upstream from Horse Creek, and 7 miles west of Aberdeen.

Drainage area--18.9 sq mi.

Gage--Water-stage recorder. Altitude of gage is 313 ft (from topographic map).

Extremes--1940-42: Maximum discharge, 220 cfs Apr. 5, Aug. 24, 1941 (gage height, 4.45 ft), from rating curve extended above 70 cfs on basis of logarithmic plotting and area-velocity studies; minimum, 5.3 cfs July 28, 1940.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	8.34	22.4	17.9	19.0	16.1	24.6	45.0	16.3	18.3	39.8	14.6	7.44	-
1942	13.6	14.5	23.2	18.2	24.0	40.2	-	-	-	-	-	-	22.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	0.51	1.32	1.09	1.16	0.89	1.50	2.65	1.00	1.08	2.43	0.89	0.44	-
1942	.83	.86	1.41	1.11	1.32	2.45	-	-	-	-	1.53	1.03	16.19

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	-	-	-	-	-	-	-	-
1941	922	220	Apr. 5, Aug. 24	7.1	22.6	1.20	16.19	22.8	16.37
1942	952	2101	Mar. 22, 1942	-	-	-	-	-	-

a Maximum during period October to April.

211. Drowning Creek near Hoffman, N. C.

Location--Lat 35°03'38", long 79°29'39", on right bank 10 ft downstream from bridge on U. S. Highway 1, three-quarters of a mile downstream from Deep Creek, 1 mile upstream from Seaboard Airline Railroad bridge, and 4 miles northeast of Hoffman, Richmond County.

Drainage area--178 sq mi.

Supplemental records available--Records of chemical analyses for the period October 1946 to September 1947 are published in report of Geological Survey.

Gage--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

Average discharge--11 years (1939-50), 268 cfs.

Extremes--1939-50: Maximum discharge, 10,900 cfs Sept. 18, 1945 (gage height, 10.29 ft), from rating curve extended above 5,600 cfs by logarithmic plotting; minimum, 28 cfs Aug. 4, 1940 (gage height, 1.32 ft).

Monthly and yearly mean discharge, in cubic feet per second, of Drowning Creek near Hoffman, N. C.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#114	147	181	241	301	261	217	128	96.5	57.5	116	46.7	#158
1941	48.5	214	182	196	156	240	368	96.4	103	327	147	88.8	181
1942	75.9	93.4	187	151	222	401	242	205	126	127	215	215	188
1943	176	191	259	337	304	348	266	189	91.9	364	145	154	236
1944	99.3	133	191	344	468	605	583	310	159	624	348	220	340
1945	272	223	286	266	353	301	214	171	169	292	350	932	318
1946	390	312	455	469	408	315	289	319	215	339	329	213	338
1947	270	260	227	398	252	323	402	204	118	147	140	150	241
1948	193	420	282	307	532	483	424	242	198	270	208	120	306
1949	292	491	503	454	404	353	351	374	213	508	439	368	395
1950	473	363	338	299	264	302	204	207	114	208	136	112	252

* Not previously published; estimated or partly estimated on basis of records for Little River at Linden.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#0.74	0.92	1.17	1.56	1.83	1.69	1.36	0.83	0.61	0.37	0.75	0.29	#12.12
1941	.31	1.34	1.18	1.27	.91	1.56	2.30	.62	.65	2.12	.95	.56	13.77
1942	.49	.58	1.21	.98	1.30	2.60	1.52	1.33	.79	.83	1.39	1.35	14.36
1943	1.14	1.20	1.68	2.18	1.78	2.26	1.67	1.22	.58	2.36	.94	.96	17.97
1944	.64	.83	1.24	2.23	2.83	3.92	3.65	2.01	1.00	4.04	2.25	1.38	26.02
1945	1.76	1.40	1.85	1.72	2.07	1.95	1.34	1.11	1.06	1.89	2.27	5.84	24.26
1946	2.53	1.96	2.95	3.04	2.39	2.04	1.81	2.07	1.35	2.20	2.13	1.33	25.80
1947	1.75	1.63	1.47	2.58	1.48	2.09	2.52	1.32	.74	.95	.91	.94	18.38
1948	1.25	2.63	1.82	1.99	3.22	3.13	2.66	1.57	1.24	1.75	1.35	.75	23.36
1949	1.89	3.08	3.26	2.94	2.36	2.28	2.07	2.42	1.33	3.29	2.84	2.30	30.06
1950	3.06	2.27	2.19	1.94	1.54	1.95	1.28	1.34	.72	1.35	.88	.70	19.22

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second									
Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	435	Feb. 22, 1940	29	#158	+0.888	#12.12	158	12.12
1941	922	1,130	Apr. 7, 1941	39	181	1.02	13.77	173	13.22
1942	952	640	Mar. 24, 1942	47	188	1.06	14.36	211	16.11
1943	972	989	July 13, 1943	64	236	1.33	17.97	218	16.66
1944	1002	8,000	July 15, 1944	85	340	1.91	26.02	370	28.32
1945	1032	10,900	Sept. 18, 1945	88	318	1.79	24.26	350	26.69
1946	1052	1,210	July 15, 1946	126	338	1.90	25.80	304	23.21
1947	1082	1,050	Apr. 16, 1947	73	241	1.35	18.38	252	19.23
1948	1112	1,280	Feb. 14, 1948	77	306	1.72	23.36	339	25.89
1949	1142	6,360	July 16, 1949	111	395	2.22	30.06	385	29.35
1950	1172	2,710	Oct. 8, 1949	70	252	1.42	19.22	-	-

* Not previously published.

212. Little Raft Swamp at Red Springs, N. C.

Location.--Lat 34°50', long 79°11', at bridge on State Highways 71 and 211, at Red Springs, Robeson County, half a mile upstream from bridge on Atlantic Coast Line Railroad and three-quarters of a mile downstream from Graham Pond.

Drainage area.--23.1 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 165 ft (from topographic map).

Extremes.--1940-42: Maximum discharge, 187 cfs July 1, 1941 (gage height, 6.66 ft), from rating curve extended above 105 cfs on basis of logarithmic plotting; minimum not determined.

Remarks.--Slight diurnal fluctuation and some regulation caused by mill and pond above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	1.25	6.09	7.15	9.19	10.1	19.7	18.8	5.73	2.86	1.48	8.68	2.01	-
1942	3.37	2.56	13.0	12.3	16.9	56.5	-	-	9.61	33.0	8.10	3.95	11.1

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	-	-
1941	0.06	0.29	0.36	0.46	0.45	0.98	0.91	0.29	0.14	0.07	0.43	0.10	-
1942	.17	.12	.65	.62	.76	2.82	-	-	.46	1.65	.40	.19	6.50

Yearly discharge, in cubic feet per second, of Little Raft Swamp at Red Springs, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	-	-	1.4	-	-	-	-	-
1941	922	187	July 1, 1941	1.2	11.1	0.481	6.50	11.5	6.73
1942	952	al57	Mar. 23, 1942	b.7	-	-	-	-	-

a Maximum during period October to March.
 b Minimum day during period October to March.

213. Lumber River at Boardman, N. C.

Location.--Lat 34,26', long 78°58', on right bank 15 ft downstream from bridge on U. S. Highway 74, 1 mile downstream from Atlantic Coast Line Railroad bridge at Boardman, Columbus County, and 1½ miles downstream from Big Swamp.

Drainage area.--1,220 sq mi, approximately.

Supplemental records available.--Records of chemical analyses for the period October 1946 to September 1947 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 72.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, staff gage at site 100 ft downstream at same datum. Sept. 30, 1936, to June 8, 1943, wire-weight gage at present site and datum.

Average discharge.--21 years (1929-50), 1,282 cfs.

Extremes.--1929-50: Maximum discharge, 13,400 cfs Sept. 24, 1945 (gage height, 10.64 ft); minimum, 132 cfs Oct. 12, 1930.
 Maximum stage known, 11.8 ft in August 1928, from floodmarks witnessed by local resident (discharge, 25,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	3,250	2,130	3,220	2,790	2,640	1,590	1,050	659	702	457	293	242	1,580
1931	236	755	1,470	2,080	1,070	1,080	1,380	1,080	546	656	1,900	884	1,100
1932	226	263	934	1,390	1,250	1,400	879	838	811	281	435	208	742
1933	588	3,360	3,090	2,700	3,960	1,910	1,180	659	293	313	481	496	1,490
1934	170	211	237	282	429	611	825	382	816	785	556	1,020	524
1935	495	365	1,132	1,621	1,468	1,439	2,057	675	356	353	257	3,182	1,108
1936	606	803	1,131	3,135	3,831	3,175	5,688	933	603	504	654	476	1,783
1937	1,047	923	1,856	2,366	4,306	2,325	2,717	1,772	503	334	704	792	1,620
1938	364	580	707	934	677	825	2,464	554	1,638	1,446	1,669	1,462	1,092
1939	1,026	727	1,081	1,388	3,243	5,173	1,202	765	486	802	1,307	743	1,489
1940	468	419	453	988	1,429	1,343	1,178	564	427	235	410	191	673
1941	141	317	416	500	475	1,114	1,389	492	215	2,133	968	356	713
1942	219	268	580	1,027	1,015	2,951	1,570	706	546	552	698	1,733	1,005
1943	570	510	903	1,525	1,810	1,680	2,033	961	709	2,808	1,043	404	1,262
1944	343	378	475	2,011	3,064	1,132	3,200	1,604	600	1,269	1,151	561	1,561
1945	596	585	977	1,006	1,221	1,273	563	583	718	1,224	2,182	4,787	1,307
1946	1,717	1,071	2,310	3,375	2,081	1,668	1,472	1,459	737	1,259	1,743	779	1,642
1947	804	914	967	1,430	1,030	1,632	2,759	875	455	575	775	1,148	1,112
1948	1,525	4,142	2,761	1,985	4,851	3,307	2,482	861	878	689	878	491	2,056
1949	1,265	1,372	3,977	2,617	2,185	1,823	1,274	2,447	776	1,825	1,002	3,901	2,040
1950	945	1,408	1,402	1,342	1,058	1,181	825	627	557	1,384	995	424	1,016

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	3.07	1.95	3.04	2.64	2.25	1.50	0.96	0.62	0.64	0.43	0.28	0.22	17.60
1931	.22	.69	1.39	1.97	.91	1.02	1.27	1.00	.50	.62	1.79	.81	12.19
1932	.21	.24	.88	1.31	1.10	1.32	.80	.79	.74	.27	.41	.19	8.26
1933	.56	2.15	2.92	2.55	3.38	1.80	1.08	.62	.27	.30	.45	.45	16.53
1934	.16	.19	.22	.25	.37	.58	.75	.36	.75	.74	.53	.94	5.84
1935	.47	.33	1.27	1.53	1.25	1.36	1.88	.64	.33	.33	.22	2.91	12.32
1936	.57	.73	1.07	2.96	3.39	3.00	5.20	.88	.55	.48	.62	.44	19.89
1937	.99	.84	1.75	2.24	3.68	2.20	2.49	1.67	.46	.32	.87	.72	16.03
1938	.34	.53	.67	.98	.58	.59	2.25	.52	1.50	1.37	1.58	1.34	12.15
1939	.97	.66	1.02	1.31	2.77	4.89	1.10	.72	.44	.76	1.24	.68	16.56
1940	.44	.38	.43	.93	1.26	1.27	1.08	.53	.39	.22	.39	.17	7.49
1941	.13	.29	.39	.47	.41	1.05	1.27	.46	.20	2.02	.91	.33	7.93
1942	.21	.25	.55	.97	.87	2.79	1.44	.67	.50	.52	.85	1.58	11.19
1943	.54	.47	.85	1.44	1.55	1.78	1.86	.91	.64	2.65	.99	.37	14.05
1944	.32	.56	.45	1.89	2.71	3.90	2.93	1.52	.55	1.20	1.09	.51	17.42
1945	.56	.53	.92	.95	1.04	1.20	.51	.56	.66	1.16	2.06	4.38	14.52
1946	1.62	.98	2.18	3.19	1.78	1.58	1.35	1.38	.67	1.19	1.65	.71	18.28
1947	.76	.84	.91	1.35	.88	1.54	2.52	.83	.42	.54	.73	1.05	12.37
1948	1.44	3.79	2.61	1.88	4.29	3.12	2.27	.81	.80	.65	.83	.45	22.94
1949	1.20	1.25	3.76	2.47	1.87	1.72	1.16	2.31	.71	1.72	.95	3.57	22.69
1950	.89	1.29	1.52	1.27	.90	1.12	.75	.59	.53	1.31	.94	.39	11.30

Yearly discharge, in cubic feet per second, of Lumber River at Boardman, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	a7,430	Oct. 9, 1929	168	1,580	1.30	17.60	1,060	11.84
1931	712	a3,110	Aug. 26-31, 1931	132	1,100	.902	12.19	1,010	11.22
1932	727	a2,150	Jan. 19, 20, Mar. 18*	170	742	.608	8.26	1,130	12.56
1933	742	a5,230	Feb. 22, 23, 1933	158	1,490	1.22	16.53	1,030	11.47
1934	757	a2,120	Sept. 21, 1934	140	524	.430	5.84	641	7.14
1935	782	a7,080	Sept. 14, 15, 1935	150	1,108	.908	12.32	1,153	12.82
1936	802	a10,800	Apr. 13, 1936	315	1,783	1.46	19.83	1,891	21.10
1937	822	a5,920	Feb. 5, 6, 1937	270	1,620	1.33	18.03	1,436	15.99
1938	852	a5,920	July 30, 1938	268	1,092	.895	12.15	1,192	13.26
1939	872	a12,600	Mar. 4, 1939	328	1,489	1.22	16.56	1,363	15.16
1940	892	a1,830	Feb. 22, 23, 24	134	673	.552	7.49	634	7.05
1941	922	a4,660	July 21, 1941	134	713	.584	7.93	730	8.13
1942	952	a4,160	Mar. 11-14, 1942	172	1,005	.824	11.19	1,082	12.05
1943	972	4,580	July 15, 1943	303	1,262	1.03	14.05	1,195	13.31
1944	1002	5,420	Mar. 28, 1944	256	1,561	1.28	17.42	1,642	18.31
1945	1032	13,400	Sept. 24, 1945	288	1,307	1.07	14.52	1,555	17.29
1946	1052	4,120	Jan. 3-5, 1946	426	1,642	1.35	18.28	1,438	16.01
1947	1082	3,750	Apr. 18, 1947	280	1,112	.911	12.37	1,591	17.70
1948	1112	7,070	Feb. 17, 1948	280	2,056	1.69	22.94	1,910	21.31
1949	1142	7,600	Sept. 6, 1949	459	2,040	1.67	22.69	1,797	19.98
1950	1172	2,880	July 30, 1950	280	1,016	.833	11.30	-	-

* Revised.

a Maximum observed.

214. Little Pee Dee River at Galivants Ferry, S. C.

Location.--Lat 34°03'25", long 79°14'50", at bridge on U. S. Highway 501, at Galivants Ferry, Horry County, 1.0 mile downstream from Lake Swamp.

Drainage area.--2,790 sq mi, approximately.

Gage.--Wire-weight gage. Datum of gage is 23.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--9 years (1941-50), 3,224 cfs.

Extremes.--1941-50: Maximum discharge, 26,800 cfs Sept. 23, 1945 (gage height, 13.23 ft, from graph based on gage readings); minimum, 452 cfs Oct. 26, 27, Oct. 30 to Nov. 2, 1943, but may have been less during October 1941.

Maximum stage known, 16.0 ft in September 1928, from floodmark set by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	#460	#600	#1,200	2,238	2,243	7,715	3,609	1,111	906	954	1,221	2,517	#2,065
1943	849	784	1,232	2,856	4,259	3,905	4,845	1,874	1,050	5,094	2,540	2,039	2,802
1944	759	625	868	4,689	6,350	8,726	6,219	3,685	896	1,823	2,890	1,040	3,206
1945	960	952	1,574	1,663	2,318	2,525	1,060	1,334	1,111	3,900	6,330	12,410	3,008
1946	4,644	1,955	5,304	9,146	5,171	3,808	4,343	3,699	1,424	2,672	4,159	1,743	4,014
1947	1,736	1,930	1,992	3,143	2,311	3,421	6,727	2,004	1,063	1,907	2,545	2,990	2,644
1948	3,929	9,623	8,538	5,525	12,560	9,010	6,583	1,572	1,499	1,340	1,800	988	5,213
1949	2,636	2,759	10,680	5,891	5,724	4,401	2,523	4,697	1,435	3,058	1,956	7,435	4,432
1950	1,556	2,296	2,273	2,402	2,112	2,275	1,710	1,144	1,016	2,572	1,717	863	1,831

* Not previously published; estimated on basis of records for station near Dillon and Lumber River at Boardman, N. C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	#0.19	#0.24	#0.50	0.92	0.84	3.19	1.44	0.46	0.56	0.39	0.50	1.01	#10.04
1943	.35	.31	.51	1.18	1.59	1.61	1.94	.77	.42	2.11	1.05	.82	12.66
1944	.31	.25	.37	1.94	2.45	3.61	2.49	1.52	.36	.75	1.20	.42	15.67
1945	.40	.38	.65	.69	.87	1.04	.42	.55	.44	1.61	2.82	4.96	14.63
1946	1.91	.78	2.19	3.78	1.93	1.57	1.74	1.53	.57	1.10	1.72	.70	19.52
1947	.72	.77	.82	1.30	.86	1.42	2.69	.83	.43	.79	1.05	1.19	12.87
1948	1.63	3.85	3.53	2.28	4.85	3.72	2.63	.65	.60	.55	.74	.40	25.43
1949	1.09	1.10	4.42	2.43	2.14	1.82	1.01	1.94	.57	1.27	.81	2.97	21.57
1950	.64	.92	.94	.99	.79	.94	.68	.47	.41	1.06	.71	.35	8.90

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Little Pee Dee River at Galivants Ferry, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952	11,000	Mar. 14, 1942	-	#2,065	+0.740	#10.04	2,116	10.28
1943	972	10,500	July 18, 1943	724	2,602	.933	12.66	2,550	12.42
1944	1002	11,500	Feb. 24, Mar. 29	452	3,206	1.15	15.67	3,510	16.17
1945	1032	26,800	Sept. 23, 1945	629	3,008	1.08	14.63	3,720	18.08
1946	1052	all,600	Jan. 2, 1946	867	4,014	1.44	19.52	3,484	16.95
1947	1082	10,600	Apr. 20, 1947	697	2,644	.948	12.87	4,019	19.57
1948	1112	17,600	Feb. 16-19, 1948	822	5,213	1.87	25.43	4,723	23.03
1949	1142	14,600	Dec. 4, 1948	1,070	4,432	1.59	21.57	3,588	17.46
1950	1172	4,310	July 18, 19, 1950	588	1,831	.656	8.90	-	-

* Not previously published.

† Maximum peak discharge; maximum discharge during the year, 15,200 cfs at 12:01 a.m. Oct. 1, 1945, stage falling.

215. Black River at Kingstree, S. C.

Location.--Lat 33°39'40", long 79°50'10", at bridge on U. S. Highway 52 at Kingstree, Williamsburg County, 1 mile downstream from Kingstree Swamp Canal.

Drainage area.--1,260 sq mi, approximately.

Supplemental records available.--Gage-height records collected at same site since 1893 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 25.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 7, 1934, tape gage at same site and datum.

Average discharge.--21 years (1929-50), 814 cfs.

Extremes.--1929-50: Maximum discharge, 29,100 cfs Sept. 20, 1945 (gage height, 16.07 ft); minimum, 4 cfs June 30, July 1, 4, 5, 1935, Sept. 5, 6, Oct. 15-19, 1944. Maximum stage known, 18.0 ft Sept. 21, 1928 (discharge, 41,600 cfs, from rating curve extended above 27,000 cfs).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	369	-
1930	774	574	1,820	3,440	2,430	2,140	1,150	246	187	365	156	81.0	1,110
1931	210	528	1,370	2,240	1,020	782	885	*997	91.1	336	103	50.2	*719
1932	8.65	5.0	43.4	501	781	1,180	457	139	129	67.2	626	263	349
1933	784	1,500	1,840	1,950	3,230	1,370	441	121	22.3	212	65.9	414	989
1934	32.6	18.2	40.1	124	319	436	283	56.6	449	48.2	56.3	363	183
1935	69.2	27.9	244	411	330	428	407	54.9	11.3	10.9	12.4	1,173	263
1936	223	278	372	1,899	3,503	1,923	*5,905	339	83.3	52.1	52.0	16.4	*1,188
1937	305	222	982	1,175	3,242	1,404	1,719	1,084	74.3	246	215	686	930
1938	186	304	564	1,027	473	319	2,068	296	664	522	423	45.1	573
1939	226	147	401	430	1,365	4,164	557	331	263	210	460	397	745
1940	197	64.4	186	585	1,561	1,041	661	99.4	216	18.5	143	54.1	398
1941	10.5	19.5	201	334	333	972	906	71.0	180	338	933	149	625
1942	18.7	28.2	800	1,953	1,199	5,341	1,254	406	739	1,174	1,100	364	1,205
1943	46.5	45.4	326	591	931	1,653	1,173	442	115	653	86.2	44.6	507
1944	17.6	25.1	170	1,251	1,826	3,368	1,749	881	70.6	12.3	13.7	8.6	780
1945	36.1	17.8	286	331	665	663	354	367	134	177	953	7,258	941
1946	1,225	528	2,074	3,608	1,629	1,329	1,074	981	171	58.9	389	131	1,102
1947	450	458	506	983	568	1,253	3,149	461	196	437	951	414	818
1948	338	350	3,716	1,953	5,067	4,277	2,678	503	370	127	93.5	84.5	1,857
1949	1,009	1,196	4,809	1,652	2,773	1,253	688	746	468	307	416	1,523	1,397
1950	179	398	529	656	611	905	462	137	60.2	227	99.6	851	425

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	0.33	-
1930	0.71	0.51	1.66	3.15	2.01	1.96	1.02	0.22	0.17	0.33	0.14	0.07	11.95
1931	.19	.47	1.26	2.05	.84	.72	.78	*.91	.08	.31	.09	.04	*7.74
1932	*.008	*.004	.04	.46	.67	1.08	.40	.13	.11	.06	.57	.23	3.76
1933	.72	1.40	1.68	1.76	2.67	1.26	.39	.11	.02	.19	.08	.37	10.65
1934	.03	.02	.04	.11	.26	4.0	.25	.05	.40	.04	.05	.32	1.97
1935	.06	.02	.22	.38	.27	.39	.36	.05	.01	.01	.01	1.04	2.82
1936	.20	.25	.34	1.74	2.83	1.76	*5.23	.31	.07	.05	.05	.01	*12.84
1937	.28	.20	.90	1.08	2.68	1.28	1.52	.99	.07	.22	.20	.61	10.03
1938	.17	.27	.52	.94	.39	.29	1.83	.27	.59	.48	.39	.04	6.18
1939	.21	.13	.37	.59	1.12	3.80	.49	.30	.23	.19	.42	.35	8.00
1940	.18	.06	.17	.53	1.34	.95	.59	.09	.19	.02	.13	.05	4.30
1941	.01	.02	.18	.31	.28	.89	.80	.06	.16	3.03	.85	.13	6.72
1942	.02	.02	.73	1.79	.99	4.89	1.12	.37	.65	1.07	1.01	.32	12.98
1943	.04	.04	.30	.54	.77	1.51	1.04	.40	.10	.60	.08	.04	5.46
1944	.02	.02	.16	1.14	1.56	3.08	1.55	.81	.06	.01	.01	.008	8.43
1945	.03	.16	.26	.30	.55	.61	.31	.34	.12	.16	.87	6.43	10.14
1946	1.12	.47	1.90	3.30	1.34	1.21	.95	.90	.15	.05	.36	.12	11.87
1947	.41	.41	.46	.90	.47	1.15	2.79	.42	.17	.40	.87	.37	8.82
1948	.31	2.88	3.40	1.79	4.34	3.91	2.38	.46	.33	.12	.09	.07	20.08
1949	.92	1.06	4.40	1.51	2.29	1.15	.61	.68	.41	.28	.38	1.35	15.04
1950	.16	.35	.48	.60	.29	.83	.41	.13	.05	.21	.09	.75	4.56

* Revised.

217. Catawba River near Old Fort, N. C.

Location.--Lat 35°38'20", long 82°08'10", at highway bridge a quarter of a mile upstream from Brevard Creek, 1 mile downstream from Curtis Creek, and 2 miles east of Old Fort, McDowell County.

Drainage area.--57.1 sq mi.

Gage.--Staff gage. Altitude of gage is 1,350 ft (from topographic map).

Extremes.--1930-31: Maximum discharge observed, 870 cfs Apr. 4, 1931 (gage height, 3.40 ft); minimum, 16 cfs Sept. 3 and Oct. 20, 1930 (gage height, 0.64 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	-	27.9
1931	20.5	43.5	*55.2	67.1	42.4	76.9	160	82.3	44.7	56.8	-	-	-

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	0.55	-
1931	0.41	0.85	*1.11	1.36	0.77	1.56	3.12	1.66	0.87	1.15	-	-	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Maximum observed		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	-	-	-	-	-	-
1931	712,1503	870	Apr. 4, 1931	-	-	-	-	-	-

218. Catawba River near Marion, N. C.

Location (revised).--Lat 35°42'20", long 82°02'10", on right bank 15 ft downstream from bridge on U. S. Highway 221, 0.2 mile downstream from Tom Creek, and 2.2 miles northwest of Marion, McDowell County. Records include flow of small tributary which enters above control.

Drainage area.--171 sq mi (includes area of small tributary which enters above control).

Supplemental records available.--Records of chemical analyses for the period October 1945 to September 1946 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 1,208 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--9 years (1941-50), 345 cfs.

Extremes.--1941-50: Maximum discharge, 19,700 cfs Aug. 28, 1949 (gage height, 15.02 ft), from rating curve extended above 10,000 cfs on basis of logarithmic plotting and contracted-opening determinations at gage heights 15.02 and 19.34 ft; minimum, 69 cfs Dec. 17, 1943, Sept. 8-11, 1944.

Maximum stage known, 19.34 ft Aug. 13, 1940 (discharge, 71,400, from rating curve extended above 10,000 cfs as explained in preceding paragraph).

Remarks.--Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	90.9	131	279	215	360	479	241	636	380	309	358	361	322
1943	210	184	445	526	449	360	440	351	253	393	191	129	323
1944	107	127	136	224	368	547	437	275	169	189	139	177	241
1945	240	163	214	238	323	289	376	338	216	211	168	562	277
1946	313	269	445	694	583	569	419	362	239	237	154	123	367
1947	170	177	149	464	213	262	270	177	165	176	156	125	209
1948	441	631	254	223	511	430	355	224	200	407	431	486	382
1949	239	655	515	449	473	418	572	548	644	669	1,052	504	562
1950	557	528	385	385	386	524	320	276	308	228	196	927	418

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	0.61	0.85	1.88	1.45	2.19	3.23	1.57	4.28	2.48	2.09	2.42	2.49	25.54
1943	1.42	1.20	3.00	3.55	2.74	2.43	2.87	2.37	1.65	2.65	1.29	.84	26.01
1944	.72	.83	.91	1.51	2.32	3.69	2.85	1.85	1.10	1.27	.94	1.15	19.14
1945	1.62	1.06	1.44	1.61	1.97	1.95	2.45	2.28	1.41	1.42	1.13	3.67	22.01
1946	2.11	1.75	3.00	4.68	3.55	3.84	2.74	2.44	1.56	1.60	1.04	.81	29.12
1947	1.15	1.16	1.00	3.13	1.30	1.76	1.76	1.19	1.07	1.19	1.05	.82	16.58
1948	2.98	4.12	1.71	1.50	3.22	2.90	2.31	1.51	1.30	2.75	2.91	3.17	30.38
1949	1.61	4.28	3.47	3.02	2.88	2.82	3.73	3.69	4.20	4.51	7.09	3.29	44.59
1950	3.76	3.44	2.60	2.60	2.35	3.53	2.09	1.86	2.01	1.54	1.32	6.05	35.15

SANTÉE RIVER BASIN

Yearly discharge, in cubic feet per second, of Catawba River near Marion, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952,1032	6,300	May 15, 1942	70	322	1.88	25.54	350	27.82
1943	972	4,260	Dec. 29, 1942	90	328	1.92	26.01	288	22.85
1944	1002	3,560	Sept. 30, 1944	69	241	1.41	19.14	261	20.80
1945	1032	8,210	Sept. 18, 1945	108	277	1.62	22.01	312	24.75
1946	1052	4,420	Feb. 10, 1946	109	367	2.15	29.12	322	25.57
1947	1082	3,240	Jan. 20, 1947	74	209	1.22	16.56	278	22.08
1948	1112	6,790	Sept. 6, 1948	87	382	2.23	30.58	390	30.93
1949	1142	19,700	Aug. 28, 1949	191	562	3.29	44.59	567	45.03
1950	1172	7,630	Sept. 8, 1950	129	418	2.44	33.15	-	-

219. Linville River at Branch, N. C. 1/

Location.--Lat 35°47'50", long 81°53'20", on right bank 20 ft downstream from bridge on State Highway 126 at Branch, Burke County, and 0.2 mile upstream from Lake James.

Drainage area.--65 sq mi, approximately. At site used 1907-8, 66 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 1,205.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 1907 to December 1908, staff gage at site at Fonta Flora, 1.2 miles downstream at different datum. June 1922 to Aug. 12, 1937, staff gage at present site and datum.

Average discharge.--28 years (1922-50), 143 cfs (revised).

Extremes.--1907-8; 1922-50: Maximum discharge, 39,500 cfs Aug. 13, 1940 (gage height, 11.4 ft), from rating curve extended above 6,400 cfs on basis of slope-area determination of peak flow; minimum, 3 cfs Jan. 2, 1940, result of freezeup; minimum daily, 8 cfs Sept. 7-9, 1925.

Flood of July 1916 reached a stage about 0.4 ft lower than that of Aug. 13, 1940.

Remarks.--Occasional slight diurnal fluctuation caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	*81.0	-	-
1908	*70.6	*118	-	-	-	-	-	*185	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	136	80.2	50.3	-
1923	85.0	42.4	93.6	155	189	227	129	310	144	143	96.4	91.6	142
1924	45.7	68.5	125	331	152	241	274	148	81.3	156	65.1	*263	*163
1925	131	68.3	*173	185	121	102	85.8	117	49.8	45.0	15.5	13.8	*92.3
1926	26.6	59.6	44.6	153	200	138	170	58.7	33.9	*77.6	106	79.3	*94.9
1927	48.9	163	189	*123	181	197	156	83.0	113	73.8	43.5	37.0	117
1928	76	159	240	124	108	139	231	234	128	117	524	*321	*200
1929	168	101	71.4	118	194	411	132	194	143	91.4	64.1	268	163
1930	*372	257	133	113	104	135	94.0	72.3	44.6	23.0	42.5	39.0	*119
1931	27.5	60.4	92.4	111	62.9	125	283	115	61.5	95.1	127	58.6	102
1932	27.7	27.8	112	234	164	156	127	148	82.7	31.6	35.8	26.6	97.6
1933	268	183	242	172	206	141	299	165	68.2	115	119	89.4	172
1934	50.6	49.1	44.3	66.1	66.9	286	199	69.9	194	102	104	99.7	111
1935	141	212	183	366	142	273	190	96.0	61.0	104	152	209	178
1936	56.0	130	104	380	225	274	316	107	57.8	45.3	69.3	54.3	152
1937	433	96.1	165	443	177	107	123	126	64.0	46.0	118	132	170
1938	277	182	122	127	139	167	98.6	88.2	109	278	200	52.7	152
1939	33.7	157	79.4	181	355	190	115	84.7	95.2	113	156	50.4	135
1940	34.5	32.1	30.9	31.8	90.7	144	249	76.2	127	86.7	1,084	140	178
1941	53.4	62.2	156	104	60.8	97.7	116	48.9	33.7	238	49.3	31.0	68.1
1942	20.8	36.1	108	88.5	181	277	92.8	314	266	81.3	97.5	285	154
1943	103	80.3	223	222	213	160	211	174	123	227	60.5	37.9	153
1944	31.8	44.0	39.3	79.5	175	241	154	96.8	84.2	57.1	40.7	63.6	91.9
1945	123	83.4	110	154	185	149	202	228	78.9	91.2	74.7	473	162
1946	153	121	174	399	226	277	152	168	70.0	80.8	41.5	33.1	158
1947	75.2	55.8	47.1	228	86.5	142	189	61.7	54.9	55.8	126	72.2	98.1
1948	396	391	101	76.6	263	221	165	74.9	71.4	110	110	205	181
1949	77.2	348	212	145	156	168	245	226	257	332	473	152	233
1950	153	180	127	117	173	197	109	83.5	81.4	59.7	57.0	326	138

* Revised.

* Not previously published; computed from records of daily discharge.

1/ Published 1907-8 as "a Fonta Flora."

Monthly and yearly runoff, in inches, of Linville River at Branch, N. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1907	-	-	-	-	-	-	-	-	-	-	-	-	-
1908	*1.23	*2.00	-	-	-	-	-	*3.20	-	-	-	*1.41	-
1922	-	-	-	-	-	-	-	-	-	2.41	1.42	0.86	-
1923	1.51	.73	1.66	2.74	3.03	4.02	2.21	5.50	2.48	2.54	1.71	1.57	29.70
1924	.81	1.17	2.21	5.87	2.52	4.28	4.71	2.63	1.40	2.77	1.15	*4.51	*34.03
1925	2.33	1.17	*3.07	3.29	1.94	1.81	1.44	2.08	.85	.80	.27	.24	*19.29
1926	.47	1.02	.79	2.71	3.21	2.44	2.92	1.04	.58	*1.38	1.88	1.36	*19.80
1927	.87	2.80	3.36	*2.18	2.90	3.49	2.68	1.48	1.94	1.31	.77	.65	*24.41
1928	1.35	2.73	4.25	2.20	1.79	2.47	3.96	4.15	2.20	2.08	9.29	*5.51	41.98
1929	2.97	1.73	1.27	2.10	1.30	7.29	2.26	3.44	2.46	1.63	1.14	4.60	33.99
1930	*6.60	4.41	2.34	2.01	1.67	2.40	1.62	1.28	.77	.41	.75	.67	*24.93
1931	.49	1.04	1.64	1.97	1.01	2.21	4.85	2.04	1.06	1.68	2.25	1.01	21.25
1932	.49	.48	1.98	4.15	2.72	2.77	2.18	2.63	1.42	.56	.60	.46	20.44
1933	4.75	3.15	4.29	3.06	3.30	2.50	5.13	2.93	1.17	2.04	2.11	1.54	35.97
1934	.90	.84	.79	1.18	1.07	5.07	3.41	1.24	3.32	1.81	1.84	1.71	23.18
1935	2.50	3.64	3.25	6.49	2.27	4.84	3.26	1.71	1.05	1.84	2.70	3.59	37.14
1936	.99	2.23	1.84	6.74	3.73	4.86	5.42	1.90	.99	.80	1.23	.93	31.66
1937	7.68	1.65	2.93	7.86	2.83	1.90	2.11	2.24	1.10	.82	2.10	2.26	35.48
1938	4.91	2.78	2.17	2.25	2.23	2.96	1.70	1.57	1.87	4.93	3.55	.90	31.82
1939	.60	2.70	1.41	3.20	5.69	3.37	1.98	1.50	1.63	2.05	2.77	.86	27.72
1940	.61	.55	.55	.56	1.51	2.55	4.28	1.35	2.18	1.54	19.23	2.41	37.32
1941	.95	1.07	2.77	1.84	.97	1.73	2.00	.87	.58	4.22	.87	.53	18.40
1942	.37	.62	1.32	1.57	2.89	4.90	1.59	5.57	4.57	1.44	1.73	4.89	*32.06
1943	1.82	1.38	3.96	3.95	3.41	2.83	3.82	3.08	2.11	4.03	1.07	.65	31.91
1944	.56	.75	.70	1.41	2.90	4.28	2.64	1.72	1.44	1.01	.72	1.09	19.22
1945	2.18	1.43	1.96	2.73	2.96	2.63	3.47	4.04	1.35	1.62	1.53	6.11	33.81
1946	2.72	2.07	3.08	7.08	3.61	4.92	2.61	2.98	1.20	1.43	.74	.57	33.01
1947	1.33	.96	.64	4.05	1.39	2.52	2.90	1.10	.94	.99	2.24	1.24	20.50
1948	7.02	6.71	1.79	1.36	4.36	3.92	2.83	1.33	2.13	1.94	1.96	3.51	37.96
1949	1.37	5.97	3.76	2.56	2.50	2.96	4.20	4.00	4.41	5.89	8.59	2.60	48.83
1950	2.71	3.09	2.25	2.07	2.78	3.49	1.68	1.48	1.40	1.08	1.01	5.60	28.82

* Revised.
 † Corrected.
 ‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	242	-	-	50	-	-	-	-	-
1908	242	-	-	-	-	-	-	-	-
1922	542	-	-	-	-	-	-	-	-
1923	562	*3,380	May 29, 1923	31	142	2.18	29.70	144	29.99
1924	582,1503	*5,790	Jan. 11, 1924	26	*163	*2.51	*34.03	*174	*36.41
1925	602,1503	*2,180	Dec. 8, 1924	8	*92.3	*1.42	*19.29	71.9	15.00
1926	622,1503	*2,180	Jan. 18, 1926	10	*94.9	*1.46	*19.80	*116	*24.55
1927	642,1503	2,350	Nov. 16, 1926	23	117	*1.80	*24.41	*123	*25.71
1928	662,1503	8,350	Aug. 15, 1928	23	*200	*3.08	*41.98	*189	*39.62
1929	682, 892	6,000	Sept. 28, 1929	28	163	2.51	33.99	*198	*41.37
1930	697,1503	*3,550	Oct. 22, 1929	13	*119	*1.83	*24.93	70.4	14.75
1931	712	1,810	Apr. 22, 1931	19	102	1.57	21.25	101	21.03
1932	727	*1,470	May 1, 1932	10	97.6	1.50	20.44	142	29.68
1933	742	*6,910	Oct. 16, 1932	21	172	2.65	35.97	126	26.31
1934	757	1,700	Mar. 27, 1934	28	111	1.71	23.18	144	30.04
1935	782, 892	10,000	Jan. 9, 1935	44	178	2.74	37.14	157	32.81
1936	802	2,250	Jan. 19, 1936	30	152	2.34	31.66	186	38.86
1937	822, 892	10,400	Oct. 16, 1936	31	170	2.62	35.48	158	33.06
1938	852	*4,090	Oct. 19, 1937	36	152	2.34	31.82	128	26.67
1939	872	*4,380	July 9, 1939	30	133	2.05	27.72	118	24.72
1940	892	39,500	Aug. 13, 1940	15	178	2.74	37.32	193	40.40
1941	922	2,420	July 7, 1941	21	88.1	1.35	18.40	79.1	16.52
1942	952	4,700	Sept. 6, 1942	14	154	2.37	*32.06	174	36.31
1943	972	2,900	Dec. 30, 1942	23	155	2.35	31.91	128	26.76
1944	1002	1,360	Sept. 30, 1944	16	91.9	1.41	19.22	109	22.78
1945	1032	7,420	Sept. 17, 1945	26	162	2.49	33.61	173	36.11
1946	1052	3,380	Jan. 8, 1946	22	158	2.43	33.01	135	28.27
1947	1082	1,620	Jan. 20, Aug. 3	23	98.1	1.51	20.50	157	32.89
1948	1112	4,040	Nov. 2, 1947	29	161	2.78	37.96	160	33.54
1949	1142	10,400	Aug. 28, 1949	47	233	3.58	48.63	218	45.58
1950	1172	5,100	Sept. 9, 1950	28	138	2.12	28.82	-	-

* Revised.
 † Corrected.
 Note.--Records for October to December 1908 published in WSP 242 have been found in error on the basis of restudy of the original data and comparison with records at nearby stations. Those records are not published herein and should not be used.

220. Catawba River near Morganton, N. C.

Location (revised).--Lat 35°46'20", long 81°41'20", at bridge on highway from Morganton to Hartland, about 600 ft downstream from Warrior Fork, 2 miles upstream from Johns River, and 2 miles north of Morganton, Burke County.

Drainage area.--677 sq mi (revised).

Gage.--Chain gage. Altitude of gage was about 980 ft (from river-profile). Prior to May 6, 1903, wire-weight gage at same site at altitude about 0.5 ft higher.

Average discharge.--5 years (1903-8), 1,631 cfs.

Extremes.--1903-8: Maximum stage, 23.0 ft Aug. 26, 1908, from graph based on gage readings (discharge not determined); minimum daily discharge, 280 cfs Oct. 17, 1904. Flood of May 1901 is reported to have reached a stage from 8 to 15 ft higher than a flood which occurred sometime prior to June 1900, which reached a stage of about 28 ft.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	1,092	597	734	-
1901	1,698	1,562	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	†1,334	*3,170	1,100	*1,035	770	-
1904	735	674	579	643	915	1,759	846	*1,734	1,333	711	1,293	639	*990
1905	338	515	679	*1,361	*1,497	*1,119	*923	*2,112	*1,373	*3,070	*2,060	670	*1,313
1906	*679	*476	*1,692	*3,358	1,730	1,870	*1,768	1,180	2,680	*2,100	*4,600	*2,900	*2,091
1907	*5,200	*3,700	*2,300	*1,764	1,150	1,350	1,210	1,090	2,120	1,170	654	1,320	*1,923
1908	585	942	*2,258	2,480	2,770	2,050	1,480	1,540	1,250	1,650	*3,820	al,200	*1,838
1909	a2,058	al,309	1,480	2,070	al,947	a2,215	al,619	a4,400	3,600	-	-	-	-

* Revised.

† Not previously published; estimated or partly estimated on basis of records for Yadkin River at North Wilkesboro and other nearby streams.

a Only monthly figures revised; revised daily figures not available Sept. 1-30, Oct. 11 to Nov. 13, 1908, Feb. 16 to Mar. 6, Apr. 16 to May 10, 1909.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	1.86	1.02	1.21	-
1901	2.89	2.57	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	*2.27	*5.22	1.87	*1.76	1.27	-
1904	1.25	1.11	0.99	1.10	1.46	3.00	1.39	*2.95	2.20	1.21	2.20	1.05	*19.91
1905	.58	.85	1.16	*2.32	*2.30	*1.91	*1.52	*3.60	*2.26	*5.23	*3.51	1.10	*26.34
1906	*1.16	*.79	*2.88	*5.72	2.65	3.19	*2.91	2.01	4.42	*3.58	*7.83	*4.78	*41.92
1907	*8.86	*6.10	*3.92	*3.00	1.77	2.29	2.00	1.85	3.49	1.99	1.13	2.17	*38.57
1908	1.00	1.55	*3.85	4.22	4.41	3.49	2.44	2.62	2.07	2.82	*6.51	*1.98	*36.96
1909	*3.51	*2.16	2.53	3.53	*2.99	*3.77	*2.67	*7.49	5.94	-	-	-	-

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1900	83	-	-	-	-	-	-	-	-
1901	83	-	-	-	-	-	-	-	-
1903	98,1503	-	-	-	-	-	-	-	-
1904	127,1503	-	-	-	339	*990	*1.46	*19.91	*952
1905	166,1503	-	-	-	280	*1,313	*1.94	*26.34	*1,425
1906	204,1503	-	-	-	435	*2,091	*3.09	*41.92	*2,791
1907	242	-	-	-	435	*1,923	*2.84	*38.57	*1,301
1908	242,1503	-	-	-	510	*1,838	*2.71	*36.96	*1,927
1909	262	-	-	-	-	-	-	-	-

* Revised.

† Not previously published.

221. Wilson Creek near Adako, N. C.

Location.--Lat 35°55'10", long 81°44'00", 2½ miles northwest of Adako, Caldwell County, 3 miles upstream from mouth, 3½ miles west of Collettsville, and 4½ miles downstream from Harper Creek.

Drainage area.--66 sq mi, approximately.

Gage.--Staff gage. Datum of gage is 1,144.00 ft above mean sea level (levels by Tucker and Laxton, Inc.).

Extremes.--1921-22: Maximum stage observed, 6.1 ft Mar. 27, 1922 (discharge not determined; figure published in WSP 542 is unreliable and should not be used); minimum discharge, 52 cfs Oct. 21-27, 1921 (gage height, 1.30 ft).

Flood of Aug. 13, 1940, reached a stage of 36.5 ft, from floodmarks (discharge 99,000 cfs, from rating curve based on slope-area determination of peak flow). Flood of July 1916 reached a stage of about 27.0 ft (discharge, 52,500 cfs, from rating curve extended down from the slope-area determination at stage 36.5 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	-	-	-	-	-	-	-	-	-	-	112	90.4	-
1922	81.9	119	113	110	141	206	165	207	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	-	-	-	-	-	-	-	-	-	-	1.96	1.53	-
1922	1.43	2.01	1.97	1.92	2.23	3.60	2.79	3.62	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1921	522	-	-	-	70	-	-	-	-	-
1922	542	-	-	-	52	-	-	-	-	-

222. Johns River near Morganton, N. C. 1/

Location (revised).--Lat 35°47'30", long 81°40'30", at bridge on highway from Morganton to Lenoir, 1½ miles upstream from mouth and 3¼ miles north of Morganton, Burke County.

Drainage area.--213 sq mi.

Supplemental records available.--March 1901 to June 1906, periodic discharge measurements only.

Gage.--Wire gage. Altitude of gage was about 990 ft (from topographic map).

Extremes.--1900-1901: Maximum stage recorder, 20.5 ft May 22, 1901 (discharge not determined; previously published discharge is unreliable and should not be used); minimum daily discharge recorded, 80 cfs Sept. 10-13, 1900.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	†341	-	-	-
1901	-	391	455	502	352	-	-	-	1,426	*689	-	†886	-
1902	531	419	-	-	-	-	-	-	-	-	-	-	-

* Revised.
† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	†1.85	-	-	-
1901	-	2.05	†2.46	2.72	1.72	-	-	-	7.47	*3.73	-	†4.64	-
1902	2.87	2.19	-	-	-	-	-	-	-	-	-	-	-

* Revised.
† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1900	83	-	-	-	a80	-	-	-	-	-
1901	83,1503	-	-	-	95	-	-	-	-	-
1902	83	-	-	-	-	-	-	-	-	-

a Minimum observed during period June to September.
Note.--Records of daily discharge above 4,500 cfs, published in WSP 83, have been found unreliable on basis of restudy of the original data. Those records should not be used.

1/ Previously published as John River.

223. Catawba River at Rhodhiss, N. C.

Location.--Lat 35°46'10", long 81°25'50", on highway bridge at Rhodhiss, Caldwell County, 300 ft downstream from tailraces of Rhodhiss Manufacturing Co.'s mills, 1,000 ft downstream from dam, and 1½ miles south of Granite Falls.

Drainage area.--1,090 sq mi (revised), approximately.

Gage.--Chain gage. Altitude of gage was 930 ft (from topographic map).

Extremes.--1917-20: Maximum gage height observed, 19.2 ft Oct. 26, 1918 (discharge previously published in WSP 502 is unreliable and should not be used); minimum gage height observed, 0.2 ft Nov. 16-17, Dec. 6, 1919, result of regulation (discharge previously published in WSP 502 is unreliable and should not be used).

Flood of May 22, 1901, reached a stage of 31.03 ft (discharge not determined).
Flood of July 16, 1916, reached a stage of 43.4 ft (discharge not determined).

Remarks.--Some regulation at times during low flows from storage in Rhodhiss Manufacturing Co.'s pond. Considerable regulation beginning in January 1919 by Lake James about 25 miles upstream (usable capacity, 12,582,001,080 cu ft).

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	-	1,410	1,210	1,920	1,130	1,770	-
1918	1,180	974	921	2,460	2,230	1,320	2,250	1,730	1,390	1,400	1,340	1,060	1,520
1919	-	2,980	5,070	3,450	2,480	3,740	2,420	3,500	2,880	4,340	1,820	1,080	3,240
1920	1,250	1,380	1,340	1,610	1,430	1,750	-	-	-	-	-	-	-

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	-	1.49	1.24	2.03	1.20	1.81	-
1918	1.24	1.00	0.97	2.61	2.13	1.39	2.30	1.83	1.42	1.48	1.42	1.08	18.87
1919	-	3.05	5.36	3.65	2.37	3.96	2.48	3.70	2.95	4.59	1.93	1.11	40.40
1920	1.32	1.41	1.41	1.70	1.42	1.85	-	-	-	-	-	-	-

Year	W.S.P. no.	Yearly discharge, in cubic feet per second							Calendar year			
		Water year ending Sept. 30					Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Maximum observed		Date	Discharge	Date						
1917	452	(a)	-				-	-	-	-	-	-
1918	472	10,100	Jan. 29, 1918	600	1,520	1.39	18.87	2,360	29.33			
1919	502	(a)	-	630	3,240	2.97	40.40	2,480	30.88			
1920	502	b, 280	Mar. 29, 1920	-	-	-	-	-	-			

a Not determined; previously published figures are not reliable and should not be used.

b Maximum during period Oct. 1 to Mar. 31.

Note.--Daily discharges above 20,000 cfs and below 600 cfs and monthly figures for October 1918 published in water-supply paper 502 have been found unreliable on basis of restudy of original data and should not be used.

224. Lakes on Catawba River between Marion and Catawba gaging stations, N. C.

Location.--The following four lakes equipped with staff gages are located on the main stem of the Catawba River except that Lake James, with three dams, includes also Paddy Creek and Linville River.

Lake James: Lat 35°44'40", long 81°50'35", 2 miles northeast of Bridgewater, Burke County. Datum of gage is 1,100 ft above mean sea level (levels by Duke Power Co.). Drainage area, 380 sq mi.

Rhodhiss Lake: Lat 35°46'30", long 81°26'25", three-quarters of a mile west of Rhodhiss, Caldwell County, 1½ miles south of Granite Falls. Datum of gage is 895.0 ft above mean sea level (levels by Duke Power Co.). Drainage area, 1,088 sq mi.

Lake Hickory: Lat 35°49', long 81°12', 2 miles upstream from Lower Little River and 7 miles south of Taylorsville, Alexander County. Datum of gage is 835.0 ft above mean sea level (levels by Duke Power Co.). Drainage area, 1,310 sq mi, approximately.

Lookout Shoals Lake: Lat 35°46', long 81°06', 4 miles upstream from bridge on U. S. Highways 64 and 70 and 4¼ miles north of Catawba, Catawba County. Datum of gage is 738.0 ft above mean sea level (levels by Duke Power Co.). Drainage area, 1,449 sq mi.

Remarks.--All four lakes are used for hydroelectric power development. Lake James was first put in operation May 5, 1919, and has a usable capacity of 12,582,001,080 cu ft below gage height 100.0 ft (crest of spillways). Rhodhiss Lake was first put in operation Feb. 18, 1925, and has a usable capacity of 1,717,004,520 cu ft between gage heights 85.0 ft and 100.0 ft (crest of spillway). Lake Hickory was first put in operation Apr. 5, 1928, and has a usable capacity of 2,277,970,200 cu ft between gage heights 85.0 ft and 100.0 ft (top of flood gates in closed position). Lookout Shoals Lake was first put in operation Dec. 2, 1915, and has a usable capacity of 473,976,360 cu ft between gage heights 90.0 ft and 100.0 ft (crest of spillway).

Cooperation.--Records furnished by Duke Power Co.

Monthly and yearly change in contents, equivalent in cubic feet per second, of Lakes on Catawba River between Marion and Catawba gaging stations, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	-1,744	-377	-280	+2,509	+877	+1,330	-99	-654	-361	+12	+663	-877	+86
1937	+672	-2,002	+1,225	+1,292	-245	-636	+135	-131	-236	-224	+825	-1,300	-25
1938	+1,049	-563	-684	-416	-708	+467	-190	+15	+115	-594	+9	-50	+62
1939	-622	-24	-774	+850	+1,800	-891	-564	-527	-318	+594	+728	-601	-42
1940	-268	-476	-85	-76	+729	+489	+320	-876	+275	-103	+1,977	-1,800	+9
1941	-568	-100	+382	+3	-110	+502	+86	-271	-133	+1,268	+209	-578	+45
1942	-1,055	-269	+269	+465	+704	+432	-321	+175	+34	-181	+302	-108	+34
1943	-563	-139	+1,059	+52	-805	+195	+84	-128	+52	-18	-208	-177	-45
1944	-219	-161	-154	+351	+259	-811	-137	-306	-89	+90	-325	+544	+54
1945	-453	-368	+249	-22	+552	-618	+571	-346	-86	+467	-501	+642	+1
1946	-272	-344	+871	-911	+62	+145	+118	-183	-244	+121	-304	-532	-123
1947	-246	-198	-178	-1,362	-47	+522	+199	-256	+182	-245	-420	-777	-7
1948	+1,319	+352	-162	-466	+845	+178	-297	-179	-156	-79	+392	-20	+125
1949	-675	+1,153	-101	-565	+248	+69	-5	+12	-89	+186	+328	-971	-37
1950	+645	-1,168	+47	-234	-298	+738	-85	+116	+30	+591	-638	+747	+23

225. Catawba River at Catawba, N. C.

Location.--Lat 35°43', long 81°04', on right bank at downstream side of bridge on U. S. Highway 64 and 70, half a mile upstream from Lyle Creek, five-eighths of a mile upstream from Southern Railway bridge, and 1 mile northeast of Catawba, Catawba County. Records include flow of Lyle Creek.

Drainage area.--1,535 sq mi, includes that of Lyle Creek.

Supplemental records available.--Records of chemical analyses for period October 1945 to September 1946 are published in report of Geological Survey. April 1901 to April 1902, gage heights only for site at Southern Railway bridge (the discharge measurements made during this period and discharge previously published for part of this period have been found to be unreliable and should not be used).

Gage.--Water-stage recorder. Datum of gage is 746.49 ft above mean sea level, datum of 1939, supplementary adjustment of 1936. July 1896 to April 1902, wire-weight gage at railway bridge five-eighths of a mile downstream at different datum.

Average discharge.--18 years (1896-99, 1935-50), 2,451 cfs (unadjusted, revised).

Extremes.--1896-1901, 1934-50: Maximum discharge, 177,000 cfs Aug. 14, 1940 (gage height, 36.8 ft, from floodmarks), from rating curve extended above 24,000 cfs on basis of computation by Duke Power Co. of peak flow over dam; minimum, 107 cfs Nov. 9, 1941; minimum daily, 115 cfs Dec. 10, 1939, Sept. 14, 1941.

Maximum stage known, 44.1 ft July 16, 1916, affected by failure of earth dike at Lookout Shoals Dam 4 miles above station, from information furnished by State Highway and Public Works Commission.

Remarks.--Flow regulated by Lake James since May 1919, Rhodhiss Lake since February 1925, Lake Hickory since April 1928, and Lookout Shoals Lake since December 1915 (see p. 238).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	\$4,717	\$1,355	\$1,265	-
1897	*970	*2,566	*2,703	*1,925	*7,623	*6,223	*6,060	*3,194	*2,185	*2,294	*1,608	*1,037	*3,165
1898	*2,043	*1,458	*1,268	*1,907	*1,182	*2,022	*1,729	*1,397	*1,092	*3,212	*4,998	*6,813	*2,433
1899	*7,302	*2,539	*3,048	*4,163	*8,864	*14,280	*6,279	*3,921	*2,521	*1,817	*1,581	*1,588	*4,815
1900	*1,311	*1,311	*2,595	-	-	-	-	-	-	*1,860	*1,118	*1,691	-
1901	\$3,970	\$3,112	\$3,983	*4,865	*3,096	*6,485	-	-	-	-	-	-	-
1935	-	-	2,459	-	-	-	-	-	-	1,955	2,154	2,134	-
1936	2,780	2,338	1,681	4,180	2,750	2,497	5,393	2,328	1,504	1,184	1,422	2,050	2,504
1937	3,957	3,043	2,124	6,168	3,668	2,990	2,534	2,306	1,851	1,549	1,275	3,357	2,898
1938	3,775	2,771	2,776	2,630	2,788	2,100	2,010	1,670	1,797	1,547	2,363	1,107	2,260
1939	1,382	1,493	2,078	1,323	3,723	3,808	2,474	2,003	1,631	1,172	1,625	1,447	2,006
1940	994	1,174	1,002	1,078	1,166	1,189	1,841	1,991	966	1,115	8,077	3,396	2,005
1941	1,530	1,422	1,490	1,599	1,296	1,309	1,905	1,303	1,060	3,078	1,134	1,202	1,531
1942	1,612	1,198	1,345	1,027	2,077	2,980	1,873	3,178	2,325	1,670	1,621	3,046	1,994
1943	1,798	1,249	2,148	3,761	3,673	2,343	2,814	2,522	1,741	3,630	1,494	1,033	2,347
1944	971	1,180	1,209	1,533	2,643	3,237	2,877	2,013	1,194	1,454	1,194	1,361	1,735
1945	2,595	1,867	1,376	1,818	2,100	2,702	1,730	2,459	1,205	783	1,524	4,711	2,069
1946	1,955	1,983	2,405	5,766	3,881	3,347	2,277	2,827	1,782	1,621	1,547	1,540	2,574
1947	1,461	1,502	1,293	2,181	1,447	1,598	1,862	1,611	2,631	1,368	1,508	1,808	1,688
1948	2,080	3,866	1,873	2,188	3,350	3,338	3,343	2,030	1,848	1,611	2,720	2,371	2,544
1949	1,952	3,164	3,555	3,296	2,838	2,666	3,420	3,311	2,827	3,426	5,253	3,529	3,274
1950	2,319	3,955	2,073	2,378	2,694	2,594	1,956	2,001	1,814	1,250	1,978	2,308	2,271

* Revised.

† Not previously published; computed from gage-height record or estimated or partly estimated on basis of record for stations on nearby streams.

SANTEE RIVER BASIN

Monthly and yearly runoff, in inches, of Catawba River at Catawba, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	*3.54	*1.02	*0.92	-
1897	*0.73	*1.86	*2.03	*1.45	*5.17	*4.67	*4.40	*2.40	*1.59	*1.72	*1.21	*.75	*27.98
1898	*1.53	*1.06	*.95	*1.43	*.80	*1.52	*1.26	*1.05	*.79	*2.41	*3.75	*4.95	*21.50
1899	*5.48	*1.89	*2.29	*3.13	*6.01	*10.73	*4.56	*2.94	*1.83	*1.37	*1.19	1.15	*42.57
1900	*.98	*.95	*1.95	-	-	-	-	-	-	*1.40	*.84	-	*12.23
1901	*2.98	*2.26	*2.99	*3.65	*2.10	*4.87	-	-	-	-	-	-	-

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30									Calendar year			
		Observed						Adjusted/			Observed	Adjusted/		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches			
		Discharge	Date											
1896	1503	-	-	-	-	-	-	-	-	-	-	-	-	-
1897	1503	*65,000	Apr. 5, 1897	*773	*3,615	-	*2.06	*27.98	*3,043	-	-	-	*26.90	
1898	1503	*79,000	Sept. 23, 1898	*800	*2,433	-	*1.59	*21.50	*3,125	-	-	-	*27.62	
1899	1503	*89,200	Mar. 19, 1899	*1,120	*4,815	-	*3.14	*42.57	*4,161	-	-	-	*36.79	
1900	1503	-	-	-	-	-	-	-	-	-	-	-	-	
1901	1503	-	-	-	-	-	-	-	-	-	-	-	-	
1935	782	17,000	Jan. 10, 1935	-	-	-	-	-	-	-	-	-	-	
1936	802, 892	38,900	Jan. 19, 1936	136	2,504	2,590	1.69	22.96	2,699	3,001	26.61			
1937	822, 892	31,800	Oct. 17, 1936	136	2,898	2,873	1.87	25.41	2,915	2,861	25.30			
1938	852, 892	38,000	Oct. 20, 1937	148	2,260	2,322	1.51	20.54	1,893	1,849	16.36			
1939	872	13,600	Feb. 28, 1939	136	2,006	1,964	1.28	17.37	1,656	1,665	16.49			
1940	892	177,000	Aug. 14, 1940	115	2,005	2,014	1.31	17.86	2,112	2,166	19.21			
1941	922	31,200	July 17, 1941	115	1,531	1,576	1.03	13.94	1,507	1,487	13.15			
1942	952	20,600	Sept. 7, 1942	130	1,994	2,028	1.32	17.93	2,082	2,236	19.78			
1943	972	15,800	Dec. 30, 1942	154	2,347	2,302	1.50	20.36	2,191	2,070	18.31			
1944	1002	15,400	Sept. 30, 1944	130	1,735	1,789	1.17	15.86	1,943	1,995	17.89			
1945	1032	60,300	Sept. 18, 1944	133	2,069	2,070	1.35	18.31	2,111	2,182	19.29			
1946	1052	24,200	Jan. 8, 1946	130	2,574	2,451	1.60	21.68	2,398	2,200	19.41			
1947	1082	45,800	June 14, 1947	118	1,688	1,681	1.10	14.93	1,984	2,155	19.00			
1948	1112	31,200	Aug. 3, 1948	130	2,544	2,669	1.74	23.68	2,618	*2,646	*23.47			
1949	1142	31,200	Aug. 29, 1949	130	3,274	*3,273	*22.11	*28.63	3,245	3,142	27.83			
1950	1172	11,500	Nov. 2, 1949	130	2,271	2,294	1.49	20.23	-	-	-			

* Revised.

† Corrected.

‡ Not previously published.

a Adjusted for change in contents in James, Rhodhiss, Hickory, and Lookout Shoals Lakes since 1936. Adjusted figures for 1936-46 are not previously published and supersede unadjusted figures previously published. No regulation 1896-1901.

Note.--Records for April to December 1901, published in WSP 65 and 75, have been found in error on basis of restudy of the original data and comparison with records at nearby stations. Those records are not published herein and should not be used. Monthly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers for the years 1935-41 have been found subject to appreciable error because of storage in lakes upstream. Those figures are not included herein and should not be used. Gage heights for July 2, Aug. 14, Sept. 3-15, Sept. 18 to Oct. 22, and Oct. 27 to Nov. 2, 1900, previously published in WSP 48, have been found unreliable on basis of a restudy of the original data. Those gage heights should not be used.

226. Henry Fork near Henry River, N. C.

Location.--Lat 35°41', long 81°24', on left bank 450 ft (revised) downstream from highway bridge at site of old Link Ford, 1½ miles downstream from Burke-Catawba County line, and 2 miles southeast of village of Henry River, Burke County.

Drainage area.--80 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 890.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1931, at site 450 ft upstream at same datum.

Average discharge.--14 years (1925-31, 1942-50), 128 cfs.

Extremes.--1925-31, 1941-50: Maximum discharge, 15,300 cfs Oct. 2, 1929 (gage height, 18.40 ft, site then in use), from rating curve extended above 2,300 cfs on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft; minimum, 3 cfs Dec. 20, 1942; minimum daily, 4 cfs Nov. 15, Dec. 20, 1942. Maximum stage known, 29.2 ft Aug. 13, 1940, at the highway bridge site, from flood-marks (discharge, 31,300 cfs).

Remarks.--Considerable diurnal fluctuation and some regulation caused by mill above station. A diversion of from 2½ to 5 cfs, made for water supply by city of Morganton and Morganton State Hospital, was discharged into Catawba River.

SANTEE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Henry Fork near Henry River, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	31.7	33.8	-
1926	34.9	55.4	47.9	162	146	99.5	97.1	56.0	34.4	36.1	50.9	27.5	70.2
1927	25.6	47.0	82.0	54.3	123	98.8	66.3	44.8	50.0	50.2	44.0	35.3	59.7
1928	38.1	39.0	160	90.3	114	110	144	121	85.3	72.2	354	239	147
1929	116	77.6	75.6	91.8	255	323	128	120	115	111	81.9	180	139
1930	562	196	131	134	126	128	102	76.7	61.9	36.1	42.4	36.3	137
1931	27.6	50.3	105	110	50.0	107	210	167	57.4	93.0	123	52.6	96.4
1932	34.5	34.8	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	73.7	198	209	93.6	99.4	75.2	77.1	59.5	72.4	-
1943	50.2	47.3	184	193	139	147	178	108	80.6	155	62.6	53.6	117
1944	44.8	60.0	58.6	109	158	285	215	114	85.1	96.3	50.1	114	116
1945	159	82.2	104	111	172	129	121	89.0	57.4	86.2	70.8	594	147
1946	89.7	87.1	224	310	281	223	157	188	110	96.1	78.7	66.6	159
1947	87.6	85.3	68.8	209	78.9	125	121	77.1	392	73.7	59.1	56.5	119
1948	215	256	116	128	291	230	200	127	99.4	71.8	275	101	175
1949	75.7	274	203	165	226	164	195	196	120	203	253	134	184
1950	206	163	105	111	128	205	111	87.5	93.7	74.5	60.1	98.9	120

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	+0.46	+0.47	-
1926	+0.50	+0.77	+0.69	+2.34	+1.90	+1.43	+1.35	+0.81	+0.48	+0.52	+7.3	+3.38	+11.90
1927	+3.37	+6.66	+1.18	+7.78	+1.60	+1.42	+9.92	+6.65	+7.70	+7.72	+6.63	+4.49	+10.12
1928	+8.55	+5.54	+2.31	+1.30	+1.53	+1.59	+2.01	+1.74	+1.16	+1.04	+7.99	+3.34	+25.10
1929	1.67	1.08	1.06	1.33	3.32	4.66	1.78	1.73	1.61	1.60	1.18	2.51	23.53
1930	6.10	2.73	1.89	1.94	1.64	1.84	1.43	1.11	.86	.52	.61	.51	23.18
1931	.40	1.70	1.51	1.59	.65	1.54	2.92	2.41	.80	1.34	1.78	.73	16.37
1932	.50	.49	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	1.06	2.58	3.01	1.31	1.43	1.05	1.11	.86	1.01	-
1943	.72	.66	2.66	2.78	1.81	2.12	2.48	1.56	1.12	2.23	.90	.75	19.79
1944	.65	.84	.84	1.57	2.13	4.10	3.00	1.65	1.19	1.39	.72	1.59	19.67
1945	2.29	1.15	1.50	1.60	2.24	1.86	1.69	1.28	.80	1.24	1.02	8.29	24.96
1946	1.29	1.22	3.23	4.47	3.66	3.22	2.19	2.70	1.53	1.38	1.13	.93	26.95
1947	1.26	1.19	.99	3.01	1.03	1.81	1.69	1.11	5.46	1.06	.85	.79	20.25
1948	3.09	3.57	1.67	1.84	3.92	3.31	2.80	1.83	1.39	1.03	3.97	1.41	29.83
1949	1.09	3.83	2.92	2.38	2.95	2.37	2.71	2.83	1.68	2.93	3.64	1.87	31.20
1950	2.97	2.27	1.51	1.60	1.67	2.95	1.55	1.26	1.31	1.07	.87	1.38	20.41

* Not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	5,520	Jan. 18, 1926	4.1	70.2	+0.878	+11.90	+71.6	+12.15
1927	642	2,100	Feb. 20, 1927	7.4	59.7	+7.746	+10.12	+66.7	+11.31
1928	662, 952	11,500	Aug. 16, 1928	9.4	147	1.84	25.10	150	25.51
1929	682	5,850	Sept. 26, 1929	47	139	1.74	23.53	191	32.44
1930	697, 952	15,300	Oct. 2, 1929	6.2	137	1.71	23.18	76.9	13.07
1931	712	2,750	May 21, 1931	9.5	96.4	-	16.37	-	-
1932	712	-	-	-	-	-	-	-	-
1942	952	4,000	Mar. 9, 1942	-	-	-	-	-	-
1943	972	3,520	(a)	4	117	1.46	19.79	107	18.08
1944	1002	4,600	Sept. 30, 1944	5	116	1.45	19.67	131	22.27
1945	1032	13,000	Sept. 18, 1945	6	147	1.84	24.96	152	25.76
1946	1052	3,980	Feb. 10, 1946	6	159	1.99	26.95	145	24.65
1947	1082	15,000	June 14, 1947	6	119	1.49	20.25	148	25.14
1948	1112	10,500	Aug. 3, 1948	9	175	2.19	29.83	172	30.34
1949	1142	6,910	Aug. 28, 1949	16	184	2.30	31.20	178	29.11
1950	1172	3,930	Oct. 7, 1949	10	120	1.50	20.41	-	-

* Not previously published.

a Dec. 29, 1942, Apr. 19 (corrected), 1943.

227. Long Creek near Gastonia, N. C.

Location.--Lat 35°17'30", long 81°11'00", at pumping station of Gastonia water-supply system, 500 ft upstream from old State Highway 16 (now U. S. Highway 321), 1,000 ft downstream from Carolina & Northwestern Railroad bridge, and 2 miles north of Gastonia, Gaston County.

Drainage area.--41.9 sq mi.

Gage.--Staff gage. Altitude of gage was about 665 ft (from topographic map).

Extremes.--1923-25: Maximum discharge observed, 1,390 cfs Sept. 30, 1924 (gage height, 8.6 ft), from rating curve extended above 380 cfs; minimum observed, 9.2 cfs July 18, 1925.

Remarks.--A diversion from the gage pool by city of Gastonia for water supply is included in these records.

Monthly and yearly mean discharge, in cubic feet per second, of Long Creek near Gastonia, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
	1924	-	-	46.3	82.8	69.6	60.7	75.4	50.9	62.2	109	28.4	
1925	42.4	30.2	67.0	170	45.5	44.5	34.8	24.3	15.6	11.9	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
	1924	-	-	1.27	2.28	1.79	1.67	2.01	1.40	1.65	3.00	0.78	
1925	1.16	0.80	1.84	4.68	1.14	1.22	.95	.67	.42	.33	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum observed		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	582	1,390	Sept. 30, 1924	a19	-	-	-	65.6	21.28
1925	602	†1,010	Jan. 1, 1925	b9.5	-	-	-	-	-

† Corrected.

a Minimum during the period December 1923 to September 1924.

b Minimum during the period October 1924 to July 1925.

228. South Fork Catawba River at Lowell, N. C.

Location.--Lat 35°17'09", long 81°06'04", on right bank 50 ft north of private mill road, 120 ft downstream from Housers Creek, 1 mile north of Lowell, Gaston County, and 3 miles downstream from Long Creek.

Drainage area.--630 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 608.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years (1942-50), 866 cfs.

Extremes.--1942-50: Maximum discharge, 22,000 cfs Sept. 19, 1945 (gage height, 16.98 ft); minimum, 43 cfs Sept. 10, 1944; minimum daily (corrected), 130 cfs Aug. 11, 13, 1950. Maximum stage known, 21.33 ft in August 1940, from floodmarks (discharge, 34,000 cfs).

Remarks.--Considerable diurnal fluctuation and slight regulation for short periods of low flow caused by powerplant above station. City of Gastonia diverted yearly averages ranging from 3 to 6.6 cfs for water supply. For diversion by town of Morganton see Henry Fork near Henry River.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	1,289	1,247	561	619	574	659	430	563	-
1943	316	331	959	1,669	1,041	1,066	988	662	623	1,361	525	387	828
1944	297	364	414	819	1,198	2,061	1,601	821	562	550	373	678	809
1945	1,306	627	686	721	1,133	869	786	565	360	778	404	2,460	894
1946	538	563	1,651	2,000	2,021	1,148	805	985	590	705	506	486	996
1947	659	590	516	1,579	639	874	777	569	908	523	415	438	708
1948	1,028	1,517	733	811	1,793	1,406	1,210	747	549	454	1,293	422	993
1949	402	1,341	1,258	978	1,210	903	1,082	1,023	578	900	1,047	815	959
1950	1,537	1,085	637	698	688	958	693	665	677	418	342	454	737

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	2.13	2.28	0.99	1.13	1.02	1.21	0.79	1.00	-
1943	0.58	0.59	1.76	3.06	1.72	1.95	1.75	1.21	1.10	2.49	.96	.69	17.86
1944	.54	.65	.78	1.50	2.05	3.77	2.84	1.50	1.00	1.01	.68	1.20	17.50
1945	2.39	1.11	1.26	1.32	1.97	1.59	1.39	1.07	.64	1.42	.74	4.36	19.26
1946	.99	1.00	3.02	3.66	3.34	2.10	1.43	1.80	1.04	1.29	.93	.86	21.46
1947	1.21	1.04	.95	2.89	1.06	1.60	1.58	1.04	1.61	.96	.76	.78	15.28
1948	1.88	2.69	1.34	1.48	3.07	2.57	2.14	1.37	.97	.83	2.37	.75	21.46
1949	.74	2.37	2.30	1.79	2.00	1.65	1.92	1.87	1.02	1.65	1.92	1.44	20.57
1950	2.79	1.92	1.17	1.28	1.14	1.75	1.25	1.22	1.20	.76	.63	.80	15.89

Yearly discharge, in cubic feet per second, of South Fork Catawba River at Lowell, N. C.

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	952	8,850	Feb. 17, 1942	-	-	-	-	-	-
1943	972	12,800	July 10, 1943	171	828	1.31	17.86	783	16.88
1944	1002	11,000	Sept. 30, 1944	138	809	1.28	17.50	940	20.31
1945	1032	22,000	Sept. 19, 1945	221	894	1.42	19.26	905	19.51
1946	1052	13,000	Feb. 11, 1946	242	996	1.58	21.46	912	19.65
1947	1032	8,540	Jan. 20, 1947	228	708	1.12	15.28	834	17.99
1948	1112	8,060	Feb. 13, 1948	227	993	1.58	21.46	970	20.96
1949	1142	9,450	Nov. 28, 1948	279	959	1.52	20.67	981	21.14
1950	1172	*12,400	Oct. 7, 1949	130	757	1.17	15.89	-	-

* Revised.

229. Catawba River near Rock Hill, S. C.

Location.--Lat 34°59', long 80°58', at bridge on U. S. Highway 21, 3½ miles downstream from Catawba Dam, 5 miles northeast of Rock Hill, York County, and 7½ miles upstream from Sugar Creek.

Drainage area.--3,050 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 492 ft (by barometer). Sept. 23, 1895, to July 31, 1903, chain gage at Southern Railway bridge, 2 miles downstream, at different datum.

Average discharge.--16 years (1895-1903, 1942-50), 5,175 cfs.

Extremes.--1895-1903, 1942-50: Maximum discharge, 151,000 cfs May 23, 1901 (gage height, 24.15 ft, site and datum then in use); minimum, 143 cfs (revised) Apr. 25, 1943 (gage height, 2.59 ft); minimum daily, 815 cfs Sept. 2, 1945.

Remarks.--Flow regulated by Catawba Reservoir and by other powerplants above station. Catawba Dam completed in 1904; rebuilt in 1925 (usable capacity, 6,542,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	1,210	1,660	2,180	3,050	5,600	2,160	2,680	2,310	2,090	10,300	1,710	1,820	3,070
1897	1,580	2,650	3,140	2,240	10,800	9,260	8,070	4,060	3,450	3,130	2,720	1,650	4,350
1898	2,730	2,940	3,350	3,730	3,080	3,820	4,190	2,850	2,680	3,890	6,470	9,290	4,090
1899	10,700	5,520	6,200	6,930	14,900	19,500	9,810	6,950	*5,290	*4,020	*3,280	*3,070	*7,980
1900	2,100	2,040	3,080	3,960	8,120	9,250	7,700	4,010	6,850	3,500	2,450	2,130	4,570
1901	4,630	5,400	6,470	6,710	5,470	8,330	16,000	15,400	10,100	6,670	22,200	7,890	9,630
1902	5,360	4,260	14,300	6,530	9,610	12,600	5,830	4,600	8,010	4,000	3,940	3,980	6,910
1903	4,130	4,140	6,210	7,240	12,100	17,100	12,600	4,960	8,230	4,200	*4,500	*5,700	*7,390
1942	-	-	-	-	-	-	*3,095	4,615	4,011	3,206	2,849	4,722	-
1943	2,554	1,946	3,040	7,950	6,674	4,870	4,695	3,681	3,085	7,611	2,540	1,845	4,202
1944	1,724	1,751	1,702	3,841	5,349	7,661	7,234	4,444	2,267	2,546	2,271	1,957	3,555
1945	5,785	3,286	3,013	3,847	4,315	5,571	3,219	4,052	2,416	1,558	3,419	9,768	4,181
1946	3,602	3,104	5,716	10,630	8,421	5,769	3,762	5,262	2,814	2,861	2,762	2,423	4,749
1947	2,969	2,628	2,589	8,250	3,257	3,587	3,141	2,630	4,018	2,499	2,667	2,928	3,265
1948	5,012	6,291	3,614	4,676	8,698	7,078	6,945	3,607	3,329	2,333	4,973	3,035	5,110
1949	3,163	6,212	6,928	6,443	5,411	4,808	6,301	6,218	3,926	5,555	7,519	6,181	5,725
1950	4,957	7,602	3,601	3,991	4,804	3,970	4,514	3,529	3,448	2,327	3,299	2,400	4,026

* Only monthly figures revised.

† Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	0.46	0.61	0.82	1.15	1.98	0.82	0.98	0.87	0.76	3.90	0.65	0.67	13.67
1897	.60	.97	1.19	1.85	3.69	3.50	2.96	1.53	1.26	1.19	1.03	.60	19.37
1898	1.03	1.08	1.27	1.41	1.05	1.44	1.53	1.08	1.98	1.46	2.44	3.40	18.19
1899	4.05	2.02	2.34	2.62	5.09	7.37	3.59	2.63	*1.93	*1.52	*1.24	*1.13	*35.53
1900	.79	.75	1.16	1.50	2.77	3.49	2.81	1.51	2.51	1.35	.93	.78	20.33
1901	1.75	1.98	2.44	2.54	1.66	3.15	5.86	5.82	3.69	2.52	8.39	2.89	42.89
1902	2.03	1.56	5.41	2.47	3.28	4.76	2.13	1.74	2.93	1.51	1.49	1.45	30.76
1903	1.56	1.52	2.35	2.73	4.13	6.47	4.61	1.88	3.01	1.59	*1.71	*1.35	*32.91

* Revised.

† Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of Catawba River near Rock Hill, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1896	(a)	\$71,500	July 10, 1896	1,200	3,070	1.01	13.67	3,259	14.54
1897	(a)	\$68,500	Feb. 7, 1897	1,200	4,350	1.43	19.37	4,533	19.99
1898	(a)	-	-	1,460	4,090	1.34	18.19	5,202	23.22
1899	(a)	\$95,000	Mar. 20, 1899	*1,900	*7,980	*2.62	*35.53	*6,700	*29.82
1900	(a)	-	-	1,360	4,570	1.50	20.33	5,372	23.80
1901	(a)	151,000	May 23, 1901	1,530	9,630	3.16	42.89	10,224	45.72
1902	(a)	\$108,000	Dec. 30, 1901	2,940	6,910	2.27	30.76	6,132	27.19
1903	(a)	\$93,800	Mar. 24, 1903	-	\$7,390	\$2.42	\$32.91	-	-
1942	1032	25,900	Sept. 8, 1942	-	-	-	-	-	-
1943	1032	56,100	July 10, 1943	906	4,202	-	-	4,002	-
1944	1032	30,200	Sept. 30, 1944	922	3,555	-	-	4,136	-
1945	1032	76,800	Sept. 19, 1945	815	4,181	-	-	4,210	-
1946	1052	46,000	Feb. 11, 1946	938	4,749	-	-	4,391	-
1947	1082	39,300	Jan. 20, 1947	850	3,265	-	-	3,991	-
1948	1112	39,300	Mar. 31, 1948	906	5,110	-	-	5,064	-
1949	1142	60,200	Nov. 28, 1948	1,020	5,725	-	-	5,709	-
1950	1172	23,600	Nov. 1, 1949	938	4,026	-	-	-	-

* Revised.

‡ Not previously published.

A North Carolina Department of Conservation and Development, Bull. 34.

Note.--Figures for discharge, in cubic feet per second per square mile, and runoff, in inches, published in Water-supply papers subsequent to Apr. 7, 1942, may be subject to error because of regulation in reservoirs upstream. These figures are not included in this report and should not be used.

230. Little Sugar Creek near Charlotte, N. C.

Location (revised).--Lat 35°09'20", long 80°51'10", on right bank 50 ft downstream from tributary on right, 500 ft downstream from Briar Creek, 600 ft upstream from sewage-disposal plant of city of Charlotte, and 4.7 miles south of city hall, Charlotte, Mecklenburg County.

Drainage area.--41.4 sq mi.

Gage.--Water-stage recorder and concrete control. Datum of gage is 571.6 ft above mean sea level (city of Charlotte datum). Prior to Apr. 6, 1927 (corrected), staff gage at same site and datum.

Average discharge.--26 years (1924-50), 45.7 cfs (revised).

Extremes.--1924-50: Maximum discharge, 8,370 cfs Apr. 6, 1936 (gage height, 16.2 ft, from floodmarks), from rating curve extended above 2,600 cfs on basis of slope-area determinations of peak flow at gage heights 10.42, 11.47, and 12.00 ft; minimum, 1.6 cfs July 30, 31, Aug. 1, 1925.

Remarks.--There is a small diversion through the city of Charlotte storm sewers.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	12.0	107	-
1925	21.7	22.8	42.2	194	37.7	23.7	23.3	14.2	10.3	4.70	23.4	3.10	37.2
1926	4.89	24.1	20.4	76.2	92.8	49.8	23.3	18.2	16.0	28.6	18.9	6.22	31.3
1927	3.87	7.11	21.3	11.9	44.2	53.6	24.6	11.6	13.2	28.0	17.6	8.23	20.3
1928	34.1	9.33	*142	24.0	63.2	48.3	88.3	43.0	40.0	22.6	*200	*248	*80.1
1929	25.9	15.3	15.8	23.4	*191	183	44.7	54.9	50.7	22.1	19.0	19.1	*54.5
1930	*94.8	55.4	69.5	63.5	61.0	36.4	20.2	26.4	23.8	22.5	13.3	11.6	*41.5
1931	6.06	29.5	45.2	43.2	20.1	38.1	55.8	54.8	11.9	28.0	69.7	8.34	34.4
1932	6.22	5.72	108	95.0	50.4	*116	34.5	26.3	113	15.2	34.1	13.2	*51.6
1933	*75.7	40.6	109	47.0	57.7	46.6	32.0	30.8	14.3	15.4	37.6	*128	*52.8
1934	21.9	10.6	14.7	17.1	35.1	40.6	39.6	26.8	128	21.8	19.6	*45.5	*34.9
1935	32.6	23.5	33.9	42.9	50.8	91.5	66.8	43.2	11.8	55.1	14.5	56.3	43.6
1936	9.76	29.7	17.3	255	109	139	283	18.7	17.4	71.9	62.8	25.3	86.4
1937	71.2	23.4	68.4	141	61.6	49.1	103	35.8	37.5	22.3	23.5	14.0	54.3
1938	23.2	20.0	28.8	31.5	20.0	33.7	36.6	15.3	45.6	25.1	16.4	11.5	25.7
1939	7.25	16.3	32.0	39.0	143	83.8	32.7	34.8	31.5	69.8	47.4	14.5	45.5
1940	8.86	8.72	13.8	25.9	68.8	38.1	30.1	32.5	30.1	21.4	39.2	8.77	27.0
1941	8.25	35.3	27.8	26.5	20.0	38.3	45.5	12.4	17.4	115	12.5	7.05	30.6
1942	9.76	6.57	32.4	17.9	69.2	99.4	22.7	81.8	99.8	37.4	21.7	18.6	43.0
1943	12.2	15.4	40.3	94.6	39.3	78.1	46.8	19.2	33.4	89.2	19.8	20.3	42.5
1944	8.24	9.48	17.7	49.2	101	126	81.7	24.4	17.2	94.0	20.1	42.9	49.2
1945	39.0	30.2	42.5	41.3	87.9	44.5	35.9	18.0	9.75	50.3	15.8	213	51.8
1946	17.5	17.7	102	66.5	85.5	45.1	43.4	41.4	14.6	19.8	23.9	24.4	41.6
1947	60.1	26.1	19.8	130	34.5	60.8	37.0	22.0	16.1	32.9	16.9	24.5	40.2
1948	49.9	152	40.5	75.7	147	111	64.1	51.7	24.0	10.9	59.0	13.8	66.2
1949	18.5	130	84.2	87.8	78.4	47.8	66.6	62.3	29.1	42.5	87.1	31.7	63.7
1950	69.4	54.8	42.8	49.2	38.5	72.4	37.6	26.9	24.6	33.7	10.8	12.6	39.5

* Revised.

Monthly and yearly runoff, in inches, of Little Sugar Creek near Charlotte, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	0.34	2.88	-
1925	0.60	0.61	1.17	5.39	1.20	1.05	0.63	0.40	0.28	0.13	.65	.08	12.19
1926	.11	.65	.57	2.12	2.33	1.38	.63	.51	.43	.80	.53	.17	10.26
1927	.11	.19	.59	.53	1.11	1.49	.66	.32	.36	.78	.49	.22	6.65
1928	.95	.25	3.95	.67	1.65	1.35	2.38	1.20	1.08	.63	5.58	6.68	26.37
1929	.72	.41	.43	.65	4.81	5.10	1.20	1.53	1.36	.62	.53	.51	17.87
1930	2.64	1.50	1.94	1.76	1.53	1.01	1.54	.74	.64	.63	.37	.31	13.61
1931	.17	.80	1.26	1.20	.51	1.06	1.51	1.52	.32	.78	1.94	.22	11.29
1932	.17	.15	3.01	2.64	1.32	3.22	.93	.73	3.05	.42	.95	.36	16.95
1933	2.11	1.09	3.05	1.51	1.45	1.30	.86	.86	.38	.43	1.05	3.44	17.31
1934	.61	.29	.41	.48	.88	1.13	1.07	.75	3.45	.61	.55	1.23	11.46
1935	.91	.63	.94	1.20	1.28	2.55	1.80	1.20	.32	1.53	.40	1.52	14.28
1936	.27	.80	.48	7.10	2.84	3.87	7.63	.52	.47	2.01	1.75	.68	28.42
1937	1.98	.63	1.90	3.93	1.55	1.37	2.78	1.00	1.01	.62	.65	.38	17.80
1938	.65	.54	.80	.88	.50	.94	.99	.43	1.23	.70	.46	.31	8.43
1939	.20	.44	.89	1.09	3.61	2.33	.88	.97	.85	1.94	1.32	.39	14.91
1940	.25	.23	.58	.72	1.79	1.06	.81	.90	.81	.59	1.09	.24	8.67
1941	.23	.95	.77	.74	.50	1.07	1.23	.35	.47	3.20	.35	.19	10.05
1942	.27	.18	.90	.50	1.74	2.77	.61	2.28	2.69	1.04	.60	.50	14.08
1943	.34	.41	1.12	2.63	.99	2.17	1.26	.53	.90	2.48	.53	.55	13.91
1944	.23	.26	.49	1.37	2.62	3.52	2.20	.68	.46	2.62	.56	1.16	16.17
1945	1.09	.81	1.18	1.15	2.21	1.24	.97	.50	.26	1.40	.44	5.73	16.98
1946	.49	.48	2.83	1.85	2.15	1.26	1.17	1.15	.39	.55	.67	.66	13.65
1947	1.67	.70	.55	3.61	.87	1.69	1.00	.62	.43	.92	.47	.66	13.19
1948	1.39	4.09	1.13	2.11	3.83	3.08	1.73	1.44	.65	.30	1.64	.37	21.76
1949	.52	3.52	2.34	2.45	1.97	1.33	1.79	1.73	.78	1.18	2.43	.85	20.89
1950	1.93	1.48	1.19	1.37	.97	2.02	1.01	.75	.66	.94	.30	.34	12.96

* Revised.

† Not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	602	3,310	Sept. 29, 1924	-	-	-	-	-	-
1925	602	4,760	Aug. 5 or 6, 1925	1.6	37.2	0.899	12.19	34.1	11.17
1926	622	3,240	Jan. 18, 1926	2.0	31.3	.756	10.26	29.9	9.79
1927	642	2,980	Feb. 23, 1927	3.2	20.3	.490	6.65	33.3	10.91
1928	662, 1503	7,030	Aug. 16, 1928	3.2	80.1	1.93	26.37	69.2	22.78
1929	682, 1503	5,340	Feb. 28, 1929	7.9	54.5	1.32	17.87	68.2	22.39
1930	697, 1503	3,160	Oct. 2, 1929	5.3	41.5	1.00	13.61	29.8	9.76
1931	712	2,630	Aug. 6, 1931	4.6	34.4	.831	11.29	37.8	12.39
1932	727, 1503	5,860	June 12, 1932	4.6	51.6	1.25	16.95	60.4	19.85
1933	742, 1503	4,760	Sept. 13, 1933	5.6	52.8	1.28	17.31	37.8	12.39
1934	757, 1503	5,860	June 3, 1934	6.3	34.9	.843	11.46	35.4	12.63
1935	782	3,300	July 13, 1935	6.6	43.6	1.05	14.28	40.7	13.35
1936	802	8,370	Apr. 6, 1936	6.6	86.4	2.09	28.42	95.4	31.38
1937	822	4,280	Apr. 25, 1937	6.7	54.3	1.31	17.80	46.5	15.28
1938	852	1,020	July 24, 1938	4.5	25.7	.621	8.43	24.3	7.97
1939	1052	3,520	July 21, 1939	3.7	45.5	1.10	14.91	43.4	14.24
1940	1052	2,230	Aug. 14, 1940	5.6	27.0	.652	8.67	30.4	79.96
1941	1052	4,680	July 6, 1941	4.4	30.6	.739	10.05	28.8	9.45
1942	1052	6,600	June 11, 1942	3.3	43.0	1.04	14.08	44.6	14.60
1943	1052	3,040	Jan. 18, 1943	6.5	42.5	1.03	13.91	39.8	13.02
1944	1052	4,840	July 2, 1944	6.9	49.2	1.19	16.17	55.6	18.27
1945	1052	3,430	Sept. 17, 1945	6.1	51.8	1.25	16.98	54.0	17.70
1946	1052	(b)	Feb. 10, 1946	6.1	41.6	1.00	13.65	39.0	12.77
1947	1082	1,800	(c)	5.4	40.2	.971	13.19	51.5	16.88
1948	1142	3,360	Aug. 3, 1948	4.5	66.2	1.60	21.76	65.5	21.53
1949	1142	3,730	Nov. 28, 1948	7.5	63.7	1.54	20.89	58.3	19.11
1950	1172	2,160	Oct. 7, 1949	5.9	39.5	.954	12.96	-	-

* Revised.

† Corrected.

‡ Not previously published.

a Maximum during period July to September.

b Not determined.

c Oct. 8, 1946, Jan. 13, 1947.

231. Catawba River near Catawba, S. C.

Location.--Lat 34°50', long 80°53', at Southern Railway bridge, 2 miles southeast of Catawba, York County, and 2.1 miles downstream from Twelve Mile Creek.

Drainage area.--3,540 sq mi (revised), approximately.

Supplemental records available.--Gage-height records collected at same site July 1906 to December 1948 are contained in reports of U. S. Weather Bureau.

Gage.--Staff gage. Altitude of gage is 440 ft (from topographic map).

Extremes.--1903-4: Maximum discharge, 26,200 cfs Aug. 8, 1904 (gage height, 10.5 ft, from graph based on gage readings); minimum daily, 810 cfs Oct. 2, 1904.

Remarks.--Flow regulated after December 1903 by powerplant at Catawba Reservoir.

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	2,313	2,754	2,269	2,313	4,785	5,366	2,808	3,344	3,599	3,172	7,629	2,883	3,603
1905	1,198	2,451	2,994	-	-	-	-	-	-	-	-	-	-

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1903	127	-	-	-	-	-	-	-	-	-
1904	127	#26,200	Aug. 8, 1904	900	3,603	1.02	13.86	3,545	13.64	-
1905	127	-	-	a810	-	-	-	-	-	-

* Not previously published.

a Minimum day during period October to December.

Note.--Monthly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, published in water-supply papers may be subject to appreciable error because of regulation in Catawba Reservoir upstream. Those figures are not published herein and should not be used.

232. Wateree River near Camden, S. C.

Location.--Lat 34°14'40", long 80°39'15", at bridge on U. S. Highway 1, 1,500 ft downstream from Twentyfivemile Creek, 4,000 ft upstream from Seaboard Air Line Railroad bridge, 2.2 miles west of Camden, Kershaw County, and 7.4 miles downstream from Wateree Dam.

Drainage area.--5,070 sq mi, approximately.

Supplemental records available.--January to December 1903, gage heights and discharge measurements only. Gage-height record collected at same sites since 1891 are contained in reports of U. S. Weather Bureau. Records of chemical analyses and water temperatures for the period October 1946 to September 1947 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 119.36 ft above mean sea level, datum of 1929, supplemental adjustment of 1936. Jan. 1, 1903, to Sept. 30, 1910, staff or chain gage at site 1½ miles downstream at different datum. Oct. 1, 1929, to Sept. 1, 1942, water-stage recorder at site 830 ft (revised) upstream at present datum.

Average discharge.--27 years (1904-10, 1929-50), 6,413 cfs.

Extremes.--1904-10, 1929-50: Maximum discharge, 366,000 cfs (revised), Aug. 26, 1908 (gage height, 39.7 ft, site and datum then in use, from records of U. S. Weather Bureau), from rating curve extended above 122,000 cfs as described in following paragraph; minimum daily, 170 cfs June 3, 1941.

Maximum stage known, 40.4 ft July 18, 1916, at site 1½ miles downstream, from records of U. S. Weather Bureau (discharge, 400,000 cfs, revised, from rating curve extended above 122,000 cfs on basis of computation by Duke Power Co. of peak flow of 382,000 cfs over dam at Rocky Creek Reservoir).

Remarks.--Flow regulated since 1919 by powerplant at Wateree Reservoir (capacity, 7,626,000,000 cu ft) and subsequent to 1904 by other powerplants above station.

SANTEE RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Wateree River near Camden, S. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1905	\$1,470	\$2,718	3,717	4,828	*12,550	5,206	4,358	7,205	3,025	*10,580	*12,870	3,468	\$5,975
1906	2,429	2,019	*10,120	*18,600	7,460	10,100	7,330	4,740	*9,610	9,020	*13,200	*11,100	*8,839
1907	*13,000	6,600	5,750	6,050	6,020	5,660	5,530	4,690	*9,590	5,650	4,540	4,360	*6,450
1908	2,280	*5,940	*14,600	*17,900	*19,400	*12,200	6,630	5,690	5,660	8,160	*36,700	7,160	*11,900
1909	*8,650	6,990	*8,980	6,310	8,440	8,240	5,150	*14,900	*19,400	6,960	8,090	6,590	*9,060
1910	4,630	3,220	3,410	3,850	7,950	*6,860	2,570	3,610	8,180	*4,320	*2,850	*5,580	*4,720
1930	18,690	9,410	8,890	8,380	7,900	6,020	6,160	5,480	5,260	5,040	2,570	1,800	7,143
1931	2,430	4,280	5,740	5,780	4,290	3,250	5,090	4,070	5,940	4,550	5,650	6,010	4,790
1932	1,970	992	3,540	10,100	6,090	7,000	5,600	4,280	3,090	5,430	5,820	4,820	4,820
1933	6,010	6,900	11,600	8,510	8,050	6,460	4,910	5,680	5,220	3,620	3,810	4,130	6,290
1934	2,485	2,917	3,077	2,860	2,748	4,072	4,196	5,604	7,960	4,048	3,724	3,478	3,933
1935	4,684	4,902	4,631	5,296	6,593	8,447	8,492	5,580	4,474	3,445	4,070	5,897	5,567
1936	4,980	3,743	3,071	17,790	13,500	11,120	28,750	5,449	3,593	3,091	4,269	5,198	8,670
1937	8,658	6,782	6,164	18,530	11,550	8,319	9,735	6,542	4,286	3,325	3,615	6,463	7,809
1938	4,590	7,283	5,732	6,359	5,296	3,878	7,839	4,021	4,128	3,060	5,535	2,436	5,006
1939	1,990	2,767	3,844	4,484	13,960	15,370	7,354	5,413	3,543	3,605	5,610	3,603	5,917
1940	1,985	1,873	2,023	3,313	4,962	4,383	4,026	3,752	1,680	1,366	10,480	6,697	3,663
1941	2,856	2,623	3,635	3,464	2,532	2,994	5,169	2,079	1,129	14,980	2,713	2,827	3,939
1942	3,298	3,288	2,711	1,803	6,972	13,630	5,297	7,314	6,067	5,223	4,039	5,107	5,388
1943	3,396	2,927	4,389	12,510	10,960	9,407	7,095	5,310	3,730	10,970	3,883	2,237	6,390
1944	2,290	2,086	2,694	5,926	9,589	16,750	13,570	6,707	3,658	3,289	3,067	2,480	5,936
1945	7,208	4,703	4,038	5,695	7,804	8,590	3,722	4,864	3,345	1,612	5,641	20,430	6,460
1946	5,453	4,453	9,041	16,250	11,590	7,928	5,402	7,365	3,271	3,577	4,583	3,267	6,840
1947	5,509	4,554	2,919	12,020	4,621	7,055	6,676	3,180	4,384	3,365	3,723	3,459	5,130
1948	5,418	13,590	6,510	7,915	16,060	12,230	12,220	5,072	4,171	3,246	5,496	3,700	7,921
1949	4,308	11,490	12,560	11,600	9,615	7,508	8,488	10,610	4,445	6,457	10,710	10,750	9,043
1950	6,063	10,100	5,284	5,543	5,929	5,670	6,324	4,298	4,315	3,171	3,962	2,787	5,273

* Revised.

† Corrected.

‡ Not previously published; estimated or partly estimated on basis of once-daily gage readings by U. S. Weather Bureau and estimated rating curve and weather records.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1905	\$0.33	\$0.60	0.85	1.10	*2.56	1.19	0.96	1.64	0.67	*2.41	*2.93	0.76	*16.02
1906	.55	.44	*2.31	*4.23	1.53	†2.29	1.62	1.08	*2.12	2.05	*3.00	*2.44	*23.66
1907	*2.95	1.45	1.30	1.37	1.24	1.29	1.22	1.07	*2.11	1.28	1.03	.96	*17.27
1908	.52	*1.30	*3.32	*4.07	*4.13	*2.78	1.46	1.29	1.23	1.86	*8.35	1.57	*31.88
1909	*1.97	1.54	*2.04	1.43	1.75	1.88	1.14	*3.39	*4.27	1.58	1.84	1.45	*24.26
1910	1.05	.71	.78	.88	1.64	*1.56	.57	.82	1.60	*.96	*.65	*1.23	*12.67

* Revised.

† Corrected.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches
		Discharge	Date				
1904	168	-	-	-	-	-	-
1905	168,1433	*66,800	July 15, 1905	*1,050	*5,975	*1.18	*16.02
1906	204,1433	*54,100	Dec. 22, 1905	930	*8,839	*1.74	*23.66
1907	242,1433	*55,000	Oct. 21, 1906	1,350	*6,450	*1.27	*17.27
1908	262,1433	*366,000	Aug. 26, 1908	*690	*11,900	*2.35	*31.88
1909	262,1433	*103,000	June 5, 1909	2,320	*9,060	*1.79	*24.26
1910	262,1433	*39,700	Mar. 2, 1910	*365	*4,720	*.931	*12.67
1930	727, 802	163,000	Oct. 3, 1929	365	7,143	-	5,070
1931	727	*11,600	Dec. 23, 1930	524	4,790	-	4,280
1932	727	50,700	Jan. 9, 1932	296	4,820	-	6,360
1933	742	32,000	Dec. 28, 1932	268	6,290	-	4,921
1934	757	20,200	June 9, 1934	202	3,933	-	4,415
1935	782	30,000	Mar. 14, 1935	297	5,567	-	5,364
1936	802	168,000	Apr. 7, 1936	270	8,670	-	9,491
1937	822	52,500	Jan. 4, 1937	598	7,809	-	7,470
1938	852	13,300	Apr. 9, 1938	365	5,006	-	4,256
1939	872	70,500	Mar. 2, 1939	181	5,317	-	5,686
1940	892	89,000	Aug. 16, 1940	184	3,869	-	4,141
1941	922	60,600	July 9, 1941	170	3,939	-	3,952
1942	952	35,400	Mar. 10, 1942	351	5,388	-	5,509
1943	972	35,400	Jan. 20, 1943	281	6,390	-	6,094
1944	1002	71,700	Mar. 21, 1944	361	5,996	-	6,740
1945	1032	132,000	Sept. 18, 19, 1945	*208	6,460	-	6,735
1946	1052	33,800	Jan. 9, 1946	466	6,840	-	6,333
1947	1082	58,500	Jan. 21, 1947	274	5,130	-	6,170
1948	1112	59,500	Apr. 2, 1948	243	7,921	-	8,166
1949	1142	101,000	Nov. 30, 1948	340	9,043	-	8,459
1950	1172	20,500	Nov. 3, 1949	412	5,273	-	-

* Revised.

† Corrected.

‡ Not previously published.

Note.--Monthly and yearly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers subsequent to Sept. 30, 1929, may be subject to appreciable error because of regulation in reservoirs upstream. These figures are not included in this report and should not be used.

233. Broad River near Chimney Rock, N. C. 1/

Location.--Lat 35°25'35", long 82°10'45", 1,000 ft downstream from Lake Lure Dam, 1.5 miles downstream from Buffalo Creek, and 3 miles east of Chimney Rock, Rutherford County.

Drainage area.--97 sq mi, approximately. At site used 1907-9, 100 sq mi, approximately.

Gage.--Water-stage recorder. Altitude of gage is 860 ft (from topographic map). May 17, 1907, to June 30, 1909, staff gage at site 1 1/8 miles downstream at different datum.

Average discharge.--23 years (1927-50), 179 cfs.

Extremes.--1907-9, 1927-50: Maximum discharge, 26,000 cfs Aug. 15, 1928 (gage height, 16.8 ft), from rating curve extended above 4,200 cfs on basis of computation of peak flow over Lake Lure Dam at gage heights 12.2 and 16.8 ft; minimum, 0.7 cfs Sept. 13, 1928 (gage height, 0.26 ft); minimum daily, 0.8 cfs Sept. 13, 14, 24, 26, 1928 (corrected).

Remarks.--Large diurnal fluctuation and complete regulation for low flow since Sept. 27, 1926, caused by powerplant at Lake Lure Dam.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	116	#125	-	-
1908	79.2	114	-	-	-	#236	#226	-	191	-	-	#251	-
1909	-	#252	#244	-	#290	-	#260	-	-	-	-	-	-
1927	-	-	-	-	-	-	141	98.1	101	68.5	59.3	58.0	-
1928	54.7	64.4	163	106	*120	*131	216	229	140	163	1,073	311	232
1929	178	126	113	153	204	417	232	236	167	205	152	371	211
1930	471	329	238	210	204	185	155	151	95.7	53.8	57.4	70.9	183
1931	42.5	90.1	99.2	107	75.6	129	216	138	76.8	65.1	66.1	40.9	95.6
1932	32.9	41.9	150	197	155	134	129	142	114	64.2	129	46.3	111
1933	263	229	275	208	219	195	259	214	106	87.2	97.8	130	190
1934	67.9	65.7	69.7	94.3	104	234	158	122	185	105	129	132	122
1935	165	148	189	320	191	194	224	171	99.4	185	185	179	188
1936	90.7	168	124	414	284	345	498	194	144	113	131	134	219
1937	656	166	226	325	325	213	247	170	120	101	142	173	248
1938	291	167	146	158	190	160	147	115	133	151	132	115	159
1939	63.3	116	123	130	375	301	166	143	103	*102	167	86.4	155
1940	55.7	50.0	60.9	75.7	110	165	139	96.2	86.4	98.9	537	209	141
1941	92.9	123	170	173	111	139	194	75.5	54.1	202	97.9	87.1	127
1942	46.4	61.0	112	101	167	239	122	311	157	134	120	179	146
1943	106	90.5	188	265	241	218	240	210	150	244	112	91.7	180
1944	60.7	71.7	81.5	104	180	276	256	171	102	99.0	114	90.0	134
1945	137	91.4	108	125	178	167	203	167	68.0	125	104	401	159
1946	161	136	222	445	358	376	311	280	149	159	109	77.5	228
1947	113	113	97.0	263	126	144	163	93.6	119	97.7	91.5	112	128
1948	321	365	166	144	321	229	234	131	124	274	262	259	235
1949	122	309	297	263	227	240	290	345	323	355	468	337	298
1950	255	303	181	201	224	283	177	142	157	156	119	578	231

* Revised.

† Not previously published; partly estimated by filling in a few scattered days of missing discharge record by applying an extended rating to gage heights.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	1.34	#1.44	-	-
1908	0.91	1.27	-	-	-	#2.72	#2.52	-	2.13	-	-	#2.80	-
1909	-	#2.81	#2.82	-	#3.02	-	#2.90	-	-	-	-	-	-
1927	-	-	-	-	-	-	1.62	1.16	1.16	.81	.70	.67	-
1928	.65	.74	1.94	1.26	*1.33	*1.55	2.49	2.72	1.61	1.94	12.75	3.58	*32.56
1929	2.12	1.45	1.34	1.82	2.19	4.98	2.67	2.90	1.92	2.43	1.57	4.26	29.53
1930	5.60	3.78	2.82	2.49	2.19	2.20	1.78	1.56	1.10	.64	.68	.82	25.66
1931	.50	1.04	1.18	1.27	.81	1.53	2.49	1.64	.88	.77	.79	.47	13.37
1932	.39	.48	1.79	2.34	1.73	1.59	1.48	1.68	1.32	.76	1.53	.53	15.82
1933	3.12	2.63	3.27	2.47	2.35	2.32	2.98	2.55	1.22	1.04	1.16	1.50	26.61
1934	.81	.76	.85	1.12	1.11	2.78	1.82	1.45	2.13	1.24	1.53	1.52	17.10
1935	1.96	1.71	2.25	3.80	2.05	2.31	2.58	2.03	1.14	2.20	2.20	2.06	26.29
1936	1.08	1.93	1.48	4.92	3.16	4.10	5.72	2.31	1.65	1.34	1.56	1.54	30.79
1937	6.61	1.91	2.69	6.12	3.47	2.54	2.84	2.02	1.38	1.20	1.68	1.99	34.45
1938	3.46	1.92	1.73	1.88	2.04	1.90	1.70	1.37	1.53	1.80	1.57	1.33	22.26
1939	7.75	1.34	1.46	1.54	4.03	3.57	1.91	1.70	1.18	*1.21	1.98	.99	*21.66
1940	.66	.58	.72	.90	1.23	1.96	1.60	1.14	.99	1.18	6.38	2.41	19.75
1941	1.10	1.42	2.02	2.06	1.19	1.65	2.24	.90	.62	2.40	1.16	1.00	17.76
1942	.55	.70	1.33	1.20	1.80	2.84	1.40	3.70	1.81	1.59	1.42	2.05	20.39
1943	1.26	1.04	2.23	3.15	2.59	2.59	2.76	2.49	1.73	2.90	1.33	1.05	25.12
1944	.72	.82	.97	1.24	2.01	3.29	2.94	2.03	1.17	1.18	1.36	1.03	18.75
1945	1.63	1.05	1.28	1.49	1.92	2.22	2.34	2.22	.78	1.48	1.23	4.61	22.25
1946	1.91	1.57	2.64	5.28	3.63	4.47	3.58	3.08	1.72	1.89	1.29	.89	31.95
1947	1.34	1.30	1.15	3.12	1.35	1.71	1.87	1.11	1.37	1.16	1.09	1.29	17.86
1948	3.81	4.20	1.97	1.71	3.56	2.72	2.69	1.56	1.43	3.25	3.12	2.98	33.00
1949	1.46	3.55	3.53	3.12	2.44	2.65	3.34	4.10	3.72	4.21	5.56	3.87	41.75
1950	3.03	3.49	2.15	2.59	2.40	3.36	2.04	1.69	1.61	1.67	1.41	6.65	32.29

* Revised.

† Not previously published; see footnote to preceding table.

1/ Published as "at Uree", 1907-9.

Yearly discharge, in cubic feet per second, of Broad River near Chimney Rock, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	242	-	-	a62	-	-	-	-	-
1908	242	-	-	62	-	-	-	-	-
1909	262	-	-	b183	-	-	-	-	-
1927	642	2,570	Mar. 25, 1927	-	-	-	-	-	-
1928	662,1503	26,000	Aug. 15, 1928	-	.8	232	2.39	*32.56	*243
1929	692, 892	8,800	Sept. 26, 1929	1.0	2.1	211	2.18	29.53	263
1930	697, 892	7,000	Oct. 1, 1929	1.4	1.83	183	1.89	25.66	116
1931	712	644	Apr. 22, 1931	1.2	95.6	.986	15.37	95.2	13.31
1932	727	674	Aug. 20, 1932	1.4	1.11	1.14	15.62	157	21.98
1933	742, 892	8,980	Oct. 16, 1932	2.5	1.90	1.96	26.61	143	19.99
1934	757	900	Mar. 4, 1934	1.9	1.22	1.26	17.10	147	20.62
1935	782	3,680	Jan. 9, 1935	2.8	1.88	1.94	26.29	176	24.86
1936	802	3,680	Apr. 6, 1936	2.2	2.19	2.26	30.79	267	37.51
1937	822	15,400	Oct. 16, 1936	2.8	2.46	2.54	34.45	217	30.41
1938	852	6,480	Oct. 19, 1937	1.5	1.59	1.64	22.26	133	18.67
1939	872,1503	4,900	Aug. 18, 1939	2.3	1.55	1.60	*21.66	144	*20.07
1940	892	17,300	Aug. 13, 1940	2.3	1.41	1.45	19.75	159	22.33
1941	922	630	July 6, 7, 1941	2.3	1.27	1.31	17.76	113	15.80
1942	952	3,080	May 20, 1942	3.2	1.46	1.51	20.39	160	22.34
1943	972	2,400	Dec. 29, 1942	5.1	1.80	1.86	25.12	165	23.10
1944	1002	652	Aug. 1, 2, 1944	4.4	1.34	1.38	18.76	144	20.21
1945	1032	3,850	Sept. 18, 1945	4.4	1.59	1.64	22.25	174	24.41
1946	1052	1,940	Jan. 6, 1946	4.2	2.28	2.35	31.95	212	29.62
1947	1082	609	June 14, 1947	4.8	1.28	1.32	17.86	172	24.05
1948	1112	5,080	July 11, 1948	4.2	2.35	2.42	35.00	225	31.56
1949	1142	13,700	Aug. 28, 1949	5.5	2.98	3.07	41.75	299	41.88
1950	1172	7,000	Sept. 8, 1950	5.1	2.31	2.38	32.29	-	-

* Revised.
 a Minimum day during period June to September.
 b Minimum day during period October to June.

234. Green River at Saluda, N. C.

Location (revised).--Lat 35°16'25", long 82°22'25", at highway bridge 1 mile upstream from Hungry River, 3 miles northwest of Saluda, Polk County, 4 miles east of Flat Rock, and 6 miles southeast of Hendersonville.

Drainage area.--51 sq mi.

Gage.--Chain gage. Altitude of gage was 1,630 ft (from topographic map).

Extremes.--1907-9: Maximum stage recorded, 7.6 ft Feb. 15, 1908 (discharge not determined; previously published figure is unreliable and should not be used); minimum discharge recorded, 40 cfs several times in August, September, and November, 1907 (gage height, 1.4 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	154	80.2	59.4	89.5	-
1908	57.5	119	299	227	-	213	202	170	116	132	-	156	202
1909	174	141	184	212	245	274	189	286	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	3.37	1.81	1.34	1.95	-
1908	1.30	2.60	6.76	5.13	-	4.82	4.42	3.84	2.53	2.99	-	3.41	53.92
1909	3.93	3.08	4.16	4.80	5.00	6.19	4.14	6.47	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Observed maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	242	-	-	840	-	-	-	-	-
1908	242	-	-	40	202	3.96	55.92	†204	†54.42
1909	262	-	-	b66	-	-	-	-	-

† Corrected.
 a Minimum day during the period June to September.
 b Minimum day during the period October to June.
 Note.--Mean daily discharge for Feb. 15, Aug. 25, 1908, and June 4, 9, 1909, and monthly figures for February and August 1908 and June 1909 published in WSP 242 and 262 have been found unreliable on the basis of restudy of original data. These records are not published in this report and should not be used.

235. Green River near Mill Spring, N. C.

Location.--Lat 35°20'10", long 82°04'50", on right bank at abandoned ford 1.5 miles north-east of Pea Ridge Church, 2 miles downstream from Walnut Creek, 5.2 miles northeast of Mill Spring, Polk County, and 9 miles downstream from Turner Shoals Dam.

Drainage area.--174 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 770 ft (by barometer).

Average discharge.--10 years (1940-50), 411 cfs (revised).

Extremes.--1939-50: Maximum gage height, 22.15 ft Aug. 13, 1940 (maximum discharge at gage not determined, and that previously published is unreliable); maximum discharge at Turner Shoals Dam (drainage area, 135 sq mi), 12,000 cfs Aug. 28, 1949, by computation of flow over dam; minimum and minimum daily, 25 cfs July 6, 1940 (gage height, 1.42 ft). Maximum stage known, 24.2 ft in July 1916, from flood crest reference mark placed by local resident.

Remarks.--Large diurnal fluctuation caused by powerplants above station; considerable regulation by Lake Summit and Lake Adger (combined usable storage, 338,875,000 cu ft). Lake Adger has frequently been referred to as Turner Shoals Reservoir.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	191	257	210	323	232	190	183	700	357	-
1941	222	189	270	329	232	296	365	212	172	381	275	189	262
1942	157	145	265	244	460	581	313	716	363	295	299	338	346
1943	245	205	492	558	542	495	548	441	336	558	303	231	413
1944	206	211	213	314	455	683	679	440	324	244	203	195	346
1945	233	288	248	271	375	462	442	358	205	299	285	636	341
1946	316	303	570	1,013	801	775	615	580	388	400	272	258	523
1947	318	272	271	548	347	325	411	272	366	280	237	189	320
1948	485	596	374	378	624	683	582	360	310	367	482	*391	*469
1949	241	790	598	529	611	519	653	624	479	629	883	622	598
1950	872	647	481	467	446	520	413	337	372	347	269	751	492

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	a9,490	Aug. 13, 1940	b25	-	-	-	277	21.69
1941	922	(c)	July 16, 1941	30	262	1.51	20.41	252	19.67
1942	952	(c)	May 16, 1942	27	348	2.00	27.11	379	29.59
1943	972	(c)	Dec. 29, 1942	38	413	2.37	32.21	386	30.12
1944	1002	(c)	Mar. 29, 1944	38	346	1.99	27.10	358	28.01
1945	1032	(c)	Sept. 18, 1945	36	341	1.96	26.60	377	29.38
1946	1052	d3,850	Jan. 7, 1946	50	523	3.01	40.83	496	38.66
1947	1082	(c)	June 14, 1947	34	320	1.84	24.91	369	28.80
1948	1112, 1503	(c)	Oct. 28, 1947	30	*469	*2.70	*36.65	*483	*37.76
1949	1233	a12,000	Aug. 28, 1949	52	598	3.44	46.63	630	49.14
1950	1233	a8,870	Oct. 7, 1949	54	492	2.83	38.37	-	-

* Revised.

a Maximum discharge at Turner Shoals, 9 miles upstream (drainage area, 135 sq mi); stage-discharge relation at gage indeterminate.

b Minimum day during period January to September.

c Stage-discharge relation indeterminate; figure previously published is unreliable and should not be used.

d Result of discharge measurement.

Note.--Mean daily and peak discharges above 1,500 cfs, except for the 1946 momentary maximum discharge and those mean daily discharges estimated in water years 1949 and 1950, and also the monthly discharge, in cubic feet per second per square mile, and runoff, in inches, published in WSP 892, 922, 952, 972, 1002, 1032, 1052, 1082, 1112, and 1233 have been found unreliable on basis of restudy of the original data. Those records are not published herein and should not be used.

236. Second Broad River at Cliffside, N. C.

Location (revised).--Lat 35°14', long 81°46', on left bank a quarter of a mile downstream from dam at Cliffside Mills, at Cliffside, Rutherford County, and 1½ miles upstream from mouth.

Drainage area.--211 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 670 ft (by barometer).

Average discharge.--25 years (1925-50), 299 cfs.

Extremes.--1925-50: Maximum discharge, 15,000 cfs Aug. 14, 1940 (gage height, 17.93 ft), from rating curve extended above 9,100 cfs on basis of computation of peak flow over Cliffside Mills dam; minimum (revised), 4 cfs Sept. 27, 1935, Aug. 3, 1937, July 24, 1943; minimum daily, 6 cfs June 9, 1940.

Remarks.--Considerable diurnal fluctuation and some regulation at low flows caused by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	149	89.5	81.3	-
1926	123	178	151	375	354	288	235	155	104	215	199	113	205
1927	66.8	141	168	148	322	284	230	126	147	250	144	132	179
1928	106	128	344	193	244	266	305	286	231	218	1,420	516	356
1929	248	191	189	246	477	749	323	421	276	268	212	614	350
1930	928	502	367	312	353	371	270	250	194	142	128	128	329
1931	120	202	284	288	176	272	468	354	165	198	316	97.5	246
1932	79.0	95.3	575	680	281	305	250	208	192	127	320	108	269
1933	500	595	656	396	454	398	334	374	177	186	254	204	377
1934	155	156	181	223	253	613	349	206	421	190	285	308	278
1935	488	246	289	506	336	401	371	261	177	311	169	156	310
1936	124	232	182	967	517	604	1,044	266	219	212	418	214	416
1937	631	166	361	1,182	508	356	387	290	239	228	280	268	407
1938	824	239	236	275	231	316	232	247	232	376	260	136	285
1939	118	189	190	271	732	456	333	223	162	191	265	99.0	266
1940	100	99.6	123	169	211	205	209	130	172	124	799	145	208
1941	119	181	206	184	152	220	234	128	122	641	193	109	208
1942	84.0	108	208	186	439	451	218	338	335	224	210	276	255
1943	144	141	444	570	346	382	317	313	223	421	179	139	302
1944	125	197	185	304	438	739	551	311	517	201	160	178	308
1945	281	209	239	228	376	329	311	237	148	234	161	879	301
1946	180	206	558	756	704	442	342	433	271	250	258	171	380
1947	174	195	164	451	190	282	268	148	504	226	158	117	240
1948	270	475	242	290	637	506	415	268	203	166	300	184	328
1949	141	537	408	331	468	341	412	365	297	391	565	286	378
1950	379	399	249	296	301	418	255	204	270	245	178	213	284

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	0.82	0.49	0.43	-
1926	0.67	0.94	0.72	2.05	1.75	1.58	1.24	0.85	0.55	1.17	1.09	.60	13.21
1927	0.37	.75	.92	.81	1.59	1.55	1.22	.69	.78	1.37	.79	.70	11.54
1928	.58	.68	1.88	1.06	1.25	1.45	1.61	1.56	1.22	1.19	7.76	2.73	22.97
1929	1.36	1.01	1.03	1.34	2.36	4.09	1.71	2.30	1.46	1.47	1.16	3.25	22.54
1930	5.07	2.66	2.01	1.71	1.74	2.03	1.43	1.37	1.03	.78	.70	.68	21.21
1931	.66	1.07	1.55	1.57	.87	1.49	2.47	1.93	.87	1.08	1.73	.52	15.81
1932	4.53	1.50	3.14	3.72	1.44	1.66	1.32	1.14	1.01	.70	1.75	.57	17.38
1933	2.73	3.15	3.59	2.16	2.24	2.17	1.77	2.04	.94	1.01	1.39	1.08	24.27
1934	.85	.83	.99	1.22	1.25	3.35	1.84	1.12	2.23	1.01	1.56	1.63	17.88
1935	2.67	1.30	1.58	2.76	1.66	2.19	1.96	1.42	.94	1.70	.92	.83	19.93
1936	.68	1.23	.99	5.28	2.64	3.30	5.52	1.45	1.16	1.16	2.29	1.13	26.83
1937	3.45	.88	1.97	6.46	2.51	1.84	2.04	1.59	1.26	1.25	1.53	1.42	26.20
1938	3.41	1.26	1.29	1.50	1.14	1.73	1.23	1.35	1.22	2.05	1.42	.72	18.32
1939	.65	1.00	1.04	1.48	3.61	2.49	1.76	1.22	.86	1.04	1.45	.52	17.12
1940	.55	.53	.67	.93	1.08	1.12	1.10	.71	.91	.68	4.37	.77	13.42
1941	.65	.96	1.13	1.01	.75	1.20	1.24	.68	.65	3.50	1.05	.58	13.40
1942	.46	.57	1.14	1.02	2.17	2.47	1.16	1.85	1.77	1.23	1.15	1.46	16.45
1943	.79	.74	2.43	3.11	1.71	2.09	1.68	1.71	1.18	2.30	.98	.73	19.45
1944	.68	1.04	1.01	1.66	2.24	4.04	2.92	1.70	1.68	1.10	.88	.94	19.89
1945	1.53	1.10	1.51	1.24	1.86	1.80	1.65	1.30	.78	1.28	.88	4.65	19.38
1946	.98	1.09	3.05	4.13	3.48	2.42	1.81	2.37	1.43	1.37	1.41	.91	24.45
1947	.95	1.03	90	2.46	.94	1.54	1.42	.81	2.87	1.24	.86	.62	15.44
1948	1.48	2.51	1.32	1.59	3.26	2.76	2.20	1.46	1.07	.91	1.64	.97	21.17
1949	.77	2.84	2.23	1.81	2.31	1.86	2.18	1.99	1.57	2.14	3.09	1.51	24.30
1950	2.07	2.11	1.56	1.62	1.49	2.28	1.35	1.11	1.43	1.34	.97	1.13	18.26

Yearly discharge, in cubic feet per second, of Second Broad River at Cliffside, N. C.									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	a16	-	-	-	-
1926	622	3,860	Jan. 19, 1926	21	205	0.972	13.21	200	12.92
1927	642	1,450	Feb. 24, 1927	18	179	.848	11.54	196	12.64
1928	662	14,500	Aug. 16, 1928	†25	356	1.69	22.97	360	23.23
1929	682	7,590	Sept. 26, 1929	74	350	1.66	22.54	449	28.88
1930	697	10,800	Oct. 2, 1929	29	329	1.56	21.21	229	14.75
1931	712	2,500	Apr. 2, 1931	26	246	1.17	15.81	258	16.60
1932	727	4,300	Aug. 3, 1932	11	269	1.27	17.38	353	22.78
1933	742	6,100	Oct. 17, 1932	20	377	1.79	24.27	271	17.47
1934	757	6,670	June 8, 1934	72	278	1.32	17.88	322	20.76
1935	782	4,300	Oct. 11, 1934	41	310	1.47	19.93	269	17.28
1936	802	8,490	Apr. 7, 1936	67	416	1.97	26.83	469	30.23
1937	822	4,600	Jan. 20, 1937	59	407	1.92	26.20	402	25.86
1938	852	7,950	Oct. 20, 1937	38	285	1.35	18.32	†234	15.05
1939	872	3,060	Aug. 18, 1939	34	266	1.26	17.12	252	16.18
1940	892	15,000	Aug. 14, 1940	6	208	.986	13.42	223	14.41
1941	922	4,500	July 20, 1941	8	208	.986	13.40	199	12.83
1942	952	3,600	June 10, 1942	8	255	1.21	16.45	283	18.24
1943	972	4,200	Dec. 30, 1942	12	302	1.43	19.45	283	18.22
1944	1002	3,590	Mar. 30, 1944	46	308	1.46	19.89	327	21.10
1945	1032	10,600	Sept. 17, 1945	70	301	1.43	19.38	320	20.56
1946	1052	6,400	Jan. 7, 1946	44	380	1.80	24.45	345	22.21
1947	1082	7,500	June 14, 1947	14	240	1.14	15.44	278	17.87
1948	1112	3,600	Feb. 13, 1948	42	328	1.55	21.17	336	21.70
1949	1142	6,340	Aug. 29, 1949	26	378	1.79	24.30	373	24.00
1950	1172	2,510	Nov. 2, 1949	86	284	1.35	18.26	-	-

† Corrected.

a Minimum day during period July to September.

237. Broad River near Boiling Springs, N. C.

Location.--Lat 35°12'35", long 81°41'50", on right bank half a mile upstream from Sandy Run Creek, 3 miles downstream from Second Broad River, and 3½ miles southwest of Boiling Springs, Cleveland County.

Drainage area.--864 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1945 and September 1946 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 639.92 ft above mean sea level (Duke Power Co. benchmark). Prior to July 20, 1934, at site 500 ft upstream at datum 1.00 ft higher.

Average discharge.--25 years (1925-50), 1,443 cfs (revised).

Extremes.--1925-50: Maximum discharge, 73,300 cfs Aug. 16, 1928 (gage height, 24.3 ft, former site, present datum); minimum, 61 cfs July 21, 1940 (gage height, 1.06 ft); minimum daily, 157 cfs Oct. 12, 1941.

Remarks.--Considerable diurnal fluctuation and some regulation caused by powerplants and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	575	440	357	-
1926	405	635	657	1,520	1,540	1,210	1,140	769	511	784	812	648	910
1927	405	838	1,020	814	1,250	1,380	1,250	728	854	972	607	528	892
1928	505	626	1,500	880	1,110	1,300	1,470	1,620	1,350	1,430	6,893	2,770	1,795
1929	1,580	1,180	1,060	1,310	2,150	3,640	1,740	2,080	1,560	1,470	1,020	2,710	1,790
1930	3,680	2,480	1,820	1,720	1,700	1,640	1,360	1,100	812	586	498	513	1,490
1931	429	769	1,160	1,340	853	1,220	1,960	1,460	816	847	928	426	1,020
1932	362	418	2,020	2,480	1,330	1,360	1,220	1,150	1,250	735	1,330	547	1,190
1933	2,530	2,450	2,640	1,970	2,070	1,780	1,750	1,780	972	905	1,120	936	1,740
1934	804	669	835	1,040	1,080	2,640	1,700	1,180	1,690	829	1,140	1,200	1,220
1935	1,873	1,143	1,428	2,680	1,601	1,764	1,674	1,363	972	1,495	1,274	1,011	1,526
1936	635	1,304	947	4,168	2,506	2,670	4,525	1,343	1,104	1,010	1,286	1,047	1,874
1937	3,593	1,089	1,773	4,750	2,645	1,831	1,941	1,458	1,194	1,115	1,378	813	2,034
1938	2,679	1,263	1,241	1,334	1,214	1,444	1,218	1,125	1,202	1,591	1,291	886	1,378
1939	611	847	886	1,058	3,195	2,272	1,413	1,238	936	924	1,580	622	1,287
1940	543	516	569	819	1,116	1,029	1,069	755	923	724	3,562	1,115	1,063
1941	731	954	1,052	1,065	820	1,095	1,280	685	615	1,981	968	582	990
1942	470	605	1,041	938	1,857	2,027	1,070	2,072	1,405	1,088	1,119	1,325	1,248
1943	822	748	1,865	2,492	1,840	1,817	1,774	1,514	1,176	2,009	984	745	1,483
1944	664	863	841	1,319	2,069	2,956	2,487	1,458	1,291	1,068	937	949	1,405
1945	1,107	909	985	934	1,458	1,468	1,468	1,225	709	1,195	884	1,300	1,283
1946	1,041	1,071	2,379	3,499	2,892	2,313	1,868	1,978	1,323	1,357	1,242	893	1,818
1947	1,075	1,008	864	2,267	1,167	1,348	1,340	976	1,608	1,002	890	672	1,187
1948	1,539	2,220	1,187	1,240	2,368	2,230	1,913	1,251	1,089	1,205	1,678	1,275	1,613
1949	853	2,703	2,186	1,880	2,238	1,842	2,293	2,184	1,659	2,505	3,008	2,142	2,123
1950	2,503	2,260	1,543	1,690	1,661	2,042	1,496	1,327	1,397	1,396	1,267	2,186	1,732

SANTEE RIVER BASIN

Monthly and yearly runoff, in inches, of Sandy Run Creek near Boiling Springs, N. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	0.58	0.51	0.59	0.43	-
1926	1.08	0.94	0.82	2.55	1.58	2.24	1.44	1.28	.74	1.15	1.58	.69	16.09
1927	.43	.65	1.86	.68	2.53	2.02	1.16	.66	.84	1.15	.96	.47	13.41
1928	.74	.58	1.61	.78	1.06	1.52	1.41	1.05	1.13	1.19	-	1.73	18.77
1929	1.13	.92	.91	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year						
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1925	602	-	-	14	-	-	-	-	-	-	-	-	-
1926	622	-	-	14	79.5	1.19	16.09	80.0	16.19				
1927	642	-	-	14	66.2	.988	13.41	86.1	13.40				
1928	662	-	-	15	92.4	1.38	18.77	92.5	18.80				
1929	662	-	-	-	-	-	-	-	-				

Note.--Figures of momentary maximum discharge and daily discharge above 400 cfs and monthly figures for August 1928 published in WSP 622, 642, and 662 have been found unreliable on basis of restudy of the original data. Those records are not published herein and should not be used.

239. First Broad River near Lawndale, N. C.

Location (revised).--Lat 35°22'50", long 81°32'40", on left bank 0.2 mile upstream from Shoal Rock Creek, 0.4 mile downstream from highway bridge at Double Shoals, and 2½ miles southeast of Lawndale, Cleveland County.

Drainage area.--198 sq mi.

Supplemental records available.--Records of chemical analyses for the period October 1948 to September 1949 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 735.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1940-50), 282 cfs.

Extremes.--1940-50: Maximum discharge, 32,500 cfs Aug. 14, 1940 (gage height, 37.8 ft), from rating curve extended above 12,000 cfs on basis of records for nearby streams; minimum, 16 cfs June 23, 30, 1940, July 25, 1943; minimum daily, 29 cfs July 29, 1940. Flood of 1916 reached a stage of 37.8 ft, from floodmarks established by local resident.

Remarks.--Considerable diurnal fluctuation and slight regulation at low flow caused by powerplants and mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	194	165	99.6	99.7	80.2	1,074	116	-
1941	94.4	138	151	147	122	188	206	112	147	648	202	111	190
1942	81.8	109	167	157	450	359	181	185	242	238	318	247	229
1943	132	132	427	646	366	350	304	246	191	394	192	144	294
1944	115	156	147	241	339	607	461	256	216	180	133	212	255
1945	251	192	209	226	333	256	223	169	109	205	153	754	255
1946	167	177	579	695	730	427	275	380	191	186	169	141	342
1947	155	173	144	418	182	256	263	156	426	234	178	114	225
1948	331	541	173	285	737	527	409	260	187	228	531	210	367
1949	133	570	430	318	427	310	350	398	273	468	647	292	364
1950	698	345	221	241	254	369	239	195	244	168	135	181	276

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	1.13	0.93	0.58	0.56	0.47	6.25	0.65	-
1941	0.55	0.78	0.88	0.86	0.64	1.09	1.16	.65	.83	3.77	1.17	.62	13.00
1942	.48	.61	.97	.92	2.37	2.27	1.02	1.08	1.36	1.39	1.85	1.39	15.71
1943	.77	.75	2.48	3.76	1.93	2.04	1.71	1.43	1.08	2.29	1.12	.81	20.17
1944	.67	.88	.86	1.40	1.85	3.53	2.60	1.49	1.22	1.05	.78	1.20	17.53
1945	1.46	1.08	1.22	1.31	1.75	1.49	1.26	.98	.61	1.20	.89	4.25	17.50
1946	.97	1.00	3.37	4.04	3.84	2.49	1.55	2.21	1.08	1.08	.99	.80	23.42
1947	.90	.97	.84	2.44	.96	1.49	1.48	.91	2.40	1.36	1.04	.64	15.43
1948	1.93	3.05	1.01	1.66	4.01	3.07	2.31	1.52	1.05	1.33	3.09	1.18	25.21
1949	.78	3.21	2.50	1.85	2.24	1.81	1.97	2.32	1.54	2.72	3.77	1.64	26.35
1950	4.07	1.94	1.28	1.40	1.34	2.15	1.35	1.13	1.37	1.09	.78	1.02	18.92

Yearly discharge, in cubic feet per second, of First Broad River near Lawndale, N. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	32,500	Aug. 14, 1940	a29	-	-	-	-	-
1941	922	12,400	July 16, 1941	44	190	0.960	13.00	188	12.85
1942	952	9,170	Aug. 17, 1942	-	229	1.16	15.71	257	17.65
1943	972	7,250	Jan. 28, 1943	84	294	1.48	20.17	271	16.58
1944	1002	4,840	Mar. 20, 1944	67	255	1.29	17.53	275	18.88
1945	1032	9,530	Sept. 18, 1945	76	255	1.29	17.50	278	19.08
1946	1052	9,810	Jan. 7, 1946	91	342	1.73	23.42	303	20.79
1947	1082	8,580	June 14, 1947	80	225	1.14	15.43	273	16.71
1948	1112	5,320	Feb. 12, 1948	86	367	1.85	25.21	374	25.71
1949	1142	10,200	Aug. 29, 1949	66	384	1.94	26.35	396	27.15
1950	1172	11,300	Oct. 7, 1949	99	276	1.39	18.92	-	-

a Minimum day during the period March to September.

240. Broad River near Gaffney, S. C.

Location.--Lat 35°05'10", long 81°34'20", at bridge on U. S. Highway 29, 0.3 mile upstream from Cherokee Creek, 4.4 miles downstream from Gaston Shoals Dam, and 4.5 miles east of Gaffney, Cherokee County.

Drainage area.--1,490 sq mi, approximately.

Supplemental records available.--July 1896 to December 1899, gage heights and discharge measurements only. Records of chemical analyses and water temperatures for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 539.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1896, to Dec. 31, 1899, chain or staff gages at sites 1.1 miles upstream, at different datum.

Average discharge.--12 years (1938-50), 2,433 cfs.

Extremes.--1938-50: Maximum discharge, 119,000 cfs Aug. 14, 1940 (gage heights, 19.78 ft) by computation of flow over Gaston Shoals Dam; minimum, 242 cfs Sept. 18, Oct. 30, 1939; minimum daily, 443 cfs July 2, 1940.

Remarks.--Some regulation at medium and low flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	1,000	1,580	1,450	1,793	5,469	4,086	2,424	2,102	1,522	1,747	2,785	991	2,210
1940	940	885	1,062	1,437	1,882	1,656	1,566	1,124	1,379	983	5,858	1,787	1,716
1941	992	1,510	1,538	1,563	1,182	1,723	1,975	1,018	1,237	4,220	1,495	959	1,623
1942	697	953	1,530	1,374	3,227	3,142	1,756	2,849	2,207	1,827	2,098	2,268	1,986
1943	1,328	1,118	2,802	4,241	2,782	3,210	3,123	2,238	2,146	3,844	1,632	1,363	2,508
1944	1,025	1,438	1,518	2,325	3,628	5,150	4,568	2,805	2,417	1,656	1,725	1,762	2,495
1945	2,320	1,726	1,854	2,004	3,079	2,802	2,590	1,978	1,144	2,155	1,335	5,984	2,404
1946	1,650	1,616	4,414	5,455	4,959	3,559	2,859	3,224	2,046	2,235	1,977	1,560	2,957
1947	1,904	1,802	1,661	4,300	2,023	2,511	2,443	1,759	2,775	1,957	1,498	1,073	2,144
1948	2,891	4,190	1,959	2,275	5,001	3,837	3,371	2,228	1,826	1,934	3,209	2,002	2,882
1949	1,366	4,603	3,674	3,146	3,926	5,040	3,752	3,550	2,449	3,887	5,633	3,179	3,514
1950	4,718	3,630	2,370	2,736	2,836	3,221	2,415	2,047	2,388	2,268	1,633	3,024	2,757

† Corrected.

* Not previously published; estimated on basis of records for stations in same basin and weather records.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	0.77	1.03	1.12	1.38	3.82	3.16	1.82	1.63	1.14	1.35	2.16	0.74	20.12
1940	.73	.66	.82	1.11	1.36	1.28	1.17	.87	1.03	.76	4.53	1.34	15.66
1941	.77	1.13	1.19	1.21	.83	1.34	1.48	.79	.93	3.26	1.15	.72	14.80
1942	.54	.71	1.19	1.06	2.26	2.43	1.32	2.20	1.65	1.42	1.63	1.70	18.11
1943	1.03	.84	2.17	3.29	1.95	2.48	2.34	1.73	1.61	2.97	1.42	1.02	22.85
1944	.79	1.08	1.18	1.80	2.62	3.99	3.42	2.17	1.61	1.28	1.34	1.32	22.80
1945	1.80	1.29	1.43	1.54	2.18	2.17	1.94	1.53	.86	1.67	1.03	4.48	21.90
1946	1.28	1.20	3.41	4.22	3.47	2.76	2.14	2.49	1.53	1.73	1.53	1.17	26.93
1947	1.48	1.35	1.28	3.33	1.42	1.95	1.83	1.36	2.08	1.51	1.16	.80	19.55
1948	2.24	3.14	1.51	1.76	3.62	2.97	2.52	1.73	1.37	1.50	2.48	1.50	26.34
1949	1.06	3.45	2.85	2.43	2.74	2.35	2.81	2.74	1.83	3.01	4.36	2.38	32.01
1950	3.66	2.72	1.83	2.12	1.84	2.49	1.81	1.58	1.78	1.75	1.27	2.26	25.11

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Broad River near Gaffney, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	21,000	Aug. 18, 1939	-	2,210	1.48	20.12	2,131	19.41
1940	892	119,000	Aug. 14, 1940	443	1,716	1.15	15.66	1,812	16.54
1941	922	26,000	July 17, 1941	495	1,623	1.09	14.80	1,552	14.15
1942	952	21,800	Feb. 17, 1942	466	1,986	1.33	18.11	2,161	19.71
1943	972	38,400	Jan. 28, 1943	699	2,506	1.68	22.65	2,398	21.86
1944	1002	21,700	Mar. 20, 1944	730	2,495	1.67	22.80	2,657	24.27
1945	1032	61,600	Sept. 18, 1945	743	2,404	1.61	21.90	2,555	23.27
1946	1052	43,400	Jan. 7, 1946	970	2,957	1.98	26.93	2,760	25.15
1947	1082	27,800	June 15, 1947	657	2,144	1.44	19.55	2,450	22.33
1948	1112	25,600	Aug. 4, 1948	680	2,662	1.93	26.54	2,932	26.61
1949	1142	35,700	Nov. 29, 1948	1,040	3,514	2.36	32.01	3,608	32.86
1950	1172	31,000	Oct. 7, 1949	1,090	2,757	1.85	25.11	-	-

* Not previously published.

Note.--Records for July 1896 to December 1899 published in 18th, 19th and 21st Annual Reports have been found in error on basis of restudy of the original data and comparison with records at nearby stations. These records are not published herein and should not be used.

241. North Pacolet River near Tryon, N. C.

Location (revised).--Lat 35°13'00", long 82°11'45", 250 ft downstream from Horse Creek, 2½ miles east of Tryon, Polk County and 3 miles upstream from South Carolina State line.

Drainage area.--43.6 sq mi (revised).

Gage.--Staff gage. Altitude of gage was about 875 ft (from topographic map).

Extremes.--1924-25: Maximum stage observed, 7.3 ft Nov. 12, 1925 (discharge not determined and that previously published is unreliable and should not be used); minimum discharge, 8.0 cfs several times during September 1925 (gage height, 1.50 ft).

Flood of July 1916 reached a stage of 21.2 ft, from floodmarks established by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	68.4	86.1	53.3	77.2	-
1925	62.2	52.9	85.6	126	83.3	72.4	64.7	57.7	36.4	28.3	21.5	18.8	58.8
1926	26.1	61.7	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	1.75	2.28	1.41	1.98	-
1925	1.64	1.35	2.21	3.33	1.99	1.91	1.66	1.53	-	-	-	-	18.31

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	582	-	-	a34	-	-	-	-	-
1925	602	-	-	8.0	58.8	1.35	18.31	-	-
1926	602	-	-	b11	-	-	-	-	-

a Minimum day during period May 16 to Sept. 30.

b Minimum day during period Oct. 1 to Dec. 12.

Note.--Figures of maximum and mean daily discharge above 150 cfs and the figures of monthly runoff June to December 1925 published in WSP 582 and 602 have been found unreliable on basis of restudy of the original data. Those records are not published herein and should not be used.

242. North Pacolet River at Fingerville, S. C.

Location.--Lat 35°07', long 81°59', at McMillin Mill, about 400 ft downstream from Obed Creek and 1 mile south of Fingerville, Spartanburg County.

Drainage area.--116 sq mi.

Gage.--Water-stage recorder. Datum of gage is 715.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 24, 1933 (revised), at site about 400 ft downstream at datum 5.60 ft higher.

Average discharge.--21 years (1929-50), 210 cfs.

Extremes.--1929-50: Maximum discharge, 12,500 cfs Aug. 14, 1940 (gage height, 27.13 ft), from rating curve extended above 1,400 cfs on basis of computation of peak flow over dam; minimum, 10 cfs Oct. 7, 1940, June 22, 1941; minimum daily, 34 cfs Oct. 1, 2, 1931.

Remarks.--Some diurnal fluctuation at low and medium flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#64.0	#46.0	302	266	255	238	177	139	126	93.1	88.2	74.1	#238
1931	66.6	146	196	172	122	181	240	153	87.6	85.5	92.7	55.3	133
1932	46.5	56.8	340	358	165	212	175	181	160	88.8	252	95.7	178
1933	387	332	392	280	319	248	286	237	131	157	186	134	257
1934	84.7	94.6	117	130	159	360	221	167	270	118	210	185	176
1935	255	145	175	313	216	225	204	145	132	212	194	138	196
1936	94.2	172	119	628	357	314	763	202	178	177	211	152	280
1937	657	165	297	791	389	260	309	209	161	262	252	322	340
1938	476	187	162	199	171	238	180	185	198	306	175	135	217
1939	94.1	118	125	150	454	286	208	203	164	136	245	97.2	188
1940	83.8	78.8	96.2	140	183	141	136	86.2	103	95.1	490	91.8	147
1941	78.1	121	131	136	122	170	180	88.3	75.6	206	154	60.9	125
1942	48.6	73.2	141	119	284	279	133	235	122	153	209	268	171
1943	113	104	267	360	268	286	268	208	165	510	175	118	220
1944	91.3	138	145	195	286	444	370	185	141	122	116	138	197
1945	174	149	149	155	209	199	188	130	83.8	230	149	346	180
1946	123	138	357	632	504	327	247	258	168	181	162	127	268
1947	187	191	148	323	169	210	193	135	242	137	130	87.0	180
1948	203	279	169	177	326	332	262	179	162	169	246	161	222
1949	120	427	292	267	324	254	311	248	183	213	408	263	275
1950	380	291	205	220	202	243	201	175	188	187	153	269	226

* Not previously published; estimated on basis of records for Broad River near Chimney Rock, N. C., and weather records.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#6.36	#4.43	3.00	2.64	2.29	2.36	1.71	1.38	1.22	0.92	0.88	0.71	#27.90
1931	.68	1.41	1.95	1.71	1.09	1.80	2.31	1.52	.84	.85	.92	.53	15.61
1932	.48	.55	3.38	3.56	1.53	2.11	1.68	1.80	1.54	.88	2.50	.92	20.91
1933	3.85	3.19	3.90	2.78	2.86	2.47	2.76	2.35	1.26	1.56	1.84	1.29	30.11
1934	.84	.91	1.16	1.29	1.43	3.57	2.13	1.66	2.60	1.18	2.09	1.77	20.63
1935	2.54	1.40	1.74	3.11	1.94	2.24	1.96	1.44	1.27	2.11	1.92	1.33	23.00
1936	.94	1.65	1.19	6.24	3.32	3.12	7.34	2.01	1.71	1.76	2.10	1.46	32.84
1937	6.52	1.58	2.95	7.86	3.49	2.58	2.97	2.08	1.55	2.61	2.50	3.10	39.79
1938	4.75	1.80	1.61	1.98	1.53	2.36	1.73	1.84	1.91	3.04	1.74	1.29	25.36
1939	.94	1.14	1.24	1.49	4.07	2.85	2.00	2.02	1.57	1.35	2.43	.94	22.04
1940	.83	.76	.96	1.40	1.70	1.41	1.30	.86	.99	.95	4.86	.88	16.90
1941	.78	1.16	1.30	1.35	1.09	1.70	1.54	.88	.73	2.05	1.53	.59	14.70
1942	.48	.70	1.41	1.19	2.55	2.78	1.28	2.34	1.17	1.52	1.98	2.58	19.98
1943	1.12	1.00	2.65	3.57	2.40	2.85	2.58	2.06	1.57	3.08	1.74	1.12	25.74
1944	.91	1.33	1.44	1.94	2.66	4.42	3.56	1.83	1.36	1.21	1.15	1.33	23.14
1945	1.73	1.43	1.48	1.54	1.87	1.98	1.81	1.29	.81	2.28	1.48	3.32	21.02
1946	1.22	1.33	3.55	6.28	4.52	3.25	2.38	2.56	1.62	1.80	1.61	1.22	31.34
1947	1.86	1.84	1.48	3.20	1.52	2.09	1.85	1.34	2.33	1.36	1.29	.84	21.00
1948	2.02	2.69	1.68	1.76	3.03	3.30	2.52	1.78	1.56	1.68	2.44	1.55	26.01
1949	1.19	4.11	2.90	2.65	2.90	2.52	2.99	2.47	1.76	2.12	4.06	2.53	32.20
1950	3.78	2.80	2.04	2.19	1.81	2.41	1.93	1.74	1.81	1.86	1.52	2.59	26.48

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of North Pacolet River at Fingerville, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	#59	#238	#2.05	#27.90	155	18.15
1931	712	872	Dec. 7, 1930	44	133	1.15	15.61	136	15.96
1932	727	2,120	Dec. 15, 1931	34	178	1.53	20.91	234	27.46
1933	742	6,820	Oct. 17, 1932	74	257	2.22	30.11	189	22.08
1934	757	2,100	Mar. 4, 1934	59	176	1.52	20.63	200	23.40
1935	782	1,760	July 19, 1935	59	196	1.69	23.00	180	21.10
1936	802	6,120	Apr. 7, 1936	72	280	2.41	32.84	342	40.11
1937	822	7,290	Oct. 17, 1936	104	340	2.93	39.79	315	36.88
1938	852	5,400	Oct. 19, 1937	84	217	1.87	25.36	176	20.54
1939	872	2,480	Aug. 19, 1939	75	188	1.62	22.04	182	21.27
1940	892	12,500	Aug. 14, 1940	40	147	1.27	16.90	153	17.59
1941	922	1,540	July 17, 1941	36	125	1.08	14.70	120	14.05
1942	952	2,700	Feb. 17, 1942	35	171	1.47	19.98	189	22.16
1943	972	2,200	Jan. 28, 1943	78	220	1.90	25.74	211	24.65
1944	1002	1,620	Mar. 20, 29, 1944	66	197	1.70	23.14	205	24.10
1945	1032	3,780	Sept. 17, 1945	64	180	1.55	21.02	192	22.48
1946	1052	5,040	Jan. 7, 1946	99	268	2.31	31.34	260	30.42
1947	1082	3,110	June 15, 1947	76	180	1.55	21.00	190	22.21
1948	1112	1,370	Feb. 13, 1948	72	222	1.91	26.01	237	27.82
1949	1142	3,780	Nov. 29, 1948	109	275	2.37	32.20	279	32.62
1950	1172	5,150	Oct. 7, 1949	98	226	1.95	26.48	-	-

* Not previously published.

243. South Pacolet River Reservoir near Fingerville, S. C.

Location.--Lat 35°07', long 81°59', at bridge on State road, 1 mile upstream from dam and $\frac{1}{4}$ miles south of Fingerville, Spartanburg County.

Drainage area.--92 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 761.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1930-50: Maximum gage height, 17.68 ft Oct. 19, 1937; minimum, 2.76 ft Oct. 8, 1930.

Remarks.--Reservoir is formed by concrete dam completed in 1926. Capacity, 879,000,000 gal between gage heights 0.0 ft (limit of drawdown) and 15.0 ft (top of flashboards). Dead storage is about 350,000,000 gal. Figures given herein represent usable contents. Spillway crest is at gage height 12.0 ft. City of Spartanburg diverts water from reservoir for municipal supply. Surplus water is used for generation of power.

Cooperation.--Capacity table furnished by Commissioners of Public Works, Spartanburg Water Works.

Contents, in millions of gallons, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930	-	-	-	-	-	565	461	450	508	368	432	132
1931	167	537	664	431	499	682	656	606	309	278	359	243
1932	359	395	759	816	613	779	678	638	491	405	444	507
1933	762	722	907	657	659	626	669	466	502	580	654	610
1934	564	607	615	617	866	832	335	669	530	586	900	650
1935	654	810	673	657	630	726	652	554	392	542	595	555
1936	460	685	616	721	756	918	553	533	558	949	596	995
1937	489	637	1,032	919	725	616	706	610	622	902	891	478
1938	625	460	559	528	580	625	526	894	587	831	424	184
1939	235	383	633	670	940	604	910	551	314	402	471	149
1940	439	787	823	247	552	905	629	349	333	274	519	296
1941	423	432	553	482	360	668	449	377	557	449	710	384
1942	329	620	684	668	444	569	549	658	537	692	491	547
1943	709	555	894	894	730	805	750	791	701	737	436	565
1944	678	614	677	709	880	897	891	726	594	667	678	934
1945	574	860	584	638	835	794	819	621	570	809	580	733
1946	640	672	906	785	621	895	827	703	718	692	655	737
1947	695	783	531	603	484	755	612	633	713	512	631	529
1948	796	632	727	807	729	895	504	732	798	610	577	636
1949	632	910	896	793	804	709	800	706	695	765	888	746
1950	355	760	766	814	777	720	746	814	539	766	577	610

Note.--Contents March 1930 to August 1938, not previously published.

244. Pacolet River near Pingerville, S. C.

Location.--Lat 35°07', long 81°58', 100 ft upstream from bridge on State Highway 55, a quarter of a mile downstream from confluence of North Pacolet and South Pacolet Rivers, and 2½ miles southeast of Pingerville, Spartanburg County.

Drainage area.--212 sq mi.

Gage.--Water-stage recorder. Datum of gage is 706.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1929-50), 344 cfs.

Extremes.--1929-50: Maximum discharge, 22,800 cfs Aug. 14, 1940 (gage height, 22.43 ft), from rating curve extended above 9,600 cfs by velocity-area studies; minimum daily, 38 cfs Oct. 4, 1931.

Maximum stage known, 46 ft in June 1903, from floodmark (discharge not determined).

Remarks.--Flow partly regulated by South Pacolet River Reservoir (see preceding station). City of Spartanburg diverts water above station from South Pacolet River Reservoir for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	1,110	+790	439	422	404	375	282	216	195	148	137	138	+388
1931	101	224	300	291	197	278	391	285	158	151	157	90.2	219
1932	70.5	97.1	616	676	316	388	309	304	352	154	375	151	319
1933	630	611	672	457	512	388	432	359	196	244	306	227	419
1934	156	151	195	211	263	645	384	257	505	196	305	299	295
1935	384	225	283	470	347	354	335	250	206	367	295	211	311
1936	152	289	204	1,046	571	500	1,249	314	273	269	354	224	452
1937	1,021	255	470	1,203	598	421	485	336	248	405	430	536	535
1938	724	303	263	321	267	368	283	250	314	460	304	197	339
1939	138	186	193	249	762	466	320	332	260	236	411	160	308
1940	124	112	167	242	302	236	235	151	156	155	846	142	239
1941	108	184	197	203	175	259	251	123	100	372	220	99.4	191
1942	71.7	105	219	200	512	439	199	335	177	203	310	396	282
1943	138	162	434	624	441	472	418	313	251	458	276	158	347
1944	131	224	230	316	532	616	313	230	183	182	182	219	335
1945	305	224	261	252	362	349	343	216	128	486	258	606	315
1946	193	215	644	1,004	807	521	408	460	273	316	267	203	441
1947	316	323	249	585	285	347	337	209	424	244	210	131	305
1948	319	480	262	284	578	590	472	271	257	276	449	239	372
1949	178	750	508	475	576	426	528	416	281	365	762	422	473
1950	628	513	331	370	334	403	336	269	323	304	229	394	370

* Not previously published; estimated on basis of records for Broad River near Chimney Rock, N. C., and weather records.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	-	-	+110	+388	-	-	244	-
1931	712	1,020	Dec. 6, 1930	48	219	-	-	233	-
1932	727	3,810	Dec. 15, 1931	38	319	-	-	413	-
1933	742	11,000	Oct. 17, 1932	104	419	-	-	299	-
1934	757	3,810	Mar. 4, 1934	100	295	-	-	330	-
1935	782	2,510	Oct. 11, 1934	126	311	-	-	290	-
1936	802	10,100	Apr. 7, 1936	116	452	-	-	546	-
1937	822	11,300	Oct. 17, 1936	172	535	-	-	496	-
1938	852	10,300	Oct. 19, 1937	123	339	-	-	274	-
1939	872	4,390	Aug. 19, 1939	85	308	-	-	299	-
1940	892	22,800	Aug. 14, 1940	40	239	-	-	246	-
1941	922	1,760	July 17, 1941	46	191	-	-	164	-
1942	952	6,760	Feb. 17, 1942	41	262	-	-	293	-
1943	972	4,120	Jan. 28, 1943	85	347	-	-	333	-
1944	1002	3,870	Mar. 20, 1944	87	335	-	-	352	-
1945	1032	5,850	Sept. 17, 1945	93	315	-	-	338	-
1946	1052	9,400	Jan. 7, 1946	113	441	-	-	427	-
1947	1082	5,250	June 15, 1947	94	305	-	-	320	-
1948	1112	3,160	Aug. 5, 1948	86	372	-	-	403	-
1949	1142	6,980	Nov. 29, 1948	156	473	-	-	477	-
1950	1172	6,250	Oct. 7, 1949	137	370	-	-	477	-

* Not previously published.

Note.--Figures for discharge in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers may be subject to error because of diversion and regulation in South Pacolet River Reservoir upstream. These figures are not included herein and should not be used.

245. Pacolet River near Clifton, S. C.

Location--Lat 34°58'10", long 81°48'05", 1.2 miles downstream from dam at Clifton Mill 2, 1.3 miles southeast of Clifton, Spartanburg County, 2.7 miles upstream from Lawson Fork, and 2.7 miles northeast of Glendale.

Drainage area--320 sq mi.

Gage--Water-stage recorder. Altitude of gage is 540 ft (from topographic map).

Average discharge--11 years (1939-50), 483 cfs.

Extremes--1939-50: Maximum discharge, 26,800 cfs Aug. 14, 1940 (gage height, 21.19 ft), from rating curve extended above 4,400 cfs on basis of computation of peak flow over dam at Clifton Mill 2; minimum daily, 17 cfs Oct. 19, 1941.

Remarks--Some regulation at low and medium flow by powerplants above station and South Pacolet River Reservoir (see elsewhere in this report). City of Spartanburg diverts water above station from South Pacolet River Reservoir for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	†175	156	236	335	427	348	321	208	210	221	1,076	191	‡326
1941	148	275	277	277	235	367	331	167	144	566	302	133	269
1942	106	151	323	285	745	665	286	431	233	297	418	542	371
1943	213	219	626	962	589	668	578	408	366	679	361	223	492
1944	194	311	327	455	797	1,301	902	455	329	280	266	307	491
1945	437	330	374	384	536	518	516	328	197	697	335	934	465
1946	283	315	967	1,490	1,242	760	568	661	390	456	382	284	648
1947	457	426	353	881	413	536	491	319	571	325	286	187	437
1948	480	736	397	443	876	860	699	440	367	396	634	363	556
1949	262	1,119	768	713	879	623	776	615	423	494	†1,154	632	703
1950	1,049	744	466	557	499	591	513	438	448	483	‡24	505	552

† Corrected.

‡ Not previously published; estimated on basis of records for station near Fingerville.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	972	26,800	Aug. 14, 1940	50	‡326	-	-	337	-
1941	972	5,620	July 11, 1941	30	269	-	-	260	-
1942	972	8,640	Aug. 18, 1942	17	371	-	-	412	-
1943	972	9,300	Jan. 28, 1943	71	492	-	-	472	-
1944	1002	7,220	Mar. 20, 1944	90	491	-	-	517	-
1945	1032	12,000	Sept. 17, 1945	86	465	-	-	501	-
1946	1052	12,900	Jan. 7, 1946	58	648	-	-	620	-
1947	1082	5,860	Jan. 20, 1947	105	437	-	-	469	-
1948	1112	4,630	Aug. 4, 1948	128	556	-	-	600	-
1949	1142	9,170	Nov. 28, 1948	226	703	-	-	713	-
1950	1172	16,300	Oct. 7, 1949	184	552	-	-	723	-

‡ Not previously published.

246. Broad River near Carlisle, S. C.

Location--Lat 34°36', long 81°25', at bridge on State Highway 72, 2 miles upstream from Sandy River, 2 miles downstream from Seaboard Air Line Railroad bridge, 2½ miles east of Carlisle, Union County, and 5 miles downstream from Neals Shoals Dam.

Drainage area--2,790 sq mi, approximately.

Supplemental records available--Records of chemical analyses and water temperatures for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage--Water-stage recorder. Datum of gage is 290.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--12 years (1938-50), 3,839 cfs.

Extremes--1938-50: Maximum discharge, 103,000 cfs Aug. 15, 1940 (gage height, 29.41 ft), from rating curve extended above 52,000 cfs on basis of computation of peak flow over Neals Shoals Dam; minimum, 73 cfs Nov. 1, 1948 (gage height, 1.14 ft); minimum daily, 30 cfs June 30, 1940.

Remarks--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second, of Broad River near Carlisle, S. C.

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1939	*1,401	*2,463	2,715	3,252	9,948	7,025	3,554	3,171	2,193	2,429	4,520	1,488	*3,642
1940	1,309	1,236	1,574	2,317	3,348	2,996	2,585	1,791	1,941	1,730	7,582	2,143	2,548
1941	1,360	2,884	2,425	2,501	1,887	2,843	2,940	1,509	1,647	8,092	2,507	1,386	2,676
1942	1,038	1,395	2,845	2,208	5,925	6,317	2,564	3,653	2,867	2,762	3,208	3,361	3,163
1943	1,783	1,718	4,209	8,375	4,828	5,243	4,691	3,237	3,441	6,001	2,614	1,879	4,006
1944	1,436	1,952	2,141	3,696	6,252	10,210	7,748	4,063	3,201	2,295	2,609	1,883	3,947
1945	3,441	2,311	2,640	3,031	4,926	4,052	3,735	2,803	1,547	3,373	2,261	9,885	3,649
1946	2,292	2,264	7,549	9,164	6,455	5,603	4,381	4,962	2,865	3,263	3,518	2,319	4,708
1947	3,508	2,768	2,520	7,874	3,249	4,548	3,775	2,455	3,568	2,605	2,003	1,642	3,382
1948	4,911	7,507	3,498	4,150	8,360	7,001	5,978	3,486	2,806	2,844	4,513	2,751	4,798
1949	1,973	8,093	6,180	5,492	6,373	4,244	5,629	5,468	3,560	4,931	9,495	5,329	5,556
1950	6,926	5,559	3,627	4,100	3,730	4,684	3,544	3,110	3,376	3,244	2,193	3,824	3,994

* Not previously published; estimated on basis of powerplant records at Neals Shoals.

Monthly and yearly runoff, in inches

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1939	*0.58	*0.99	1.12	1.35	3.72	2.90	1.42	1.31	0.88	1.00	1.87	0.59	*17.73
1940	.54	.49	.65	.96	1.29	1.23	1.03	.74	.78	.71	3.14	.86	12.42
1941	.56	1.15	1.00	1.03	.70	1.18	1.17	.62	.66	3.34	1.04	.55	13.00
1942	.43	.56	1.18	.91	2.21	2.61	1.03	1.51	1.15	1.14	1.33	1.34	15.40
1943	.74	.69	1.74	3.46	1.80	2.17	1.87	1.34	1.37	2.48	1.08	.75	19.49
1944	.59	.78	.88	1.52	2.42	4.22	3.10	1.68	1.28	.95	1.08	.75	19.25
1945	1.42	.92	1.09	1.26	1.94	1.67	1.50	1.35	.62	1.40	.93	3.95	17.75
1946	.95	.90	3.12	3.78	3.16	2.32	1.75	2.05	1.15	1.35	1.45	.93	22.91
1947	1.45	1.11	1.04	3.25	1.21	1.88	1.51	1.01	1.43	1.08	.83	.66	16.46
1948	2.05	3.00	1.44	1.72	3.24	2.89	2.39	1.44	1.13	1.18	1.87	1.10	23.43
1949	.82	3.24	2.56	2.27	2.37	1.75	2.25	2.26	1.43	2.04	3.92	2.13	27.04
1950	2.86	2.22	1.50	1.70	1.40	1.94	1.42	1.28	1.35	1.34	.91	1.53	19.45

* Not previously published; estimated on basis of powerplant records at Neals Shoals.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date						
1939	872	34,900	Mar. 1, 1939	-	*3,642	*1.31	*17.73	3,437	16.72
1940	892	103,000	Aug. 15, 1940	90	2,548	.913	12.42	2,759	13.45
1941	922	37,600	July 18, 1941	150	2,676	.959	13.00	2,562	12.46
1942	952	42,200	Feb. 18, 1942	150	3,163	1.13	15.40	3,368	16.40
1943	972	44,500	Jan. 29, 1943	347	4,006	1.44	19.49	3,820	18.57
1944	1002	46,900	Mar. 20, 1944	308	3,947	1.41	19.25	4,188	20.43
1945	1032	78,500	Sept. 19, 1945	372	3,649	1.31	17.75	3,965	19.29
1946	1052	49,200	Jan. 8, 1946	551	4,708	1.69	22.91	4,426	21.54
1947	1082	37,900	Jan. 21, 1947	215	3,382	1.21	16.46	3,974	19.33
1948	1112	34,600	Feb. 14, 1948	180	4,798	1.72	23.43	4,825	23.58
1949	1142	62,200	Nov. 29, 1948	324	5,556	1.99	27.04	5,552	27.00
1950	1172	44,200	Oct. 8, 1949	225	3,994	1.43	19.45	-	-

* Not previously published.

247. Middle Tyger River at Lyman, S. C.

Location.--Lat 34°56'35", long 82°08'00", 200 ft upstream from bridge on Stage Highway 292 at Lyman, Spartanburg County, 600 ft downstream from Southern Railway bridge, and 0.8 mile northeast of Duncan.

Drainage area.--68.3 sq mi.

Gage.--Water-stage recorder and masonry control. Datum of gage is 776.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--13 years (1937-50), 97.3 cfs.

Extremes.--1937-50: Maximum discharge, 4,800 cfs Aug. 14, 1940 (gage height, 16.16 ft), from rating curve extended above 2,900 cfs on basis of computation of peak flow over dam; minimum, 1 cfs Sept. 25, 1940; minimum daily, 13 cfs Oct. 12, 18, 26, 1941.

Remarks.--Some diurnal fluctuation caused by steam powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second, of Middle Tyger River at Lyman, S. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1938	*275	*87.0	*83.0	*92.5	76.6	104	81.0	60.4	58.6	90.6	90.8	41.0	*95.5
1939	31.9	50.3	58.4	80.9	255	141	106	79.1	55.1	77.3	158	52.5	94.5
1940	39.0	37.5	51.9	67.9	103	80.1	60.6	42.8	41.4	42.7	222	34.9	68.7
1941	33.3	52.7	57.3	56.9	51.0	80.2	65.0	31.2	26.8	121	67.4	24.5	55.8
1942	17.3	32.2	60.8	60.7	156	143	60.5	78.7	43.3	40.7	44.0	72.7	66.9
1943	37.4	43.9	118	224	134	145	116	127	97.8	104	73.7	47.8	106
1944	40.6	62.9	66.8	91.5	168	285	178	88.8	81.1	76.9	47.0	63.0	104
1945	84.8	74.6	74.5	81.8	118	103	107	65.6	40.7	141	60.3	136	90.3
1946	55.0	60.7	204	316	272	156	112	148	69.9	114	71.5	56.1	136
1947	83.5	89.4	70.5	188	83.4	108	98.3	58.3	98.6	54.5	54.3	34.6	85.2
1948	74.7	111	72.9	79.7	168	188	136	84.6	66.8	107	218	59.0	114
1949	48.9	252	152	150	180	117	140	115	75.0	111	251	138	144
1950	158	165	97.5	114	96.5	109	106	76.2	105	97.4	55.5	74.8	104

* Not previously published; estimated on basis of records for North Tyger River near Moore.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1938	*4.65	*1.42	*1.41	*1.56	1.17	1.75	1.33	1.02	0.96	1.53	1.53	0.67	*19.00
1939	.54	.82	.99	1.36	3.88	2.38	1.73	1.34	.90	1.30	2.66	.86	18.78
1940	.66	.61	.88	1.15	1.63	1.35	.99	.72	.68	.72	3.75	.57	13.71
1941	.56	.86	.97	.96	.78	1.35	1.06	.53	.44	2.04	1.14	.40	11.09
1942	.29	.53	1.03	1.02	2.37	2.41	.99	1.33	.71	.69	.74	1.18	13.29
1943	.65	.72	1.99	3.78	2.04	2.44	1.90	2.14	1.60	1.75	1.24	.78	21.01
1944	.68	1.03	1.13	1.54	2.65	4.81	2.91	1.50	1.33	1.30	.79	1.03	20.70
1945	1.43	1.22	1.26	1.38	1.80	1.74	1.75	1.11	.66	2.58	1.02	2.22	17.97
1946	.93	.99	3.45	5.34	4.14	2.63	1.83	2.50	1.14	1.92	1.21	.92	27.00
1947	1.41	1.46	1.19	3.17	1.27	1.82	1.61	.98	1.61	.92	.92	.57	16.93
1948	1.26	1.82	1.23	1.35	2.65	3.17	2.22	1.43	1.09	1.81	3.68	.95	22.66
1949	.83	4.12	2.57	2.54	2.75	1.97	2.29	1.94	1.23	1.88	4.23	2.25	28.60
1950	2.66	2.67	1.65	1.92	1.47	1.84	1.73	1.29	1.72	1.65	.94	1.23	20.77

* Not previously published; estimated on basis of records for North Tyger River near Moore.

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	852	-	-	-	*95.5	*1.40	*19.00	*69.8	*13.87
1939	872	2,730	Aug. 18, 1939	26	94.5	1.38	18.76	93.5	18.56
1940	892	4,800	Aug. 14, 1940	20	68.7	1.01	13.71	69.9	13.95
1941	922	945	July 18, 1941	16	55.8	.817	11.09	53.0	10.55
1942	952	2,860	Feb. 17, 1942	13	68.9	.980	13.29	74.4	14.78
1943	972	2,380	Jan. 28, 1943	26	106	1.55	21.01	103	20.51
1944	1002	2,120	Mar. 20, 1944	32	104	1.52	20.70	109	21.77
1945	1032	2,310	July 16, 1945	28	90.3	1.32	17.97	97.6	19.43
1946	1052	3,670	Jan. 7, 1946	42	136	1.99	27.00	129	25.69
1947	1082	1,840	Jan. 21, 1947	29	85.2	1.25	16.93	86.5	17.18
1948	1112	3,310	Aug. 5, 1948	29	114	1.67	22.66	130	25.87
1949	1142	3,190	Nov. 29, 1948	45	144	2.11	28.60	141	28.06
1950	1172	1,580	Oct. 7, 1949	46	104	1.52	20.77	-	-

* Not previously published.

248. North Tyger River near Moore, S. C. 1/

Location.--Lat 34°48'10", long 81°57'57", at Ott Shoals, 2.0 miles upstream from Wards Creek, 2.6 miles southeast of Moore, Spartanburg County, and 5.3 miles upstream from confluence with South Tyger River.

Drainage area.--162 sq mi.

Supplemental records available.--Records of chemical analyses and water temperatures for the period October 1948 to September 1949 are published in report of Geological Survey.

Gage.--Water-stage recorder and concrete control. Datum of gage is 564.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--17 years (1933-50), 230 cfs.

Extremes.--1933-50: Maximum discharge, 12,300 cfs Aug. 14, 1940 (gage height, 7.15 ft), from rating curve extended above 7,800 cfs by velocity-area studies; minimum, 13 cfs (revised) Dec. 29, 1935; minimum daily, 21 cfs Oct. 12, 1941.

Remarks.--Some regulation at low flow by powerplants above station.

1/ Published as North Tyger River prior to 1936.

Monthly and yearly mean discharge, in cubic feet per second, of North Tyger River near Moore, S. C.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1934	#103	#112	#141	#176	#234	#402	254	215	399	126	162	132	#204
1935	203	141	165	242	222	212	216	158	111	192	262	128	188
1936	88.4	205	129	876	427	395	996	182	182	185	314	225	349
1937	827	178	305	962	424	281	334	249	202	134	327	308	379
1938	605	191	183	205	172	208	187	146	158	186	153	117	208
1939	67.0	121	138	181	563	369	218	180	113	143	277	90.0	205
1940	75.8	77.2	119	149	206	183	140	89.5	80.9	107	586	78.0	158
1941	66.5	137	127	127	107	179	143	73.9	76.7	282	127	55.9	126
1942	41.2	65.4	141	136	390	337	142	159	99.1	101	142	185	160
1943	88.4	97.0	248	570	288	310	270	256	207	225	141	104	234
1944	87.6	140	156	217	402	620	430	198	166	141	110	118	232
1945	205	152	177	186	272	236	231	138	89.1	248	144	384	205
1946	134	140	458	678	555	333	240	349	154	220	137	112	292
1947	173	174	141	407	177	252	205	129	151	94.6	105	69.9	174
1948	159	306	175	197	385	445	347	187	153	179	340	143	251
1949	114	521	361	340	437	273	328	288	176	206	447	284	313
1950	488	357	214	261	208	238	212	167	194	201	121	155	233

* Not previously published; estimated on basis of records for Tyger River near Woodruff.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1934	#0.73	#0.77	#1.00	#1.26	#1.50	#2.86	1.75	1.53	2.74	0.90	1.15	0.91	#17.10
1935	1.44	.97	1.18	1.72	1.43	1.51	1.48	1.12	1.76	1.37	1.87	.88	15.73
1936	.63	1.42	.92	6.24	2.85	2.81	6.86	1.29	1.25	1.31	2.24	1.55	29.37
1937	5.88	1.23	2.17	6.85	2.73	1.99	2.30	1.78	1.40	.95	2.33	2.12	31.73
1938	4.30	1.32	1.30	1.46	1.10	1.48	1.28	1.04	.95	1.33	1.09	.81	17.46
1939	.48	.83	.98	1.29	3.75	2.63	1.51	1.28	.78	1.02	1.97	.62	17.14
1940	.54	.53	.85	1.06	1.37	1.20	.96	.64	.56	.76	4.17	.54	13.28
1941	.47	.94	.90	.90	.69	1.27	.99	.53	.53	2.01	.90	.38	10.51
1942	.29	.45	1.00	.97	2.51	2.40	.98	1.13	.68	.72	1.01	1.27	13.41
1943	.63	.67	1.76	4.06	1.85	2.20	1.86	1.82	1.43	1.59	1.00	.72	19.59
1944	.62	.96	1.11	1.54	2.68	4.42	2.96	1.41	1.14	1.00	.78	.81	19.43
1945	1.46	1.05	1.26	1.33	1.75	1.68	1.60	.98	.61	1.76	1.02	2.64	17.14
1946	.95	.96	3.26	4.83	3.57	2.38	1.65	2.48	1.06	1.57	.98	.77	24.46
1947	1.23	1.19	1.00	2.89	1.14	1.80	1.42	.92	1.04	.67	.75	.48	14.53
1948	1.13	2.11	1.24	1.41	2.57	3.17	2.39	1.33	1.05	1.27	2.42	.99	21.08
1949	.81	3.59	2.57	2.42	2.81	1.95	2.25	2.05	1.22	1.46	3.18	1.95	26.26
1950	3.47	2.32	1.52	1.86	1.33	1.70	1.46	1.19	1.34	1.43	.86	1.07	19.55

* Not previously published; estimated on basis of records for Tyger River near Woodruff.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1934	757	-	-	-	#204	#1.26	#17.10	#217	#18.19	
1935	782	2,010	Aug. 25, 1935	46	188	1.16	15.73	180	15.11	
1936	802	8,640	Apr. 7, 1936	29	349	2.15	29.37	425	35.68	
1937	822	7,160	Oct. 16, 1936	61	379	2.34	31.73	350	29.37	
1938	852	6,680	Oct. 20, 1937	35	208	1.28	17.46	153	12.83	
1939	872	2,240	Aug. 19, 1939	34	205	1.27	17.14	200	16.77	
1940	892	12,300	Aug. 14, 1940	28	158	.975	13.28	163	13.67	
1941	922	1,080	July 17, 1941	26	126	.778	10.51	119	9.94	
1942	952	3,610	Feb. 18, 1942	21	160	.988	13.41	176	14.73	
1943	972	4,130	Jan. 29, 1943	48	234	1.44	19.59	229	19.22	
1944	1002	2,930	Mar. 21, 1944	52	232	1.43	19.43	244	20.51	
1945	1032	3,120	Sept. 18, 1945	48	205	1.27	17.14	222	18.54	
1946	1052	5,760	Jan. 8, 1946	54	292	1.80	24.46	271	22.71	
1947	1082	2,160	Jan. 21, 1947	37	174	1.07	14.53	186	15.59	
1948	1112	3,610	Aug. 6, 1948	47	251	1.55	21.08	280	23.57	
1949	1142	4,800	Nov. 29, 1948	58	313	1.93	26.26	318	26.60	
1950	1172	8,120	Oct. 7, 1949	62	233	1.44	19.55	-	-	

* Not previously published.

249. South Tyger River near Reidville, S. C. 1/

Location.--Lat 34°52'35", long 82°05'10", 0.4 mile upstream from bridge on State Highway 296, 1.2 miles downstream from Berry Shoals, 1.8 miles northeast of Reidville, Spartanburg County, and 4 miles upstream from Bens Creek.

Drainage area.--106 sq mi.

Gage.--Water-stage recorder. Datum of gage is 626.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years (1934-50), 159 cfs.

Extremes.--1934-50: Maximum discharge, 6,420 cfs Oct. 7, 1949 (gage height, 14.23 ft); minimum, 4.6 cfs June 5, 6, 1941 (gage height, 0.60 ft); minimum daily, 5.5 cfs June 6, 1941.

Remarks.--Low and medium flow regulated by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	165	225	82.9	118	80.9	-
1935	111	86.0	104	148	132	139	148	113	86.1	186	208	98.1	130
1936	64.6	165	92.7	553	289	269	632	143	140	127	193	151	234
1937	496	127	221	604	302	209	240	169	150	108	182	197	251
1938	371	130	128	142	121	178	129	98.3	101	118	123	74.3	143
1939	53.8	76.7	91.8	119	366	239	149	143	91.7	116	190	79.8	142
1940	58.3	56.5	80.1	107	136	118	105	65.8	61.7	71.8	288	71.0	102
1941	41.8	85.7	89.3	90.4	72.1	122	104	52.7	50.9	171	83.9	38.1	83.8
1942	24.0	46.4	92.8	105	243	206	98.7	115	70.3	71.9	95.4	92.1	104
1943	56.0	67.8	165	317	209	217	190	250	137	212	106	83.5	168
1944	63.3	97.6	111	145	256	405	321	171	135	166	82.7	78.4	169
1945	120	107	113	122	185	178	171	119	74.4	150	97.6	187	135
1946	81.9	96.0	266	453	391	234	181	291	129	127	110	76.7	202
1947	101	123	97.2	263	127	167	151	94.0	112	74.3	73.9	45.3	119
1948	115	137	115	125	240	291	231	151	116	122	175	101	163
1949	69.6	338	229	233	284	203	231	212	140	224	280	251	224
1950	379	266	167	196	158	182	169	133	176	132	88.1	99.8	179

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	1.80	2.36	0.90	1.26	0.85	-
1935	1.21	0.90	1.13	1.61	1.30	1.51	1.56	1.23	2.31	2.02	2.26	1.03	16.67
1936	.70	1.74	1.01	6.02	2.94	2.93	6.65	1.56	1.47	1.38	2.10	1.58	30.08
1937	5.40	1.34	2.40	6.57	2.97	2.27	2.52	1.85	1.58	1.18	1.98	2.08	32.12
1938	4.04	1.37	1.40	1.54	1.19	1.94	1.36	1.07	1.06	1.29	1.34	.79	13.96
1939	.59	.81	2.00	1.29	3.59	2.59	1.57	1.56	.97	1.26	2.06	.84	18.13
1940	.63	.59	.87	1.16	1.38	1.28	1.11	.72	.65	.78	3.14	.75	13.06
1941	.45	.90	.97	.98	.71	1.33	1.09	.57	.54	1.86	.91	.40	10.71
1942	.26	.49	1.01	1.14	2.38	2.24	1.04	1.24	.74	.78	1.04	.97	13.33
1943	.61	.71	1.80	3.45	2.05	2.36	2.00	2.72	1.44	2.31	1.15	.88	21.48
1944	.69	1.03	1.21	1.58	2.61	4.40	3.08	1.86	1.42	1.81	.90	.83	21.72
1945	1.30	1.13	1.23	1.33	1.82	1.94	1.80	1.29	.78	1.64	1.06	1.96	17.28
1946	.89	1.01	2.89	4.92	3.84	2.55	1.91	3.17	1.36	1.38	1.20	.81	25.93
1947	1.10	1.29	1.06	2.86	1.25	1.82	1.58	1.02	1.18	.81	.80	.48	15.25
1948	1.24	1.90	1.24	1.36	2.44	3.17	.43	1.64	1.22	1.33	1.90	1.06	20.93
1949	.76	3.54	2.49	2.54	2.79	2.21	2.43	2.31	1.47	2.43	3.04	2.64	28.65
1950	4.13	2.60	1.82	2.13	1.55	1.98	1.77	1.44	1.85	1.44	.96	1.05	22.92

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1934	757	-	-	-	-	-	-	-	-	
1935	782	4,150	Aug. 24, 1935	-	8.5	130	1.23	16.67	132	16.88
1936	802	6,080	Apr. 6, 1936	-	8.7	234	2.21	30.08	279	35.77
1937	822	3,880	Oct. 16, 1936	-	11	251	2.37	32.12	232	29.79
1938	852	4,330	Oct. 19, 1937	-	12	143	1.35	18.37	109	13.96
1939	872	1,820	Aug. 19, 1939	-	13	142	1.34	18.13	139	17.82
1940	892	5,510	Aug. 13, 1940	-	7.7	102	.962	13.06	103	13.29
1941	922	982	July 19, 1941	-	5.5	83.8	.791	10.71	79.3	10.15
1942	932	2,610	Feb. 18, 1942	-	5.9	104	.981	13.33	115	14.69
1943	972	2,880	Jan. 28, 1943	-	9.9	168	1.58	21.48	166	21.29
1944	1002	1,770	(9)	-	10	169	1.59	21.72	175	22.45
1945	1032	1,450	Sept. 18, 1945	-	10	135	1.27	17.28	144	18.41
1946	1052	3,760	Jan. 7, 1946	-	12	202	1.91	25.93	192	24.59
1947	1082	1,520	Jan. 21, 1947	-	8.9	119	1.12	15.25	126	16.18
1948	1112	1,420	Aug. 5, 1948	-	9.5	163	1.54	20.93	182	23.34
1949	1142	3,760	Nov. 28, 1948	-	11	224	2.11	28.65	239	30.61
1950	1172	6,420	Oct. 7, 1949	-	8.5	179	1.69	22.92	-	-

a Mar. 20, July 3, 1944.

1/ Published as South Tiger River prior to 1936.

250. South Tyger River near Woodruff, S. C. 1/

Location.--Lat 34°45'21", long 81°56'19", at Chesnee Shoals, 0.5 mile upstream from confluence with North Tyger River and 5 1/2 miles east of Woodruff, Spartanburg County.

Drainage area.--174 sq mi.

Gage.--Water-stage recorder and concrete control. Datum of gage is 508.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--17 years (1933-50), 234 cfs.

Extremes.--1933-50: Maximum discharge, 9,510 cfs Apr. 6, 1936 (gage height, 9.78 ft), from rating curve extended above 7,700 cfs by velocity-area studies; minimum, 13 cfs Oct. 17, 18, 1941 (gage height, 1.40 ft); minimum daily, 14 cfs Oct. 17, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1934	#104	#112	#141	#176	#237	#408	248	236	330	128	169	116	#200
1935	197	128	160	241	227	224	230	170	118	244	258	136	195
1936	88.6	207	134	910	484	398	1,095	203	188	175	305	214	366
1937	846	183	287	922	450	299	374	261	204	155	288	262	378
1938	521	183	187	213	176	236	202	137	135	166	151	118	203
1939	72.6	115	133	187	585	375	216	189	118	149	285	101	208
1940	77.9	79.7	115	167	204	198	160	103	85.6	104	461	90.7	154
1941	61.7	148	139	141	108	190	154	74.1	68.6	238	130	55.9	126
1942	46.1	68.0	152	147	379	346	157	159	123	92.8	157	153	164
1943	83.4	98.6	226	545	296	323	283	296	170	327	135	108	241
1944	88.0	133	164	229	386	622	458	230	185	217	122	111	245
1945	160	140	161	186	301	260	242	177	102	210	137	361	204
1946	115	136	429	679	571	361	266	369	169	177	151	108	295
1947	156	171	148	473	394	230	224	138	144	106	99.3	68.9	184
1948	169	311	177	209	391	451	347	218	165	161	231	159	248
1949	109	447	372	363	434	273	330	306	183	315	344	336	317
1950	582	361	234	275	225	253	237	176	218	191	116	124	250

* Not previously published; estimated on basis of records for Tyger River near Woodruff.

Monthly and yearly runoff, in inches

Water year	Monthly											The year	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.
1934	#0.69	#0.72	#0.93	#1.16	#1.42	#2.70	1.60	1.57	2.12	0.85	1.12	0.74	#15.62
1935	1.30	.82	1.06	1.60	1.35	1.49	1.47	1.13	.76	1.61	1.71	.87	15.17
1936	.59	1.33	.89	6.03	3.00	2.64	7.02	1.35	1.20	1.16	2.02	1.37	28.60
1937	5.60	1.17	1.90	6.11	2.70	1.98	2.40	1.73	1.30	1.03	1.91	1.68	29.51
1938	3.45	1.17	1.23	1.41	1.05	1.57	1.29	.91	.87	1.10	1.00	.76	15.81
1939	.48	.74	.88	1.23	3.50	2.49	1.38	1.26	.76	.99	1.89	.65	16.25
1940	.52	.51	.76	1.11	1.26	1.31	1.03	.69	.55	.69	3.08	.58	12.06
1941	.41	.95	.92	.93	.65	1.26	.99	.49	.44	1.58	.86	.36	9.84
1942	.31	.44	1.01	.97	2.27	2.29	1.01	1.05	.79	.61	1.04	.98	12.77
1943	.55	.63	1.50	3.61	1.77	2.14	1.82	1.96	1.09	2.17	.89	.69	18.82
1944	.58	.85	1.09	1.52	2.39	4.12	2.93	1.52	1.18	1.44	.81	.71	19.14
1945	1.19	.90	1.07	1.23	1.80	1.72	1.55	1.18	.65	1.40	.91	2.31	15.91
1946	.76	.87	2.85	4.50	3.42	2.39	1.71	2.58	1.08	1.18	1.00	.69	23.03
1947	1.03	1.10	.97	3.14	1.16	1.92	1.44	.91	.92	.70	.66	.43	14.38
1948	1.12	2.00	1.18	1.38	2.43	2.99	2.22	1.43	1.06	1.07	1.53	1.02	19.43
1949	.72	2.87	2.47	2.41	2.59	1.81	2.12	2.03	1.17	2.09	2.28	2.15	24.71
1950	3.85	2.31	1.54	1.82	1.34	1.67	1.52	1.16	1.40	1.27	.77	.80	19.45

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1934	757	-	-	-	#200	#1.15	#15.62	#211	#16.46
1935	782	2,260	Aug. 25, 1935	42	195	1.12	15.17	190	14.80
1936	802	9,510	Apr. 6, 1936	33	366	2.10	28.60	441	34.46
1937	822	8,080	Oct. 16, 1936	55	378	2.17	29.51	342	26.69
1938	852	3,660	Oct. 20, 1937	55	203	1.17	15.81	154	12.06
1939	872	1,960	Feb. 28, 1939	32	208	1.20	16.25	204	15.94
1940	892	6,960	Aug. 14, 1940	28	154	.885	12.06	160	12.55
1941	922	1,050	Nov. 13, 1940	18	126	.724	9.84	119	9.32
1942	952	2,910	June 10, 1942	14	164	.943	12.77	176	13.69
1943	972	3,540	Jan. 28, 1943	34	241	1.39	18.82	239	18.66
1944	1002	2,640	Mar. 20, 1944	39	245	1.41	19.14	253	19.78
1945	1032	3,020	Sept. 18, 1945	36	204	1.17	15.91	221	17.25
1946	1052	4,140	Jan. 8, 1946	41	295	1.70	23.03	277	21.65
1947	1082	2,220	Jan. 20, 1947	29	184	1.06	14.38	200	15.58
1948	1112	1,360	Mar. 7, 1948	34	248	1.43	19.43	271	21.19
1949	1142	2,860	Nov. 29, 1948	57	317	1.82	24.71	338	26.35
1950	1172	8,490	Oct. 7, 1949	39	250	1.44	19.45	-	-

* Not previously published.

1/ Published as South Tiger River prior to 1936.

251. Tiger River near Woodruff, S. C. 1/

Location.--Lat 34°45'15", long 81°55'30", at Nesbitts Bridge on State Highway 49, 0.5 mile downstream from confluence of North Tiger and South Tiger Rivers and 6½ miles east of Woodruff, Spartanburg County.

Drainage area.--351 sq mi.

Gage.--Water-stage recorder. Datum of gage is 489.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--21 years (1929-50), 489 cfs.

Extremes.--1929-50: Maximum discharge (revised), 28,000 cfs (estimated) Oct. 2, 1929; minimum, 37 cfs Oct. 18, 1941; minimum daily, 40 cfs Oct. 17, 1941.

Flood of June 6, 1903, reached a stage of 20.4 ft, from floodmark set by local resident, at site 0.3 mile below gage; that of August 1928, 20.0 ft (present site); that of September 1929, 14.65 ft, from floodmarks (discharge, 19,600 cfs).

Remarks.--Some regulation at low and medium flow by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930 #	1,520	827	620	621	651	579	481	397	403	306	280	204	#574
1931	187	455	488	515	355	486	582	585	231	312	244	155	383
1932	128	157	1,100	1,130	611	660	464	347	418	166	346	156	475
1933	780	797	1,180	680	721	538	512	408	297	407	352	489	594
1934	215	231	291	363	483	832	523	468	766	267	342	259	419
1935	422	274	339	504	469	461	472	349	244	449	539	270	400
1936	181	424	268	1,880	968	828	2,178	405	377	368	640	465	746
1937	1,776	369	601	1,961	908	604	735	529	414	302	635	579	786
1938	1,167	391	381	436	355	458	411	296	281	371	313	254	428
1939	149	248	286	388	1,231	784	450	385	243	306	589	199	433
1940	156	158	240	332	437	401	315	197	178	231	1,091	176	327
1941	137	306	275	287	224	388	308	152	148	552	269	114	264
1942	93.4	139	306	297	406	713	314	333	230	204	312	352	339
1943	178	193	502	1,183	619	674	584	586	405	587	292	226	503
1944	184	284	331	465	823	1,291	924	448	366	378	247	246	498
1945	406	306	353	392	603	523	497	329	200	484	298	782	430
1946	258	283	922	1,407	1,173	720	528	769	339	424	308	230	612
1947	345	360	297	924	388	570	447	274	309	211	214	148	374
1948	348	648	369	425	808	940	718	418	328	347	589	319	520
1949	226	1,012	759	736	905	575	686	622	377	549	824	650	658
1950	1,098	722	455	555	446	510	460	351	426	410	245	288	498

* Not previously published; estimated on basis of records for Enoree River near Enoree and weather records.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#4.99	2.63	2.04	2.04	1.93	1.90	1.53	1.30	1.28	1.01	0.92	0.65	#22.22
1931	.61	1.45	1.60	1.70	1.05	1.59	1.85	1.92	.75	1.02	.80	.49	14.81
1932	.42	.50	3.61	3.71	1.88	2.17	1.47	1.14	1.33	.55	1.14	.50	18.42
1933	2.56	2.53	3.87	2.24	2.14	1.76	1.63	1.34	.94	1.34	1.15	1.46	22.96
1934	.71	.73	.96	1.19	1.44	2.73	1.66	1.53	2.43	.88	1.12	.82	16.20
1935	1.38	.87	1.11	1.66	1.40	1.51	1.50	1.15	.78	1.48	1.78	.86	15.48
1936	.59	1.35	.88	6.18	2.98	2.72	6.93	1.33	1.19	1.21	2.10	1.47	28.93
1937	5.85	1.17	1.97	6.44	2.70	1.98	2.33	1.74	1.32	.99	2.09	1.84	30.40
1938	3.83	1.24	1.26	1.43	1.05	1.50	1.30	.97	.89	1.22	1.03	.81	16.53
1939	.49	.79	.94	1.28	3.66	2.57	1.43	1.27	.77	1.01	1.94	.63	16.78
1940	.51	.50	.79	1.09	1.35	1.31	1.00	.65	.57	.78	3.58	.56	12.67
1941	.45	.97	.90	.94	.66	1.28	.98	.50	.47	1.81	.88	.36	10.20
1942	.31	.44	1.01	.98	2.40	2.34	1.00	1.09	.73	.67	1.02	1.12	13.11
1943	.58	.61	1.65	3.88	1.83	2.21	1.85	1.92	1.28	1.92	.96	.72	19.41
1944	.60	.90	1.09	1.52	2.52	4.24	2.93	1.48	1.16	1.24	.81	.78	19.27
1945	1.34	.97	1.16	1.29	1.79	1.72	1.58	1.08	.64	1.59	.98	2.49	16.63
1946	.85	.90	3.03	4.62	3.48	2.36	1.67	2.50	1.08	1.40	1.01	.73	23.65
1947	1.13	1.15	.98	3.03	1.16	1.87	1.42	.90	.98	.69	.70	.47	14.48
1948	1.14	2.06	1.21	1.40	2.48	3.09	2.29	1.37	1.04	1.14	1.94	1.01	20.17
1949	.74	3.21	2.49	2.42	2.69	1.89	2.18	2.04	1.19	1.80	2.71	2.06	25.42
1950	3.61	2.30	1.50	1.82	1.32	1.67	1.46	1.15	1.35	1.35	.80	.92	19.25

* Not previously published; see footnote to preceding table.

1/ Published as Tiger River prior to 1936

Yearly discharge, in cubic feet per second, of Tyger River near Woodruff, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	†a28,000	Oct. 2, 1929	‡97	‡574	‡1.64	‡22.22	419	16.22
1931	712	2,430	May 22, 1931	80	363	1.09	14.81	405	15.88
1932	727	4,350	Jan. 8, 1932	61	475	1.35	18.42	590	22.85
1933	742	7,840	Oct. 17, 1932	82	594	1.69	22.96	424	16.40
1934	757	3,540	Mar. 5, 1934	90	419	1.19	16.20	445	17.16
1935	782	4,350	Aug. 25, 1935	99	400	1.14	15.48	366	14.94
1936	802	17,100	Apr. 6, 1936	87	746	2.13	28.93	905	35.06
1937	822	14,700	Oct. 16, 1936	134	786	2.24	30.40	718	27.76
1938	852	10,600	Oct. 20, 1937	105	428	1.22	16.53	321	12.42
1939	872	3,850	Aug. 16, 1939	80	433	1.23	16.78	423	16.36
1940	892	19,200	Aug. 14, 1940	75	327	.932	12.67	340	13.19
1941	922	2,220	Nov. 13, 1940	52	264	.752	10.20	249	9.64
1942	952	5,450	Feb. 18, 1942	40	339	.966	13.11	367	14.19
1943	972	7,780	Jan. 28, 1943	114	503	1.43	19.41	497	19.16
1944	1002	5,270	Mar. 20, 1944	128	498	1.42	19.27	520	20.15
1945	1032	6,580	Sept. 18, 1945	86	430	1.23	16.63	463	17.94
1946	1052	9,690	Jan. 8, 1946	103	612	1.74	23.65	572	22.13
1947	1082	4,290	Jan. 21, 1947	†75	374	1.07	14.48	404	15.63
1948	1112	4,800	Aug. 6, 1948	76	520	1.48	20.17	573	22.20
1949	1142	8,740	Nov. 29, 1948	124	658	1.87	25.42	682	26.39
1950	1172	17,200	Oct. 7, 1949	109	498	1.42	19.25	-	-

† Corrected.
‡ Not previously published.
a Estimated.

252. Fairforest Creek near Union, S. C.

Location.--Lat 34°41', long 81°41', at bridge on State Highway 92, 0.3 mile downstream from Buffalo Creek and 4.3 miles southwest of Union, Union County.

Drainage area.--183 sq mi.

Gage.--Water-stage recorder. Datum of gage is 393.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1940-50), 209 cfs.

Extremes.--1940-50: Maximum discharge, 8,690 cfs Nov. 29, 1948 (gage height, 7.61 ft), from rating curve extended above 4,300 cfs by velocity-area studies and logarithmic plotting; minimum, 19 cfs Aug. 11, 1940 (gage height, 1.85 ft).

Remarks.--Discharge includes some water diverted from South Pacolet River Reservoir (see elsewhere in this report) which is discharged into this stream after use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	56.6	400	37.7	-
1941	39.2	191	128	107	86.2	186	116	48.4	65.2	657	132	46.5	151
1942	55.0	86.9	283	125	430	478	131	129	73.4	83.1	103	89.2	170
1943	55.5	80.1	165	549	214	317	272	101	145	544	82.9	82.2	225
1944	50.0	81.9	135	224	449	725	472	164	126	71.3	76.9	56.6	218
1945	86.6	90.7	105	150	361	224	186	108	52.7	117	74.8	514	170
1946	77.5	83.9	522	457	427	296	171	236	94.8	108	195	114	232
1947	228	118	108	641	177	341	191	99.2	92.1	92.1	61.4	90.2	187
1948	312	527	222	310	562	532	400	171	100	77.4	124	80.8	283
1949	75.8	700	334	348	464	194	327	284	124	147	483	226	307
1950	326	209	149	210	182	208	158	123	92.1	119	56.8	93.4	157

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	0.36	2.52	0.23	-
1941	0.25	1.16	0.81	0.67	0.49	1.18	0.71	0.30	0.40	4.14	.83	.28	11.22
1942	.35	.54	1.66	.79	2.45	3.01	.80	.81	.45	.52	.65	.54	12.57
1943	.35	.37	1.04	3.46	1.22	1.99	1.66	.64	.87	3.42	.52	.38	15.92
1944	.31	.50	.85	1.41	2.64	4.56	2.88	1.03	.77	.45	.48	.34	18.22
1945	.55	.55	.66	.95	2.05	1.41	1.14	.68	.32	.74	.47	3.14	12.66
1946	.49	.51	3.29	2.88	2.43	1.87	1.04	1.49	.58	.68	1.23	.70	17.19
1947	1.44	.72	.68	4.04	1.01	2.14	1.16	.62	.56	.58	.39	.55	13.89
1948	1.96	3.21	1.40	1.95	3.31	3.36	2.44	1.08	.61	.49	.78	.49	21.06
1949	.48	4.27	2.11	2.19	2.64	1.22	2.00	1.79	.76	.93	3.04	1.37	22.80
1950	2.05	1.27	.94	1.33	.87	1.31	.84	.77	.58	.75	.36	.57	11.62

Yearly discharge, in cubic feet per second, of Fairforest Creek near Union, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	692	7,520	Aug. 14, 1940	-	-	-	-	-	-
1941	922	6,610	July 17, 1941	22	151	0.825	11.22	156	11.55
1942	952	4,580	Feb. 17, 1942	23	170	.929	12.57	159	11.78
1943	972	4,950	July 9, 1943	33	215	1.17	15.92	213	15.82
1944	1002	6,370	Mar. 20, 1944	34	218	1.19	16.22	220	16.32
1945	1032	7,130	Sept. 18, 1945	32	170	.929	12.66	205	15.19
1946	1052	3,120	Jan. 8, 1946	46	232	1.27	17.19	212	15.74
1947	1082,1383	4,140	Jan. 20, 1947	27	187	1.02	13.89	238	17.62
1948	1112	2,760	Mar. 7, 1948	49	283	1.55	21.08	287	21.37
1949	1142	8,690	Nov. 29, 1948	64	307	1.68	22.80	272	20.20
1950	1172	5,650	Oct. 8, 1949	43	157	.858	11.62	-	-

253. Enoree River near Enoree, S. C.

Location.--Lat 34°36', long 81°54', at bridge on State Highway 30, three-quarters of a mile upstream from Warrior Creek and 4 miles southeast of Enoree, Spartanburg County.

Drainage area.--307 sq mi.

Supplemental records available.--Records of chemical analyses and water temperatures for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 448.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 20, 1929, staff gage at same site and datum.

Average discharge.--21 years (1929-50), 423 cfs.

Extremes.--1929-50: Maximum discharge, 30,000 cfs Oct. 2, 1929 (gage height, 10.5 ft, from floodmark), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum (revised), 8 cfs Oct. 5, 1941; minimum daily, 32 cfs Oct. 15, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	2,062	-
1930	1,943	834	561	528	547	513	400	362	428	260	260	181	569
1931	180	369	471	421	318	412	454	521	235	394	298	167	354
1932	130	163	1,119	1,101	560	549	397	319	482	150	351	198	461
1933	857	708	1,278	579	604	426	372	335	237	232	317	330	523
1934	151	164	221	280	408	636	401	397	592	247	341	225	338
1935	439	201	257	444	457	457	486	393	253	400	629	271	391
1936	165	328	220	1,812	885	694	2,004	327	267	272	491	281	643
1937	1,843	278	491	1,623	765	497	694	473	289	238	416	386	626
1938	863	303	295	373	282	352	401	233	230	296	178	168	352
1939	110	193	250	367	1,115	715	359	287	188	331	477	161	375
1940	114	124	205	286	398	377	246	182	153	143	881	121	270
1941	107	269	238	227	178	346	258	127	134	484	197	83.8	222
1942	80.7	116	273	244	806	874	284	280	224	193	256	208	317
1943	140	140	388	1,203	529	615	498	333	279	419	196	156	409
1944	141	222	274	409	754	1,238	763	358	263	237	208	177	419
1945	227	216	240	316	617	476	458	311	159	267	219	683	346
1946	192	224	822	1,141	934	606	447	652	298	307	371	214	516
1947	321	296	253	932	347	515	385	252	217	151	192	137	334
1948	310	636	360	419	788	842	658	507	307	254	278	213	463
1949	166	1,056	630	683	890	497	630	553	310	437	558	562	578
1950	895	535	393	457	411	431	369	293	296	308	157	215	399

Monthly and yearly runoff, in inches, of Enoree River near Enoree, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	7.50
1930	7.30	3.04	2.11	1.98	1.85	1.92	1.45	1.36	1.55	0.98	0.98	.66	25.18
1931	.68	1.34	1.76	1.58	1.08	1.54	1.65	1.96	.85	1.48	1.12	.61	15.65
1932	.49	.59	4.20	4.14	1.96	2.06	1.44	1.20	1.75	.56	1.51	.72	20.42
1933	3.22	2.58	4.80	2.18	2.05	1.60	1.35	1.26	.86	.87	1.19	1.19	23.15
1934	.57	.60	.83	1.05	1.38	2.39	1.46	1.49	2.15	.93	1.28	.82	14.95
1935	1.65	.73	.96	1.67	1.55	1.72	1.76	1.48	.92	1.50	2.36	.99	17.29
1936	.62	1.19	.83	6.80	3.11	2.61	7.29	1.23	.97	1.02	1.84	1.02	28.53
1937	5.04	1.01	1.84	6.10	2.59	1.87	2.52	1.78	1.05	.89	1.57	1.41	27.67
1938	3.24	1.10	1.11	1.40	.96	1.33	1.46	.88	.84	1.11	.67	.61	14.71
1939	.41	.70	.94	1.38	3.78	2.69	1.30	1.08	.68	1.24	1.79	.58	16.57
1940	.43	.45	.77	1.07	1.40	1.42	.89	.68	.56	.54	3.51	.44	11.96
1941	.40	.98	.89	.85	.60	1.30	.94	.48	.49	1.82	.74	.30	9.79
1942	.30	.42	1.02	.92	2.74	3.29	1.03	1.05	.81	.73	.96	.76	14.03
1943	.53	.51	1.45	4.52	1.79	2.31	1.81	1.24	1.01	1.57	.74	.57	18.05
1944	.53	.81	1.03	1.53	2.58	4.65	2.78	1.35	1.03	.89	.78	.64	18.60
1945	.85	.79	.90	1.19	2.09	1.79	1.66	1.16	.58	1.00	.82	2.48	15.31
1946	.72	.81	3.09	4.29	3.17	2.27	1.63	2.44	1.08	1.15	1.40	.78	22.83
1947	1.21	1.08	.95	3.50	1.18	1.94	1.40	.95	.79	.57	1.72	.50	14.79
1948	1.16	2.31	1.35	1.57	2.77	3.16	2.39	1.90	1.12	.95	1.04	.77	20.49
1949	.62	3.84	2.36	2.56	3.02	1.87	2.29	2.08	1.13	1.64	2.10	2.04	25.55
1950	3.37	1.94	1.48	1.72	1.40	1.61	1.42	1.10	1.08	1.15	.59	.78	17.64

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	697, 892	#20,900	Sept. 27, 1929	-	-	-	-	-	-
1930	697, 892	30,000	Oct. 2, 1929	84	569	1.85	25.18	374	16.51
1931	712	3,100	May 22, 1931	98	354	1.15	15.65	388	17.15
1932	727, 892	7,100	Dec. 4, 1931	50	461	1.50	20.42	581	25.74
1933	742, 892	9,500	Oct. 17, 1932	85	525	1.70	23.15	329	14.55
1934	757	4,810	June 5, 1934	59	358	1.10	14.95	369	16.29
1935	782, 892	8,430	Aug. 25, 1935	101	391	1.27	17.29	375	16.59
1936	802	17,200	Apr. 7, 1936	112	643	2.09	28.53	762	33.78
1937	822	13,800	Oct. 16, 1936	103	626	2.04	27.67	570	25.23
1938	852	8,960	Oct. 20, 1937	70	332	1.08	14.71	255	11.31
1939	872	4,270	Aug. 18, 1939	75	375	1.22	16.57	366	16.17
1940	892	12,800	Aug. 14, 1940	35	270	.879	11.96	284	12.58
1941	922	2,690	July 10, 1941	35	222	.723	9.79	210	9.26
1942	952	5,520	Feb. 17, 1942	32	317	1.03	14.03	334	14.78
1943	972	7,740	Jan. 29, 1943	42	409	1.33	18.05	406	17.93
1944	1002	7,570	Mar. 20, 1944	82	419	1.36	18.60	423	18.77
1945	1032	6,430	Sept. 18, 1945	82	346	1.13	15.31	393	17.39
1946	1052	8,960	Jan. 7, 1946	131	516	1.68	22.83	485	21.45
1947	1082	5,970	Jan. 20, 1947	80	354	1.09	14.79	370	16.37
1948	1112	4,140	May 28, 1948	87	463	1.51	20.49	508	22.49
1949	1142	10,200	Nov. 29, 1948	132	578	1.88	25.55	577	25.52
1950	1172	13,000	Oct. 8, 1949	110	399	1.30	17.64	-	-

* Not previously published.

254. Broad River at Alston, S. C. 1/

Location.--Lat 34°15', long 81°19', at Southern Railway bridge at Alston, Fairfield County.

Drainage area.--4,790 sq mi (revised).

Supplemental records available.--July to September 1896, gage heights and discharge measurements only.

Gage.--Chain gage. Altitude of gage is 220 ft (from topographic map).

Average discharge.--11 years (1896-1907), 7,705 cfs.

Extremes.--1896-1907: Maximum discharge, 140,000 cfs June 7, 1903 (gage height, 29.02 ft), from rating curve extended above 72,000 cfs by logarithmic plotting; minimum daily, 785 cfs Oct. 21, 1907.

Remarks.--Some regulation at low and medium flow by powerplant at Neals Shoals (completed in 1904).

1/ Published as "near Alston", 1900-1902.

Monthly and yearly mean discharge, in cubic feet per second, of Broad River at Alston, S. C.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Broad River at Alston, S. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1897	*2,717	*5,838	*6,401	*4,704	*17,910	*13,189	*12,177	4,858	*7,878	4,350	3,653	*2,759	*7,094
1898	3,658	3,210	3,786	*4,646	3,443	*4,269	*8,411	2,958	2,928	4,960	*7,772	*8,534	*4,736
1899	*7,040	4,637	*6,016	*9,104	*20,087	*16,420	*9,443	4,767	3,480	2,923	3,373	3,952	*7,525
1900	2,897	3,447	*5,246	*4,686	*14,171	*14,163	*17,031	5,877	*10,840	5,448	3,148	3,021	*7,431
1901	*3,980	*5,345	*7,084	7,227	7,775	*10,776	*20,435	*13,877	13,666	6,349	*27,732	*17,101	*11,786
1902	7,123	4,892	*15,020	10,424	*19,798	*19,056	9,204	5,798	*7,469	4,200	4,067	5,060	*9,286
1903	6,505	5,275	11,737	9,882	22,647	25,601	15,578	6,474	20,656	4,407	6,837	4,416	11,578
1904	3,136	3,856	3,804	3,921	7,237	7,097	4,480	3,695	3,821	4,189	12,200	2,761	4,991
1905	1,614	3,096	4,866	5,719	13,970	4,780	4,045	8,629	2,873	9,318	9,653	2,590	5,895
1906	1,831	1,943	11,720	18,800	6,790	12,000	6,560	4,700	8,860	7,880	14,600	10,900	8,910
1907	8,270	4,850	5,190	6,610	5,920	5,280	6,060	4,260	8,030	4,080	4,180	3,540	5,520
1908	1,630	6,250	15,700	-	-	-	-	-	-	-	-	-	-

* Revised.

† Not previously published; estimated on basis of once-daily gage readings and estimated rating table, and weather records.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1897	*0.65	*1.36	*1.54	*1.13	*3.90	*3.17	*2.83	1.12	*1.83	1.04	0.88	0.64	*20.09
1898	.88	.75	.91	*1.16	.75	*1.03	*1.50	.71	.68	1.20	*1.87	*1.99	*13.43
1899	*1.70	1.08	*1.45	*2.19	*4.36	*3.95	*2.20	1.15	.81	.70	.81	.92	*21.32
1900	.70	.80	*1.27	*1.13	*3.08	*3.41	*3.97	1.42	*2.52	1.31	.76	.70	*21.07
1901	*.96	*1.25	*1.71	1.74	1.69	*2.59	*4.76	*3.34	3.18	1.53	*6.68	*3.98	*33.41
1902	1.72	1.14	*3.82	2.51	*4.30	*4.59	2.14	1.40	*1.74	1.01	.98	1.18	*26.33
1903	1.52	1.23	2.82	2.38	4.92	6.16	3.63	1.56	4.85	1.06	1.65	1.03	32.61
1904	.76	.85	.87	.94	1.83	1.71	1.04	.89	.91	1.00	2.94	.64	14.18
1905	.59	.72	1.18	1.37	3.04	1.15	.94	2.08	.67	2.25	2.33	.80	16.72
1906	.44	.45	2.82	4.52	1.48	2.89	1.53	1.13	2.06	1.90	3.52	2.54	25.28
1907	1.99	1.13	1.24	1.59	1.29	1.27	1.42	1.02	1.87	.98	1.01	.82	15.63
1908	.59	1.45	3.78	-	-	-	-	-	-	-	-	-	-

* Revised.

† Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1897	(a)	*85,800	Feb. 7, 1897	*1,470	*7,094	*1.48	*20.09	*6,756	*19.08
1898	(a)	*40,500	Sept. 24, 1898	1,815	*4,756	*.999	*13.43	*5,330	*15.12
1899	(b)	*60,800	Feb. 28, 1899	1,650	*7,525	*1.57	*21.32	*7,010	*19.86
1900	(c)	*95,100	Apr. 22, 1900	1,460	*7,431	*1.55	*21.07	*7,835	*22.22
1901	75,1383	*106,000	May 23, 1901	1,870	*11,786	*2.46	*33.41	*12,690	*35.97
1902	83,1383	*105,000	Dec. 31, 1901	*2,835	*9,286	*1.94	*26.33	*8,969	*25.42
1903	98	*140,000	June 7, 1903	2,420	11,578	2.42	32.81	*10,485	29.72
1904	127	*36,800	Aug. 29, 1904	1,495	4,991	1.04	14.18	4,923	13.99
1905	168	*50,000	Feb. 21, 1905	1,250	5,895	1.23	16.72	6,423	18.14
1906	204	*67,900	Dec. 21, 1905	990	8,910	1.86	25.28	9,120	25.93
1907	242	*30,900	June 2, 1907	820	5,520	1.15	15.63	5,960	16.89
1908	242	-	-	d785	-	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published.

a 20th Ann. Rept., Pt. 4, WSP 1383.

b 21st Ann. Rept., Pt. 4, WSP 1383.

c 22nd Ann. Rept., Pt. 4, WSP 1383.

d Minimum for period October to December 1907.

255. Broad River at Richtex, S. C.

Location.--Lat 34°11'05", long 81°11'48", 0.8 mile west of Richtex, Fairfield County, 1.2 miles upstream from Little River, and 11 miles downstream from Parr Shoals Dam.

Drainage area.--4,850 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 184.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years (1925-50), 6,103 cfs.

Extremes.--1925-50: Maximum discharge, 228,000 cfs Oct. 3, 1929 (gage height, 30.7 ft, from floodmarks), on basis of computation of flow over Parr Shoals Dam; minimum daily, 149 cfs Oct. 13, 1935, from rating curve extended below 320 cfs.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second, of Broad River at Richtex, S. C.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Broad River at Richtex, S. C.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	The year	
1926	\$2,180	\$3,640	3,550	9,110	10,700	7,340	6,400	2,390	1,830	3,040	4,630	2,550	\$4,740
1927	1,300	2,480	4,100	3,070	7,050	7,000	3,680	2,260	3,300	5,400	2,200	2,400	3,670
1928	1,660	1,810	9,500	3,790	6,220	6,360	9,610	8,180	4,880	7,330	\$0,900	\$13,000	\$8,630
1929	\$4,050	\$3,120	\$2,940	\$4,120	\$12,700	\$24,300	\$6,510	\$8,390	\$6,160	\$5,640	4,450	9,900	\$7,860
1930	23,500	9,940	9,040	8,040	8,120	6,670	4,960	4,270	3,560	2,950	2,590	2,500	7,700
1931	1,640	5,190	6,080	6,230	3,340	4,770	7,450	6,300	2,900	4,020	5,310	1,500	4,570
1932	1,120	1,420	11,600	13,700	7,120	8,460	5,520	4,300	4,830	2,450	4,610	1,840	5,600
1933	\$10,500	\$10,200	\$15,300	\$8,360	\$9,380	\$6,490	\$5,530	\$4,930	\$2,760	\$3,570	\$5,660	\$4,960	\$7,300
1934	2,379	2,273	2,718	3,544	4,486	9,523	6,959	6,050	10,320	3,731	3,981	4,271	5,014
1935	9,096	3,401	5,059	8,217	6,667	7,029	7,507	4,658	3,028	4,952	5,117	5,115	5,825
1936	1,915	4,207	2,977	24,110	13,270	11,550	27,690	4,485	3,506	3,062	6,437	4,143	8,912
1937	14,960	3,607	7,336	22,010	10,610	7,012	11,090	5,715	4,801	3,754	5,432	5,600	8,500
1938	10,610	4,571	4,738	5,323	3,991	5,213	6,602	3,212	5,352	6,958	3,790	3,351	5,324
1939	1,793	3,230	4,056	5,321	17,140	12,010	5,418	4,537	2,774	3,618	6,353	2,021	5,621
1940	1,686	1,689	2,358	3,862	6,032	4,975	5,789	2,482	2,580	2,212	10,620	2,746	3,752
1941	1,605	4,421	3,744	3,741	2,748	4,410	4,325	1,918	2,317	14,500	3,570	1,836	4,115
1942	1,339	1,883	4,708	3,311	9,584	12,800	3,958	4,821	3,935	3,958	4,513	4,168	4,892
1943	2,435	2,549	5,519	14,520	7,798	8,978	7,084	4,550	4,445	9,861	3,530	2,499	6,157
1944	1,928	2,743	3,384	6,290	10,900	19,020	12,710	5,768	4,337	3,177	3,312	2,337	6,309
1945	4,425	3,085	3,742	4,552	5,590	6,448	5,890	4,101	2,135	4,433	3,323	15,300	5,464
1946	3,073	3,062	11,950	14,730	12,480	8,273	6,124	7,441	3,758	4,281	5,266	3,139	6,951
1947	5,092	3,871	3,546	13,610	4,899	8,183	6,053	3,449	4,484	3,408	2,752	2,210	5,142
1948	6,311	11,880	5,845	6,873	14,330	12,230	9,996	5,503	4,097	3,722	5,760	4,279	7,531
1949	2,780	11,900	11,520	9,324	11,370	6,100	8,030	8,113	4,190	6,401	13,510	7,538	8,378
1950	8,598	7,495	4,848	5,507	4,952	6,701	4,996	4,273	4,574	4,430	2,880	4,589	5,323

* Revised.

* Not previously published; estimated on basis of powerplant records at Farr Shoals.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	\$0.52	\$0.84	0.84	2.17	2.30	1.74	1.47	0.57	0.42	0.72	1.10	0.59	\$13.28
1927	.31	.57	.97	.73	1.51	1.66	.85	.54	.76	1.28	.52	.55	10.25
1928	.39	.42	2.26	.90	1.38	1.51	2.21	1.95	1.13	1.74	\$7.34	\$2.99	\$24.22
1929	\$9.96	\$7.72	\$7.70	\$9.98	\$2.73	\$5.78	\$1.50	\$1.99	\$1.42	1.34	1.06	2.28	\$21.46
1930	5.59	2.29	2.14	1.91	1.74	1.59	1.14	1.01	.82	.70	1.62	.58	20.13
1931	.39	1.19	1.44	1.48	.72	1.13	1.72	1.50	.67	.96	1.26	.34	12.80
1932	.27	.33	2.76	3.21	1.58	2.01	1.27	1.02	1.11	.58	1.10	.42	15.70
1933	\$2.49	2.34	3.63	1.98	2.01	1.54	1.27	1.18	.63	.85	1.35	1.14	\$20.41
1934	.57	.52	.65	.84	.96	2.26	1.60	1.44	2.38	.89	.95	.98	14.04
1935	2.17	.78	1.20	1.95	1.43	1.67	1.73	1.11	.70	1.18	1.22	1.17	16.31
1936	.46	.97	.71	5.73	2.96	2.74	6.37	1.07	.81	.73	1.53	.95	25.03
1937	3.55	.83	1.74	5.23	2.28	1.67	2.56	1.36	1.10	.89	1.29	1.28	23.78
1938	2.52	1.05	1.13	1.27	.86	1.23	1.52	.76	1.23	1.65	.90	.77	14.79
1939	.43	.74	.96	1.27	5.68	2.86	1.25	1.08	.64	.86	1.51	.47	15.85
1940	.40	.39	.56	.92	1.34	1.19	.87	.59	.59	.53	2.52	.63	10.53
1941	.38	1.02	.89	.89	.59	1.05	1.00	.46	.53	3.45	.85	.42	11.53
1942	.32	.43	1.12	.79	2.06	3.04	.91	1.15	.90	.94	1.07	.96	13.69
1943	.58	.59	1.31	3.45	1.68	2.13	1.63	1.08	1.02	2.35	.84	.57	17.23
1944	.46	.63	.80	1.50	2.43	4.52	2.92	1.37	1.00	.76	.79	.54	17.72
1945	1.05	.71	.89	1.08	1.84	1.53	1.35	.98	.49	1.05	.79	3.51	15.27
1946	.73	.70	2.84	3.50	2.68	1.97	1.41	1.76	.86	1.02	1.26	.72	19.45
1947	1.21	.89	.84	3.24	1.05	1.95	1.40	.82	1.03	.81	.65	.51	14.40
1948	1.50	2.73	1.40	1.64	3.18	2.90	2.30	1.30	.94	.88	1.37	.98	21.12
1949	.66	2.73	2.74	2.21	2.44	1.45	1.85	1.92	.96	1.52	3.22	1.73	23.43
1950	2.04	1.73	1.15	1.31	1.06	1.59	1.15	1.02	1.05	1.05	.68	1.06	14.89

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mtle	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	622	40,300	Jan. 20, 1926	-	\$4,740	\$0.977	\$13.28	4,620	12.93
1927	642	28,400	Feb. 25, 1927	-	3,670	.757	10.25	4,100	11.47
1928	662	\$22,000	Aug. 17, 1928	-	\$8,630	\$1.78	\$24.22	\$8,380	\$23.53
1929	682	\$88,200	Sept. 28, 1929	-	\$7,660	\$1.58	\$21.46	\$4,460	\$29.10
1930	697	228,000	Oct. 3, 1929	260	7,200	1.48	20.13	4,700	13.13
1931	712	23,000	Dec. 7, 1930	365	4,570	.942	12.80	4,690	13.14
1932	727	51,200	Jan. 9, 1932	250	5,600	1.15	15.70	\$7,420	\$20.80
1933	742, 1383	\$101,000	Oct. 18, 1932	778	\$7,300	\$1.51	\$20.41	4,890	13.69
1934	757	34,400	Mar. 29, 1934	450	5,014	1.03	14.04	5,876	16.45
1935	782	84,600	Oct. 12, 1934	690	5,825	1.20	16.31	5,105	14.30
1936	802	157,000	Apr. 8, 1936	149	8,912	1.84	25.03	10,340	29.01
1937	822	72,400	Oct. 18, 1936	855	8,500	1.75	23.78	7,990	22.36
1938	852	55,800	Oct. 21, 1937	610	5,324	1.10	14.89	4,407	12.32
1939	872	53,400	Mar. 2, 1939	335	5,621	1.16	15.75	5,341	14.97
1940	892	120,000	Aug. 16, 1940	389	3,752	.774	10.53	4,086	11.47
1941	922	49,400	July 7, 1941	456	4,115	.848	11.53	3,966	11.11
1942	952	53,300	Feb. 18, 1942	417	4,892	1.01	13.69	5,109	14.30
1943	972	57,200	Jan. 30, 1943	1,130	6,157	1.27	17.23	5,949	16.64
1944	1002	84,700	Mar. 21, 1944	1,070	6,309	1.30	17.72	6,579	18.48
1945	1032	96,600	Sept. 19, 1945	926	5,464	1.13	15.27	6,044	16.89

* Revised.

* Not previously published.

Yearly discharge, in cubic feet per second, of Broad River at Richtex, S. C.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1052	59,200	Jan. 9, 1946	1,650	6,951	1.43	19.45	6,475	18.12
1947	1082	57,800	Jan. 21, 1947	813	5,142	1.06	14.40	6,099	17.09
1948	1112	49,400	Feb. 14, 1948	1,430	7,531	1.55	21.12	7,714	21.62
1949	1142	95,700	Nov. 30, 1948	1,590	8,378	1.73	23.43	7,945	22.22
1950	1172	52,000	Oct. 9, 1949	1,280	5,323	1.10	14.89	-	-

256. Little River at Richtex, S. C.

Location.--Lat 34°12', long 81°10', 300 ft upstream from bridge on State Highway 215, 1½ miles northeast of Richtex, Fairfield County, and 1½ miles upstream from mouth.

Drainage area.--237 sq mi.

Gage.--Staff gage. Altitude of gage is 190 ft (from topographic map).

Extremes.--May to September 1926: Maximum discharge observed, 1,920 cfs July 31 (gage height, 8.60 ft); minimum, 6.7 cfs June 19, July 22, 23 (gage height, 0.26 ft).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	-	-	19.2	220	96.5	38.9	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	-	-	-	-	-	-	-	-	0.09	1.07	0.47	0.18	-

257. Saluda River near Greenville, S. C. 1/

Location.--Lat 34°50'30", long 82°28'50", 500 ft upstream from bridge on U. S. Highway 123 alternate, 1.5 miles downstream from Saluda Lake Dam, 2.5 miles upstream from George Creek, and 4.6 miles west of Greenville, Greenville County.

Drainage area.--293 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 810 ft (from topographic map).

Average discharge.--9 years (1941-50), 643 cfs.

Extremes.--1941-50: Maximum discharge, 11,000 cfs Oct. 7, 1949 (gage height, 19.38 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam at Saluda Lake; minimum, 29 cfs (revised) July 21, 1946 (gage height, 1.67 ft); minimum daily, 124 cfs Oct. 21, 1945.

Remarks.--Some regulation at low and medium flow by powerplant at Saluda Lake. Capacity of reservoir insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	*147	*194	*461	*450	895	832	473	689	472	419	481	521	*499
1943	317	307	844	1,032	953	995	889	847	607	864	440	329	702
1944	275	358	387	558	811	1,279	1,188	717	432	348	286	297	577
1945	337	361	378	413	619	685	670	475	276	410	370	457	453
1946	283	348	789	1,875	1,478	1,166	839	882	506	499	407	314	779
1947	363	458	399	862	512	555	622	397	488	328	244	200	422
1948	370	675	441	471	817	1,011	858	478	355	417	565	376	567
1949	243	994	904	907	1,083	882	1,049	1,012	793	1,435	1,054	1,241	965
1950	1,457	983	813	878	756	805	780	533	729	677	442	614	789

* Not previously published; estimated or partly estimated on basis of records for station near Pelzer.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	*0.58	*0.74	*1.81	*1.70	3.18	3.27	1.80	2.71	1.80	1.65	1.89	1.99	*23.12
1943	1.24	1.17	3.32	4.06	3.38	3.92	3.38	3.35	2.31	3.40	1.73	1.25	32.49
1944	1.08	1.36	1.52	2.19	2.99	5.04	4.52	2.82	1.64	1.37	1.13	1.13	26.79
1945	1.33	1.37	1.49	1.63	2.20	2.70	2.56	1.87	1.05	1.61	1.45	1.74	21.00
1946	1.11	1.33	3.10	7.38	5.25	4.59	3.19	3.47	1.93	1.96	1.60	1.19	36.10
1947	1.43	1.74	1.57	3.39	1.82	2.18	2.36	1.56	1.86	1.29	.96	.76	20.92
1948	1.45	2.57	1.74	1.86	3.01	3.98	3.19	1.88	1.35	1.64	2.22	1.43	26.32
1949	.96	3.78	3.56	3.57	3.85	3.47	3.99	3.98	3.02	5.65	4.15	4.73	44.71
1950	5.73	3.74	3.19	3.46	2.69	3.16	2.97	2.10	2.78	2.66	1.74	2.34	36.56

* Not previously published; see footnote to preceding table.

1/ Published as "near West Greenville" prior to 1949.

Yearly discharge, in cubic feet per second, of Saluda River near Greenville, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	1032	5,980	Feb. 17, 1942	-	499	1.70	23.12	555	25.72
1943	1032	5,620	Dec. 30, 1942	182	702	2.40	32.49	664	30.72
1944	1032	4,060	Mar. 30, 1944	137	577	1.97	26.79	582	27.02
1945	1032	2,740	Mar. 27, 1945	141	453	1.55	21.00	482	22.35
1946	1052	7,720	Jan. 8, 1946	124	779	2.66	36.10	762	35.30
1947	1082	3,460	Jan. 20, 1947	134	452	1.54	20.92	474	21.94
1948	1112	3,140	Aug. 5, 1948	156	567	1.94	26.32	621	28.86
1949	1142	6,280	July 13, 1949	186	985	3.29	44.71	1,059	49.07
1950	1172	11,000	Oct. 7, 1949	331	789	2.69	36.56	-	-

* Not previously published.

258. Saluda River near Pelzer, S. C.

Location.--Lat 34°40', long 82°28', half a mile downstream from Hurricane Creek and 2 miles north of Pelzer, Anderson County.

Drainage area.--405 sq mi.

Gage.--Water-stage recorder. Datum of gage is 727.75 ft above mean sea level, unadjusted. Prior to Sept. 25, 1929, staff gage at same site and datum.

Average discharge.--2½ years (1929-50), 797 cfs.

Extremes.--1929-50: Maximum discharge, 13,600 cfs Oct. 7, 1949 (gage height, 10.53 ft); minimum, 9 cfs Sept. 22, Oct. 5, 1947 (gage height, 0.70 ft); minimum daily, 62 cfs Oct. 25, 1931.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	*1,110
1930	1,630	1,290	992	913	875	945	714	595	472	298	252	265	770
1931	242	485	615	623	483	623	964	881	440	466	348	247	537
1932	176	243	1,270	1,530	978	949	820	611	881	425	899	404	766
1933	1,210	1,210	2,060	1,430	1,330	993	1,070	913	570	501	517	589	1,030
1934	366	333	488	580	546	1,515	850	825	953	602	710	524	684
1935	805	510	732	1,235	870	864	884	729	557	651	756	480	757
1936	331	815	509	2,496	1,585	1,173	2,991	863	660	510	547	548	1,081
1937	1,547	592	921	2,658	1,626	1,053	1,176	831	616	545	948	815	1,110
1938	1,516	717	644	707	610	910	797	565	588	788	729	445	754
1939	299	360	388	572	1,812	1,293	802	750	510	494	1,116	373	724
1940	262	265	359	442	665	619	625	403	367	451	1,117	502	506
1941	251	450	559	556	410	620	598	336	258	812	371	218	454
1942	190	251	591	520	1,138	1,182	600	807	520	451	584	620	618
1943	384	375	1,015	1,634	1,187	1,233	1,116	971	676	1,063	546	415	885
1944	358	434	480	708	1,172	1,831	1,613	916	572	459	380	383	772
1945	425	450	505	579	922	974	902	631	347	529	490	592	610
1946	366	453	1,089	2,311	1,901	1,480	1,101	1,301	689	656	611	411	1,028
1947	471	569	519	1,252	878	756	812	512	631	406	339	253	600
1948	481	1,006	808	641	1,167	1,444	1,171	879	495	541	787	482	790
1949	324	1,426	1,229	1,225	1,503	1,121	1,335	1,360	979	1,752	1,297	1,560	1,258
1950	1,786	1,299	1,018	1,113	975	1,030	983	704	912	839	538	732	994

* Not previously published; estimated on basis of record for station at Chappells.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	-	-	-	*3.06
1930	4.64	3.56	2.82	2.59	2.25	2.69	1.96	1.70	1.30	0.85	0.72	0.73	25.81
1931	.69	1.34	1.75	1.78	1.24	1.78	2.66	2.51	1.22	1.39	.99	.68	18.02
1932	.50	.67	3.62	4.36	2.60	2.70	2.25	1.74	2.43	1.21	2.56	1.11	25.75
1933	3.45	3.34	5.87	4.07	3.42	2.82	2.94	2.59	1.57	1.43	1.48	1.62	34.60
1934	1.04	.92	1.38	1.65	1.41	4.31	2.34	2.35	2.62	1.43	2.02	1.44	22.91
1935	2.29	1.41	2.09	3.52	2.24	2.46	2.43	2.08	1.54	1.86	2.16	1.33	25.41
1936	.94	2.24	1.45	7.10	4.22	3.34	8.24	2.46	1.82	1.45	1.56	1.51	36.33
1937	1.40	1.63	2.62	7.56	4.18	3.00	3.24	2.36	1.70	1.56	2.70	2.24	37.19
1938	4.31	1.98	1.65	2.02	1.57	2.59	2.20	1.61	1.62	2.25	2.08	1.23	25.29
1939	.85	.99	1.10	1.63	4.66	3.68	2.21	2.13	1.41	1.41	3.18	1.03	24.28
1940	.75	.73	1.02	1.26	1.77	1.76	1.72	1.15	1.01	1.28	3.18	1.38	17.01
1941	.71	1.24	1.59	1.58	1.05	1.76	1.65	.96	.71	2.31	1.06	.60	15.22
1942	.54	.69	1.68	1.48	2.93	3.37	1.65	2.29	1.43	1.28	1.66	1.71	20.71
1943	1.09	1.03	2.89	4.65	3.05	3.50	3.08	2.77	1.86	3.02	1.56	1.14	29.64
1944	.96	1.19	1.37	2.02	3.12	5.21	4.44	2.61	1.57	1.30	1.08	1.06	25.93
1945	1.21	1.24	1.44	1.65	2.57	2.77	2.49	1.80	.96	1.51	1.40	1.63	20.47
1946	1.04	1.25	3.10	6.58	4.88	4.21	3.04	3.70	1.90	1.87	1.74	1.13	34.44
1947	1.35	1.56	1.48	3.56	1.74	2.16	2.23	1.45	1.74	1.15	.96	1.70	20.08
1948	1.37	2.77	1.73	1.82	3.11	4.12	3.22	1.94	1.36	1.54	2.24	1.33	26.55
1949	.92	3.93	3.49	3.48	3.86	3.19	3.68	3.93	2.70	4.99	3.69	4.30	42.16
1950	5.08	3.58	2.89	3.17	2.51	2.93	2.71	2.01	2.51	2.39	1.53	2.02	33.33

* Not previously published; estimated on basis of records for station at Chappells.

Yearly discharge, in cubic feet per second, of Saluda River near Pelzer, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	697	#6,460	Sept. 27, 1929	-	-	-	-	-	-
1930	697	9,400	Oct. 2, 1929	102	770	1.90	25.81	554	18.57
1931	712	2,750	May 22, 1931	120	537	1.33	18.02	567	19.03
1932	727	4,900	Dec. 15, 1931	82	765	1.89	25.75	1,000	33.62
1933	742	7,990	Oct. 17, 1932	236	1,030	2.54	34.60	755	25.28
1934	757	6,460	Mar. 5, 1934	141	684	1.69	22.91	756	25.36
1935	782	5,760	Jan. 10, 1935	240	757	1.87	25.41	723	24.25
1936	802	13,300	Apr. 7, 1936	251	1,081	2.67	36.33	1,201	40.35
1937	822	9,390	Jan. 3, 1937	361	1,110	2.74	37.19	1,094	36.66
1938	852	10,200	Oct. 19, 1937	242	754	1.86	25.29	599	20.11
1939	872	6,360	Aug. 20, 1939	218	724	1.79	24.28	711	23.84
1940	892	9,920	Aug. 14, 1940	94	506	1.25	17.01	537	18.05
1941	922	2,540	July 9, 1941	130	454	1.12	15.22	435	14.59
1942	952	7,180	Feb. 17, 1942	160	618	1.53	20.71	681	22.81
1943	972	6,840	Jan. 28, 1943	238	885	2.19	29.64	840	28.15
1944	1002	5,720	Mar. 20, 1944	225	772	1.91	25.93	783	26.30
1945	1032	3,720	Mar. 27, 1945	214	610	1.51	20.47	655	21.97
1946	1052	10,400	Jan. 7, 1946	213	1,028	2.54	34.44	998	33.44
1947	1082	5,720	Jan. 20, 1947	192	600	1.48	20.08	644	21.56
1948	1112	3,340	Aug. 6, 1948	195	790	1.95	26.55	864	29.02
1949	1142	8,270	Nov. 29, 1948	250	1,258	3.11	42.16	1,354	45.37
1950	1172	13,600	Oct. 7, 1949	426	994	2.45	33.33	-	-

* Not previously published.

259. Saluda River near Ware Shoals, S. C.

Location.--Lat 34°23', long 82°14', 2 miles southeast of Ware Shoals, Greenwood County, 2½ miles downstream from Ware Shoals Dam, and 5 miles upstream from Turkey Creek.

Drainage area.--569 sq. mi.

Gage.--Water-stage recorder. Altitude of gage is 448 ft (by barometer).

Average discharge.--12 years (1938-50), 990 cfs.

Extremes.--1938-50: Maximum discharge, 20,600 cfs Aug. 13, 1940 (gage height, 20.48 ft), from rating curve extended above 6,300 cfs on basis of computation of peak flow over dam; minimum, 3 cfs Sept. 18, 1939; minimum daily, 11 cfs Oct. 12, 19, 1941.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*371	*447	*478	*717	*2,520	*1,751	939	881	547	556	1,616	497	*934
1940	*355	*366	458	629	983	843	*781	531	*467	*527	1,990	718	*721
1941	*328	*591	644	742	561	801	730	412	340	1,042	427	261	*574
1942	236	319	842	653	1,505	1,899	774	988	627	529	855	729	826
1943	419	*430	1,189	2,629	1,577	1,560	1,258	1,097	802	1,481	634	506	*1,132
1944	429	592	681	887	1,453	2,584	2,180	1,103	635	556	*473	*445	*999
1945	*496	*492	573	703	1,258	1,269	1,239	770	450	566	*610	*1,010	*782
1946	429	577	1,513	2,929	2,382	1,811	1,364	1,666	837	779	849	489	1,299
1947	641	718	642	1,885	910	1,115	1,070	634	774	552	437	310	808
1948	730	1,597	808	891	1,659	1,968	1,621	827	664	774	1,010	592	1,092
1949	392	2,041	1,619	1,612	2,065	1,368	1,639	1,685	1,144	1,906	1,554	1,861	1,569
1950	1,905	1,527	1,203	1,357	1,168	1,244	1,124	790	1,069	953	605	837	1,148

* Revised.

* Not previously published; estimated on basis of records for station near Pelzer.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*0.75	*0.88	*0.97	*1.45	*4.61	*3.55	1.84	1.79	1.07	1.13	3.27	0.97	*22.28
1940	*.72	*.72	.93	1.28	1.87	1.71	*1.53	1.08	*.92	*1.07	4.04	1.41	*17.28
1941	*.66	*1.16	1.30	1.50	1.03	1.63	1.43	.83	.67	2.11	.86	.51	*13.69
1942	.48	.63	1.71	1.33	2.75	3.85	1.52	2.01	1.23	1.07	1.73	1.43	19.74
1943	.85	*.84	2.41	5.33	2.88	3.16	2.47	2.22	1.57	3.00	1.28	.99	*27.00
1944	.87	*1.16	1.38	1.80	2.75	5.23	4.27	2.24	1.24	1.13	*.96	*.87	*23.90
1945	*1.01	*.97	1.16	1.43	2.30	2.57	2.43	1.56	.88	1.15	*1.23	*1.99	*18.68
1946	.87	1.13	3.07	5.94	4.36	3.67	2.68	3.38	1.64	1.58	1.72	.96	31.00
1947	1.30	1.41	1.30	3.82	1.67	2.26	2.10	1.28	1.52	1.12	.89	.61	19.28
1948	1.48	3.14	1.64	1.81	3.15	3.99	3.18	1.67	1.30	1.57	2.05	1.16	26.14
1949	.79	4.00	3.29	3.26	3.78	2.77	3.21	3.41	2.24	3.86	3.15	3.65	37.41
1950	3.86	2.99	2.43	2.74	2.14	2.52	2.21	1.60	2.10	1.92	1.22	1.64	27.37

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Saluda River near Ware Shoals, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872, 892	10,500	Aug. 18, 1939	-	*954	*1.64	*22.28	*919	*21.92
1940	892, 1433	20,600	Aug. 13, 1940	*152	*721	*1.27	*17.28	*753	*18.03
1941	922, 1433	5,010	July 7, 1941	*132	*574	*1.01	*13.69	561	13.39
1942	952	8,300	Mar. 21, 1942	11	826	1.45	19.74	*881	*21.02
1943	972, 1433	15,300	Jan. 18, 1943	*180	*1,132	1.99	*27.00	1,103	26.31
1944	1002, 1433	11,700	Mar. 20, 1944	*192	*999	*1.78	*23.90	*988	*23.63
1945	1032, 1433	5,970	Sept. 13, 1945	*168	*782	*1.37	*18.68	*863	*20.61
1946	1052	14,300	Jan. 7, 1946	240	1,299	2.28	31.00	1,254	29.94
1947	1082	7,880	Jan. 20, 1947	129	808	1.42	19.28	901	21.53
1948	1112	5,410	July 16, 1948	117	1,092	1.92	26.14	1,168	27.96
1949	1142	16,500	Nov. 29, 1948	187	1,569	2.76	37.41	1,620	38.61
1950	1172	14,800	Oct. 8, 1949	316	1,148	2.02	27.37	-	-

* Revised.

† Not previously published.

260. Reedy River near Greenville, S. C.

Location.--Lat 34°48'00", long 82°21'55", 200 ft upstream from bridge on State highway, 0.5 mile upstream from Brushy Creek, 2.5 miles upstream from dam at Conestee, and 3.9 miles southeast of Greenville, Greenville County.

Drainage area.--48.6 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 800 ft (from topographic map).

Average discharge.--9 years (1941-50), 82.5 cfs.

Extremes.--1941-50: Maximum discharge, 3,590 cfs Oct. 7, 1949 (gage height, 7.88 ft), from rating curve extended above 2,000 cfs by velocity-area studies; minimum, 12 cfs Nov. 29, Dec. 3, 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	*18.0	*21.8	47.7	45.1	121	124	50.2	51.8	27.4	45.6	58.4	35.3	*53.4
1943	27.2	29.6	86.5	178	99.9	111	87.6	58.4	52.4	84.2	43.4	30.3	74.2
1944	26.9	41.2	49.4	66.5	135	223	132	72.3	53.4	50.2	43.0	44.1	77.7
1945	47.8	53.6	48.5	61.0	108	96.2	104	57.7	38.1	71.5	60.6	98.9	70.2
1946	43.7	48.0	155	216	187	127	102	143	64.4	83.6	69.5	45.0	107
1947	60.2	67.7	49.9	166	68.6	88.1	76.3	51.3	55.1	31.9	53.8	28.3	66.5
1948	48.6	107	60.3	63.8	130	163	104	87.6	58.6	50.5	72.9	46.4	82.5
1949	33.8	204	104	118	152	87.1	124	115	91.8	115	128	155	118
1950	255	135	84.8	91.4	72.6	83.6	73.7	62.8	80.0	84.2	36.7	55.2	93.0

* Not previously published; estimated on basis of record for station near Ware Shoals.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	*0.43	*0.50	1.13	1.07	2.59	2.94	1.15	1.23	0.63	1.03	1.38	0.81	*14.89
1943	.65	.68	2.05	4.22	2.14	2.63	2.01	1.38	1.20	1.99	1.03	.70	20.68
1944	.64	.95	1.18	1.58	3.00	5.29	3.04	1.72	1.23	1.19	.97	1.01	21.80
1945	1.13	1.23	1.15	1.45	2.31	2.28	2.39	1.37	.87	1.70	1.44	2.26	19.58
1946	1.04	1.10	3.68	5.12	4.01	3.01	2.34	3.39	1.48	1.98	1.65	1.03	29.83
1947	1.43	1.55	1.19	3.94	1.47	2.09	1.75	1.22	1.26	.76	1.28	.65	18.59
1948	1.15	2.46	1.43	1.51	2.88	3.86	2.39	2.08	1.35	1.20	1.73	1.07	23.11
1949	.80	4.69	2.47	2.80	3.26	2.06	2.84	2.73	2.11	2.73	3.03	3.56	33.08
1950	6.05	3.06	2.01	2.17	1.55	1.98	1.70	1.49	1.84	1.99	.87	1.27	25.98

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	1032	1,560	Feb. 17, 1942	-	*53.4	*1.10	*14.89	58.1	16.21
1943	1032	1,810	Jan. 28, 1943	16	74.2	1.53	20.68	71.9	20.07
1944	1032	1,430	Mar. 20, 1944	20	77.7	1.60	21.80	80.4	22.54
1945	1032	1,710	Sept. 13, 1945	21	70.2	1.44	19.58	78.4	21.89
1946	1052	2,360	Jan. 7, 1946	28	107	2.20	29.83	101	28.18
1947	1082	1,610	Jan. 20, 1947	15	66.5	1.37	18.59	69.7	19.46
1948	1112	1,430	May 27, 1948	19	82.5	1.70	23.11	92.9	26.03
1949	1142	2,460	Nov. 28, 1948	26	118	2.43	33.08	130	36.24
1950	1172	3,590	Oct. 7, 1949	27	93.0	1.91	25.98	-	-

* Not previously published.

261. Reedy River near Princeton, S. C.

Location.--Lat 34°30', long 82°13', at old bridge on U. S. Highway 76, 200 ft downstream from Tumbling Shoals powerplant and 5 miles east of Princeton, Laurens County.

Drainage area.--207 sq mi (revised).

Gage.--Chain gage.

Extremes.--1929-31: Maximum discharge, about 16,000 cfs Oct. 2, 1929 (gage height, 25.1 ft, from floodmarks), from rating curve extended above 1,100 cfs on basis of discharge measurement of 15,800 cfs at site 5 miles downstream during the reported equal flood of September 1929; minimum discharge, about 2 cfs July 19, Nov. 3, 1930.
Maximum stage known, 34.6 ft in August 1908, from floodmarks (discharge, about 28,000 cfs).

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*1,360	578	383	341	361	310	230	158	210	148	172	113	*365
1931	95	248	327	284	206	262	284	253	71.3	202	190	124	213

* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*7.57	3.11	2.13	1.90	1.81	1.73	1.24	0.88	1.13	0.82	0.96	0.61	*23.89
1931	.53	1.34	1.82	1.58	1.04	1.46	1.53	1.41	.38	1.13	1.06	.67	13.95

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	697	*16,000	Oct. 2, 1929	*3	*365	*1.76	*23.89	225	14.77
1931	712	1,780	May 22, 1931	3	213	1.03	13.95	-	-

* Not previously published.

262. Reedy River near Ware Shoals, S.C.

Location.--Lat 34°27', long 82°12', 1 $\frac{3}{4}$ miles downstream from dam at Boyd's Mill, 4.5 miles northeast of Ware Shoals, Greenwood County, and 10.5 miles upstream from Redburn Creek.

Drainage area.--228 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 489 ft (by barometer).

Average discharge.--11 years (1939-50), 299 cfs.

Extremes.--1939-50: Maximum discharge, 7,750 cfs Aug. 14, 1940 (gage height, 13.32 ft), by computation of peak flow over dam at Boyd's Mill; minimum, 6 cfs Nov. 11, 1948, Sept. 30, 1950.

Remarks.--Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	314	237	151	176	414	116	-
1940	81.5	87.5	139	232	385	354	238	165	122	150	692	102	229
1941	89.4	196	186	177	144	262	204	100	103	397	117	64.7	171
1942	68.5	83.4	231	192	476	750	239	242	131	151	285	150	249
1943	104	116	315	965	443	552	368	224	183	362	160	122	327
1944	98.8	165	196	304	557	966	598	262	212	183	190	126	322
1945	156	158	177	261	506	417	424	247	150	166	169	447	273
1946	146	156	576	860	680	523	347	435	216	269	346	165	393
1947	265	217	187	729	285	451	341	198	148	158	159	111	271
1948	266	574	279	300	609	714	563	315	211	194	187	142	361
1949	111	705	444	489	676	344	431	458	261	296	336	440	413
1950	478	426	285	324	281	289	237	201	291	244	149	175	282

Monthly and yearly runoff, in inches, of Reedy River near Ware Shoals, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	1.54	1.20	0.74	0.89	2.10	0.57	-
1940	0.41	0.43	0.70	1.18	1.82	1.79	1.16	.83	.60	.76	3.50	.50	13.68
1941	.45	.96	.94	.89	.66	1.33	1.00	.51	.50	2.01	.59	.32	10.16
1942	.35	.41	1.16	.97	2.18	3.79	1.17	1.22	.64	.76	1.44	.73	14.82
1943	.53	.57	1.59	4.90	2.02	2.79	1.80	1.13	.90	1.83	.81	.60	19.47
1944	.50	.81	.99	1.53	2.63	4.89	2.92	1.43	1.04	.93	.96	.62	19.25
1945	.79	.77	.89	1.31	2.31	2.11	2.08	1.24	.73	.84	.96	2.19	16.22
1946	.74	.76	2.92	4.35	3.10	2.64	1.70	2.20	1.06	1.36	1.75	.81	23.39
1947	1.34	1.06	.95	3.69	1.30	2.28	1.67	1.00	.72	.80	.80	.54	16.15
1948	1.35	2.81	1.41	1.52	2.88	3.61	2.76	1.59	1.03	.98	.95	.70	21.59
1949	.56	3.45	2.25	2.47	3.08	1.74	2.11	2.32	1.27	1.50	1.70	2.15	24.60
1950	2.42	2.09	1.44	1.64	1.28	1.46	1.16	1.02	1.43	1.23	.75	.86	16.78

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872, 892	3,560	Aug. 19, 1939	-	-	-	-	-	-
1940	892	7,750	Aug. 14, 1940	14	229	1.00	13.68	243	14.49
1941	922	2,380	July 17, 1941	16	171	.750	10.16	163	9.73
1942	952	4,270	Feb. 18, 1942	15	249	1.09	14.82	262	15.59
1943	972	6,140	Jan. 19, 29, 1943	15	327	1.43	19.47	320	19.08
1944	1002	4,840	Mar. 21, 1944	18	322	1.41	19.25	325	19.40
1945	1032	2,580	Sept. 17, 1945	17	273	1.20	16.22	306	18.19
1946	1052	6,440	Jan. 8, 1946	15	393	1.72	23.39	375	22.32
1947	1082	3,470	Jan. 21, 1947	22	271	1.19	16.15	309	18.37
1948	1112	2,680	Mar. 8, 1948	14	361	1.58	21.59	373	22.28
1949	1142	6,690	Nov. 29, 1948	16	413	1.81	24.60	408	24.29
1950	1172	4,820	Oct. 8, 1949	14	282	1.24	16.78	-	-

263. Saluda River near Waterloo, S. C. 1/

Location--Lat 34°18', long 82°05', at Charleston & Western Carolina Railroad bridge, seven-eighths of a mile downstream from Reedy River and 4 1/4 miles south of Waterloo, Laurens County.

Drainage area--1,056 sq mi.

Supplemental records available--August to September 1896, gage heights and discharge measurements only.

Gage--Chain gage. Altitude of gage is 400 ft (from river-profile map). Prior to Jan. 1, 1902, at datum 1.5 ft higher.

Average discharge--9 years (1896-1905), 1,954 cfs.

Extremes--1896-1905: Maximum daily discharge, 18,970 cfs June 8, 1903; minimum daily, 200 cfs Oct. 25, 1904.

Remarks--Low and medium flow regulated since 1904 by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1897	*790	*2,324	*1,763	1,550	3,653	3,382	3,125	1,668	1,808	1,140	912	778	*1,892
1898	1,001	1,165	1,166	1,369	1,009	1,215	1,612	968	888	1,453	2,331	2,263	1,371
1899	2,314	1,469	*1,797	2,683	5,417	4,448	2,858	1,666	1,256	1,145	1,096	1,137	*2,254
1900	1,135	1,204	1,375	1,445	3,487	3,647	3,382	1,848	3,371	1,692	1,023	1,161	2,050
1901	1,343	1,828	1,762	1,834	2,066	*2,417	*3,650	*2,824	*3,424	1,491	*5,869	*4,261	*2,730
1902	1,862	1,261	*3,065	2,148	4,352	4,098	1,919	1,333	1,485	1,099	905	1,400	*2,065
1903	1,269	1,173	2,268	2,074	5,858	5,273	*4,086	1,798	4,222	*1,373	1,417	856	*2,613
1904	802	1,072	882	868	1,460	1,398	1,130	*881	798	730	3,118	738	*1,157
1905	444	683	961	*1,278	*2,827	1,191	971	1,688	1,008	3,447	2,080	941	*1,455
1906	865	793	2,821	-	-	-	-	-	-	-	-	-	-

* Revised.

+ Corrected.

* Not previously published; estimated on basis of once-daily chain-gage readings and estimated rating table, and weather records.

1/ Published as "at Waterloo" prior to January 1902.

Monthly and yearly runoff, in inches, of Saluda River near Waterloo, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1897	*0.86	*2.46	*1.92	1.69	3.60	3.70	*3.30	1.82	1.91	1.25	0.99	0.82	*24.32
1898	1.09	1.23	1.27	1.50	1.00	1.35	1.71	1.06	.95	1.59	2.55	2.39	17.67
1899	2.53	1.55	*1.96	2.93	5.34	4.85	3.02	1.82	1.33	1.25	1.20	1.20	*28.98
1900	1.23	1.27	1.50	1.58	3.43	3.98	3.57	2.02	3.56	1.84	1.12	1.23	26.53
1901	1.46	1.93	1.93	2.01	2.04	*2.64	*3.86	*3.08	*3.62	1.63	*6.41	*4.51	*35.12
1902	2.03	1.33	*3.34	2.34	4.29	4.47	2.03	1.45	1.57	1.20	*1.99	1.48	*26.52
1903	1.38	1.24	2.48	2.26	5.78	5.75	*4.32	1.96	4.46	*1.50	1.54	.90	*33.57
1904	.88	1.14	.97	.948	1.49	1.52	1.19	*.962	.844	.797	3.40	.780	*14.92
1905	.484	.722	1.05	*1.40	*2.79	1.30	1.03	1.84	1.07	3.76	2.27	.994	*18.71
1906	.944	.838	3.08	-	-	-	-	-	-	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1897	(a)	12,730	Apr. 7, 1897	*350	*1,892	*1.79	*24.32	1,779	22.67
1898	(a)	8,230	Sept. 25, 1898	290	1,371	1.30	17.67	*1,562	*20.12
1899	(b)	15,850	Feb. 7, 1899	430	*2,254	*2.13	*28.98	2,118	26.94
1900	(c)	15,100	Feb. 14, 1900	405	2,050	1.94	26.33	*2,166	27.65
1901	65,1385	*17,200	Sept. 18, 1901	415	*2,730	*2.59	*35.12	*2,838	*36.50
1902	83,1383	18,500	Feb. 2, 1902	360	*2,065	*1.96	*26.52	1,954	24.92
1903	98,1383	18,970	June 8, 1903	442	*2,613	*2.47	*33.57	*2,447	*31.46
1904	127,1383	15,070	Aug. 9, 1904	229	*1,157	*1.10	*14.92	*1,102	*14.19
1905	168	11,110	July 3, 1905	200	*1,455	*1.38	*18.71	*1,657	*21.32
1906	168	-	-	-	-	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published.

a 20th Ann. Rept., Pt. 4.

b 21st Ann. Rept., Pt. 4.

c 22nd Ann. Rept., Pt. 4.

264. Lake Greenwood near Chappells, S. C.

Location.--Lat 34°10', long 81°54', at left upstream end of dam on Saluda River, 0.7 mile upstream from Wilson Creek and 2.4 miles west of Chappells, Newberry County.

Drainage area.--1,150 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Dan T. Duncan Engineering Co.), gage readings have been reduced to elevations above mean sea level. Prior to June 11, 1940, staff gage at same site and datum.

Extremes.--1940-50: Maximum elevation, 441.82 ft Jan. 7, 1949; minimum elevation since normal reservoir level was reached, 424.42 ft Oct. 16, 1947.

Remarks.--Lake is formed by earth dam; storage began in May 1940; dam completed in 1940. Usable capacity, about 8,330,000,000 cu ft between elevations 420.0 ft (limit of draw-down) and 441.5 ft (top of 1½-ft flashboards on top of spillway gates) above mean sea level. Dead storage is about 3,500,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest is 415.0 ft above mean sea level. Water is used for generation of power.

Cooperation.--Capacity curve furnished by Greenwood County Electric Power Commission.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1940	-	-	-	-	-	-	-	-	1.63	3.63	7.97	7.25
1941	5.66	5.39	6.01	4.88	5.04	6.14	5.64	5.16	5.58	7.16	5.22	3.85
1942	3.26	3.64	5.47	5.02	6.66	7.59	4.70	3.93	3.25	3.00	3.79	3.06
1943	2.82	2.69	4.63	8.34	6.69	7.57	6.84	5.95	5.48	6.16	4.79	3.95
1944	2.94	2.73	3.43	3.31	6.48	8.32	8.30	6.52	5.44	4.67	3.90	3.00
1945	2.48	2.24	2.20	2.26	4.65	5.61	7.11	6.48	5.68	5.34	5.28	6.73
1946	4.61	3.61	7.62	7.18	7.84	7.44	6.46	6.34	5.44	5.32	5.38	4.26
1947	4.36	3.44	2.69	6.93	5.81	6.76	7.73	6.41	5.93	4.81	3.75	1.91
1948	2.94	5.20	4.37	3.62	6.78	8.41	7.59	7.60	5.93	5.04	3.90	2.58
1949	1.72	8.38	7.15	5.88	7.60	6.42	7.34	7.31	6.53	7.16	7.88	6.20
1950	5.93	4.71	4.91	5.73	4.88	6.14	5.69	6.04	5.78	6.54	5.49	5.35

265. Saluda River at Chappells, S. C.

Location--Lat 34°11', long 81°52', at bridge on State Highway 39 at Chappells, Newberry County, 7 miles downstream from dam at Lake Greenwood and 8 1/4 miles upstream from Little River.

Drainage area--1,350 sq mi, approximately.

Supplemental records available--Records of chemical analyses and water temperatures for the period October 1946 to September 1947 are published in report of Geological Survey. Gage-height records collected at practically same site since 1905 are contained in reports of U. S. Weather Bureau.

Gage--Water-stage recorder. Datum of gage is 363.89 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 27, 1927, staff gage and from June 27, 1927, to Sept. 30, 1939, water-stage recorder at site 300 ft downstream at datum 0.10 ft lower.

Average discharge--24 years (1926-50), 1,999 cfs.

Extremes--1926-50: Maximum discharge, 63,700 cfs Oct. 2, 1929 (gage height, 31.5 ft), from rating curve extended above 27,000 cfs on basis of velocity-area studies; minimum, 8 cfs Oct. 29, 1939; minimum daily, 8 cfs Oct. 29, 1939, caused by construction work above station.

Maximum stage known, 35.7 ft, present datum, Aug. 26, 1908, from reports of U. S. Weather Bureau.

Remarks--Some regulation at low and medium flow by powerplants upstream from station prior to October 1909, but capacity of reservoirs insufficient to affect monthly figures of runoff. Flow regulated October 1939 to April 1940 by construction operations at Lake Greenwood and by storage thereafter (see elsewhere in this report).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	8553	81,150	81,850	81,270	82,240	82,310	81,190	80,051	80,270	2,090	609	797	81,340
1928	489	602	2,890	1,380	1,840	2,000	2,850	3,710	1,900	2,270	9,630	3,180	2,740
1929	1,510	1,190	1,130	1,550	4,190	9,240	3,300	3,970	2,020	1,590	1,040	6,710	3,110
1930	8,240	3,370	2,980	2,560	2,360	2,140	1,640	1,320	1,180	865	629	640	2,330
1931	509	1,360	1,660	1,760	1,240	1,660	2,180	1,870	868	1,260	977	512	1,320
1932	421	491	3,520	4,300	2,710	2,210	1,840	1,390	980	831	2,010	805	1,860
1933	3,950	2,820	5,490	3,210	3,410	2,130	1,870	1,680	3,110	1,280	1,090	2,150	2,450
1934	825	745	989	1,267	1,392	3,074	1,829	1,754	3,368	1,522	1,531	1,072	1,614
1935	1,981	918	1,383	2,462	2,174	2,200	2,259	1,405	1,032	1,410	2,431	1,570	1,769
1936	730	1,486	1,012	8,844	4,598	3,591	10,480	1,764	1,342	998	1,461	859	3,084
1937	4,142	1,223	2,471	6,476	3,845	2,446	3,613	2,060	1,363	1,138	2,046	2,055	2,738
1938	3,684	1,493	1,544	1,711	1,294	1,818	2,562	1,136	1,165	1,860	1,237	797	1,697
1939	545	782	978	1,473	4,738	3,656	1,779	1,493	915	964	2,393	752	1,687
1940	422	617	578	1,308	2,024	1,671	1,315	218	58.2	52.6	3,531	1,081	1,072
1941	1,083	1,534	1,273	1,696	866	1,245	1,444	715	582	2,131	1,522	825	1,248
1942	530	385	1,049	1,357	2,123	4,338	2,452	1,987	1,207	977	1,068	1,282	1,561
1943	863	809	1,321	3,783	3,371	2,856	2,649	1,943	1,645	2,855	1,428	1,093	2,046
1944	953	973	957	1,993	2,191	5,826	3,783	2,427	1,496	1,277	1,090	956	1,994
1945	894	864	1,011	1,313	1,880	1,826	1,789	1,604	1,366	1,047	1,041	1,900	1,373
1946	1,516	1,234	1,975	5,389	3,760	3,328	2,707	2,600	1,684	1,414	1,469	1,518	2,362
1947	1,396	1,519	1,410	2,962	2,159	2,364	1,894	1,456	1,314	1,364	1,248	1,230	1,691
1948	1,187	2,721	2,214	2,375	2,892	3,684	3,855	1,661	793	1,726	1,860	1,620	2,268
1949	1,054	2,684	3,736	3,766	3,779	2,804	2,647	2,983	2,088	2,334	2,501	3,398	2,808
1950	2,733	2,661	1,760	1,763	2,157	1,854	1,835	1,169	1,741	1,234	1,278	1,282	1,785

* Not previously published; estimated on basis of once-daily gage readings by U. S. Weather Bureau and estimated stage-discharge relation.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	0.47	0.95	1.58	1.08	1.73	1.97	0.98	0.69	1.05	1.79	0.52	0.66	13.47
1928	.42	.50	2.47	1.18	1.47	1.71	2.35	3.17	1.57	1.94	8.22	2.63	27.63
1929	1.29	.98	.96	1.33	3.23	7.89	2.72	3.39	1.67	1.36	8.99	5.54	31.25
1930	7.03	2.79	2.55	2.19	1.82	1.83	1.35	1.13	.98	.74	.54	.53	23.48
1931	.43	1.13	1.42	1.50	.96	1.42	1.80	1.60	.72	1.08	.83	.42	13.31
1932	.36	.41	3.01	3.68	2.17	1.89	1.52	1.19	1.64	.71	1.72	.67	18.97
1933	2.61	2.33	4.69	2.74	2.64	1.82	1.55	1.43	1.08	1.09	.93	1.77	24.68
1934	.70	.62	.85	1.08	1.07	2.63	1.51	1.50	2.78	1.30	1.30	.89	16.23
1935	1.70	.76	1.18	2.10	1.68	1.88	1.86	1.20	.85	1.20	2.08	1.29	17.78
1936	.62	1.23	.86	7.55	3.68	3.07	8.66	1.51	1.11	.85	1.24	.71	31.09
1937	3.54	1.01	2.11	5.53	2.97	2.09	2.99	1.76	1.13	.97	1.75	1.70	27.55
1938	3.15	1.24	1.31	1.46	1.00	1.56	2.12	.97	.96	1.59	1.06	.66	17.08
1939	.46	.65	.83	1.27	3.66	3.12	1.47	1.25	.76	.82	2.04	.62	16.37

* Not previously published; estimated or partly estimated on basis of once-daily gage readings by U. S. Weather Bureau and estimated stage-discharge relation.

Yearly discharge, in cubic feet per second, of Saluda River at Chappells, S. C.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642	7,700	Dec. 30, 1926	228	1,340	40.993	13.47	1,380	13.86
1928	662	56,200	Aug. 17, 1928	222	2,740	2.03	27.63	2,750	27.47
1929	682	60,700	Sept. 28, 1929	512	3,110	2.50	31.25	4,020	40.39
1930	697	65,700	Oct. 2, 1929	389	2,330	1.73	23.48	1,400	14.09
1931	712	5,310	Apr. 1, 1931	359	1,320	.978	13.31	1,400	14.11
1932	727	16,800	Jan. 9, 1932	282	1,880	1.39	18.97	2,460	24.82
1933	742	19,200	Oct. 19, 1932	546	2,450	1.81	24.68	1,710	17.22
1934	757	18,000	June 7, 1934	429	1,614	1.20	16.23	1,760	17.70
1935	782	9,700	Oct. 12, 1934	434	1,769	1.31	17.78	1,678	16.95
1936	802	49,400	Apr. 8, 1936	293	3,084	2.28	31.09	3,475	35.04
1937	822	21,400	Jan. 5, 1937	606	2,738	2.03	27.55	2,643	26.59
1938	852	18,000	Oct. 22, 1937	358	1,697	1.26	17.08	1,324	13.32
1939	872	13,200	Mar. 1, 1939	295	1,687	1.25	16.97	1,630	-
1940	892	49,700	Aug. 14, 1940	8	1,072	-	-	1,262	-
1941	922	7,400	July 17, 1941	208	1,248	-	-	1,087	-
1942	952	24,300	Mar. 22, 1942	129	1,581	-	-	1,849	-
1943	972	22,100	Jan. 29, 1943	148	2,046	-	-	2,034	-
1944	1002	32,300	Mar. 21, 1944	385	1,994	-	-	1,985	-
1945	1032	6,080	Sept. 18, 1945	162	1,373	-	-	1,538	-
1946	1052	22,500	Jan. 8, 1946	350	2,362	-	-	2,327	-
1947	1082	8,100	Jan. 21, 1947	348	1,691	-	-	1,841	-
1948	1112	14,200	Apr. 1, 1948	410	2,268	-	-	2,383	-
1949	1142	51,400	Nov. 29, 1948	457	2,808	-	-	2,781	-
1950	1172	5,310	Mar. 7, 1950	489	1,785	-	-	-	-

* Not previously published.

Note.--Figures of discharge in cubic feet per second per square mile and runoff in inches, for 1942-45 previously published in WSP 952, 972, 1002, and 1032, may be subject to considerable error because of regulation in reservoirs upstream. These figures are not published herein and should not be used.

266. Saluda River near Silverstreet, S. C.

Location.--Lat 34°11', long 81°44', 200 ft upstream from Higgins Ferry Bridge on State Highway 19, 1 mile downstream from Little River, and 2½ miles south of Silverstreet, Newberry County.

Drainage area.--1,620 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 345.13 ft above mean sea level, unadjusted. Prior to Oct. 15, 1929, staff gage at same site and datum. Since Mar. 8, 1939, water-stage recorder for station on Lake Murray near Columbia has been used as an auxiliary gage for this station.

Average discharge.--24 years (1926-50), 2,290 cfs.

Extremes.--1926-50: Maximum discharge, 83,800 cfs Oct. 3, 1929 (gage height, 33.97 ft), from rating curve extended above 19,000 cfs on basis of discharge measurements made at Chappells and near Chapin; minimum, 49 cfs July 4, 1940 (gage height, 2.88 ft); minimum daily, 49 cfs July 4, 1940.

Remarks.--Some regulation at low and medium flow by powerplants upstream from station prior to October 1939, but capacity of reservoirs insufficient to affect monthly figures of runoff. Flow regulated October 1939 to April 1940 by construction operations at Lake Greenwood and by storage thereafter (see elsewhere in this report).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	+560	1,180	1,950	1,460	2,510	2,510	1,210	881	1,380	2,350	635	845	1,450
1928	561	650	3,410	1,600	2,090	2,260	3,480	4,400	2,070	2,660	10,900	4,110	3,190
1929	1,690	1,440	1,540	1,880	5,180	11,800	3,780	5,060	2,410	1,730	1,160	8,030	3,770
1930	10,200	3,720	3,440	3,020	2,760	2,460	1,800	1,420	1,250	962	726	741	2,720
1931	577	1,610	1,960	2,070	1,320	1,850	2,440	1,990	942	1,430	1,050	526	1,480
1932	443	530	3,820	4,950	3,200	2,590	2,110	1,570	2,280	880	2,200	857	2,120
1933	3,420	3,140	6,490	5,780	3,870	2,390	2,100	1,880	1,510	1,470	1,230	3,130	2,860
1934	930	830	1,071	1,390	1,534	3,533	2,036	2,249	4,565	1,658	1,619	1,168	1,882
1935	2,325	997	1,614	2,820	2,533	2,638	2,735	1,580	1,095	1,528	2,779	2,097	2,081
1936	785	1,635	1,151	10,460	5,360	4,097	12,490	1,887	1,442	1,101	1,703	938	3,572
1937	4,469	1,343	2,909	7,133	4,359	2,716	4,493	3,368	1,591	1,267	2,259	2,266	3,095
1938	4,170	1,665	1,761	1,943	1,446	2,032	3,043	1,216	1,274	2,018	1,510	828	1,898
1939	581	850	1,100	1,697	5,580	4,514	2,133	1,667	953	1,047	2,441	759	1,922
1940	449	685	656	1,490	2,394	1,906	1,500	318	123	95.0	4,467	1,081	1,260
1941	1,108	1,728	1,574	1,829	964	1,432	1,607	763	649	2,697	1,603	849	1,406
1942	557	458	1,258	1,532	2,454	5,212	2,663	2,169	1,347	1,111	1,128	1,348	1,766
1943	952	865	1,507	4,520	3,744	3,301	2,994	2,036	1,682	3,709	1,476	1,107	2,320
1944	947	996	1,029	2,204	2,705	7,358	4,613	2,620	1,506	1,320	1,146	957	2,284
1945	910	891	1,051	1,372	2,273	2,055	2,098	1,765	1,450	1,100	1,157	2,348	1,530
1946	1,595	1,302	2,280	5,766	4,428	4,087	3,052	2,969	1,845	1,559	1,624	1,338	2,648
1947	1,661	1,683	1,445	3,783	2,363	2,892	2,111	1,577	1,413	1,489	1,500	1,238	1,910
1948	1,317	3,365	2,577	2,658	3,877	4,546	4,091	1,931	1,816	1,899	2,064	2,010	2,697
1949	1,105	3,250	4,494	4,366	4,600	2,893	2,919	3,345	2,194	2,559	2,920	3,531	3,170
1950	2,863	2,728	1,826	1,902	2,364	2,077	1,961	1,450	2,023	1,522	1,395	1,343	1,949

* Not previously published; estimated or partly estimated on basis of records for stations in same drainage basin.

Monthly and yearly runoff, in inches, of Saluda River near Silverstreet, S. C.

Water year	Monthly and yearly runoff, in inches, of Saluda River near Silverstreet, S. C.												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1927	*0.40	*0.81	*1.58	*1.04	1.61	1.79	0.83	0.63	0.95	1.67	0.45	0.58	*12.14
1928	.40	.45	2.42	1.14	1.39	1.61	2.40	3.14	1.43	1.89	7.76	2.83	26.86
1929	1.20	.99	.95	1.34	3.33	8.39	2.60	3.60	1.66	1.23	.83	5.53	31.65
1930	7.26	2.57	2.44	2.14	1.77	1.75	1.24	1.01	.86	.68	.52	.51	22.75
1931	.41	1.11	1.40	1.48	.85	1.31	1.68	1.42	.65	1.02	.75	.36	12.44
1932	.31	.36	2.72	3.53	2.14	1.84	1.45	1.12	1.57	.63	1.57	.59	17.83
1933	2.43	2.16	4.62	2.69	2.49	1.71	1.45	1.34	1.04	1.05	.88	2.15	24.01
1934	.66	.57	.76	.99	.99	2.51	1.41	1.60	3.15	1.18	1.15	.80	15.77
1935	1.66	.69	1.15	2.01	1.62	1.88	1.89	1.12	.75	1.09	1.98	1.44	17.28
1936	.56	1.13	.82	7.45	3.57	2.92	8.60	1.34	.99	.78	1.21	.65	30.02
1937	3.18	.92	2.08	5.07	2.80	1.94	3.09	1.66	1.10	.90	1.60	1.56	25.92
1938	2.96	1.15	1.26	1.58	.93	1.44	2.10	.87	.88	1.44	.93	.57	15.91
1939	.41	.59	.78	1.21	3.58	3.22	1.47	1.19	.66	.74	1.74	.52	16.11

* Not previously published; estimated or partly estimated on basis of records for stations in same drainage basin.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642	-	-	-	*1,450	+0.895	*12.14	*1,530	*12.82
1928	662	60,400	Aug. 18, 1928	280	3,190	1.97	26.86	3,180	26.73
1929	682	69,800	Sept. 28, 1929	550	3,770	2.33	31.65	4,860	40.78
1930	697	83,800	Oct. 3, 1929	440	2,720	1.68	22.75	1,600	13.40
1931	712	6,180	Apr. 2, 1931	416	1,480	.914	12.44	1,540	12.91
1932	727	18,600	Jan. 10, 1932	356	2,120	1.31	17.83	2,810	23.65
1933	742	19,600	Sept. 8, 1933	628	2,860	1.77	24.01	2,000	16.79
1934	757	18,000	June 7, 1934	520	1,882	1.16	15.77	2,060	17.28
1935	782	11,500	Oct. 11, 1934	504	2,061	1.27	17.28	1,944	16.29
1936	802	63,000	Apr. 8, 1936	404	3,572	2.20	30.02	4,009	33.69
1937	822	20,900	Jan. 6, 1937	718	3,095	1.91	25.92	2,999	25.11
1938	852	15,800	Oct. 23, 1937	420	1,898	1.17	15.91	1,470	12.32
1939	872	16,300	Mar. 2, 1939	354	1,922	1.19	16.11	1,858	-
1940	892	58,300	Aug. 15, 1940	49	1,260	-	-	1,481	-
1941	922	8,610	July 18, 1941	269	1,406	-	-	1,227	-
1942	952	23,700	Mar. 23, 1942	170	1,766	-	-	1,856	-
1943	972	20,100	Jan. 30, 1943	346	2,320	-	-	2,290	-
1944	1002	39,100	Mar. 21, 1944	355	2,284	-	-	2,272	-
1945	1032	9,130	Apr. 27, 1945	282	1,530	-	-	1,728	-
1946	1052	22,800	Jan. 9, 1946	416	2,648	-	-	2,614	-
1947	1082	13,000	Jan. 21, 1947	413	1,910	-	-	2,117	-
1948	1112	14,600	Apr. 2, 1948	364	2,697	-	-	2,828	-
1949	1142	32,200	Nov. 30, 1948	560	3,170	-	-	3,052	-
1950	1172	6,860	Mar. 8, 1950	657	1,949	-	-	-	-

* Not previously published.

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff, in inches, for 1942-45, previously published in WSP Nos. 952, 972, 1002, and 1032, may be subject to considerable error because of regulation in Lake Greenwood and other reservoirs upstream. These figures are not included herein and should not be used.

267. Saluda River near Chapin, S. C.

Location.--Lat 34°04', long 81°17', at Wise Ferry bridge, just downstream from Johns Creek and 7½ miles southeast of Chapin, Lexington County.

Drainage area.--2,380 sq mi (revised).

Gage.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Extremes.--1926-29: Maximum discharge, 64,400 cfs Mar. 5, 1929 (gage height, 13.37 ft); minimum, 239 cfs Oct. 5, 1927 (gage height, 0.77 ft).

Remarks.--Some regulation at low and medium flow by powerplants upstream from station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*580	*1,210	*2,070	*1,470	3,240	3,340	1,310	848	1,490	2,970	821	914	*1,680
1928	587	686	4,590	1,780	3,490	3,070	5,060	6,280	2,360	3,580	13,600	8,280	4,440
1929	1,820	1,440	1,440	2,360	7,680	17,500	4,790	7,040	2,910	2,150	1,510	-	-

* Not previously published; estimated on basis of records for station near Columbia.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	*0.28	*0.57	*1.00	*0.71	1.42	1.61	0.61	0.41	0.70	1.44	0.40	0.43	*9.58
1928	.28	.32	2.22	.86	1.58	1.49	2.38	3.04	1.12	1.64	6.58	3.88	25.39
1929	.88	.68	.70	1.14	3.36	8.47	2.24	3.41	1.36	1.04	.73	-	-

* Not previously published; estimated on basis of records for station near Columbia.

SANTÉE RIVER BASIN

Yearly discharge, in cubic feet per second, of Saluda River near Chapin, S. C.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1927	642	*12,700	July 20, 1927*	-	*1,680	*0.706	*9.58	*1,850	*10.55	
1928	662	59,400	Aug. 18, 1928	262	4,440	1.87	25.39	4,340	24.83	
1929	682	64,400	Mar. 5, 1929	-	-	-	-	-	-	

* Revised.

† Not previously published.

268. Lake Murray near Columbia, S. C.

Location.--Lat 34°03'05", long 81°13'15", in intake tower 500 ft upstream from dam on Saluda River, 10 miles upstream from confluence of Saluda and Broad Rivers at Columbia, Richland County.

Drainage area.--2,420 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 0.64 ft below mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 31, 1930, staff gage at same site and datum.

Extremes.--1929-50: Maximum gage height, 361.51 ft Apr. 10, 1936; minimum gage height since generation of power was started, 320.96 ft Dec. 23, 1941.

Remarks.--Lake is formed by earth dam; storage began Aug. 31, 1929; dam completed in 1930. Usable capacity, 70,300,000 cu ft between gage heights 300.0 ft (limit of drawdown) and 360.0 ft (maximum normal lake level). Dead storage, 21,800,000 cu ft. Figures given herein represent usable contents. Gage height of new spillway crest (completed in 1946), 330 ft with top of gates 362 ft; gage height of other spillway crest 340 ft with top of gates 365 ft. Water is used for generation of power.

Cooperation.--Capacity table furnished by Lexington Water Power Co.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930	-	-	-	1.84	1.19	1.54	5.96	9.70	12.87	15.66	17.70	20.80
1931	21.87	27.16	31.82	33.20	28.07	30.66	36.34	37.39	32.42	30.51	29.36	22.64
1932	19.07	17.15	25.82	40.00	49.23	56.82	58.13	57.27	56.89	47.20	41.32	30.13
1933	36.10	39.30	55.33	57.83	61.38	65.03	67.55	66.00	56.12	48.68	40.46	36.83
1934	23.65	17.49	17.22	16.75	16.78	27.23	30.01	35.38	46.07	42.46	36.23	32.29
1935	27.04	22.73	24.49	30.42	34.86	39.84	45.01	43.39	36.09	37.15	44.73	42.19
1936	27.90	21.89	21.12	50.43	65.11	70.44	70.26	66.30	58.90	49.92	44.58	32.77
1937	34.87	28.27	30.56	50.72	54.32	54.13	58.71	57.06	49.39	39.62	40.72	31.92
1938	32.14	28.15	25.04	23.89	28.30	31.37	39.78	37.28	33.58	35.69	33.86	31.55
1939	27.07	24.80	24.90	28.76	48.04	57.64	55.73	49.95	43.19	41.15	40.86	33.96
1940	26.63	20.67	19.95	22.94	30.59	36.49	38.88	35.73	34.57	33.19	44.03	39.55
1941	35.43	36.66	30.40	32.16	31.59	35.16	37.83	35.11	33.80	44.25	43.12	37.13
1942	29.28	19.58	17.04	19.91	26.79	47.23	47.60	51.30	49.73	43.91	40.07	38.57
1943	33.85	29.76	29.48	39.50	43.74	50.95	53.57	51.32	48.97	50.02	46.31	40.10
1944	33.21	29.19	27.89	33.44	41.12	60.23	60.02	56.77	51.69	50.63	45.67	41.35
1945	37.01	32.37	32.65	34.22	38.59	41.77	45.46	48.78	46.07	42.62	38.99	44.49
1946	b41.84	40.87	46.80	58.71	65.65	70.20	69.74	66.83	61.18	55.88	51.38	45.60
1947	42.81	40.38	36.71	44.66	44.76	53.91	61.36	62.76	62.29	59.55	56.14	50.60
1948	45.94	50.87	50.82	50.09	58.42	68.32	67.64	68.74	65.81	65.28	61.45	59.13
1949	52.69	61.04	63.58	65.71	69.87	67.70	70.26	69.06	66.81	66.75	70.00	64.84
1950	59.96	53.34	51.73	50.65	50.77	54.00	53.30	53.25	54.13	55.68	48.11	43.66

a Contents by capacity table used beginning Sept. 1, 1938; contents Sept. 30, 1938, by capacity table used prior to Sept. 1, 1938, was 31.19 billion cubic feet.

b Contents by capacity table used beginning Oct. 1, 1945; contents Oct. 31, 1945, by capacity table used prior to Oct. 1, 1945, was 42.32 billion cubic feet.

Note.--Contents prior to January 1930 when elevation of reservoir was below elevation 300 ft not available; contents January 1950 to August 1938 not previously published.

269. Saluda River near Columbia, S. C.

Location.--Lat 34°00'50", long 81°05'17", 0.4 mile upstream from site of old Saluda mill, 1.6 miles upstream from confluence with Broad River, and 3.3 miles west of Columbia, Richland County.

Drainage area.--2,510 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 149.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 1, 1929, at datum 1.00 ft higher.

Average discharge.--25 years (1925-50), 2,966 cfs.

Extremes.--1925-50: Maximum discharge, 67,000 cfs Oct. 2, 1929 (gage height, 15.22 ft), from rating curve extended above 26,000 cfs on basis of discharge measurements made at Wise Ferry Bridge near Chapin; minimum, 11 cfs July 13, 1930; minimum daily, 12 cfs July 13, 1930, caused by construction work above station.

Remarks.--Some regulation at low and medium flow by powerplants upstream from station prior to Aug. 31, 1929. Flow regulated by Lake Murray thereafter (see elsewhere in this report).

Monthly and yearly mean discharge, in cubic feet per second, of Saluda River near Columbia, S. C.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	-	484	-
1926	7801,880	1,480	4,000	6,230	4,330	4,260	1,010	791	1,770	1,940	1,110	2,440	2,440
1927	6001,300	2,220	1,540	3,400	3,540	1,370	895	1,660	3,220	886	931	1,790	1,790
1928	625,713	4,930	1,910	3,900	3,370	5,570	820	2,670	3,550	14,400	8,940	4,600	4,600
1929	2,210,760	1,670	2,870	8,320	18,500	5,580	7,820	3,260	2,290	1,680	278	4,670	4,670
1930	20,200,360	2,590	3,960	4,250	3,300	198	60.3	50.2	49.8	43.3	66.4	3,110	3,110
1931	124,94.5	730	2,360	4,370	1,500	959	2,310	3,120	2,680	1,610	5,370	1,930	1,930
1932	1,780,280	952	1,050	1,220	1,120	1,970	1,990	5,220	5,080	5,260	5,480	2,540	2,540
1933	1,950,150	2,060	3,780	4,650	1,480	1,110	560	5,350	4,810	5,020	5,700	3,370	3,370
1934	6,3645,410	1,219	1,707	1,883	411	1,364	1,572	1,800	3,469	4,394	2,978	2,555	2,555
1935	5,3692,978	1,096	901	1,054	1,517	1,302	2,318	5,722	2,098	2,633	5,807	2,669	2,669
1936	6,6104,383	1,687	2,146	1,940	5,193	20,450	2,262	4,388	4,959	4,237	6,138	5,431	5,431
1937	4,2975,115	2,662	1,817	4,808	3,944	4,965	4,229	5,240	5,276	2,784	6,135	4,188	4,188
1938	4,6294,505	2,732	2,761	532	155	1,532	439	3,376	1,520	1,908	1,865	2,339	2,339
1939	2,217,874	1,289	502	1,086	2,415	3,314	1,186	3,667	2,646	2,673	5,839	2,480	2,480
1940	3,2445,161	1,081	869	248	237	971	1,684	787	645	1,500	2,717	1,434	1,434
1941	2,623,720	4,585	1,526	1,499	659	773	1,748	2,250	1,377	2,405	3,157	2,032	2,032
1942	3,6314,406	2,800	772	558	946	3,341	1,260	2,687	3,564	2,841	2,014	2,410	2,410
1943	2,8182,849	2,292	2,194	2,587	2,525	2,893	1,183	3,128	4,513	3,401	3,785	3,016	3,016
1944	3,6332,729	2,123	1,040	1,521	4,093	6,073	1,140	3,717	2,095	3,059	2,765	3,063	3,063
1945	2,7562,919	1,087	1,127	1,603	1,098	895	464	2,274	2,532	2,820	2,332	1,824	1,824
1946	2,4051,644	2,188	2,323	2,326	2,903	4,184	490	3,968	4,129	3,800	3,696	3,195	3,195
1947	3,5115,068	3,503	1,987	2,578	1,040	805	1,217	1,656	2,459	3,304	3,686	2,401	2,401
1948	3,5065,455	4,619	4,808	3,717	4,026	5,698	2,614	3,099	1,974	3,579	3,246	3,693	3,693
1949	3,7042,361	5,147	4,141	5,333	4,119	3,119	4,302	3,003	2,685	4,249	5,446	3,961	3,961
1950	4,6685,046	2,610	2,863	2,557	1,808	2,334	1,817	1,717	1,601	4,104	3,394	2,877	2,877

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	-	-	-	0.22	-
1926	0.56	0.84	0.68	1.83	2.58	1.99	1.90	0.46	0.35	0.81	0.69	.49	13.18
1927	.28	.58	1.02	.71	1.41	1.63	.61	.41	.74	1.46	.41	.41	9.69
1928	.29	.32	2.26	.88	1.67	1.54	2.48	3.14	1.18	1.63	6.62	3.97	25.98
1929	1.03	.78	.77	1.31	3.45	8.50	2.48	3.60	1.45	1.05	.77	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1925	602	-	-	-	-	-	-	-	-
1926	622	23,300	Mar. 31, 1926	240	2,440	0.972	13.18	2,440	13.18
1927	642	12,300	July 20, 1927	312	1,790	.713	9.69	1,970	10.68
1928	662	58,200	Aug. 18, 1928	255	4,800	1.91	25.98	4,730	25.67
1929	682	53,600	Mar. 6, 1929	62	4,670	-	-	6,330	-
1930	697	67,000	Oct. 2, 1929	12	3,110	-	-	1,060	-
1931	712	9,590	Sept. 11, 1931	28	1,930	-	-	2,190	-
1932	727	10,300	Sept. 13, 1932	41	2,540	-	-	2,710	-
1933	742	24,500	Feb. 20, 1933	70	3,370	-	-	3,780	-
1934	757	11,500	Nov. 2, 1933	43	2,555	-	-	2,424	-
1935	782	14,800	Sept. 5, 1935	49	2,569	-	-	2,840	-
1936	802	61,600	Apr. 7, 1936	81	5,431	-	-	5,378	-
1937	822	25,000	Apr. 9, 1937	68	4,188	-	-	4,173	-
1938	852	11,600	Nov. 15, 1937	50	2,339	-	-	1,795	-
1939	872	9,950	Sept. 8, 1939	46	2,480	-	-	2,655	-
1940	892	9,950	Aug. 28, 1940	34	1,434	-	-	1,556	-
1941	922	10,700	Dec. 13, 1940	62	2,032	-	-	2,187	-
1942	952	13,500	June 10, 1942	99	2,410	-	-	2,169	-
1943	972	10,300	July 22, 1943	102	3,016	-	-	3,061	-
1944	1002	25,700	Mar. 24, 1944	116	3,083	-	-	2,936	-
1945	1032	10,300	Sept. 17, 1945	90	1,824	-	-	1,783	-
1946	1052	28,700	Apr. 26, 1946	100	3,195	-	-	3,518	-
1947	1082	10,300	Dec. 7, 1946	112	2,401	-	-	2,527	-
1948	1112	20,400	Apr. 8, 1948	95	3,693	-	-	3,665	-
1949	1142	25,700	May 1, 1949	167	3,961	-	-	4,049	-
1950	1172	10,700	Nov. 22, 1949	130	2,877	-	-	-	-

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff in inches, previously published in water-supply papers September 1929 to September 1939, may be subject to considerable error because of regulation in Lake Murray and other reservoirs upstream. These figures are not published herein and should not be used.

270. Santee River at Ferguson, S. C.

Location.--Lat 33°26'15", long 80°16'20", at Ferguson, Orangeburg County, 4 miles downstream from Eutaw Creek.

Drainage area.--14,600 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 42.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 23, 1921, staff gage at same site and datum.

Average discharge.--34 years (1907-41), 18,690 cfs.

Extremes.--1907-41: Maximum discharge (revised), 374,000 cfs July 21, 1916 (gage height, 24.74 ft), from rating curve extended above 260,000 cfs by velocity-area studies; minimum, 2,570 cfs Sept. 2, 1925 (gage height, -0.75 ft).

Remarks.--Flow regulated by powerplants and reservoirs upstream from station on Catawba, Wateree, Broad, and Saluda Rivers.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1908	7,700	18,400	27,500	39,200	36,300	28,200	23,200	16,200	14,300	20,500	36,600	50,100	26,500
1909	14,100	25,000	18,800	22,600	23,800	29,600	18,400	28,800	40,500	23,900	24,300	15,400	23,700
1910	12,900	10,300	13,100	13,100	26,900	27,800	11,000	14,200	21,400	19,600	11,500	18,000	16,600
1911	17,700	7,800	9,290	16,300	11,600	10,100	20,100	9,010	5,900	6,280	5,840	10,000	10,800
1912	14,500	18,600	24,600	50,900	37,600	61,500	32,600	23,700	24,800	23,500	13,600	11,100	26,900
1913	15,500	19,200	11,300	15,400	30,800	43,100	26,300	13,100	16,000	11,000	12,700	12,600	18,900
1914	10,400	13,300	13,300	26,100	20,000	22,300	21,200	9,000	7,710	9,360	10,000	6,300	14,100
1915	10,600	9,770	32,300	49,300	30,700	28,900	17,100	16,700	18,800	10,600	14,600	11,100	20,700
1916	15,000	12,400	14,800	23,400	31,700	21,300	13,100	9,620	16,000	10,000	26,200	11,700	24,700
1917	10,900	7,580	9,710	13,500	20,000	35,200	31,100	12,500	12,100	14,000	10,300	14,000	15,900
1918	10,200	8,820	6,880	15,400	24,900	12,300	19,600	15,600	9,110	8,770	13,800	9,360	12,800
1919	7,030	29,600	31,100	32,100	28,700	35,700	17,600	26,900	15,100	42,900	23,600	9,450	25,000
1920	7,500	9,460	18,400	13,600	33,600	28,500	37,000	17,800	14,400	15,300	26,500	25,500	20,500
1921	14,100	12,800	27,900	30,300	52,600	20,200	16,300	20,400	13,400	17,600	13,700	10,500	20,600
1922	9,560	13,400	13,500	17,800	40,000	37,200	32,600	27,000	24,500	19,300	18,700	9,260	21,800
1923	14,300	9,710	15,100	19,500	24,400	39,600	24,500	20,300	19,600	11,600	14,700	14,600	19,000
1924	7,900	9,000	17,100	22,900	19,100	28,000	30,100	20,000	16,900	27,600	12,600	17,800	19,100
1925	32,500	14,000	20,600	58,900	26,700	18,300	13,800	10,800	6,390	6,810	4,920	3,430	18,100
1926	4,560	8,130	6,920	16,100	23,500	24,500	21,000	7,740	6,200	6,890	11,800	7,040	11,900
1927	4,940	6,600	7,820	10,800	12,000	22,100	10,400	6,470	7,630	14,400	7,950	6,230	9,780
1928	6,400	5,580	25,300	14,300	16,700	22,700	24,600	32,200	17,500	20,200	66,800	58,000	25,400
1929	21,300	16,000	14,300	15,900	27,900	68,800	28,700	26,300	21,800	20,100	16,800	12,100	24,700
1930	68,000	25,500	27,600	24,600	27,000	21,000	15,400	11,800	10,900	9,830	6,940	5,820	21,200
1931	4,810	11,700	15,300	19,900	15,200	11,900	17,100	16,900	13,900	12,900	14,700	12,700	13,900
1932	6,210	4,320	16,800	28,800	19,200	23,500	16,100	12,100	13,700	11,600	17,800	15,400	15,500
1933	21,200	25,200	31,800	35,800	32,200	20,800	14,900	14,500	14,600	14,300	15,200	17,700	21,500
1934	12,490	9,903	8,184	8,674	9,200	16,340	16,100	13,820	28,170	12,600	12,440	13,030	13,390
1935	20,750	12,460	13,720	16,860	16,460	20,960	22,430	14,410	12,400	11,640	12,170	20,760	16,520
1936	15,160	14,540	9,776	45,140	40,310	27,490	86,610	16,730	12,850	12,080	16,820	17,230	26,080
1937	33,550	21,590	21,600	41,640	41,500	27,120	29,080	26,450	16,760	15,210	14,440	22,900	25,900
1938	22,230	22,230	15,300	18,120	11,760	10,440	21,810	12,030	14,640	12,340	15,020	9,930	15,430
1939	7,249	8,827	9,629	11,830	33,630	40,560	20,620	16,120	11,390	11,350	14,620	11,850	16,370
1940	7,820	7,279	6,469	9,364	13,870	12,430	10,400	8,895	6,849	4,948	20,540	15,410	10,320
1941	7,819	10,080	13,610	12,020	7,925	10,990	12,950	6,815	7,862	29,840	13,130	8,977	11,890

† Corrected.

* Not previously published; estimated on basis of records for Wateree River near Camden.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1908	+0.61	+1.41	2.17	3.09	2.68	2.22	1.77	1.28	1.09	1.61	2.89	3.83	+24.65
1909	1.11	1.91	1.49	1.79	1.70	2.34	1.41	2.27	3.09	1.89	1.91	1.17	22.08
1910	1.02	.79	1.03	1.03	1.92	2.19	.84	1.12	1.64	1.54	.91	1.37	15.40
1911	1.40	.60	.73	1.29	.83	.80	1.54	.71	.45	.50	.46	.76	10.07
1912	1.14	1.42	1.94	2.44	2.78	4.85	2.49	2.34	1.90	1.86	1.07	.85	25.08
1913	1.22	1.47	.89	1.29	2.19	3.40	2.01	1.03	1.23	.87	1.00	.86	17.56
1914	.82	1.02	1.05	2.06	1.43	1.76	1.62	.71	.59	.74	.83	.48	13.11
1915	.84	.75	2.55	3.90	2.19	2.12	1.30	1.31	1.44	.84	1.15	.85	19.24
1916	1.19	.95	1.16	1.84	2.34	1.68	1.00	.76	1.23	7.90	2.06	.89	23.00
1917	.86	.58	.77	1.07	1.43	2.78	2.38	.99	.92	1.11	.81	1.07	14.77
1918	.81	.67	.54	1.21	1.78	.97	1.50	1.23	.70	.69	1.09	.72	11.91
1919	.56	2.26	2.46	2.54	2.05	2.82	1.35	2.12	1.15	3.39	1.87	.72	23.29
1920	.59	.72	1.45	1.07	2.48	2.25	2.82	1.40	1.10	1.21	2.10	1.95	19.14
1921	1.11	.98	2.20	2.40	3.75	1.59	1.25	2.11	1.02	1.40	1.08	.80	19.19
1922	.76	1.02	1.07	1.41	2.85	2.94	2.49	2.15	1.87	1.52	1.48	.71	20.25
1923	1.13	.74	1.19	1.54	1.74	3.12	1.87	1.60	1.50	.92	1.16	1.12	17.63
1924	.62	.69	1.35	1.81	1.41	2.21	2.30	1.58	1.29	2.18	.99	1.36	17.79
1925	2.57	1.07	1.63	4.65	1.91	1.44	1.05	.85	.49	.54	.39	.26	16.85
1926	.36	.62	.55	1.27	1.68	1.94	1.61	.61	.47	.54	.93	.54	11.12
1927	.39	.50	.62	.85	.86	1.74	1.79	.51	.58	1.14	.63	.48	9.09
1928	.50	.43	1.99	1.13	1.23	1.79	1.87	2.06	1.32	1.59	5.26	4.43	23.60

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Santee River at Ferguson, S. C.

Year	W. S. P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1908	542	\$344,000	Aug. 31, 1908	-	\$26,500	1.82	\$24.65	26,800	24.87
1909	542	\$101,000	June 10, 1909	8,140	23,700	1.62	22.08	21,900	20.41
1910	542	\$50,000	Mar. 7-9, 1910	6,340	16,600	1.14	15.40	16,500	15.29
1911	542	\$38,000	Jan. 10, 1911	3,520	10,800	.740	10.07	12,700	11.84
1912	542	\$215,000	Mar. 20, 1912	4,200	26,900	1.84	25.08	25,900	24.16
1913	542	\$101,000	Mar. 21, 1913	6,700	18,900	1.29	17.56	16,100	16.87
1914	542	\$53,000	Jan. 6, 1914	4,280	14,100	.966	13.11	15,400	14.36
1915	542	\$71,000	Jan. 24, 1915	4,370	20,700	1.42	19.24	19,800	18.40
1916	542	\$374,000	July 21, 1916*	5,330	24,700	1.69	23.00	23,500	21.91
1917	542	\$74,000	Mar. 10, 1917	5,660	15,900	1.09	14.77	15,700	14.58
1918	542	\$50,000	Feb. 6, 1918	4,730	12,800	.877	11.91	16,300	15.17
1919	542	\$146,000	July 27, 1919	3,480	25,000	1.71	23.29	22,300	20.77
1920	542	\$53,000	Apr. 3, 1920	4,120	20,500	1.40	19.14	22,200	20.67
1921	542	\$158,000	Feb. 15, 1921	5,550	20,600	1.41	19.19	19,100	17.75
1922	542	106,000	Feb. 21, 1922	4,730	21,800	1.49	20.25	22,000	20.46
1923	562	89,000	Mar. 23, 1923	4,980	19,000	1.30	17.63	18,500	17.23
1924	582	60,000	Jan. 23, 1924	4,980	19,100	1.31	17.79	21,900	20.40
1925	602	146,000	Jan. 23, 1925	2,630	16,100	1.24	16.85	14,100	13.11
1926	622	35,900	Mar. 3, 1926	2,870	\$11,900	.815	11.12	11,900	11.10
1927	642	32,500	Mar. 2, 1927	3,270	9,780	.670	9.09	11,300	10.50
1928	662	251,000	Aug. 22, 1928	3,840	25,400	1.74	23.60	26,500	24.72
1929	682	160,000	Mar. 10, 1929	8,470	24,700	1.69	22.97	30,600	28.43
1930	697	263,000	Oct. 7, 1929	3,160	21,200	1.45	19.74	13,700	12.72
1931	712	26,000	Jan. 19, 1931	3,770	13,900	.952	12.92	13,500	12.59
1932	727	53,000	Jan. 15, 1932	3,450	15,500	1.06	14.42	19,700	18.58
1933	742	56,000	Jan. 3, 1933	7,380	21,500	1.47	19.95	17,500	16.24
1934	757	47,000	June 11-14, 1934	4,380	13,390	.917	12.46	14,780	13.73
1935	782	47,000	Oct. 17, 1934	5,320	16,520	1.13	15.38	15,880	14.79
1936	802	245,000	Apr. 11, 1936	6,300	26,080	1.79	24.32	29,220	27.25
1937	822	59,000	Jan. 13, 1937	8,140	23,900	1.77	24.08	24,450	22.73
1938	852	38,000	Oct. 27, 1937	5,020	15,430	1.06	14.33	12,570	11.68
1939	872	86,000	Mar. 7, 1939	4,220	16,370	1.12	15.20	16,020	14.88
1940	892	56,000	Aug. 21, 1940	2,970	10,320	.707	9.63	11,160	10.40
1941	922	48,000	July 23, 24, 1941	3,700	11,890	.814	11.06	-	-

* Revised.

† Corrected.

* Not previously published.

Note.--Monthly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, for 1929-39 previously published in water-supply papers may be subject to appreciable error because of regulation in reservoirs upstream. These figures are not published herein and should not be used.

271. Lakes Marion-Moultrie diversion canal near Pineville, S. C.

Location--Lat 33°23'15", long 80°08'25", 0.6 mile (revised) upstream from bridge on State Highway 45 and 7.0 miles southwest of Pineville, Berkeley County.

Gage--Water-stage recorder. Auxiliary water-stage recorder 3.9 miles downstream from base gage. Datum of gages is 60.0 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Public Service Authority).

Average discharge--7 years (1943-50), 15,160 cfs.

Extremes--1943-50: Maximum daily discharge, 36,500 cfs Dec. 5, 1948; maximum daily reverse flow, 12,100 cfs Feb. 9, 1947.

Remarks--Canal diverts water from Lake Marion to Lake Moultrie for generation of power and for navigation. Water is discharged from powerplant and navigation lock into West Branch Cooper River.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1944	\$9,392	\$9,873	\$9,995	\$13,310	\$15,990	20,190	20,070	18,100	13,590	10,900	11,080	9,941	\$13,530
1945	12,220	11,340	11,750	12,550	14,480	15,850	12,160	10,200	7,955	9,301	10,400	16,360	12,030
1946	15,600	11,940	14,420	19,470	19,340	19,100	18,040	20,810	14,790	9,784	13,140	10,980	15,600
1947	12,930	14,080	12,070	17,310	16,150	17,350	14,780	8,728	11,030	10,310	10,890	10,080	12,950
1948	10,120	20,320	21,270	23,350	26,340	25,370	23,730	14,780	12,780	12,580	14,150	12,300	18,060
1949	13,460	14,300	25,090	24,210	26,390	22,450	20,590	21,120	12,790	14,720	17,020	22,420	19,310
1950	22,220	22,310	16,000	15,660	13,530	13,470	13,460	11,600	12,360	11,530	10,350	11,000	14,470

* Not previously published; estimated on basis of fall between Lake Marion near Pineville and Lake Moultrie near Pinopolis.

272. Lake Marion near Pineville, S. C.1/

Location.--Lat 33°27'00", long 80°09'50", at right upstream end of spillway, 2.8 miles upstream from old Santee Canal, 5.4 miles upstream from Dead River, and 8 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 6, 1942, staff gage at same site and datum.

Extremes.--1942-50: Maximum elevation, 76.91 ft Sept. 7, 1949 (caused by high wind); minimum elevation observed, 63.75 ft Jan. 1, 1942.

Remarks.--Lake is formed by earth dam. Storage began in November 1941; dam completed in 1941. Usable capacity, 39,640,000,000 cu ft between elevations 60.0 ft (limit of draw-down) and 75.0 ft (maximum normal lake elevation). Dead storage, about 15,250,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest, 63.0 ft; top of spillway gates, 76.8 ft. Some water used for generation of power. Major portion of water is diverted from Lake Marion through canal to Lake Moultrie (for diversion record see preceding station) for generation of power and for navigation.

Cooperation.--Capacity curve furnished by South Carolina Public Service Authority.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	6.71	8.21	9.14	7.21	15.33	16.48	27.34	39.01	39.05
1943	35.30	30.04	26.03	36.26	37.53	38.33	40.18	35.88	32.24	41.30	35.75	30.19
1944	23.51	17.22	13.75	20.02	36.77	37.27	41.75	38.54	33.51	27.40	22.14	18.14
1945	21.64	20.13	15.21	12.75	20.69	27.23	24.12	22.30	21.54	19.99	24.58	40.90
1946	29.86	21.35	37.44	43.63	43.99	43.41	40.81	42.24	34.30	36.85	34.86	29.16
1947	30.30	22.72	16.22	42.78	18.21	23.42	29.16	23.54	20.66	18.76	19.23	17.01
1948	24.82	44.84	46.31	40.72	46.17	46.55	40.54	38.58	33.95	25.48	27.51	27.34
1949	26.92	32.24	43.05	43.09	46.93	42.33	44.08	39.47	36.34	36.64	43.09	40.81
1950	33.67	35.96	28.30	26.23	26.41	30.52	30.82	25.61	21.13	21.10	22.81	25.27

273. Santee River near Pineville, S. C.

Location.--Lat 33°27'15", long 80°09'25", 3.0 miles upstream from Dead River, 2.4 miles downstream from Lake Marion Dam, and 6.7 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 23.00 ft above mean sea level (levels by South Carolina Public Service Authority). Prior to Feb. 25, 1943, staff gage at site 2.2 miles upstream or temporary water-stage recorder operated by Corps of Engineers, U. S. Army, at site 200 ft upstream, at different datum.

Average discharge.--8 years (1942-50), 2,935 cfs.

Extremes.--1942-50: Maximum discharge, 155,000 cfs Sept. 23, 1945 (gage height, 31.1 ft, from floodmarks), from rating curve extended above 13,000 cfs by computations of flow over spillway at Lake Marion and by logarithmic plotting; minimum daily, 9 cfs Feb. 23, 1947 (caused by closing gates for repair work at spillway).

Remarks.--Flow completely regulated by Lake Marion (see preceding station). Water is diverted above station from Lake Marion through Lakes Marion-Moultrie diversion canal (see p. 285) into Lake Moultrie (see p. 287) for generation of power and for navigation, then discharged into Cooper River basin.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	-	584	2,571	401	550	1,338	-
1943	540	533	529	4,883	11,900	7,899	1,538	749	751	6,185	592	574	3,006
1944	640	647	562	599	584	22,830	15,430	4,047	544	589	619	566	3,967
1945	554	527	522	528	640	560	558	483	504	520	487	25,500	2,586
1946	498	496	502	20,400	9,970	3,262	1,456	834	559	528	520	497	3,266
1947	514	534	542	551	7,427	362	481	477	509	527	531	505	1,034
1948	526	6,745	624	578	17,370	9,855	13,020	609	555	538	528	563	4,211
1949	551	557	17,290	7,417	3,092	891	612	7,318	614	553	3,593	15,590	4,860
1950	430	504	529	558	534	504	523	533	525	509	588	638	533

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1942	1002	-	-	-	-	-	-	-	-
1943	1002	32,300	Mar. 24-28, 1943	91	3,006	-	-	3,026	-
1944	1002	122,000	Mar. 24, 1944	406	3,987	-	-	3,968	-
1945	1032	155,000	Sept. 23, 1945	225	2,586	-	-	2,577	-
1946	1052	55,800	Jan. 9, 1946	300	3,266	-	-	3,274	-
1947	1082	132,000	Feb. 8, 1947	9	1,034	-	-	1,553	-
1948	1112	73,800	Feb. 17, 1948	207	4,211	-	-	5,117	-
1949	1142	114,000	Dec. 4, 1948	396	4,860	-	-	3,422	-
1950	1172	782	(a)	399	533	-	-	-	-

a Aug. 18, Sept. 8, 1950.

274. Lake Moultrie near Pinopolis, S. C. 1/

Location.--Lat 33°14'40", long 79°59'30", at powerplant 0.7 mile upstream from Atlantic Coast Line Railroad Bridge and 2.8 miles northeast of Pinopolis, Berkeley County.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 16, 1942, staff gage at same site and datum.

Extremes.--1942-50: Maximum elevation, 76.18 ft Feb. 24, 1946 (caused by high wind); minimum elevation observed, 63.0 ft Apr. 25, 27, Apr. 29 to May 1, 1942.

Remarks.--Lake is formed by earth dikes and dam, with concrete navigation lock; dikes and dam completed in 1941. Storage began in November 1941. Water is diverted through canal (see p. 285) from Lake Marion (see p. 286) and discharged through tailrace canal into West Branch Cooper River. Usable capacity, 28,314,000,000 cu ft between elevations 60.0 ft (limit of drawdown) and 75.0 ft (maximum normal elevation). Dead storage, about 19,600,000,000 cu ft. Figures given herein represent usable contents. Water is used for generation of power and for navigation.

Cooperation.--Capacity curve furnished by South Carolina Public Service Authority.

Contents, in billions of cubic feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	5.76	6.70	7.01	3.96	9.44	11.76	19.82	27.85	27.67
1943	25.22	21.73	16.99	24.80	25.92	25.32	26.67	24.53	23.05	27.47	25.50	21.87
1944	17.36	12.59	8.50	14.58	23.51	24.83	27.29	26.26	23.66	19.82	16.01	11.78
1945	15.27	14.46	10.52	7.61	11.41	18.69	16.75	16.64	16.13	14.81	17.73	25.60
1946	21.03	14.94	23.26	28.21	28.61	29.14	26.72	28.03	24.58	25.52	24.18	21.59
1947	21.00	18.22	11.82	23.36	11.82	15.59	20.73	17.45	14.56	13.07	14.20	12.61
1948	16.53	28.62	29.36	24.68	28.21	28.26	26.36	26.77	23.98	17.69	20.09	19.14
1949	19.62	19.19	27.68	27.62	29.54	27.31	28.69	26.77	25.17	25.47	30.07	26.05
1950	21.80	25.42	18.58	18.34	18.54	21.38	22.25	18.43	14.73	15.71	16.45	18.87

EDISTO RIVER BASIN

275. South Fork Edisto River near Montmorenci, S. C.

Location.--Lat 33°34'35", long 81°30'50", at bridge on State Highway 215, 0.4 mile upstream from Cedar Creek, 1 mile upstream from Shaw Creek, and 7.6 miles northeast of Montmorenci, Aiken County.

Drainage area.--198 sq mi.

Gage.--Wire-weight gage. Datum of gage is 250.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--11 years (1939-50), 244 cfs.

Extremes.--1939-50: Maximum discharge, 2,460 cfs Aug. 15, 1940, July 19, 1941 (gage height, 8.81 ft, from graph based on gage readings); minimum observed, 58 cfs June 8, 1941 (gage height, 1.52 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#143	#127	#164	#246	#330	#255	#230	146	152	118	288	104	#192
1941	107	210	195	213	184	234	172	91.0	193	585	303	131	219
1942	130	146	283	260	288	543	323	272	183	207	155	194	249
1943	147	229	278	373	271	452	274	202	164	225	130	141	241
1944	120	151	288	298	308	519	364	208	147	212	130	115	239
1945	184	160	212	196	235	183	169	138	106	148	134	224	174
1946	145	149	284	303	291	253	302	217	124	157	128	146	208
1947	265	256	189	296	209	305	424	186	148	126	177	153	226
1948	198	438	459	381	607	599	464	336	256	195	199	248	364
1949	235	404	434	361	531	329	297	290	214	201	485	302	339
1950	257	252	263	257	232	261	214	179	193	243	153	228	228

* Not previously published; estimated or partly estimated on basis of weather records and records for station near Denmark.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#0.83	#0.72	#0.95	#1.43	#1.80	#1.49	#1.29	0.85	0.86	0.69	1.67	0.59	#13.17
1941	.62	1.18	1.14	1.24	.97	1.36	.97	.53	1.09	3.40	1.76	.74	15.00
1942	.76	.82	1.95	1.51	1.51	3.16	1.82	1.58	1.03	1.21	.90	1.09	17.04
1943	.86	1.29	1.63	2.17	1.43	2.63	1.54	1.18	.82	1.31	.76	.79	16.49
1944	.70	.85	1.67	1.74	1.68	3.02	2.05	1.21	.83	1.23	.76	.65	16.39
1945	1.07	.90	1.23	1.14	1.24	1.07	.95	.80	.60	.86	.78	1.26	11.90
1946	.84	.84	1.65	1.76	1.53	1.48	1.71	1.27	.70	.91	.74	.82	14.25
1947	1.54	1.33	1.10	1.72	1.10	1.78	2.39	1.08	.63	.73	1.03	.86	15.49
1948	1.14	2.47	2.68	2.21	3.31	3.49	2.61	1.96	1.44	1.14	1.16	1.40	25.01
1949	1.37	2.28	2.52	2.10	2.79	1.91	1.67	1.68	1.20	1.18	2.82	1.71	23.25
1950	1.50	1.42	1.53	1.50	1.22	1.52	1.20	1.04	1.09	1.42	.89	1.28	15.61

* Not previously published; see footnote to preceding table.

1/ Published as Pinopolis Reservoir prior to October 1942.

Yearly discharge, in cubic feet per second, of South Fork Edisto River near Montmorenci, S. C.									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	2,460	July 15, 1940	-	#192	#0.970	#13.17	#198	#13.61
1941	922	2,460	July 19, 1941	62	219	1.11	15.00	223	15.29
1942	952	1,850	Mar. 10, 1942	102	249	1.26	17.04	257	17.57
1943	972	1,740	Mar. 23, 1943	82	241	1.22	16.49	233	15.95
1944	1002	2,370	Mar. 24, 1944	82	239	1.21	16.39	238	16.37
1945	1032	898	Apr. 27, 1945	74	174	.879	11.90	175	12.03
1946	1052	898	Apr. 19, 1946	98	208	1.05	14.25	217	14.89
1947	1092	1,320	Oct. 10, 1946	92	226	1.14	15.49	260	17.81
1948	1112	1,400	Mar. 9, 1948	112	364	1.84	25.01	362	24.89
1949	1142	2,180	Aug. 30, 1949	141	339	1.71	23.23	314	21.51
1950	1172	685	Sept. 9, 1950	104	228	1.15	15.61	-	-

Not previously published.

276. South Fork Edisto River near Denmark, S. C.

Location.--Lat 33°23'35", long 81°08'00", at bridge on U. S. Highway 321, 200 ft downstream from Seaboard Air Line Railroad bridge, 1.8 miles downstream from Little River, and 4.8 miles north of Denmark, Bamberg County.

Drainage area.--720 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 155.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 27, 1931, chain gage at same site and datum.

Average discharge.--19 years (1931-50), 788 cfs.

Extremes.--1931-50: Maximum discharge, 13,500 cfs Apr. 11, 1936 (gage height, 10.91 ft), from rating curve extended above 4,800 cfs on basis of velocity-area studies and logarithmic plotting; minimum, 183 cfs June 30 to July 3, 1935.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	-	-	-	325	-
1932	332	411	654	1,010	1,140	1,070	688	450	593	341	1,080	473	686
1933	977	1,250	1,220	1,210	1,430	1,070	678	437	319	440	358	501	821
1934	390	467	503	577	756	925	901	852	1,321	416	470	408	664
1935	497	425	676	707	568	674	729	330	264	387	727	1,144	594
1936	403	642	492	1,281	1,352	1,115	3,017	717	608	490	711	611	957
1937	941	891	1,261	1,263	1,482	1,197	1,311	948	682	768	698	805	1,001
1938	545	892	797	749	593	578	1,193	465	664	614	487	387	646
1939	428	592	653	644	1,069	1,524	828	578	432	406	558	450	676
1940	469	419	535	790	1,048	819	745	468	558	388	699	320	603
1941	337	636	670	730	629	821	701	314	578	1,257	708	450	653
1942	469	490	1,050	1,162	1,111	1,785	1,142	872	749	701	526	489	879
1943	516	576	935	1,186	956	1,409	947	679	506	710	419	425	772
1944	350	458	683	1,106	1,151	1,627	1,266	725	492	510	477	415	771
1945	503	475	614	619	717	632	421	493	301	420	495	1,126	567
1946	570	515	932	1,161	894	811	845	772	405	420	395	425	678
1947	736	766	613	872	639	1,014	1,210	562	487	407	676	501	707
1948	632	1,786	1,993	1,567	2,330	2,328	1,961	1,083	891	737	597	1,012	1,405
1949	1,456	1,448	2,190	1,394	1,738	1,106	922	956	696	525	1,143	1,158	1,226
1950	760	730	788	745	707	961	663	518	514	514	399	621	660

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	-	-	-	0.50	-
1932	0.53	0.64	1.05	1.61	1.70	1.72	1.07	0.72	0.92	0.55	1.73	.73	12.97
1933	1.57	1.94	1.95	1.94	2.07	1.72	1.05	.70	.49	.70	.57	.78	15.48
1934	.82	.72	.81	.92	1.09	1.49	1.40	1.36	2.04	.67	.75	.63	12.49
1935	.80	.66	1.08	1.13	.82	1.08	1.13	.53	.41	.62	1.16	1.77	11.19
1936	.65	1.00	.95	2.05	2.03	1.79	4.68	1.15	.94	.79	1.14	.95	18.12
1937	1.51	1.07	2.02	2.02	2.14	1.91	2.03	1.52	1.06	1.23	1.12	1.25	18.88
1938	.87	1.07	1.28	1.20	.86	.93	1.85	.74	1.03	.98	.78	.60	12.19
1939	.68	.92	1.05	1.03	1.54	2.44	1.28	.93	.67	.65	.86	.70	12.75
1940	.75	.65	.86	1.27	1.58	1.31	1.15	.75	.86	.62	1.12	.50	11.42
1941	.54	.99	1.07	1.16	.91	1.31	1.09	.50	.90	2.02	1.13	.70	12.32
1942	.75	.76	1.68	1.86	1.60	2.86	1.77	1.40	1.16	1.12	.84	.76	16.56
1943	.83	.89	1.50	1.90	1.38	2.26	1.47	1.09	.78	1.14	.67	.66	14.57
1944	.56	.71	1.09	1.78	1.73	2.61	1.96	1.16	.76	.82	.76	.64	14.58
1945	.81	.74	.98	.99	1.04	1.01	.65	.79	.47	.67	.79	1.74	10.68
1946	.91	.80	1.49	1.86	1.29	1.30	1.30	1.23	.63	.67	.63	.66	12.77
1947	1.18	1.18	.98	1.40	.92	1.63	1.87	.90	.75	.65	1.08	.78	13.32
1948	†1.01	2.77	3.19	2.51	3.49	3.72	3.04	1.73	1.38	1.18	.96	.85	26.55
1949	2.33	2.24	3.50	2.24	2.51	1.78	1.43	1.53	1.08	.84	1.83	1.80	23.51
1950	1.22	1.13	1.26	1.19	1.02	1.53	1.03	.83	.80	.82	.64	.96	12.43

† Corrected.

Yearly discharge, in cubic feet per second, of South Fork Edisto River near Denmark, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1951	712	-	-	-	-	-	-	-	-
1952	727	2,950	Aug. 12, 1932	234	686	0.953	12.97	858	16.21
1933	742	2,290	Nov. 4, 1932	230	821	1.14	15.48	646	12.17
1934	757	2,850	June 5, 1934	315	684	.922	12.49	684	12.88
1935	782	2,640	Aug. 22, 1935	183	594	.825	11.19	596	11.25
1936	802	13,500	Apr. 11, 1936	312	957	1.33	18.12	1,063	20.12
1937	822	2,260	Oct. 14, 1936	412	1,001	1.39	18.88	928	17.50
1938	852	2,470	Apr. 10, 1938	292	646	.897	12.19	618	11.62
1939	872	4,860	Mar. 3, 1939	287	676	.939	12.75	656	12.36
1940	892	2,060	Aug. 19, 1940	258	603	.838	11.42	622	11.76
1941	922	2,060	July 22, 1941	222	653	.907	12.32	685	12.91
1942	952	2,840	Dec. 26, 1941	331	879	1.22	16.56	880	16.59
1943	972	2,080	Mar. 24, 1943	302	772	1.07	14.57	727	13.71
1944	1002	3,220	Mar. 25, 1944	302	771	1.07	14.58	779	14.75
1945	1032	3,310	Sept. 19, 1945	231	567	.788	10.68	603	11.35
1946	1052	1,740	Jan. 1, 1946	277	678	.942	12.77	686	12.91
1947	1082	2,040	Aug. 15, 1947	300	707	.982	13.32	899	16.95
1948	1112	4,010	Feb. 14, 1948	422	1,405	1.95	26.55	1,463	27.65
1949	1142	3,810	Oct. 5, 1948	415	1,226	1.70	23.11	988	18.65
1950	1172	1,210	Mar. 9, 1950	279	660	.917	12.43	-	-

277. North Fork Edisto River at Orangeburg, S. C.

Location.--Lat 33°29'00", long 80°52'25", at bridge on U. S. Highway 301 at Orangeburg, Orangeburg County, 0.5 mile upstream from Atlantic Coast Line Railroad bridge and 1 1/2 miles downstream from Caw Caw Swamp.

Drainage area.--683 sq mi.

Supplemental records available.--Records of chemical analyses and water temperatures for the period October 1947 to September 1948 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 149.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Feb. 23, 1939, wire-weight gage at same site and datum.

Average discharge.--12 years (1938-50), 755 cfs.

Extremes.--1938-50: Maximum discharge, 9,500 cfs Sept. 18, 1945 (gage height, 14.28 ft), from rating curve extended above 3,900 cfs by velocity-area studies and logarithmic plotting; minimum, 286 cfs July 3, 1945.

Remarks.--Diversion above station for municipal supply of Orangeburg.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	420	583	568	594	1,030	1,447	778	565	486	443	619	439	662
1940	513	403	487	709	994	719	633	407	534	367	863	351	580
1941	344	607	574	660	589	703	686	332	936	1,359	904	497	683
1942	417	449	952	1,002	942	1,528	993	769	715	681	553	452	788
1943	469	476	758	957	804	1,238	858	659	491	677	429	431	688
1944	365	423	628	984	1,083	1,429	1,082	692	547	431	429	408	707
1945	508	470	595	582	668	609	443	498	314	361	451	1,755	602
1946	737	617	988	1,123	872	809	773	731	453	530	529	438	717
1947	628	634	537	786	615	877	1,121	550	502	564	669	495	665
1948	606	1,292	1,469	1,194	1,902	1,911	1,543	844	718	588	527	1,003	1,129
1949	1,436	1,368	1,182	1,549	1,549	1,034	890	829	694	559	1,376	1,148	1,347
1950	758	780	789	774	712	849	682	527	561	629	483	815	696

* Not previously published; estimated or partly estimated on basis of record for South Fork Edisto River near Denmark.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	0.71	0.95	0.96	1.00	1.57	2.44	1.27	0.95	0.79	0.75	1.04	0.72	13.15
1940	.87	.66	.82	1.20	1.58	1.21	1.03	.69	.87	.62	1.45	.57	11.57
1941	.58	.99	.97	1.11	.90	1.19	1.12	.56	1.53	2.29	1.52	.81	13.57
1942	.70	.73	1.60	1.70	1.44	2.58	1.62	1.30	1.17	1.15	.95	.74	15.86
1943	.79	.78	1.28	1.61	1.23	2.09	1.41	1.11	.80	1.14	.72	.70	13.66
1944	.62	.69	1.06	1.66	1.72	2.41	1.76	1.16	.89	.73	.72	.67	14.09
1945	.86	.77	1.00	.98	1.02	1.03	.72	.84	.51	.61	.76	2.87	11.97
1946	1.24	1.01	1.66	1.89	1.33	1.36	1.26	1.23	.74	.89	.89	.72	14.22
1947	1.06	1.04	.91	1.33	.94	1.48	1.83	.93	.82	.95	1.13	.81	13.23
1948	1.02	2.11	2.48	2.02	3.00	3.23	2.52	1.43	1.17	.99	.89	1.64	22.50
1949	2.42	2.23	2.95	1.99	2.36	1.71	1.45	1.40	1.14	.94	2.32	1.87	22.76
1950	1.28	1.27	1.34	1.30	1.08	1.43	1.11	.89	.92	1.06	.82	1.33	13.85

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of North Fork Edisto River at Orangeburg, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	3,910	Mar. 3, 1939	-	662	0.969	13.15	649	12.88
1940	892	2,340	Aug. 19, 1940	268	580	.849	11.57	590	11.76
1941	922	5,210	June 29, 1941	251	683	1.00	13.57	709	14.06
1942	952	2,670	Dec. 26, 1941	365	788	1.15	15.66	778	15.48
1943	972	1,930	Mar. 24, 1943	320	688	1.01	13.66	663	13.18
1944	1002	2,620	Mar. 25, 1944	328	707	1.04	14.09	721	14.35
1945	1032	9,500	Sept. 18, 1945	243	602	.881	11.97	667	13.25
1946	1052	1,670	Jan. 1, 1946	299	717	1.05	14.22	671	13.32
1947	1082	1,880	Apr. 18, 1947	284	665	.974	13.23	796	15.83
1948	1112	4,170	Sept. 7, 1948	398	1,129	1.65	22.50	1,229	24.49
1949	1142	4,560	Aug. 29, 1949	410	1,147	1.68	22.78	960	19.07
1950	1172	1,800	Sept. 10, 1950	328	696	1.02	13.83	-	-

* Not previously published.

278. Edisto River near Branchville, S. C.

Location.--Lat 33°10'35", long 80°48'05", 400 ft downstream from bridge on U. S. Highway 21, 4.7 miles downstream from Brier Branch, and 5.2 miles south of Branchville, Orangeburg County.

Drainage area.--1,720 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and water temperatures for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 80.02 ft above mean sea level (levels by Corps of Engineers). Prior to May 19, 1949, at datum 1.00 ft higher.

Average discharge.--5 years (1945-50), 2,178 cfs.

Extremes.--1945-50: Maximum discharge, 10,000 cfs Oct. 6, 1948 (gage height, 10.21 ft, present datum); minimum, 606 cfs Aug. 20, 1946 (gage height, 1.11 ft, present datum).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	*1,842	*1,353	2,221	3,378	2,288	2,180	2,264	1,790	1,051	1,005	970	874	*1,768
1947	1,409	1,483	1,299	1,867	1,460	2,379	3,509	1,330	1,019	1,031	1,449	1,074	1,592
1948	1,402	3,556	4,541	3,545	5,352	5,319	4,960	2,072	2,001	1,434	1,152	2,019	3,100
1949	3,556	2,968	5,641	3,355	3,888	2,739	2,131	2,067	1,683	1,310	2,757	3,463	2,960
1950	1,645	1,602	1,741	1,671	1,539	2,054	1,513	1,096	1,176	1,153	896	1,568	1,471

* Not previously published; estimated on basis of records for other stations in same drainage basin.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	*1.23	*0.88	1.49	2.26	1.38	1.46	1.47	1.20	0.68	0.67	0.65	0.57	*13.94
1947	.94	.96	.87	1.26	.88	1.59	2.14	.89	.66	.69	.97	.70	12.55
1948	.94	2.31	3.04	2.38	3.35	3.56	3.21	1.38	*1.29	.96	.77	1.30	24.49
1949	2.39	1.93	3.78	2.25	2.35	1.83	1.38	1.38	1.09	.88	1.84	2.24	23.34
1950	1.10	1.04	1.16	1.12	.93	1.37	.98	.73	.76	.77	.60	1.02	11.58

† Corrected.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1052	4,100	Jan. 1-4, 20, 1946	622	*1,768	*1.03	*13.94	1,663	13.11
1947	1082	4,870	Apr. 18, 19, 1947	656	1,592	.926	12.55	2,037	16.07
1948	1112	9,140	Apr. 4, 1948	936	3,100	1.80	24.49	3,328	26.30
1949	1142	10,000	Oct. 6, 1948	1,040	2,960	1.72	23.34	2,354	18.54
1950	1172	2,540	Mar. 11-13, 1950	645	1,471	.855	11.58	-	-

* Not previously published.

279. Four Hole Swamp near Ridgeville, S. C. /

Location.--Lat 33°05'15", long 80°22'55", 200 ft downstream from Horse Ford bridge, 3.2 miles upstream from mouth, and 3.8 miles west of Ridgeville, Dorchester County.

Drainage area.--600 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map). Nov. 16, 17, 1914, staff gage at same site and datum. Auxiliary water-stage recorder installed Jan. 9, 1915, at site 2.8 miles (revised) downstream and at same datum as base gage.

Extremes.--1914-17: Maximum discharge, 13,400 cfs July 29, 1916 (gage height, 24.75 ft); minimum, 1 cfs May 16-23, May 25 to June 14, 1916 (revised).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	273	*2,260	1,400	486	374	1,480	768	101	*277	*198	-
1916	88.9	*65.4	166	177	231	523	193	†5.9	18.2	*4,000	2,420	100	*675
1917	89.9	41.2	100	199	837	989	628	116	30.5	319	95.9	237	303

* Revised.
† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	0.52	*4.35	2.43	0.93	0.70	2.85	1.43	0.19	*0.53	0.37	-
1916	0.17	0.12	.32	.34	.42	1.01	.36	.01	.03	*7.69	4.65	.19	*15.31
1917	.17	.08	.19	.38	1.46	1.90	1.17	.22	.06	.61	.18	.44	6.86

* Revised.

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1915	402,1433	*6,060	Jan. 24, 1915	-	-	-	-	*635	*14.39
1916	432,1433	13,400	July 29, 1916	1	*675	*1.12	*15.31	*667	*15.14
1917	452	*1,690	Mar. 2, 1917	2.6	303	.505	6.86	-	-

* Revised.

† Not previously published.

280. Edisto River near Givhans, S. C.

Location.--Lat 33°01'40", long 80°23'30", at bridge on State Highway 61 (revised), 2.3 miles downstream from Four Hole Swamp and 2.8 miles west of Givhans, Dorchester County.

Drainage area.--2,730 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 20.46 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--11 years (1939-50), 2,668 cfs.

Extremes.--1939-50: Maximum discharge, 24,300 cfs Sept. 21, 1945 (gage height, 17.28 ft), from rating curve extended above 14,000 cfs by logarithmic plotting; minimum, 442 cfs June 3, 1941 (gage height, 1.12 ft).

Remarks.--City of Charleston diverts water above station for municipal supply.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	*1,553	3,095	8,438	2,447	1,562	1,477	924	1,505	1,054	-
1940	949	768	953	1,733	3,737	2,889	2,251	920	1,153	865	4,690	976	1,819
1941	645	1,057	1,344	1,668	1,487	3,044	2,999	827	1,438	7,902	3,704	2,645	2,406
1942	1,122	1,050	3,635	6,263	3,632	8,240	4,081	1,709	2,584	1,857	1,272	941	3,037
1943	885	891	1,647	2,241	2,946	4,426	3,569	2,107	1,583	1,522	1,217	794	1,981
1944	680	754	1,087	3,157	4,435	7,115	5,904	2,724	1,106	940	883	837	2,461
1945	1,007	1,114	1,393	1,441	2,009	1,919	1,058	1,301	749	1,233	1,421	9,173	1,973
1946	3,215	1,612	2,898	6,861	3,372	3,495	3,453	2,111	1,123	949	1,446	998	2,631
1947	1,483	1,666	1,543	2,473	1,880	3,628	5,745	1,970	1,187	1,350	2,605	1,576	2,259
1948	1,848	6,022	8,172	5,329	9,076	9,963	8,428	2,310	2,449	1,539	1,183	1,981	4,837
1949	4,863	2,839	10,790	4,898	5,779	3,665	2,360	2,599	2,417	1,570	3,291	6,784	4,317
1950	1,788	1,660	1,821	1,743	1,591	2,294	1,669	1,177	1,342	1,137	860	2,349	1,618

* Not previously published; partly estimated on basis of record for adjacent days.

1/ Published as Four Hole Creek.

EDISTO RIVER BASIN

Yearly discharge, in cubic feet per second, of Edisto River near Givhans, S. C.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	872	16,900	Mar. 6, 1939	-	-	-	-	\$2,059	-
1940	892	12,600	Aug. 15, 1940	597	1,819	-	-	1,850	-
1941	922	10,800	July 5, 1941	455	2,408	-	-	2,643	-
1942	952	13,100	Dec. 30, 1941	701	3,027	-	-	2,835	-
1943	972	8,010	Mar. 29, 1943	668	1,981	-	-	1,905	-
1944	1002	13,100	Mar. 30, 1944	593	2,461	-	-	2,544	-
1945	1032	24,300	Sept. 21, 1945	569	1,973	-	-	2,330	-
1946	1052	8,940	Jan. 24, 1946	675	2,631	-	-	2,373	-
1947	1082	8,540	Apr. 22, 1947	660	2,259	-	-	3,211	-
1948	1112	15,200	Apr. 6, 1948	1,020	4,837	-	-	5,053	-
1949	1142	15,800	Dec. 3, 1948	1,020	4,317	-	-	3,197	-
1950	1172	4,090	Sept. 12, 1950	615	1,818	-	-	-	-

* Not previously published.

Note.--Figures of discharge, in cubic feet per second per square mile, and runoff, in inches, for 1939, previously published in WSP 872, may be subject to error because of diversion of water upstream for Charleston water supply. These figures are not included in this report and should not be used.

SAVANNAH RIVER BASIN

281. Chattooga River near Clayton, Ga.

Location.--Lat 34°49', long 83°18', 150 ft downstream from bridge on U. S. Highway 76, 2½ miles upstream from Stekoa Creek, 7 miles southeast of Clayton, Rabun County, 9 miles downstream from War Woman Creek, and 9 miles upstream from confluence with Tallulah River.

Drainage area.--207 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 1,165.6 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by State Highway Department of Georgia). May 1907 to June 1908, staff gage at site 400 ft upstream at different datum.

Average discharge.--11 years (1939-50), 626 cfs.

Extremes.--1907-8, 1939-50: Maximum discharge, 29,000 cfs Aug. 30, 1940 (gage height, 13.8 ft), from rating curve extended above 2,300 cfs on basis of slope-area determinations at gage heights 9.9 and 13.8 ft; minimum, 122 cfs Oct. 6, 7, 1947.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	\$547	521	417	358	398	-
1908	305	506	790	840	1,150	860	892	726	566	-	-	-	-
1940	\$191	\$161	185	246	*509	467	*676	415	313	270	*1,453	*698	\$467
1941	297	379	*471	497	347	438	503	284	236	*929	472	283	*430
1942	213	262	566	501	837	958	571	627	622	510	487	581	560
1943	359	326	973	1,071	977	915	908	734	541	836	510	381	711
1944	278	313	300	534	864	1,275	1,060	677	425	303	284	294	549
1945	235	282	352	411	600	650	788	607	357	362	357	450	453
1946	365	407	744	1,747	1,474	1,347	971	1,012	563	492	322	254	806
1947	278	327	341	961	549	556	770	528	465	258	228	163	452
1948	366	531	422	445	899	1,049	864	537	391	1,014	669	696	656
1949	352	1,297	1,125	1,256	1,241	937	1,127	982	1,075	1,542	1,146	1,118	1,098
1950	925	759	776	851	803	849	620	425	543	561	380	939	702

* Revised.

* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	\$3.04	2.81	2.32	1.99	2.14	-
1908	1.70	2.72	4.35	4.68	6.00	4.78	4.81	4.31	3.05	-	-	-	-
1940	\$1.06	\$1.01	1.03	1.37	*2.65	2.61	*3.65	2.05	1.68	1.50	*8.09	*3.76	\$30.72
1941	1.65	2.04	*2.63	2.77	1.75	2.44	2.71	1.58	1.27	*5.18	2.63	1.53	*28.18
1942	1.19	1.42	3.15	2.79	4.21	5.34	3.08	3.49	3.35	2.84	2.71	3.14	36.71
1943	1.99	1.75	5.42	5.96	4.92	5.10	4.90	4.09	2.91	4.66	2.84	2.05	46.59
1944	1.54	1.68	1.67	2.97	5.0	7.10	5.71	3.77	2.29	1.68	1.58	1.58	36.07
1945	1.31	1.52	1.96	2.29	3.02	3.62	4.25	3.38	1.92	2.02	1.98	2.42	29.69
1946	2.03	2.20	4.14	9.73	7.41	7.50	5.23	5.64	3.04	2.74	1.80	1.37	52.83
1947	1.54	1.76	1.90	5.35	2.76	3.10	4.15	2.94	2.51	1.44	1.27	.88	29.60
1948	2.04	2.87	2.35	2.48	4.68	5.84	4.65	2.99	2.11	5.65	3.72	3.75	43.13
1949	1.96	7.00	6.26	7.00	6.25	5.22	6.07	5.46	5.79	8.59	6.39	6.02	72.01
1950	5.15	4.10	4.32	4.74	4.04	4.73	3.35	2.36	2.92	3.12	2.12	5.06	46.01

* Revised.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Chattooga River near Clayton, Ga.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1907	242	-	-	-	-	-	-	-	-
1908	242	-	-	-	-	-	-	-	-
1940	892,1383	29,000	Aug. 30, 1940	135	*467	+2.26	*30.72	*516	*33.94
1941	922,1383	*7,530	July 7, 1941	162	*430	*2.08	*28.18	*421	*27.62
1942	952	6,870	Feb. 17, 1942	172	560	2.71	36.71	612	40.11
1943	972	6,870	Dec. 29, 1942	262	711	3.43	46.59	645	42.32
1944	1002	3,840	Mar. 19, 1944	183	549	2.65	36.07	547	35.97
1945	1032	2,950	Apr. 17, 1945	169	453	2.19	29.69	507	33.27
1946	1052	6,650	Feb. 10, 1946	204	806	3.89	52.83	757	49.66
1947	1082	6,440	Jan. 20, 1947	130	452	2.18	29.60	483	31.66
1948	1112	12,400	July 12, 1948	122	656	3.17	43.13	777	51.09
1949	1142	13,900	June 16, 1949	266	1,098	5.30	72.01	1,073	70.36
1950	1172	4,740	Mar. 13, 1950	266	702	3.39	46.01	-	-

* Revised.

† Not previously published.

282. Stekoa Creek near Clayton, Ga.

Location.--Lat 34°49', long 83°20', at foot bridge 2 miles upstream from mouth, and 9 miles southeast of Clayton, Rabun County.

Drainage area.--37 sq mi (revised), approximately.

Gage.--Staff gage. Altitude of gage is 1,200 ft (from topographic map).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	*93.7	93.1	87.5	68.3	102	-
1908	60.6	133	169	156	220	196	253	159	110	-	-	-	-

† Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	*2.92	2.81	2.72	2.13	3.08	-
1908	1.89	4.00	5.27	4.86	6.42	6.11	7.63	4.34	3.31	-	-	-	-

† Not previously published; see footnote to preceding table.

283. Chattooga River near Tallulah Falls, Ga.

Location.--Lat 30°47', long 83°19', on right bank 300 ft upstream from Camp Creek, 5½ miles upstream from confluence with Tallulah River, and 8 miles east of Tallulah Falls, Rabun County.

Drainage area.--256 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 960 ft (from Corps of Engineers river profile). Prior to Aug. 18, 1917, staff gage at same site and datum.

Average discharge.--13 years (1916-29), 840 cfs.

Extremes.--1916-29: Maximum discharge, 22,400 cfs Aug. 15, 1928 (gage height, 16.4 ft, from floodmark), from rating curve extended above 5,800 cfs on basis of computation of peak flows passing station near Clayton; minimum, 94 cfs Sept. 21, 22, 1925.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	949	*1,240	*2,410	1,440	847	648	583	569	604	*928
1918	519	428	395	*923	1,430	1,790	1,270	1,050	803	1,210	816	494	*608
1919	1,370	1,110	2,080	1,690	1,430	1,790	1,270	1,050	803	1,210	816	494	1,260
1920	498	570	1,110	1,040	995	1,220	1,850	1,080	773	747	1,770	1,250	1,080
1921	670	639	995	1,010	1,450	928	1,010	980	707	623	493	493	829
1922	397	702	938	1,770	1,490	1,670	1,510	1,460	965	787	548	402	1,050
1923	399	304	638	737	839	1,010	988	1,300	1,170	716	590	574	772
1924	399	498	824	1,140	905	939	1,330	1,000	671	931	481	759	823
1925	517	415	728	1,400	888	693	657	553	366	321	175	136	571
1926	244	491	376	852	821	798	952	514	374	376	526	373	556
1927	312	581	970	702	756	938	*645	*438	*424	*413	*295	*226	*558
1928	283	367	1,013	641	684	810	1,040	968	879	740	1,712	1,079	852
1929	905	596	521	842	1,092	2,514	1,295	1,369	1,029	749	451	1,070	1,036

* Revised.

† Not previously published; partly estimated on basis of records for Tallulah River near Seed.

Note.--Records October 1927 to September 1929, not previously published, computed on basis of gage-height records furnished by Georgia Power Co. and 1927 stage-discharge relation.

Monthly and yearly runoff, in inches, of Chattooga River near Tallulah Falls, Ga.

Water year	Monthly									The year			
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June		July	Aug.	Sept.
1917	-	-	-	4.28	*5.05	*10.85	6.27	3.82	2.82	2.63	2.56	2.63	*49.16
1918	2.34	1.86	1.78	*4.16	-	-	-	-	-	-	-	-	*32.32
1919	6.17	4.84	9.36	7.61	5.82	8.06	5.53	4.73	3.50	5.45	3.68	2.15	66.90
1920	2.25	2.49	5.00	4.68	4.20	5.50	8.07	4.86	3.37	3.37	7.97	5.44	57.20
1921	3.02	2.79	4.48	4.55	5.89	4.17	4.41	4.42	3.08	2.80	2.22	2.15	43.98
1922	1.79	3.06	4.22	7.97	6.06	7.52	6.38	6.57	4.21	5.54	2.47	1.75	55.74
1923	1.80	1.33	2.87	3.32	3.42	4.55	4.31	5.86	5.10	3.23	2.65	2.50	40.94
1924	1.80	2.18	3.71	5.13	3.82	4.23	5.80	4.51	2.92	4.20	2.17	3.30	43.77
1925	2.33	1.81	3.27	6.31	3.61	3.12	2.87	2.49	1.60	1.44	.79	.59	30.23
1926	1.10	2.14	1.70	3.84	3.34	3.60	4.15	2.32	1.63	1.70	2.36	1.63	29.51
1927	1.41	2.53	4.37	3.16	3.07	4.22	*2.81	*1.97	*1.85	*1.86	*1.33	*.99	*29.57
1928	1.28	1.60	4.56	2.88	2.88	3.64	4.53	4.36	3.83	3.33	7.71	4.70	45.30
1929	4.08	2.60	2.35	3.79	4.45	11.32	5.64	6.17	4.48	3.38	2.03	4.66	54.95

* Revised.

* Not previously published; see footnote to preceding table.

Note.--Records October 1927 to September 1929, not previously published, computed on basis of gage-height records furnished by Georgia Power Co. and 1927 stage-discharge relation.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1917	452,1433	*17,600	Mar. 24, 1917	-	*928	*3.62	*49.16	885	46.89
1918	472,1433	*7,410	Jan. 28, 1918	-	*609	*2.38	*32.32	*881	*46.71
1919	502	*19,600	Dec. 22, 1918	255	1,260	4.92	66.90	1,061	56.27
1920	502	10,200	Feb. 9, 1919	390	1,080	4.22	57.20	1,086	57.75
1921	522	5,100	Feb. 10, 1921	372	829	3.24	43.98	806	42.76
1922	542	7,690	Jan. 21, 1922	270	1,050	4.10	55.74	993	52.67
1923	562	6,610	Dec. 17, 1922	302	772	3.02	40.94	803	42.63
1924	582	11,500	Sept. 20, 1924	338	823	3.21	43.77	818	43.49
1925	602	4,840	Dec. 8, 1924	96	571	2.23	30.23	524	27.76
1926	622	7,760	Jan. 18, 1926	127	556	2.17	29.51	620	32.88
1927	1453	4,470	Dec. 26, 1926	*175	*552	*2.18	*29.57	*541	*28.70
1928	-	*22,400	Aug. 15, 1928	*175	*852	*3.33	*45.30	*882	*46.89
1929	-	*14,200	Sept. 26, 1929	*320	*1,036	*4.05	*54.95	-	-

* Revised.

* Not previously published.

284. Burton Reservoir near Clayton, Ga.

Location.--Lat 34°48', long 83°32', on Tallulah River 10 miles southwest of Clayton, Rabun County, and 11 miles upstream from Mathis Dam.

Drainage area.--115 sq. mi.

Remarks.--Dam completed in 1920 for storage of water for power. Usable capacity, 106,000 acre-ft.

Cooperation.--Records furnished by Georgia Power Co.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930	79,000	107,000	107,000	106,000	102,000	107,000	103,000	106,000	90,700	84,300	76,500	66,600
1931	31,100	20,200	3,000	6,200	19,200	33,300	64,400	83,800	89,000	82,600	76,000	42,900
1932	14,800	4,300	33,600	67,000	99,200	108,000	108,000	108,000	105,000	102,000	106,000	102,000
1933	101,000	108,000	108,000	108,000	108,000	108,000	108,000	106,000	97,800	98,400	93,600	80,000
1934	52,300	25,100	4,900	4,300	11,400	44,600	59,800	75,200	93,900	92,900	89,700	79,700
1935	72,300	61,500	55,900	80,400	86,000	108,000	108,000	103,000	88,700	96,000	95,500	70,100
1936	40,500	37,800	17,300	63,800	101,000	108,000	108,000	85,700	81,900	83,800	83,100	81,900
1937	53,700	24,500	23,800	57,100	89,700	107,000	107,000	105,000	102,000	106,000	105,000	89,200
1938	84,500	41,400	14,100	18,700	30,700	51,200	81,600	97,000	99,500	108,000	97,800	85,700
1939	55,100	30,000	3,800	19,700	67,600	98,400	108,000	106,000	99,900	96,200	106,000	81,900
1940	40,600	8,300	4,200	9,200	22,600	40,200	63,000	78,000	92,900	98,600	108,000	98,900
1941	82,100	65,800	41,800	26,000	17,800	25,000	41,000	17,900	10,000	32,300	29,300	15,400
1942	7,000	6,000	14,300	21,500	44,600	80,700	99,200	105,000	102,000	105,000	105,000	101,000
1943	90,900	56,400	53,000	63,000	72,100	94,700	103,000	105,000	99,200	102,000	87,900	68,800
1944	44,300	25,100	7,700	18,100	44,100	94,200	106,000	105,000	97,000	87,700	76,900	67,000
1945	48,300	30,300	20,400	22,700	33,200	49,300	71,200	80,700	75,200	84,000	82,100	83,300
1946	75,200	60,000	71,600	102,000	103,000	105,000	93,900	98,900	98,600	103,000	94,200	96,200
1947	90,500	85,000	75,600	92,600	89,000	102,000	105,000	106,000	105,000	100,000	90,500	57,700
1948	43,000	49,300	56,800	53,400	84,800	106,000	105,000	105,000	97,500	104,000	98,100	76,000
1949	43,200	76,900	77,800	87,400	87,200	98,400	105,000	103,000	104,000	103,000	99,200	93,900
1950	87,900	67,000	75,600	77,600	81,400	90,300	101,000	101,000	96,200	98,600	90,000	90,000

285. Tallulah River near Seed, Ga.

Location.--Lat 34°47', long 83°31', on right bank a quarter of a mile upstream from head of Mathis Reservoir (Rabun Lake), 1 mile downstream from Bridge Creek, 1 mile below Burton Dam, 5 miles north of Seed, Rabun County, 6 miles west of Lakemont, and 10 miles upstream from Mathis Dam.

Drainage area.--129 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 1,700 ft (from topographic map).

Extremes.--1916-20: Maximum discharge, 8,010 cfs July 9, 1916 (gage height, 8.2 ft), from rating curve extended above 4,900 cfs by logarithmic plotting; minimum daily, 72 cfs Mar. 25, 1920, caused by shutting off of water by Burton Dam.

Remarks.--Flow regulated by Burton Reservoir (see preceding station) beginning March 1920.

Water year	Monthly and yearly mean discharge, in cubic feet per second												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	#645	787	474	375	377	416	1,730	712	352	-
1917	257	246	356	588	758	1,350	820	469	340	268	224	289	496
1918	266	212	191	515	520	366	429	370	250	192	*141	161	300
1919	583	510	1,120	958	850	977	700	565	454	606	362	206	658
1920	225	284	621	448	579	418	-	-	-	-	-	-	-

* Revised mean daily discharge for Aug. 16, 1918, is 150 cfs.

Not previously published; partly estimated on basis of records for nearby streams.

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	#7.55	6.58	4.23	3.25	3.37	3.59	15.45	6.36	3.05	-
1917	2.29	2.14	3.18	5.26	6.12	12.11	7.10	4.20	2.94	2.40	2.01	2.50	52.25
1918	2.38	1.83	1.71	4.60	4.20	3.27	3.72	3.31	2.16	1.72	*1.26	1.40	*31.56
1919	5.21	4.41	10.01	8.57	6.86	8.73	6.06	5.05	3.93	5.42	3.24	1.78	69.27
1920	2.01	2.46	5.54	4.00	4.84	3.74	-	-	-	-	-	-	-

* Revised.

Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1916	439	-	-	-	-	-	-	579	61.04
1917	452	-	-	144	496	3.84	52.25	480	50.56
1918	472	-	-	*109	300	2.33	*31.56	430	*45.27
1919	502	-	-	100	658	5.10	69.27	567	59.65
1920	502	-	-	a72	-	-	-	-	-

* Revised.

a Minimum day during period October to March.

286. Mathis Reservoir near Lakemont, Ga.

Location.--Lat 34°46', long 83°25', 1 $\frac{3}{4}$ miles south of Lakemont, Rabun County, and 11 miles downstream from Burton Dam.

Drainage area.--151 sq mi.

Remarks.--Dam completed in 1914 for storage of water for power. Usable capacity, 23,000 acre-ft.

Cooperation.--Records furnished by Georgia Power Co.

Contents, in acre-feet, on last day of month

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930	29,200	30,800	30,200	30,800	30,500	30,200	29,400	30,300	30,900	29,400	30,200	29,200
1931	26,600	28,200	29,300	26,800	24,900	27,200	28,300	31,200	28,500	29,600	29,600	29,200
1932	30,500	28,800	30,600	30,700	30,700	30,900	31,200	31,000	30,500	29,600	30,200	29,200
1933	31,200	30,500	31,200	29,800	30,400	28,600	31,200	29,000	30,800	30,600	30,300	29,800
1934	29,800	27,900	29,800	26,600	30,900	29,600	28,700	28,800	28,400	29,200	29,800	30,700
1935	30,100	30,900	30,800	28,800	29,500	30,900	30,900	26,800	30,100	29,400	30,300	30,500
1936	30,400	30,000	28,800	30,000	30,000	30,700	29,800	28,200	30,400	30,300	29,800	30,900
1937	28,700	30,100	30,500	29,200	30,500	28,300	29,300	28,200	30,100	30,600	29,400	28,000
1938	29,800	29,800	29,400	30,100	29,200	28,900	30,600	28,700	29,200	31,200	30,400	30,900
1939	30,500	28,200	29,000	29,600	28,300	27,600	30,500	29,600	30,200	30,100	29,500	30,100
1940	28,500	28,200	19,300	18,900	26,100	30,300	29,200	30,400	30,100	29,200	29,700	29,600
1941	28,500	29,000	29,000	29,100	28,300	23,500	28,100	27,400	29,100	27,000	29,500	29,500
1942	15,400	18,400	22,200	23,900	27,300	28,100	25,200	29,200	30,100	29,800	29,100	29,800
1943	29,400	28,000	29,400	27,700	24,300	28,100	29,400	29,400	29,500	29,700	28,200	30,000
1944	29,800	28,800	25,100	23,900	29,600	30,500	27,800	30,200	29,200	30,100	30,200	28,700
1945	29,000	27,600	27,000	27,500	28,200	28,200	28,200	29,400	30,200	28,600	30,900	29,600
1946	29,400	29,600	27,400	25,300	27,400	29,400	28,200	27,600	29,900	29,300	30,700	30,100
1947	30,200	28,100	26,000	23,700	24,900	26,300	29,300	29,400	29,300	29,000	29,400	29,000
1948	27,400	26,700	25,300	26,800	28,600	26,000	30,100	29,400	30,100	30,500	29,200	28,700
1949	27,400	30,100	26,000	25,100	26,000	26,500	28,400	29,800	30,800	28,600	29,100	30,400
1950	28,600	28,800	28,400	27,600	27,000	27,900	26,200	29,200	30,800	28,200	29,800	29,700

287. Tallulah River near Lakemont, Ga.

Location.--Lat 34°46', long 83°25', on left bank a quarter of a mile downstream from Mathis Dam, one mile upstream from Tiger Creek, and 1¼ miles from Lakemont, Rabun County.

Drainage area.--151 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 1,600 ft (from topographic map).

Extremes.--1916-18: Maximum discharge, 10,900 cfs July 9, 1916 (gage height, 10.4 ft, from graph based on gage readings); minimum, less than 5 cfs at times when gates at Mathis Dam were closed.

Remarks.--Flow regulated by Mathis Reservoir (see preceding station), completed in 1914 with usable capacity of 23,000 acre-ft.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	836	506	444	396	342	-	716	397	-
1917	-	-	-	-	-	1,370	837	685	376	262	-	231	-
1918	309	398	-	195	373	505	310	377	355	293	113	-	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	5.98	3.86	3.28	3.02	2.52	-	5.46	2.93	-
1917	-	-	-	-	-	10.46	6.18	5.23	2.78	2.01	-	1.71	-
1918	2.36	2.94	-	1.49	2.57	3.85	2.29	2.88	2.62	2.24	.86	-	-

288. Tiger Creek at Lakemont, Ga.

Location.--Lat 34°47', long 83°25', on right bank 100 ft upstream from Tallulah Falls Railway bridge at Lakemont, Rabun County, and 800 ft upstream from mouth.

Drainage area.--26 sq mi (revised), approximately.

Gage.--Staff gage. Altitude of gage is 1,600 ft (from topographic map).

Remarks.--Some regulation at low flow by mill above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	*95.9	113.	83.1	65.3	66.5	56.2	*261	108	59.7	-
1917	50.4	46.9	58.9	75.5	98.7	185	129	75.2	56.9	53.5	69.2	60.4	79.9
1918	49.5	44.0	41.4	85.4	82.9	60.3	69.4	69.5	50.3	40.3	37.6	36.6	55.4

* Not previously published; partly estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	*4.25	4.69	3.69	2.80	2.95	2.41	*11.53	4.78	2.57	-
1917	2.24	2.01	2.62	3.34	3.96	8.21	5.53	3.33	2.44	2.38	3.07	2.59	41.72
1918	2.19	1.89	1.83	3.78	3.32	2.68	2.98	3.08	2.15	1.79	1.67	1.57	28.93

* Not previously published; see footnote to preceding table.

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1916	432	-	-	-	-	-	-	*88.9	*46.54
1917	452	-	-	-	38	79.9	3.07	41.72	40.76
1918	472	-	-	-	31	55.4	2.13	28.93	-

* Not previously published.

289. Tallulah River at Mathis, Ga.

Location.--Lat 34°46', long 83°24', 900 ft downstream from Tiger Creek, 1,000 ft east of Mathis post office (now discontinued), Rabun County, 1 mile downstream from Mathis Dam, and 5 miles upstream from Tallulah Falls.

Drainage area.--177 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 1,600 ft (from topographic map).

Extremes.--1913-16: Maximum discharge, 19,300 cfs July 9, 1916 (gage height, 13.0 ft, from floodmark), from rating curve extended above 4,200 cfs on basis of float measurements at gage heights 7.33 ft and 7.76 ft, and by logarithmic plotting; minimum, 73 cfs at several times during July to October 1915.

Remarks.--Flow regulated by Mathis Reservoir, completed in 1914 with usable capacity of 23,000 acre ft.

Monthly and yearly mean discharge, in cubic feet per second, of Tallulah River at Mathis, Ga.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	860	628	485	359	*296	*253	-
1914	*238	*212	336	308	448	402	616	344	223	*203	*206	*147	*306
1915	*412	*249	784	1,160	1,150	735	290	*405	481	*549	*265	*615	*588
1916	498	549	1,010	906	927	594	544	500	430	*2,290	798	475	*796

* Only monthly figures revised; revised daily figures not available.

† Not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1913	352	-	-	-	-	-	-	-	-
1914	382	1,520	Apr. 8, 1914	*127	*306	*1.75	*23.47	*362	*27.77
1915	402	2,790	Jan. 6, 1915	*92	*588	*3.32	*45.15	*639	*49.06
1916	432	19,300	July 9, 1916	85	*796	*4.50	*61.14	-	-

* Only monthly figures revised; revised daily figures not available.

† Not previously published.

Note.--Monthly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, for 1913-16 previously published in WSP 352, 382, 402, and 432 may be subject to appreciable error because of storage in Mathis Reservoir. Those figures are not published herein and should not be used.

290. Tallulah River at Tallulah Falls, Ga.

Location--Lat 34°44', long 83°23', at bridge at Tallulah Falls, Rabun County, a quarter of a mile above the beginning of the falls proper, and 3½ miles above confluence with Chattooga River.

Drainage area--183 sq mi (revised).

Gage--Chain gage. Altitude of gage is 1,520 ft (from topographic map). Prior to Aug. 1, 1906, staff gage at same site and datum.

Average discharge--8 years (1904-12), 663 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	467	-
1901	*388	-	-	*760	670	1,007	1,442	1,070	782	603	1,690	1,379	-
1902	491	369	1,029	-	-	-	-	-	-	-	-	-	-
1904	-	-	-	-	-	-	-	-	-	*197	447	209	-
1905	135	160	266	526	744	649	490	650	369	900	537	254	473
1906	312	230	793	1,250	640	974	816	552	627	962	1,350	1,450	832
1907	1,670	945	928	731	607	607	507	537	393	447	265	291	662
1908	246	442	817	796	1,690	928	1,150	763	589	517	539	287	726
1909	476	358	851	647	1,130	1,550	1,050	1,710	1,660	780	510	431	927
1910	346	257	547	489	517	616	447	866	742	682	413	386	527
1911	318	234	378	567	439	402	1,140	559	331	289	297	258	434
1912	367	399	573	641	828	1,300	1,000	800	658	904	547	647	722

* Not previously published; partly estimated on basis of records for Tugaloo River near Madison, S. C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	2.84	-
1901	*2.43	-	-	*4.78	3.61	6.34	8.79	6.74	4.76	3.80	10.64	8.41	-
1902	3.09	2.25	6.48	-	-	-	-	-	-	-	-	-	-
1904	-	-	-	-	-	-	-	-	-	*1.24	2.81	1.27	-
1905	.85	.98	1.67	3.31	4.24	4.09	2.99	4.09	2.25	5.67	3.38	1.55	35.07
1906	1.96	1.41	4.99	7.87	3.64	6.13	4.98	3.48	3.83	6.06	8.51	8.84	61.70
1907	10.53	5.77	5.84	4.60	3.46	3.63	3.09	3.38	2.40	2.81	1.67	1.77	49.15
1908	1.54	2.70	5.14	5.02	9.96	5.84	7.01	4.81	3.59	3.26	3.40	1.75	54.02
1909	3.00	2.19	5.36	4.08	6.42	9.76	6.40	10.77	10.12	4.91	3.22	2.63	68.87
1910	2.19	1.56	3.45	3.08	2.95	3.88	2.72	5.45	4.52	4.30	2.61	2.35	39.06
1911	2.01	1.43	2.39	3.57	2.50	2.54	6.95	3.52	2.02	1.82	1.87	1.57	32.19
1912	2.32	2.43	3.61	4.04	4.88	8.19	6.09	5.04	4.02	5.70	3.45	3.95	53.72

* Not previously published; see footnote to preceding table.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1900	197	-	-	-	-	-	-	-	-	
1901	197	-	-	-	-	-	-	#943	#69.89	
1904	197	-	-	-	-	-	-	-	-	
1905	197	-	-	125	473	2.58	35.07	538	39.93	
1906	204	-	-	-	210	832	61.70	1,010	75.48	
1907	242	-	-	-	117	662	49.15	491	35.39	
1908	242	-	-	-	189	726	54.02	745	55.19	
1909	262	-	-	-	237	927	5.07	68.87	885	65.52
1910	282	-	-	-	237	527	2.88	39.06	508	37.69
1911	302	-	-	-	185	434	2.37	32.19	468	34.72
1912	322	-	-	-	168	722	3.95	53.72	-	-

* Not previously published.

291. Panther Creek near Toccoa, Ga.

Location.--Lat 34°41', long 83°21', on left bank at Yonah Dam Settlement, a quarter of a mile upstream from mouth and 7 miles north of Toccoa, Stevens County.

Drainage area.--32.5 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 673.53 ft above mean sea level, datum of 1929 (levels by Georgia Power Co.).

Average discharge.--8 years (1942-50), 79.6 cfs.

Extremes.--1942-50: Maximum discharge, 15,100 cfs June 16, 1949 (gage height, 18.0 ft, from floodmark), from rating curve extended above 800 cfs on basis of slope-area determination of peak flow; minimum, 14 cfs Sept. 6, 7, Oct. 7, 1947.

Water year	Monthly and yearly mean discharge, in cubic feet per second												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1943	#25.8	#26.1	#71.0	83.3	97.6	105	128	83.3	77.5	84.2	70.7	53.1	#76.2
1944	43.7	43.0	43.4	64.6	117	194	144	97.6	62.5	46.8	40.6	35.8	77.6
1945	28.1	33.4	33.6	41.7	76.1	68.7	75.9	61.6	38.8	44.5	39.2	45.4	48.7
1946	38.1	37.5	86.3	213	190	172	130	130	84.1	62.4	51.8	39.4	103
1947	39.6	39.9	35.1	114	57.5	62.2	67.2	50.3	56.9	34.7	25.2	20.6	50.3
1948	35.2	54.3	44.6	44.3	89.3	105	84.2	56.5	50.7	103	83.7	49.7	66.7
1949	38.4	176	109	158	140	118	144	131	350	113	91.5	177	145
1950	81.3	62.2	65.4	72.0	76.3	80.2	73.1	57.5	69.0	65.2	50.0	68.8	69.2

* Not previously published; computed from gage-height records furnished by Georgia Power Co.

Water year	Monthly and yearly runoff, in inches												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1943	#0.92	#0.90	#2.51	2.95	3.12	3.72	4.40	3.31	2.66	2.99	2.51	1.82	#31.61
1944	1.54	1.47	1.54	2.29	3.88	6.88	4.94	3.46	2.14	1.66	1.44	1.23	32.47
1945	1.00	1.15	1.19	1.48	2.44	2.43	2.61	2.19	1.33	1.58	1.40	1.56	20.36
1946	1.35	1.28	3.07	7.55	6.09	6.10	4.46	4.61	2.89	2.21	1.83	1.35	42.79
1947	1.41	1.37	1.24	4.05	1.84	2.20	2.31	1.79	1.95	1.23	.89	.71	20.99
1948	1.24	1.86	1.58	1.57	2.97	3.72	2.89	2.01	1.74	3.66	2.97	1.71	27.92
1949	1.36	6.05	3.86	5.60	4.49	4.18	4.94	4.65	12.05	4.01	3.25	6.08	60.52
1950	2.88	2.13	2.32	2.56	2.45	3.20	2.51	2.04	2.36	2.32	1.78	2.36	28.91

* Not previously published; computed from gage-height records furnished by Georgia Power Co.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	1002	2,180	Apr. 19, 1943	#21	#76.2	#2.34	#31.81	76.7	32.03
1944	1002	2,430	Mar. 19, 1944	28	77.6	2.39	32.47	74.7	31.26
1945	1032	814	Sept. 16, 1945	21	48.7	1.50	20.36	54.4	22.72
1946	1052	#6,200	Jan. 6, 1946	26	103	3.15	42.79	98.5	41.11
1947	1082	1,660	Jan. 20, 1947	16	50.3	1.57	20.99	51.9	21.65
1948	1112	2,430	July 11, 1948	16	66.7	2.05	27.92	82.4	34.51
1949	1142	15,100	June 16, 1949	35	145	4.46	60.52	136	56.58
1950	1172	1,020	June 8, 1950	37	69.2	2.13	28.91	-	-

* Not previously published.

292. Tugaloo River near Toccoa, Ga.

Location.--Lat 34°39', long 83°17', at Prathers Bridge, 5 miles downstream from Panther Creek and 5 miles northeast of Toccoa, Stephens County.

Drainage area.--528 sq mi (revised).

Gage.--Chain gage. Altitude of gage is 650 ft (from topographic map).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	†1,304	1,200	1,000	775	941	-
1908	618	1,230	2,060	2,310	-	-	-	-	-	-	-	-	-

* Not previously published; partly estimated on basis of records for Tugaloo River near Madison, S. C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	†2.85	2.53	2.18	1.70	1.99	-
1908	1.35	2.60	4.50	5.04	-	-	-	-	-	-	-	-	-

* Not previously published; see footnote to preceding table.

293. Tugaloo River near Madison, S. C.^{1/}

Location (revised).--Lat 34°36'40", long 83°12'40", 900 ft downstream from bridge on U. S. Highway 123 (site of old Southern Railway bridge), 1.2 miles south of Madison, Oconee County, and 2.2 miles downstream from Toccoa Creek.

Drainage area.--593 sq mi.

Gage.--Staff gage. Datum of gage is 630.10 ft above mean sea level. July 19, 1898, to Dec. 31, 1901, staff gage at site 1½ miles downstream at different datum.

Average discharge.--9 years (1898-1901, 1903-9), 2,057 cfs.

Extremes.--1898-1901, 1903-10: Maximum daily discharge, 21,860 cfs July 1, 1905; minimum daily, 435 cfs Oct. 19, 20, 22-24, 1904.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1898	-	-	-	-	-	-	-	-	-	-	3,354	*4,037	-
1899	4,238	2,267	2,159	2,099	*3,688	4,771	3,276	1,881	1,448	1,027	801	765	*2,362
1900	682	619	1,411	1,223	2,508	2,505	*2,674	1,562	2,931	1,884	1,095	1,305	*1,690
1901	1,290	1,322	1,491	2,153	1,719	†2,435	3,804	2,932	2,549	1,570	4,876	3,047	†2,436
1902	1,542	1,091	†2,579	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	1,283	-	874
1904	634	720	623	829	1,304	2,100	1,369	1,259	880	682	1,543	717	1,055
1905	469	539	830	1,442	2,494	1,466	1,107	2,087	1,572	4,025	1,986	942	1,578
1906	996	704	2,414	4,130	1,870	3,290	2,490	1,540	1,780	†3,380	3,920	5,500	†2,680
1907	5,570	2,990	2,740	2,300	1,850	1,770	1,600	1,460	1,290	1,090	757	918	2,030
1908	651	1,460	2,350	2,610	3,910	3,030	3,090	2,240	1,400	1,550	1,730	911	2,070
1909	1,050	886	2,040	1,990	3,260	4,520	2,460	4,660	4,910	2,300	1,740	1,550	2,610
1910	1,090	804	1,860	1,610	2,710	2,140	1,350	3,150	2,410	-	-	-	-

* Revised.

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1898	-	-	-	-	-	-	-	-	-	-	6.52	*7.60	-
1899	8.24	4.26	4.20	4.08	*6.48	9.28	6.16	3.66	2.72	1.99	1.56	1.44	*54.07
1900	1.29	1.16	2.74	2.38	4.40	4.86	*5.03	3.04	5.51	3.66	2.13	2.45	*38.65
1901	2.52	2.49	2.90	4.19	3.02	†4.74	7.16	5.71	4.80	3.06	9.48	5.74	†55.81
1902	3.00	2.05	†5.02	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	2.49	1.64	-
1904	1.23	1.35	1.21	1.61	2.37	4.08	2.58	2.44	1.65	1.33	3.00	1.35	24.20
1905	*.912	1.01	1.61	2.80	4.38	2.85	2.09	4.06	2.96	7.83	3.86	1.77	36.13
1906	1.94	1.33	4.69	8.02	3.28	6.40	4.69	3.00	3.35	†6.57	7.62	10.34	†61.23
1907	10.83	5.62	5.33	4.47	3.22	3.44	3.01	2.84	2.43	2.12	1.48	1.73	46.52
1908	1.22	2.74	4.55	5.07	7.11	5.89	5.61	4.36	2.63	3.01	3.37	1.72	47.46
1909	2.04	1.66	3.97	3.87	5.73	8.78	4.66	9.06	9.24	4.47	3.38	2.91	59.77
1910	2.12	1.52	3.62	3.14	3.00	4.16	2.50	6.12	4.53	-	-	-	-

* Revised.

† Corrected.

^{1/} Published as "at Madison" prior to 1900.

Year	W.S.P. no.	Yearly discharge, in cubic feet per second, of Tugaloo River near Madison, S. C.							
		Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
Discharge	Date								
1898	197,1433	-	-	-	-	-	-	-	-
1899	197,1433	-	-	512	*2,362	*3.98	*54.07	*1,860	*42.56
1900	197,1433	-	-	512	*1,690	*2.85	*38.65	*1,808	*41.37
1901	197	-	-	775	†2,436	†4.11	†55.81	†2,530	57.97
1902	197	-	-	-	-	-	-	-	-
1903	197	-	-	-	-	-	-	-	-
1904	197	-	-	509	1,055	1.78	24.20	†1,044	23.94
1905	197	-	-	435	1,578	2.66	36.13	†1,771	40.56
1906	204	-	-	640	†2,680	†4.52	†61.23	†3,280	†75.05
1907	242	-	-	482	2,030	3.42	46.52	1,450	33.23
1908	242	-	-	518	2,070	3.49	47.46	†2,030	46.64
1909	262	-	-	560	2,610	4.40	59.77	†2,590	59.36
1910	282	-	-	-	-	-	-	-	-

* Revised.
† Corrected.

294. Tugaloo River near Hartwell, Ga.

Location.--Lat 34°29', long 82°55', on right bank three-quarters of a mile upstream from Beaverdam Creek, 5 miles upstream from confluence with Seneca River, and 10 miles north of Hartwell, Hart County.

Drainage area.--909 sq mi (revised).

Gage.--Water-stage recorder. Altitude of gage is 570 ft (by barometer). April 1925 to September 1927 at datum about 1 ft higher.

Average discharge.--12 years (1925-27, 1940-50), 2,038 cfs (unadjusted).

Extremes.--1925-27, 1940-50: Maximum discharge, 28,600 cfs Aug. 31, 1940 (gage height, 10.8 ft); minimum daily, 189 cfs Oct. 6, 1941.

Remarks.--Flow regulated by powerplant above station and by Burton and Mathis Reservoirs on Tallulah River (see pp. 294 and 295). Runoff adjusted for change in contents in Burton and Mathis Reservoirs since February 1940; record of reservoir operations not available prior to October 1929.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	1,330 ^a	876	721	635	413	-
1926	527	1,400	984	2,050	1,950	1,890	2,000	1,210	988	975	1,390	1,370	1,390
1927	1,060	1,400	2,230	1,440	1,970	2,230	1,720	1,250	1,290	1,240	963	909	1,470
1940	-	-	-	-	*1,628	1,419	1,634	1,035	991	868	4,022	1,794	-
1941	1,113	1,555	1,995	1,841	1,501	1,424	1,346	1,328	860	2,603	1,189	909	1,460
1942	998	758	1,517	1,231	2,383	2,620	1,415	1,769	1,707	1,397	1,664	1,718	1,594
1943	1,326	1,697	3,374	3,278	2,952	2,781	3,132	2,398	2,233	2,648	1,928	1,642	2,448
1944	1,427	1,483	1,522	1,787	2,794	4,196	3,587	2,364	1,747	1,166	1,245	1,213	2,041
1945	1,018	1,322	1,400	1,381	2,230	2,000	2,101	1,694	1,273	1,103	1,187	1,484	1,510
1946	1,281	1,529	2,598	5,601	5,410	4,639	3,386	3,282	1,950	1,459	1,295	940	2,768
1947	1,126	1,349	1,363	3,427	1,785	1,774	2,477	1,655	1,590	982	975	1,094	1,632
1948	1,553	1,962	1,391	1,500	2,682	3,297	2,754	1,839	1,579	3,093	2,536	2,019	2,181
1949	1,689	4,284	3,365	4,209	4,346	3,058	3,649	3,456	3,895	4,282	3,581	3,810	3,642
1950	2,785	2,751	2,400	2,682	2,540	2,807	2,028	1,528	2,114	1,944	1,462	2,847	2,321

* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches (adjusted)^a

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	*2.36	2.25	2.46	1.65	1.52	1.21	5.29	2.03	-
1941	1.04	1.58	2.04	2.01	1.30	1.87	2.06	1.20	.93	3.72	1.50	.83	20.08
1942	.80	.97	2.18	1.74	3.28	4.08	2.05	2.44	2.05	1.83	2.10	2.04	25.56
1943	1.45	1.36	4.24	4.32	3.50	4.07	4.04	3.08	2.62	3.42	2.12	1.66	35.88
1944	1.30	1.36	1.53	2.46	3.97	6.38	4.56	3.03	1.86	1.33	1.36	1.25	30.49
1945	.91	1.23	1.56	1.81	2.79	2.87	3.04	2.38	1.46	1.54	1.51	1.82	22.92
1946	1.45	1.56	3.49	7.69	6.26	5.96	3.90	4.25	2.43	1.92	1.49	1.18	41.58
1947	1.31	1.50	1.49	4.65	2.00	2.55	3.17	2.12	1.93	1.14	1.05	.66	23.57
1948	1.64	2.52	1.69	1.87	3.87	4.56	3.45	2.32	1.80	4.05	3.07	2.01	33.05
1949	1.44	6.01	4.20	5.52	5.00	4.12	4.90	4.38	4.82	5.36	4.45	4.60	54.80
1950	3.38	2.94	3.22	3.42	2.98	3.76	2.71	1.96	2.51	2.48	1.71	3.49	34.56

* Not previously published; see footnote to preceding table.

^a Adjusted for change in contents in Burton and Mathis Reservoirs.

Yearly discharge, in cubic feet per second, of Tugaloo River near Hartwell, Ga.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted ^a			Observed		Adjusted ^a
		Momentary		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1925	602	-	-	-	-	-	-	-	-	-	-
1926	622, 1142	18,200	Jan. 18, 1926	200	1,393	-	-	-	-	-	-
1927	642	9,140	Dec. 29, 1926	300	1,470	-	-	-	-	-	-
1940	892	28,600	Aug. 31, 1940	-	-	-	-	-	-	-	-
1941	922	13,200	July 7, 1941	237	1,460	1,344	1.48	20.08	1,344	1,297	19.37
1942	952	20,500	Feb. 17, 1942	189	1,594	1,713	1.88	25.56	1,857	1,920	28.67
1943	972	17,400	Dec. 29, 1942	464	2,448	2,404	2.64	35.88	2,281	2,212	33.02
1944	1002	18,800	Mar. 20, 1944	440	2,041	2,037	2.24	30.49	1,982	2,002	30.00
1945	1032	8,600	Feb. 23, 1945	321	1,510	1,534	1.69	22.92	1,651	1,722	25.72
1946	1052	25,400	Jan. 7, 1946	368	2,768	2,787	3.07	41.58	2,635	2,639	39.38
1947	1082	15,200	Jan. 20, 1947	232	1,632	1,577	1.73	23.57	1,721	1,694	25.32
1948	1112	18,800	July 13, 1948	258	2,181	2,206	2.43	33.05	2,550	2,580	38.65
1949	1142	27,800	June 17, 1949	463	3,642	3,669	4.04	54.80	3,527	3,527	52.69
1950	1172	12,800	Sept. 9, 1950	466	2,321	2,315	2.55	34.56	-	-	-

^aAdjusted for change in contents in Burton and Mathis Reservoirs since February 1940; record of reservoir operations not available prior to October 1929.

Note.--Figures of monthly discharge, in cubic feet per second per square mile, and runoff, in inches, for 1925-27 previously published in WSP 602, 622, and 642 are subject to large error because of storage in Burton and Mathis Reservoirs. Those figures are not published herein and should not be used.

295. Keowee River near Jocassee, S. C.

Location.--Lat 34°57', long 82°55', 390 ft upstream from Chapmans Bridge on State Highway 288, 1 1/2 miles southeast of Jocassee, Oconee County, and 2 1/2 miles upstream from Eastatoe Creek.

Drainage area.--148 sq mi.

Gage.--Water-stage recorder. Datum of gage is 737.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--December 1949 to September 1950: Maximum discharge, 11,800 cfs Sept. 1 (gage height, 11.46 ft), from rating curve extended above 8,500 cfs by velocity-area studies and logarithmic plotting; minimum, 219 cfs July 10, 11 (gage height, 1.48 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	702	623	689	475	305	532	496	390	957	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	5.46	4.38	5.37	3.58	2.38	4.00	3.86	3.04	7.22	-

296. Keowee River near Newry, S. C.

Location.--Lat 34°44', long 82°53', 0.4 mile upstream from Sixmile Creek, 1 mile downstream from Little River, and 1.5 miles east of Newry, Oconee County.

Drainage area.--455 sq mi.

Gage.--Water-stage recorder. Datum of gage is 625.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--11 years (1939-50), 1,187 cfs.

Extremes.--1939-50: Maximum discharge, 25,200 cfs Aug. 13, 1940; maximum gage height, 24.60 ft Aug. 13, 1940; minimum discharge, 184 cfs Oct. 27, 1941; minimum daily, 224 cfs Oct. 26, 1941.

Remarks.--Some regulation at low flow by powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#401	#408	433	597	1,062	919	1,207	686	510	778	2,483	1,001	#874
1941	346	719	982	928	611	866	950	535	427	1,454	651	373	739
1942	295	416	1,079	808	1,732	1,808	917	1,233	1,042	886	1,017	977	1,014
1943	606	557	1,900	1,965	1,690	1,742	1,766	1,418	1,240	1,925	1,007	713	1,370
1944	545	810	658	1,080	1,728	2,759	2,002	1,218	780	704	583	702	1,112
1945	608	694	732	785	1,249	1,254	1,417	1,000	622	769	686	746	877
1946	610	729	1,589	3,511	2,854	2,404	1,618	1,846	958	1,104	810	613	1,550
1947	631	845	736	1,979	1,056	1,067	1,387	816	906	621	458	368	894
1948	710	1,188	808	892	1,768	2,013	1,469	912	625	1,480	1,817	1,192	1,209
1949	543	2,768	1,749	1,897	1,980	1,534	2,090	1,818	1,460	2,829	2,166	2,078	1,906
1950	2,112	1,636	1,550	1,606	1,359	1,510	1,244	905	1,564	1,506	930	1,798	1,477

Not previously published; estimated or partly estimated on basis of records for Seneca River near Anderson.

Monthly and yearly runoff, in inches, of Keowee River near Newry, S. C.

Water year	Monthly and yearly runoff, in inches, of Keowee River near Newry, S. C.												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1940	†1.02	†1.00	1.10	1.51	2.51	2.33	2.96	1.74	1.25	1.97	6.30	2.46	†26.15
1941	.88	1.76	2.49	2.35	1.40	2.19	2.33	1.36	1.05	3.69	1.65	.91	22.06
1942	.75	1.02	2.73	2.05	3.97	4.58	2.25	3.12	2.56	2.25	2.58	2.40	30.26
1943	1.53	1.36	4.82	4.98	3.86	4.42	4.33	3.60	3.05	4.62	2.55	1.75	40.87
1944	1.38	1.50	1.67	2.73	4.10	6.99	4.91	3.09	1.91	1.79	1.48	1.72	33.27
1945	1.54	1.71	1.86	1.99	2.86	3.18	3.47	2.54	1.53	1.95	1.74	1.63	26.20
1946	1.54	1.78	4.02	8.90	6.53	6.09	3.97	4.68	2.35	2.80	2.05	1.51	46.22
1947	1.60	2.08	1.87	5.02	2.37	2.68	3.40	2.06	2.22	1.33	1.16	.90	26.69
1948	1.80	2.91	2.05	2.28	4.22	5.10	3.60	2.31	1.53	3.75	4.60	2.92	37.05
1949	1.37	6.78	4.43	4.81	4.51	3.88	5.12	4.61	3.58	7.17	5.49	5.10	56.85
1950	5.35	4.02	3.93	4.07	3.11	3.83	3.05	2.29	3.84	3.82	2.35	4.41	44.07

* Not previously published; estimated or partly estimated on basis of records for Seneca River near Anderson.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	952	25,200	Aug. 13, 1940	-	†874	†1.92	†26.15	941	28.16
1941	952	10,400	July 7, 1941	262	739	1.62	22.06	718	21.43
1942	952	18,900	Feb. 17, 1942	224	1,014	2.23	30.26	1,121	33.47
1943	972	17,100	Dec. 29, 1942	437	1,370	3.01	40.87	1,263	37.71
1944	1002	14,900	Mar. 20, 1944	378	1,112	2.44	33.27	1,130	33.83
1945	1032	5,530	Feb. 22, 1945	356	877	1.93	26.20	953	29.43
1946	1052	20,300	Jan. 7, 1946	395	1,550	3.41	45.22	1,488	44.43
1947	1092	13,900	Jan. 20, 1947	275	894	1.96	26.69	935	27.90
1948	1112	17,500	Aug. 4, 1948	283	1,239	2.72	37.05	1,434	42.87
1949	1142	19,000	Nov. 28, 1948	350	1,906	4.19	56.85	1,929	57.57
1950	1172	21,100	Oct. 7, 1949	542	1,477	3.25	44.07	-	-

* Not previously published.

297. Seneca River near Clemson College, S. C.

Location.--Lat 34°39'15", long 82°51'05", at bridge on State road, 300 ft upstream from Blue Ridge Railroad bridge, 2.1 miles (revised) south of Clemson College, Oconee County, and 2.4 miles upstream from Martin Creek.

Drainage area.--646 sq mi.

Gage.--Chain or staff gage. Altitude of gage is 605 ft (from topographic map).

Extremes.--1903-5: Maximum discharge, 12,000 cfs July 1, 1905 (gage height, 20.27 ft, from graph based on gage readings), from rating curve extended above 2,300 cfs by logarithmic plotting; minimum daily observed, 250 cfs Oct. 19, 1904.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	†739	861	685	769	1,162	1,506	1,078	943	841	557	1,253	683	†922
1905	†394	564	741	1,287	1,926	1,100	817	1,370	921	2,433	1,675	905	†1,176
1906	987	688	2,199	-	-	-	-	-	-	-	-	-	-

† Corrected.

* Not previously published; partly estimated on basis of records for station on nearby stream.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	†1.31	1.48	1.22	1.37	1.94	2.69	1.86	1.68	1.45	0.994	2.24	1.18	†19.41
1905	†.703	.974	1.33	2.29	3.10	1.96	1.41	2.44	1.60	4.35	2.99	1.56	†24.71
1906	1.73	1.19	3.92	-	-	-	-	-	-	-	-	-	-

† Corrected.

* Not previously published; partly estimated on basis of records for station on nearby stream.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	197	†7,400	Mar. 7, 1904	-	†922	†1.43	†19.41	†874	†18.41
1905	197	†12,000	July 1, 1905	250	†1,176	†1.82	†24.71	†1,358	†28.54
1906	197	-	-	-	-	-	-	-	-

† Corrected.

* Not previously published.

298. Seneca River near Anderson, S. C.

Location (revised).--Lat 34°29'10", long 82°49'45", 0.25 mile downstream from bridge on State Highway 80, 1.9 miles downstream from Deep Creek, 4.2 miles upstream from confluence with Tugaloo River, and 10 miles west of Anderson, Anderson County.

Drainage area.--1,026 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 520 ft (from Corps of Engineers profile). May 28, 1928, to Jan. 23, 1929, staff gage, and Jan. 24, 1929, to Oct. 12, 1933, water-stage recorder, 15 ft downstream at same datum.

Average discharge.--22 years (1928-50), 2,096 cfs.

Extremes.--1928-50: Maximum discharge, 81,100 cfs Aug. 17, 18, 1928 (gage height, 25.73 ft, from graph based on gage readings), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum (revised), 105 cfs Sept. 17, 1939; minimum daily (revised), 170 cfs Sept. 20, 1931.

Remarks.--Some regulation at low flow by powerplants above station.

Cooperation.--Records for 1928-31, not previously published by Geological Survey, furnished by Corps of Engineers.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	3,886	1,584	1,132	1,771	3,632	7,057	3,272	3,781	2,481	3,772	11,280	4,661	-
1930	3,504	3,597	2,405	2,419	2,411	2,581	1,926	1,928	2,562	973	1,279	2,908	2,877
1931	*672	1,600	1,862	1,817	1,532	1,949	3,027	2,200	1,264	1,402	1,149	*588	*1,580
1932	*516	*640	4,220	4,240	2,810	2,580	2,130	1,950	2,210	1,090	2,030	1,100	*2,130
1933	3,690	3,370	5,640	3,320	3,360	2,400	2,620	2,290	1,370	1,330	1,410	1,240	2,670
1934	784	900	1,116	1,562	1,602	3,703	1,926	1,989	2,538	1,633	1,563	1,677	1,750
1935	2,390	1,358	1,892	3,392	2,197	2,253	2,318	1,670	1,191	1,558	2,006	1,072	1,943
1936	785	2,429	1,246	6,369	4,027	2,440	7,108	1,849	1,504	1,185	1,286	1,844	2,659
1937	4,941	1,518	2,519	6,497	3,944	2,558	3,032	2,097	1,502	1,337	2,128	1,736	2,818
1938	3,492	1,589	1,498	1,593	1,422	2,266	2,009	1,323	1,755	1,213	1,811	1,081	1,837
1939	687	982	968	1,612	4,665	3,029	1,999	1,790	1,428	1,215	3,029	931	1,846
1940	645	658	871	1,162	1,875	1,782	1,847	1,133	1,033	1,437	4,932	1,537	1,578
1941	764	1,195	1,545	1,472	1,047	1,655	1,526	816	682	2,343	1,120	558	1,231
1942	494	662	1,828	*1,349	3,147	3,592	1,465	1,911	1,458	1,194	1,700	1,278	*1,649
1943	947	905	2,724	3,553	2,662	2,857	2,793	2,098	1,610	2,959	1,608	1,224	2,178
1944	952	1,110	1,244	1,885	3,142	5,105	3,591	2,190	1,416	1,297	1,067	1,131	2,007
1945	1,023	1,133	1,336	1,512	2,481	2,397	2,442	1,583	1,083	1,347	1,186	1,266	1,569
1946	981	1,153	2,833	5,825	4,627	3,584	2,608	3,039	1,710	1,712	1,601	1,043	2,553
1947	1,207	1,469	1,264	3,528	1,812	1,977	2,272	1,438	1,533	910	742	605	1,562
1948	1,153	2,300	1,474	1,508	2,983	3,564	2,467	1,627	1,267	2,203	2,403	1,568	2,039
1949	908	4,665	3,188	3,492	3,796	2,756	3,313	3,423	2,291	4,387	3,355	3,687	3,263
1950	3,481	2,688	2,457	2,599	2,283	2,419	2,080	1,511	2,285	2,070	1,359	2,440	2,304

* Revised; those for 1931 supersede figures previously published in H. Doc. 64, 74th Cong., 1st sess., Savannah River.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	2.70	4.24	12.67	5.06	-
1929	4.37	1.72	1.27	1.99	3.69	7.93	3.56	4.25	2.57	2.11	1.44	3.16	38.06
1930	3.94	3.92	2.70	2.72	2.45	2.90	2.10	2.17	1.52	1.09	.86	.92	27.29
1931	*.76	1.74	2.09	2.04	1.55	2.19	3.29	2.47	1.26	1.58	1.29	*.64	*20.90
1932	*.58	*.70	4.74	4.76	2.96	2.89	2.32	2.17	2.40	1.22	2.28	1.19	*28.21
1933	4.15	3.61	6.34	3.74	3.40	2.70	2.84	2.57	1.50	1.50	1.58	1.35	35.33
1934	.88	.98	1.26	1.75	1.62	4.16	2.10	2.24	2.76	1.83	1.75	1.82	23.15
1935	2.69	1.45	2.12	3.82	2.23	2.54	2.52	1.88	1.29	1.75	2.26	1.16	25.71
1936	.88	2.64	1.40	7.16	4.23	2.74	7.73	2.08	1.64	1.33	1.44	2.01	35.28
1937	5.56	1.65	2.84	7.30	4.00	2.87	3.30	2.35	1.63	1.50	2.39	1.89	37.28
1938	3.92	1.73	1.68	1.79	1.45	2.55	2.19	1.49	1.91	2.40	2.04	1.17	24.32
1939	.77	1.07	1.11	1.61	4.74	3.40	2.18	2.01	1.55	1.36	3.40	1.01	24.41
1940	.73	.72	.98	1.30	1.97	2.01	2.01	1.27	1.13	1.61	5.54	1.67	20.94
1941	.86	1.29	1.74	1.65	1.06	1.86	1.66	.92	.74	2.63	1.26	.61	16.28
1942	.55	.72	2.05	*1.51	3.20	3.82	1.60	2.14	1.58	1.34	1.91	1.40	*21.82
1943	1.06	.98	3.06	3.99	2.70	3.20	3.04	2.35	1.96	3.30	1.81	1.33	28.78
1944	1.07	1.20	1.40	2.12	3.30	5.74	3.90	2.46	1.54	1.45	1.20	1.23	26.61
1945	1.15	1.23	1.50	1.70	2.52	2.70	2.66	1.89	1.18	1.51	1.34	1.40	20.78
1946	1.10	1.25	3.18	6.55	4.70	4.02	2.83	3.41	1.86	1.92	1.80	1.14	35.76
1947	1.36	1.60	1.62	3.97	1.94	2.22	2.47	1.61	1.66	1.02	.83	.65	20.66
1948	1.29	2.50	1.66	1.70	3.14	4.00	2.68	1.83	1.37	2.48	2.70	1.71	27.06
1949	1.02	5.08	3.58	3.92	3.85	3.10	3.60	3.85	2.49	4.93	3.75	4.00	43.17
1950	3.91	2.92	2.76	2.92	2.32	2.72	2.24	1.70	2.49	2.33	1.52	2.66	30.49

* Revised; those for 1931 supersede figures previously published in H. Doc. 64, 74th Cong., 1st sess., Savannah River.

SAVANNAH RIVER BASIN

Yearly discharge, in cubic feet per second, of Seneca River near Anderson, S. C.									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	(a)	#81,100	Aug. 17, 18, 1928	-	-	-	-	-	-
1929	(a)	#25,900	Mar. 5, 1929	825	2,877	2.80	38.06	3,118	41.26
1930	(a)	#23,100	Oct. 2, 1929	310	2,061	2.01	27.29	*1,610	*21.32
1931	(a)	#7,800	Nov. 17, 1930	*170	*1,580	*1.54	*20.90	*1,690	*22.33
1932	727,1433	17,500	Dec. 15, 1931	*238	*2,130	*2.08	*28.21	2,740	36.34
1933	742	37,600	Oct. 18, 1932	651	2,670	2.60	35.33	1,837	24.30
1934	757	19,800	Mar. 5, 1934	502	1,750	1.71	23.15	1,989	26.29
1935	782	19,800	Jan. 10, 1935	737	1,943	1.89	25.71	1,841	24.37
1936	802	b49,200	Apr. 7, 1936	499	2,659	2.59	35.28	3,044	40.41
1937	822	55,200	Oct. 1, 1936	695	2,818	2.75	37.28	2,614	34.56
1938	852	27,900	Oct. 20, 1937	654	1,837	1.79	24.52	1,505	19.94
1939	872	33,300	Aug. 19, 1939	490	1,846	1.80	24.41	1,805	23.89
1940	892	45,600	Aug. 14, 1940	429	1,578	1.54	20.94	1,689	22.40
1941	922	13,300	July 7, 1941	352	1,231	1.20	16.28	1,188	15.71
1942	952,1433	31,100	Feb. 17, 1942	326	*1,649	*1.61	*21.92	*1,735	*23.50
1943	972	20,600	Dec. 30, 1942	713	2,178	2.12	28.78	2,070	27.35
1944	1002	22,600	Mar. 20, 1944	668	2,007	1.96	26.61	2,023	26.82
1945	1032	8,850	Mar. 27, 1945	600	1,569	1.53	20.78	1,694	22.43
1946	1052	40,600	Jan. 7, 1946	704	2,553	2.49	33.76	2,465	32.61
1947	1082	18,400	Jan. 21, 1947	444	1,562	1.52	20.66	1,644	21.73
1948	1112	15,300	Aug. 5, 1946	451	2,039	1.99	27.06	2,358	31.29
1949	1142	30,700	Nov. 29, 1948	735	3,263	3.18	43.17	3,257	43.08
1950	1172	24,300	Oct. 8, 1949	911	2,304	2.25	30.49	-	-

* Revised.

* Not previously published.

a From Congressional documents: 74th Cong., 1st sess., H. Doc. 64, Savannah River.

b Maximum peak discharge; maximum discharge during the year, 53,600 cfs at 12:00 p.m. Sept. 30, 1936, stage rising.

299. Savannah River near Iva, S. C.

Location.--Lat 34°15', long 82°45', on bridge on State Highway 184, half a mile upstream from Little Generostee Creek, 5.8 miles southwest of Iva, Anderson County, and at mile 281.5 upstream from Savannah, Ga.

Drainage area.--2,231 sq mi.

Gage.--Water-stage recorder. Datum of gage is 432.255 ft above mean sea level (levels by Corps of Engineers).

Extremes.--1949-50: Maximum discharge, 27,500 cfs (estimated) Oct. 8, 1949; minimum, 1,580 cfs July 11, 1950 (gage height, 2.93 ft); minimum daily, 1,740 cfs July 10, 1950.

Remarks.--Some regulation by Burton and Mathis Reservoirs (see elsewhere in this report) and by powerplants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	#6,280	#5,750	#5,070	#5,720	#5,480	#5,850	#4,720	#3,422	4,842	4,328	3,010	5,766	#5,011

† Not previously published; estimated or partly estimated on basis of records for station near Calhoun Falls.

300. Rocky River near Calhoun Falls, S. C.

Location.--Lat 34°08', long 82°38', 2,000 ft upstream from Swanigan Mill bridge on county road, 3¼ miles northwest of Calhoun Falls, Abbeville County, and 3¾ miles upstream from mouth.

Drainage area.--267 sq mi.

Gage.--Water-stage recorder. Datum of gage is 403.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--February to September 1950: Maximum discharge, 1,930 cfs Sept. 8 (gage height, 4.24 ft); minimum, 26 cfs Aug. 14, Sept. 4 (gage height, 0.88 ft); minimum daily, 89 cfs Aug. 7, 28.

Remarks.--Flow regulated by Lake Secession (usable capacity, about 1,742,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	-	-	-	-	-	266	232	237	226	171	150	174	-

301. South Beaverdam Creek at Dewy Rose, Ga.

Location.--Lat 34°11', long 82°57', on left bank 50 ft upstream from highway bridge, 1 mile northeast of Dewy Rose, Elbert County, and 3 miles upstream from confluence with North Beaverdam Creek.

Drainage area.--35.8 sq mi (revised).

Gage.--Staff gage. Datum of gage is 581.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years (1942-50), 58.0 cfs.

Extremes.--1942-50: Maximum discharge, 2,600 cfs Jan. 18, 1943 (gage height, 13.4 ft, from graph based on gage readings); minimum observed, 6.5 cfs Sept. 9, 1947.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	20.8	19.4	75.7	172	57.6	92.7	78.0	43.5	59.8	92.3	41.4	30.8	65.6
1944	20.5	27.0	36.6	59.1	87.0	139	87.6	58.1	31.1	26.7	20.3	19.0	50.9
1945	17.3	22.8	30.4	40.9	81.8	65.4	84.2	38.2	33.6	69.9	38.0	36.6	46.3
1946	20.9	30.6	103	132	116	73.7	64.9	59.3	33.3	48.8	30.3	20.8	60.9
1947	57.7	31.1	28.3	122	48.9	66.7	62.0	35.8	37.0	23.2	19.0	23.3	46.2
1948	37.6	128	64.7	59.8	147	149	81.9	50.3	38.4	36.4	36.1	28.7	71.1
1949	20.2	182	99.9	117	150	70.5	96.9	101	49.4	47.4	56.9	55.3	86.6
1950	39.8	42.3	40.7	51.4	48.0	51.2	36.5	28.1	29.8	26.6	15.6	28.3	36.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	0.67	0.60	2.43	5.53	1.68	2.99	2.43	1.41	1.86	2.97	1.34	0.96	24.87
1944	.66	.84	1.18	1.90	2.62	4.47	2.73	1.87	.97	.86	.65	.59	19.34
1945	.56	.71	.98	1.31	2.37	2.11	2.62	1.23	1.05	2.25	1.23	1.14	17.56
1946	.67	.95	3.32	4.25	3.37	2.38	2.02	1.91	1.04	1.57	.98	.65	23.11
1947	1.96	.97	.85	3.93	1.43	2.14	1.93	1.15	1.15	.75	.61	.73	17.50
1948	1.21	3.99	2.09	1.92	4.43	4.80	2.56	1.63	1.19	1.18	1.16	.89	27.05
1949	.65	5.67	3.22	3.77	4.36	2.27	3.02	3.25	1.54	1.52	1.83	1.72	32.82
1950	1.28	1.32	1.31	1.66	1.40	1.65	1.14	.90	.93	.86	.50	.88	13.83

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	972	#2,600	Jan. 18, 1943	14	65.6	1.83	24.87	62.8	23.85
1944	1002	891	Mar. 20, 1944	10.5	50.9	1.42	19.34	49.7	18.91
1945	1032	1,110	Apr. 25, 1945	12	46.3	1.29	17.56	53.4	20.25
1946	1052	#1,450	Jan. 7, 1946	15	60.9	1.70	23.11	57.6	21.85
1947	1082	1,240	Jan. 20, 1947	7.9	46.2	1.29	17.50	55.7	21.11
1948	1112	990	Nov. 12, 1947	13	71.1	1.99	27.05	77.0	29.50
1949	1142	#1,910	Nov. 29, 1948	18	66.6	2.42	32.82	71.7	27.19
1950	1172	189	Sept. 9, 1950	12	36.5	1.02	13.83	-	-

* Not previously published.

302. Savannah River near Calhoun Falls, S. C. 1/

Location.--Lat 34°04', long 82°38', 150 ft upstream from bridge on State Highway 72, 1 mile downstream from Seaboard Air Line Railroad bridge, 1½ miles downstream from Rocky River, 3 miles southwest of Calhoun Falls, Abbeville County, and at mile 264.7 upstream from Savannah, Ga.

Drainage area.--2,876 sq mi. At site used prior to 1904, 2,712 sq mi.

Supplemental records available.--Gage-height records collected at original site 1 mile upstream during 1899-1928 and at present site since 1928, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 363.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to March 1930, chain gage at railroad bridge 1 mile upstream at different datum.

Average discharge.--15 years (1896-97, 1899-1900, 1930-31, 1938-50), 5,154 cfs.

Extremes.--1896-1900, 1903, 1930-32, 1938-50: Maximum discharge, 96,500 cfs Aug. 13, 1940 (gage height, 11.52 ft), from rating curve extended above 50,000 cfs by velocity-area studies and logarithmic plotting; minimum (revised), 730 cfs Oct. 5, 27, 1931; minimum daily (revised), 804 cfs Oct. 5, 1931.

Maximum stage known, 28.2 ft Aug. 25, 1908, original site and datum, from records of U. S. Weather Bureau.

Remarks.--Some regulation by Burton and Mathis Reservoirs (see elsewhere in this report) and by powerplants above station.

1/ Published as "at Calhoun Falls", 1897-99.

Monthly and yearly mean discharge, in cubic feet per second, of Savannah River near Pelham Falls, S.C.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	-	-	-	2,360
1897	1,821	5,644	6,469	4,456	11,366	10,950	13,342	6,010	4,898	4,417	2,654	1,873	†6,096
1898	†2,240	2,820	3,355	4,500	3,251	3,638	5,396	2,399	1,761	6,314	-	-	-
1899	-	-	-	-	-	-	9,632	5,798	4,922	*3,447	3,031	2,870	-
1900	2,549	2,474	*4,496	†5,167	13,362	9,485	10,048	5,235	11,427	3,019	2,700	4,230	*6,114
1901	3,819	4,531	5,659	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	7,777	17,551	16,244	12,325	6,216	10,071	6,623	6,265	4,402	-
1904	2,878	2,301	†2,243	-	-	-	-	-	-	-	-	-	-
1930	-	-	-	-	-	-	4,790	4,710	3,460	2,660	2,040	2,220	-
1931	2,310	3,790	4,790	4,240	3,230	4,010	5,930	4,500	2,470	2,850	2,850	2,110	3,600
1932	*1,772	1,940	9,920	9,730	6,830	5,950	5,460	4,950	5,950	-	-	-	-
1938	-	-	-	-	-	-	5,958	3,413	4,164	5,844	4,755	2,808	-
1939	2,173	3,068	3,095	3,887	10,620	7,958	5,182	4,837	3,764	2,841	6,431	2,681	4,674
1940	2,518	2,278	2,507	2,941	5,000	4,399	4,491	2,867	2,602	2,896	11,140	4,236	3,978
1941	2,304	3,534	4,251	4,311	3,082	4,291	3,742	2,665	2,268	7,557	3,187	1,970	3,609
1942	1,846	1,915	4,935	3,445	6,461	8,322	3,943	4,721	3,921	3,442	4,369	3,486	4,227
1943	2,685	3,040	7,151	10,790	7,002	7,568	7,534	5,521	4,831	7,163	4,185	3,428	5,912
1944	2,698	3,167	3,625	4,956	7,927	12,490	8,734	5,529	3,892	3,177	2,853	2,991	5,160
1945	2,646	3,009	3,471	3,843	6,507	5,700	6,609	4,243	3,163	3,100	3,188	3,965	4,100
1946	2,915	3,430	7,166	12,930	11,410	*9,397	7,136	7,485	4,579	3,883	3,734	2,616	*6,370
1947	3,201	3,475	3,207	9,152	4,602	5,195	5,849	3,668	3,586	2,497	2,255	2,100	4,065
1948	3,245	6,192	4,035	4,299	8,011	8,981	6,857	4,655	3,739	5,903	2,607	4,146	5,461
1949	2,940	11,300	8,018	9,328	10,670	7,274	9,067	9,067	7,312	9,661	7,559	8,540	8,368
1950	6,984	6,370	5,625	6,318	6,039	6,507	5,242	4,034	5,477	4,883	3,330	6,114	5,570

* Revised.

† Corrected.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	-	-	-	0.97
1897	0.77	2.32	2.75	1.89	4.36	4.66	5.49	2.56	1.93	†1.88	1.13	.77	†30.51
1898	†9.6	1.16	1.43	1.91	1.24	1.54	2.22	1.01	.72	2.69	-	-	-
1899	-	-	-	-	-	-	3.96	2.47	2.02	*1.46	1.29	1.18	-
1900	1.08	1.01	*1.91	†2.20	5.14	4.04	4.13	2.23	4.89	1.28	1.15	1.74	*30.60
1901	1.63	1.86	2.41	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	3.31	6.74	6.90	5.07	2.64	4.14	2.81	2.66	1.81	-
1904	1.22	.95	†9.6	-	-	-	-	-	-	-	-	-	-

* Revised.

† Corrected.

Yearly discharge, in cubic feet per second										
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary		Maximum Date	Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge								
1896	197	-	-	-	-	-	-	-	-	
1897	197	-	-	-	1,460	†6,096	†2.25	†30.51	†5,635	
1898	197	-	-	-	-	-	-	-	-	
1899	197,1433	-	-	-	-	-	-	-	-	
1900	197,1433	-	-	-	1,660	*6,114	*2.25	*30.60	†6,490	
1901	75	-	-	-	-	-	-	-	-	
1902	83	-	-	-	-	-	-	-	-	
1903	197	-	-	-	-	-	-	-	†7,836	
1930	697	-	-	-	-	-	-	-	-	
1931	712	15,800	Apr. 23,	1931	1,170	3,600	1.25	16.99	*3,840	
1932	727,1433	41,400	Dec. 4,	1931	804	-	-	-	*18.11	
1938	852	-	-	-	-	-	-	-	-	
1939	872	49,600	Aug. 19,	1939	1,180	4,674	1.63	22.06	4,572	
1940	892	96,500	Aug. 13,	1940	979	3,978	1.38	18.82	4,227	
1941	922	36,300	July 7,	1941	1,080	3,609	1.25	17.03	3,495	
1942	932	47,200	Feb. 18,	1942	845	4,227	1.47	19.94	4,579	
1943	972	53,100	Jan. 18,	1943	1,620	5,912	2.06	†27.89	5,624	
1944	1002	49,500	Mar. 20,	1944	1,740	5,160	1.79	†24.40	5,130	
1945	1032	33,300	Apr. 25,	1945	1,560	4,100	1.43	19.37	4,471	
1946	1052,1433	68,400	Jan. 8,	1946	1,680	*6,370	*2.21	*30.07	*6,062	
1947	1082	44,800	Jan. 20,	1947	1,080	4,065	1.41	19.18	4,362	
1948	1112	29,800	Mar. 7,	1948	1,130	5,461	1.90	25.84	6,191	
1949	1142	61,800	Nov. 29,	1948	1,730	8,368	2.91	39.49	8,104	
1950	1172	29,400	Oct. 8,	1949	2,070	5,570	1.94	26.31	-	

* Revised.

† Corrected.

‡ Minimum day during period October to June.

Note.--Monthly figures of discharge, in cubic feet per second per square mile, and runoff, in inches, previously published in water-supply papers for 1930-32 and 1938-39, may be subject to error because of regulation in reservoirs upstream. Those figures are not included herein and should not be used. Records for January 1901 to December 1902 published in WSP Nos. 65, 75, and 83 have been found in error on basis of restudy of the original data. Those records are not published herein and should not be used.

303. North Fork Broad River near Carnesville, Ga.

Location.--Lat 34°19', long 83°11', at bridge on State Highway 51, 1 mile downstream from Unawatti Creek, 3 miles upstream from confluence with Middle Fork Broad River, and 4½ miles southeast of Carnesville, Franklin County.

Drainage area.--119 sq mi.

Gage.--Wire-weight gage. Datum of gage is 600.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1942-44: Maximum discharge (revised), 4,700 cfs Jan. 18, 1943 (gage height, 7.6 ft, from graph based on gage readings); minimum observed, 44 cfs Oct. 18, 1942, July 28, Sept. 9, 1944.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	76.9	73.2	*257	*366	173	260	*322	180	229	214	146	129	*205
1944	83.1	154.	156	217	350	*516	289	196	114	71.4	75.8	83.1	*192
1945	77.4	93.4	122	-	-	-	-	-	-	-	-	-	-

* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	0.74	0.69	*2.49	*3.55	1.51	2.51	*3.02	1.74	2.14	2.08	1.42	1.20	*23.09
1944	.80	1.44	1.51	2.10	3.17	*5.00	2.71	1.90	1.07	.69	.73	.78	*21.90
1945	.75	.88	1.19	-	-	-	-	-	-	-	-	-	-

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	1002, 1383	*4,700	Jan. 18, 1943	45	*203	*1.71	*23.09	*201	*22.92
1944	1002, 1383	*3,160	Mar. 28, 1944	45	*192	*1.61	*21.90	*183	*20.97

* Revised.

304. Broad River near Carlton, Ga.

Location.--Lat 34°04', long 83°00', on upstream side of Seaboard Air line Railway bridge 2 miles upstream from South Fork Broad River and 3 miles east of Carlton, Madison County.

Drainage area.--762 sq mi.

Supplemental records available.--Gage-height records collected in this vicinity since 1897 are contained in reports of U. S. Weather Bureau.

Gage.--Chain gage. Datum of gage is 384.5 ft above mean sea level (levels by U. S. Weather Bureau).

Average discharge.--15 years (1897-1912), 1,416 cfs.

Extremes.--1897-1912: Maximum discharge, 70,000 cfs Aug. 25, 1908 (gage height, 39.0 ft), from rating curve extended above 8,300 cfs by logarithmic plotting; minimum observed, 270 cfs Sept. 24 to Oct. 1, 1905 (gage height, 1.4 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1897	-	-	-	-	-	-	-	-	-	*1,090	641	380	-
1898	468	547	748	887	575	730	1,078	524	422	1,455	1,535	*3,666	*1,052
1899	*1,919	1,099	1,319	1,599	3,602	2,870	1,622	1,072	957	943	721	654	*1,519
1900	684	771	940	1,146	*3,722	2,171	2,651	1,168	2,994	1,227	958	908	*1,592
1901	1,001	1,043	1,155	2,093	1,697	2,266	2,421	1,673	2,354	1,270	3,196	2,153	1,860
1902	1,083	898	*2,959	1,304	*5,010	*4,476	1,579	1,163	800	764	919	1,227	*1,830
1903	837	777	1,479	1,375	4,638	4,110	2,007	2,270	2,125	1,150	1,387	818	1,812
1904	651	750	683	741	1,113	1,247	720	629	478	522	1,409	471	785
1905	314	434	688	934	2,046	687	555	1,392	514	1,277	630	382	815
1906	407	397	2,184	3,620	871	3,630	1,150	989	1,200	2,340	1,870	1,530	1,696
1907	1,330	834	1,120	1,220	1,370	1,280	1,220	847	822	811	649	725	1,018
1908	419	1,040	1,710	1,830	2,730	1,980	2,090	1,020	1,110	1,260	4,490	1,050	1,726
1909	1,180	1,010	1,790	1,670	3,130	3,120	1,300	2,430	2,290	1,440	1,470	1,190	1,828
1910	1,250	735	1,250	1,020	1,330	1,330	705	1,130	1,290	1,430	1,210	1,670	1,169
1911	624	573	820	940	861	797	1,630	671	753	731	736	861	831
1912	919	973	1,770	930	2,030	4,230	1,540	1,130	2,940	1,720	1,070	1,250	1,706
1913	1,040	737	730	-	-	-	-	-	-	-	-	-	-

* Revised.

Monthly and yearly runoff, in inches, of Broad River near Carlton, Ga.

Water year	Monthly runoff, in inches											The year		
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.		Sept.	
1897	-	-	-	-	-	-	-	-	-	-	1.65	0.97	0.56	-
1898	0.70	0.80	1.13	1.34	0.78	1.15	1.57	0.79	0.61	2.20	2.32	*5.37	*18.76	
1899	*2.90	1.61	1.99	2.42	4.93	4.35	2.38	1.63	1.41	1.43	1.09	.95	*27.09	
1900	1.04	1.13	1.42	1.73	*5.08	3.29	3.88	1.76	4.38	1.86	1.45	1.33	*28.35	
1901	1.51	1.53	1.75	3.17	2.32	3.42	3.55	2.54	3.44	1.93	4.83	3.14	33.13	
1902	1.84	1.32	*4.47	1.97	*6.84	*6.77	2.31	1.76	1.17	1.15	1.39	1.60	*32.59	
1903	1.27	1.14	2.24	2.09	6.34	6.21	2.93	1.93	3.11	1.74	2.10	1.19	32.29	
1904	.98	1.09	1.04	1.12	1.58	1.89	1.05	.95	.70	.79	2.13	.69	14.62	
1905	.48	.64	1.04	1.42	2.80	1.04	.81	2.11	.75	1.94	.95	.56	19.04	
1906	.62	.58	3.31	5.48	1.19	5.49	1.68	1.50	1.75	3.54	2.82	2.24	30.20	
1907	2.02	1.22	1.70	1.84	1.87	1.94	1.78	1.28	1.20	1.22	.98	1.06	18.11	
1908	.63	1.52	2.58	2.77	3.86	3.00	3.06	1.54	1.63	1.90	6.79	1.54	30.82	
1909	1.79	1.48	2.71	2.52	4.28	4.72	1.91	3.68	3.35	2.18	2.22	1.74	32.58	
1910	1.59	1.08	1.89	1.54	1.82	1.86	1.03	1.71	1.89	2.17	1.83	2.44	20.85	
1911	.94	.84	1.24	1.42	1.18	1.21	2.39	1.02	1.10	1.11	1.12	1.26	14.83	
1912	1.40	1.43	2.68	1.41	2.67	6.40	2.25	1.71	4.31	2.61	1.61	1.83	30.51	
1913	1.57	1.08	1.10	-	-	-	-	-	-	-	-	-	-	

* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1897	197,1433	-	-	-	-	-	-	-	-
1898	197,1433	*26,600	Sept. 2, 1898	300	*1,052	*1.38	*18.76	*1,270	*22.63
1899	197,1433	*19,500	Feb. 27, 1899	490	*1,519	*1.99	*27.09	1,370	24.18
1900	197,1433	*31,600	Feb. 13, 1900	490	*1,592	*2.09	*28.35	*1,659	*29.55
1901	197	*17,800	Sept. 18, 1901	600	1,860	2.44	33.13	*2,008	*35.77
1902	197,1433	*43,200	Feb. 28, 1902	420	*1,830	*2.40	*32.59	*1,674	*29.81
1903	197,1433	*29,700	Mar. 24, 1903	420	*1,812	2.38	32.29	1,747	30.75
1904	197	*10,400	Aug. 9, 1904	305	785	1.03	14.62	730	13.05
1905	197	*8,220	Feb. 21, 1905	270	815	1.07	19.04	950	16.89
1906	204	*24,900	Jan. 23, 1906	270	1,696	2.23	30.20	1,710	30.63
1907	242	*6,200	Apr. 24, 1907	305	1,018	1.34	18.11	1,010	17.90
1908	242	*70,000	Aug. 25, 1908	375	1,728	2.27	30.82	1,800	32.07
1909	262	*14,100	June 4, 1909	620	1,828	2.40	32.58	1,760	31.16
1910	282	*20,500	Aug. 31, 1910	500	1,169	1.53	20.85	1,080	19.31
1911	302	*5,640	Apr. 8, 1911	420	831	1.09	14.63	970	17.32
1912	322	*42,800	Mar. 15, 1912	420	1,706	2.24	30.51	1,610	28.75

* Revised.

† Not previously published.

305. Broad River near Bell, Ga.

Location.--Lat 33°58', long 82°46', at downstream side of main channel pier of bridge on State Highway 17, half a mile downstream from Long Creek, 1 mile south of Bell's Cross-roads, and 12 miles southeast of Elberton, Elbert County.

Drainage area.--1,430 sq mi (revised), approximately.

Gage.--Water-stage recorder. Datum of gage is 357.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to October 1928, staff gage at railroad bridge about 1 mile downstream at datum 1.12 ft lower. October 1928 to July 1932, staff gage and August 1937 to January 1939, wire-weight gage at present site and datum.

Average discharge.--19 years (1926-32, 1937-50), 1,797 cfs.

Extremes.--1926-32, 1937-50: Maximum discharge, 79,400 cfs Oct. 2, 1929 (gage height, 34.8 ft), from rating extended above 27,000 cfs on basis of slope-conveyance studies; minimum daily, 217 cfs Oct. 13, 1941.

Cooperation.--Records collected during water years 1927-28 by Alabama Power Co., 1929-30 by Allied Engineers Inc., 1931-32 by Commonwealth & Southern Corp., except those not previously published which are estimated by Geological Survey.

Monthly and yearly mean discharge, in cubic feet per second, of Broad River near Bell, Ga.

Water year	Monthly and yearly mean discharge, in cubic feet per second, of Broad River near Bell, Ga.												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	800	982	1,790	1,010	2,070	1,910	1,180	769	917	2,080	718	716	*1,242
1928	608	475	2,590	1,420	1,610	1,810	2,630	2,620	1,610	1,900	*5,320	*3,120	*2,148
1929	*1,102	941	952	1,530	4,610	10,100	2,420	3,670	1,780	1,500	883	4,470	*2,806
1930	5,770	2,430	2,050	1,990	1,860	2,110	1,650	1,380	939	1,090	668	1,060	1,920
1931	598	1,570	1,560	1,770	1,510	1,540	1,930	1,670	792	1,000	818	406	1,260
1932	432	638	4,280	3,600	3,530	2,280	1,890	1,400	2,450	1,200	*1,750	*820	*2,020
1937	-	-	-	-	-	-	-	-	-	-	*1,400	874	-
1938	2,965	1,151	1,112	1,274	972	1,683	3,748	1,227	1,505	3,171	1,017	670	1,713
1939	456	803	936	1,575	4,331	3,367	1,510	1,319	898	799	2,428	763	1,583
1940	512	538	781	1,482	2,566	1,976	1,434	835	923	839	3,180	719	1,313
1941	386	792	1,075	1,134	829	1,855	1,025	510	814	2,572	879	392	1,026
1942	300	492	2,564	1,244	2,145	4,530	1,360	1,645	958	762	1,229	830	1,506
1943	782	665	2,447	5,070	2,031	3,268	2,862	1,399	1,489	1,763	1,193	866	1,991
1944	685	801	1,090	1,915	3,774	5,761	3,319	1,672	921	717	648	653	1,823
1945	572	649	898	1,185	2,910	1,896	3,049	1,264	739	1,241	1,172	1,724	1,428
1946	742	818	3,649	5,141	3,789	3,054	2,555	1,996	1,332	1,004	805	721	2,129
1947	1,709	994	891	4,685	1,570	2,782	2,435	1,120	1,111	686	643	471	1,612
1948	903	4,022	2,298	1,892	5,444	4,481	2,900	1,593	1,513	2,171	1,264	976	2,439
1949	763	6,158	3,234	3,253	4,719	2,334	2,939	3,538	2,047	2,293	1,588	2,588	2,935
1950	1,160	1,320	1,371	1,590	1,446	1,958	1,262	1,066	1,216	940	663	1,059	1,253

* Not previously published; estimated or partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Monthly and yearly runoff, in inches												
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	+0.64	0.77	1.44	0.81	1.51	1.54	0.92	0.62	0.72	1.67	0.58	0.56	*11.78
1928	.49	.37	2.09	1.14	1.22	1.46	2.05	2.11	1.26	1.53	*4.29	*2.43	*20.44
1929	*.89	.73	.77	1.07	3.35	8.14	1.89	2.96	1.38	1.21	.71	3.49	*26.59
1930	4.65	1.90	1.65	1.60	1.35	1.71	1.28	1.11	.73	.88	.54	.83	18.23
1931	.48	1.23	1.26	1.43	1.10	1.24	1.51	1.35	.62	.81	.66	.32	12.01
1932	.35	.50	3.45	2.90	2.66	1.83	1.47	1.13	1.91	.97	*1.41	*6.64	19.22
1937	-	-	-	-	-	-	-	-	-	-	*1.13	.68	-
1938	2.39	.90	.90	1.03	.71	1.36	2.92	.99	1.17	2.56	.82	.52	16.27
1939	.37	.63	.76	1.27	3.16	2.71	1.18	1.06	.70	.64	1.96	.60	15.04
1940	.41	.42	.63	1.20	1.93	1.59	1.12	.67	.72	.68	2.56	.56	12.49
1941	.31	.62	.87	.91	.60	1.50	.80	.41	.63	2.08	.71	.30	9.74
1942	.24	.38	2.06	1.00	1.56	3.66	1.06	1.33	.75	.61	.99	.65	14.29
1943	.63	.52	1.97	4.09	1.68	2.64	2.23	1.13	1.16	1.42	.96	.68	18.91
1944	.55	.62	.88	1.54	2.85	4.65	2.59	1.35	.72	.58	.52	.51	17.36
1945	.46	.51	.72	.96	2.11	1.53	2.38	1.02	.58	1.00	.95	1.35	13.57
1946	.60	.64	2.94	4.15	2.76	2.47	2.00	1.61	1.04	.81	.65	.56	20.23
1947	1.38	.78	.72	3.93	1.14	2.25	1.90	.90	.87	.55	.52	.37	15.31
1948	.73	3.14	1.86	1.52	4.11	3.61	2.26	1.28	1.18	1.75	1.02	.76	23.22
1949	.62	4.81	2.61	2.63	3.44	1.88	2.30	2.85	1.60	1.84	1.28	2.02	27.88
1950	.94	1.03	1.11	1.28	1.05	1.58	.99	.86	.95	.76	.53	.83	11.91

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	642	9,830	Dec. 29, 1926	-	*1,242	*0.869	*11.78	-	-
1928	662,1172	44,900	Aug. 16, 1928	325	*2,148	*1.50	*20.44	*2,089	*19.88
1929	682,1172	43,500	Mar. 6, 1929	629	*2,806	*1.96	*26.59	3,418	32.40
1930	697,1172	79,400	Oct. 2, 1929	392	1,920	1.34	18.23	1,569	15.00
1931	712	7,140	Nov. 17, 1930	303	1,260	.881	12.01	1,403	13.34
1932	727	14,800	June 16, 1932	-	*2,020	*1.41	*19.22	-	-
1937	822	-	-	-	-	-	-	-	-
1938	852	25,100	July 26, 1938	430	1,713	1.20	16.27	1,457	13.84
1939	872	20,300	Aug. 19, 1939	430	1,583	1.11	15.04	1,553	14.74
1940	892	28,400	Aug. 14, 1940	307	1,313	.918	12.49	1,348	12.83
1941	922	14,600	July 17, 1941	244	1,026	.717	9.74	1,120	10.62
1942	952	29,100	Mar. 22, 1942	217	1,506	1.05	14.29	1,551	14.73
1943	972	33,300	Jan. 19, 1943	425	1,991	1.39	18.91	1,879	17.84
1944	1002	20,000	Mar. 21, 1944	410	1,823	1.27	17.36	1,785	17.00
1945	1032	24,500	Apr. 26, 1945	450	1,428	.999	13.57	1,690	16.06
1946	1052	27,800	Jan. 9, 1946	508	2,129	1.49	20.23	1,991	18.93
1947	1082	26,900	Jan. 21, 1947	290	1,612	1.13	15.31	1,912	18.16
1948	1112	19,900	Feb. 10, 1948	352	2,439	1.71	23.22	2,682	25.33
1949	1142	47,400	Nov. 29, 1948	672	2,935	2.05	27.88	2,413	22.92
1950	1172	4,420	Mar. 14, 1950	470	1,253	.876	11.91	-	-

* Not previously published.

306. Little River near Mount Carmel, S. C.

Location.--Lat 34°04', long 82°30', 480 ft downstream from Island Ford Bridge, 2.8 miles upstream from Calhoun Creek, and 4.5 miles north of Mount Carmel, McCormick County.

Drainage area.--217 sq mi.

Gage.--Water-stage recorder. Datum of gage is 353.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--10 years (1940-50), 224 cfs.

Extremes.--1939-50: Maximum discharge, 20,800 cfs Aug. 14, 1940 (gage height, 29.60 ft, from high-water mark), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 19 cfs Oct. 19, 1941.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	166	414	236	148	109	70.7	68.2	1,027	63.6	-
1941	46.4	219	159	143	106	278	151	62.8	94.9	736	151	50.7	185
1942	37.0	52.0	250	141	297	737	178	121	89.2	275	110	59.7	196
1943	75.0	68.5	283	767	270	472	253	118	99.1	358	74.3	76.4	244
1944	56.9	86.7	142	234	441	982	382	152	104	75.0	56.3	41.9	229
1945	43.9	59.9	75.0	120	396	230	419	110	179	110	85.8	281	173
1946	76.4	81.3	430	492	446	311	300	311	116	89.2	109	90.7	237
1947	170	106	108	708	191	456	355	117	90.6	136	57.6	48.1	211
1948	87.3	614	274	305	707	685	363	151	144	*154	127	83.5	*304
1949	63.4	804	387	449	686	217	381	471	147	166	227	157	343
1950	92.4	107	116	150	136	212	132	113	135	125	54.1	87.5	122

* Revised.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	0.88	2.06	1.26	0.76	0.58	0.36	0.36	5.45	0.33	-
1941	0.25	1.13	0.85	.76	.51	1.48	.78	.33	.49	3.91	.80	.26	11.55
1942	.20	.27	1.33	.75	1.43	3.32	.91	.64	.46	1.46	.58	.31	12.26
1943	.40	.35	1.50	4.07	1.29	2.51	1.30	.63	.51	1.90	.39	.39	15.24
1944	.30	.45	.75	1.24	2.19	5.22	1.96	.81	.53	.40	.30	.22	14.37
1945	.23	.31	.40	.64	1.90	1.22	2.15	.58	.92	.58	.46	1.44	10.83
1946	.41	.42	2.28	2.62	2.14	1.65	1.54	1.65	.60	.47	.58	.47	14.83
1947	.90	.54	.57	3.76	.92	2.42	1.72	.62	.47	.72	.31	.25	13.20
1948	.46	3.16	1.45	1.63	3.52	3.53	1.86	.80	.74	*.82	.67	.43	*19.07
1949	.34	*.14	2.05	2.39	3.29	1.15	1.96	2.50	.76	.88	1.21	.81	21.48
1950	.43	.55	.82	.80	.85	1.13	.68	.60	.69	.66	.29	.45	7.61

* Revised.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	922	20,800	Aug. 14, 1940	-	-	-	-	227	14.27
1941	922	9,020	July 17, 1941	25	185	0.853	11.55	178	11.12
1942	952	6,400	Mar. 22, 1942	20	196	.903	12.26	203	12.71
1943	972	7,310	Jan. 19, 1943	32	244	1.12	15.24	232	14.49
1944	1002	8,020	Mar. 20, 1944	26	229	1.06	14.37	220	15.81
1945	1032	5,020	Apr. 26, 1945	25	173	.797	10.83	208	13.00
1946	1052	3,210	Dec. 25, 1945	50	237	1.09	14.83	220	13.73
1947	1082	5,300	Jan. 20, 1947	21	211	.972	13.20	260	16.26
1948	1112, 1433	3,130	Nov. 11, 1947	39	*304	*1.40	*19.07	*327	*20.53
1949	1142	9,350	Nov. 29, 1948	56	343	1.58	21.48	265	16.61
1950	1172	1,760	July 23, 1950	40	122	.562	7.61	-	-

* Revised.

307. Little River near Washington, Ga.

Location.--Lat 33°36'40", long 82°44'40", near left bank on downstream side of highway bridge pier, 700 ft downstream from Reedy Creek, 4 miles downstream from Georgia Railroad bridge, 6 miles upstream from Williams Creek, and 9 miles south of Washington, Wilkes County.

Drainage area.--291 sq mi (revised).

Gage.--Water-stage recorder. Altitude of gage is 360 ft (by barometer).

Extremes.--1949-50: Maximum discharge, 3,790 cfs Oct. 8, 1949 (gage height, 17.6 ft); minimum, 27 cfs Sept. 28, 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	315	122	183	189	150	392	143	174	131	96.5	53.6	61.3	168

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	1.24	0.47	0.73	0.75	0.54	1.56	0.55	0.69	0.50	0.38	0.21	0.24	7.86

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1172	3,790	Oct. 8, 1949	28	168	0.577	7.86	-	-

308. Little River near Lincolnton, Ga.

Location.--Lat 33°39', long 82°29', on downstream side of Raysville Bridge on State Highway 43, half a mile downstream from Big Creek, 2½ miles south of Amity, and 10 miles south of Lincolnton, Lincoln County.

Drainage area.--574 sq mi.

Gage.--Wire-weight gage. Datum of gage is 271.7 ft above mean sea level (unadjusted).

Average discharge.--7 years (1943-50), 512 cfs.

Extremes.--1943-50: Maximum discharge, 16,900 cfs Mar. 23, 1944 (gage height, 26.4 ft); minimum observed, 14 cfs Oct. 12, 1944.

Maximum stage known, 44.3 ft, present datum, Sept. 28, 1929 (discharge, 54,000 cfs from slope-conveyance determination at peak stage), from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	*1,627	715	1,731	556	260	179	321	90.1	79.1	-
1944	46.1	81.5	173	535	1,260	3,098	833	279	107	508	75.1	40.7	548
1945	29.6	50.1	85.0	158	620	403	739	220	71.6	114	94.9	253	233
1946	45.6	61.3	940	1,008	656	576	605	203	79.1	79.1	114	58.9	386
1947	490	177	165	1,301	403	1,608	1,148	241	182	199	209	98.1	521
1948	116	1,718	1,298	901	2,729	1,862	1,003	327	247	165	104	167	877
1949	173	1,344	1,404	610	1,587	444	626	804	711	519	295	208	720
1950	622	231	303	320	274	785	251	256	204	138	87.4	109	300

* Not previously published; partly estimated on basis of records for Stevens Creek near Modoc, S.C.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	-	-	-	*3.26	1.30	3.48	1.08	0.52	0.35	0.64	0.18	0.15	-
1944	0.09	0.16	0.35	1.07	2.37	6.23	1.62	.56	.21	.10	.15	.08	12.99
1945	.06	.10	.17	.32	1.12	.81	1.44	.44	.14	.23	.19	.49	5.51
1946	.09	.12	1.89	2.03	1.19	1.15	1.17	.60	.40	.16	.23	.11	9.14
1947	.98	.34	.33	2.62	.73	3.23	2.23	.48	.35	.40	.42	.19	12.30
1948	.23	3.34	2.61	1.81	5.12	3.74	1.95	.66	.48	.33	.21	.32	20.80
1949	.35	2.61	2.82	1.22	2.87	.89	1.22	1.61	1.58	1.04	.59	.40	17.00
1950	1.24	.45	.61	.64	.50	1.58	.49	.51	.40	.28	.18	.21	7.09

* Not previously published; see footnote to preceding table.

SAVANNAH RIVER BASIN

Yearly discharge, in cubic feet per second, of Little River near Lincolnton, Ga.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1943	972	9,580	Jan. 19, 1943	-	-	-	-	*489	*11.56
1944	1002	16,900	Mar. 23, 1944	18	548	0.955	12.99	556	12.72
1945	1032	5,040	Apr. 25, 1945	15	233	.406	5.51	308	7.28
1946	1052	4,920	Dec. 25, 1945	30	386	.672	9.14	368	8.69
1947	1082	9,920	Mar. 8, 1947	27	521	.908	12.30	712	16.65
1948	1112	9,750	Feb. 10, 1948	44	877	1.53	20.80	861	20.40
1949	1142	12,400	Nov. 29, 1948	72	720	1.25	17.00	573	13.52
1950	1172	9,100	Oct. 8, 1949	44	300	.523	7.09	-	-

* Revised.

309. Savannah River at Woodlawn, S. C.

Location.--Lat 33°35'30", long 82°08'05", at Charleston & Western Carolina Railway bridge, at Woodlawn, Edgefield County, 5.7 miles (revised) upstream from Stevens Creek, and 4.2 miles southeast of Meriwether, McCormick County.

Drainage area.--6,370 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 165 ft (from topographic map). Prior to Aug. 27, 1908, chain gage at same site and datum.

Extremes.--1905-10: Maximum discharge (revised), 304,000 cfs Aug. 26, 1908 (gage height, 37.6 ft, from floodmark); minimum daily, 2,640 cfs Sept. 2, 3, 22, 1907.

Remarks.--Slight regulation during low flow due to powerplant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	*3,860	*3,730	15,900*	25,800	10,300*	20,100	10,500	8,210	12,600	16,100	14,400	16,500	*13,300
1907	16,000	9,030	9,780	10,500	12,900	9,780	9,550	7,220	7,840	6,810	5,370	6,070	9,210
1908	3,790	9,780	18,900	19,700	25,700	17,300	19,100	9,820	12,800	10,300*	29,400	10,400	*15,600
1909	*8,640	9,890	14,200	12,900	21,000	22,300	9,870	16,500	19,100	13,100	11,300	8,240	*13,900
1910	6,780	4,650	7,020	8,760	14,000	12,700	7,060	11,100	10,500	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published; estimated or partly estimated on basis of record for station at Augusta, Ga.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	*0.70	*0.65	2.88	*4.67	1.69	*3.64	1.84	1.49	2.21	2.92	2.61	2.89	*28.19
1907	2.89	1.58	1.78	1.90	2.11	1.78	1.67	1.30	1.37	1.23	.97	1.06	18.64
1908	.69	1.72	3.42	3.56	4.35	3.14	3.35	1.78	2.24	1.87	*5.33	1.82	*33.27
1909	*1.57	1.73	2.57	2.34	3.44	4.04	1.73	2.99	3.35	2.38	2.04	1.44	*29.62
1910	1.22	.81	1.27	1.59	2.29	2.29	1.24	2.01	1.84	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1906	204,1433	*96,600	Jan. 24, 1906	-	*13,300	*2.09	*28.19	*14,200	*30.21
1907	242	*53,200	Oct. 5, 1906	2,640	9,210	1.45	19.64	*9,020	19.22
1908	242,1433	*304,000	Aug. 26, 1908	2,850	*15,600	*2.45	*33.27	*15,600	*33.31
1909	262	*75,300	June 5, 1909	4,960	*13,900	*2.18	*29.62	12,700	27.05
1910	282	*70,300	Mar. 1, 1910	-	-	-	-	-	-

* Revised.

† Corrected.

‡ Not previously published.

310. Stevens Creek near Modoc, S. C.

Location.--Lat 33°43'45", long 82°10'55", at bridge on State Highway 23, 1.4 miles east of Modoc, McCormick County, and 3.2 miles downstream from Turkey Creek.

Drainage area.--545 sq mi.

Gage.--Water-stage recorder. Datum of gage is 197.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Power Administration). Oct. 15, 1929, to Sept. 30, 1931, staff gage, 1,100 ft upstream at different datum.

Average discharge.--11 years (1930-31, 1940-50), 409 cfs.

Extremes.--1929-31, 1940-50: Maximum discharge, 35,100 cfs Aug. 14, 1940; maximum gage height, 41.08 ft Aug. 14, 1940; minimum discharge, 1.8 cfs Oct. 19, 1944 (gage height, 0.17 ft).

Remarks.--Slight diurnal fluctuation during low flow caused by small mills above station.

Cooperation.--Records for 1929-31, not previously published by Geological Survey, furnished by Corps of Engineers.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	1,098	1,213	1,343	651	787	274	110	107	50.1	66.1	338	-
1931	48.5	375	370	757	374	700	805	558	105	610	199	32.5	412
1940	-	-	-	-	-	539	401	80.4	76.1	32.4	2,311	35.2	-
1941	12.0	502	571	411	167	492	187	35.9	461	726	156	17.9	311
1942	12.0	50.2	418	293	828	2,306	361	299	93.9	180	211	75.6	425
1943	99.4	136	425	1,519	631	1,350	669	176	62.8	614	76.2	43.6	485
1944	10.3	29.7	141	416	1,246	2,935	894	136	39.2	116	72.1	19.1	503
1945	16.6	13.6	30.9	116	689	274	399	124	66.2	103	70.6	368	187
1946	33.5	30.8	235	919	821	668	521	355	153	40.1	40.1	52.9	405
1947	332	112	79.7	1,123	235	1,090	721	98.6	97.6	42.8	168	40.6	347
1948	95.3	1,188	947	991	2,582	1,764	821	335	151	156	78.0	81.2	742
1949	33.5	1,281	823	408	1,664	284	602	517	160	142	362	153	526
1950	54.7	57.5	81.4	207	163	534	116	104	109	211	61.8	167	156

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	2.24	2.57	2.84	1.24	1.66	0.56	0.23	0.22	0.11	0.14	0.69	-
1931	0.10	.77	.78	1.60	.71	1.48	1.65	1.18	.22	1.29	.42	.07	10.27
1940	-	-	-	-	-	1.14	.82	.17	.16	.07	4.89	.07	-
1941	.03	1.03	1.21	.87	.32	1.04	.38	.08	.94	1.53	.29	.04	7.76
1942	.03	.06	.88	.62	1.58	4.88	.74	.63	.19	.38	.45	.16	10.60
1943	.21	.28	.90	3.22	1.21	2.86	1.37	.37	.13	1.30	.16	.09	12.10
1944	.02	.06	.30	.88	2.47	6.21	1.83	.29	.08	.25	.15	.04	12.58
1945	.04	.03	.07	.25	1.31	.58	.82	.26	.14	.22	.15	.79	4.66
1946	.07	.06	2.62	1.95	1.57	1.42	1.07	.75	.31	.09	.09	.11	10.11
1947	.70	.23	.17	2.38	.45	2.31	1.47	.21	.20	.09	.36	.08	8.65
1948	.20	2.43	2.01	2.10	4.71	3.74	1.68	.71	.31	.33	.16	.17	18.55
1949	.07	2.62	1.74	.86	3.18	.60	1.23	1.09	.33	.30	.77	.31	13.10
1950	.12	.12	.17	.44	.31	1.13	.24	.22	.22	.45	.13	.34	3.89

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	(a)	-	-	-	-	-	-	376	9.34
1931	(a)	+5,550	Apr. 1, 1931	20	412	0.756	10.27	-	-
1940	922	35,100	Aug. 14, 1940	-	-	-	-	-	-
1941	922	6,000	June 25, 1941	4.3	311	.571	7.76	260	6.46
1942	952	16,800	Mar. 22, 1942	2.2	425	.780	10.60	442	11.02
1943	972	18,700	Jan. 19, 1943	8.0	485	.890	12.10	445	11.09
1944	1002	26,200	Mar. 21, 1944	3.1	503	.923	12.58	493	12.32
1945	1032	7,220	Apr. 25, 1945	2.5	187	.343	4.66	292	7.27
1946	1052	11,800	Dec. 26, 1945	3.1	405	.743	10.11	339	8.46
1947	1082	11,000	Mar. 8, 1947	10	347	.637	8.65	489	12.19
1948	1112	14,200	Feb. 10, 1948	8.0	742	1.36	18.55	734	18.34
1949	1142	17,700	Nov. 29, 1948	16	526	.965	13.10	364	9.08
1950	1172	4,060	Mar. 7, 1950	8.2	156	.286	3.89	-	-

* Not previously published.

a From Congressional documents: 74th Cong., 1st sess., H. Doc. 64, Savannah River.

311. Augusta Canal near Augusta, Ga.

Location.--Lat 33°30'15", long 82°00'15", 2.7 miles northwest of Thirteenth Street Bridge in Augusta, Richmond County, and 4.6 miles downstream from Stevens Creek power dam.

Gage.--Water-stage recorder. Datum of gage is 46.58 ft above city of Augusta datum or 148.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Auxiliary water-stage recorder 3.4 miles upstream from base gage.

Average discharge.--19 years (1931-50), 2,700 cfs.

Extremes.--1930-50: Maximum daily discharge, 4,380 cfs Jan. 2, 28, 1948; no flow Apr. 8 to May 10, 1936.

Remarks.--Canal diverts water from Savannah River for power and municipal supply at dam 1 mile downstream from Stevens Creek Dam. Waste water from powerhouses is returned to river below station by three channels above Thirteenth Street Bridge, and a small amount entering Beaverdam ditch is discharged into river about 13 miles below Augusta. Water diverted from canal for municipal supply of Augusta and for operation of pumps at city pumping station is included in record since Oct. 1, 1933.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	2,400	2,510	2,640	2,700	2,680	2,560	2,570	2,460	2,210	1,710	-
1932	1,650	1,890	2,330	2,390	2,550	2,610	2,590	2,290	2,380	2,240	2,430	2,290	2,300
1933	2,240	2,490	2,070	2,360	2,500	2,600	1,810	2,230	2,610	2,360	2,250	2,100	2,300
1934	2,148	2,405	2,328	2,636	2,768	2,730	2,729	2,715	2,520	2,414	2,535	2,253	2,513
1935	2,552	2,683	2,571	2,782	2,734	2,614	2,726	2,572	2,321	2,482	2,645	2,516	2,599
1936	2,331	2,702	2,791	2,103	2,456	2,682	314	2,022	3,032	3,018	2,827	2,807	2,426
1937	2,969	2,938	2,836	2,461	2,773	3,074	3,088	2,957	2,863	2,835	3,156	3,027	2,915
1938	2,972	2,979	2,866	2,743	2,798	2,677	2,563	2,726	2,598	2,482	2,845	2,477	2,727
1939	2,168	2,306	2,245	2,647	2,542	2,629	2,792	3,025	2,946	2,583	2,869	2,582	2,611
1940	2,420	2,411	2,298	2,589	2,490	2,738	2,840	2,773	2,563	2,582	2,559	2,630	2,574
1941	2,456	2,536	2,706	2,807	2,749	2,626	2,666	2,432	2,180	2,488	2,560	1,806	2,501
1942	1,551	1,851	2,152	2,383	2,206	2,139	2,801	3,145	3,112	2,814	3,022	2,925	2,509
1943	2,821	2,764	2,940	2,224	2,815	2,865	2,856	2,891	2,774	2,743	2,750	2,699	2,759
1944	2,623	2,771	2,735	2,792	2,826	2,219	2,819	2,890	2,880	2,686	2,811	2,544	2,715
1945	2,624	2,654	2,839	3,150	3,137	3,116	2,690	2,772	2,665	2,493	2,444	2,375	2,743
1946	2,525	2,659	2,553	2,286	2,618	2,571	2,670	2,915	3,073	2,964	2,982	2,525	2,695
1947	2,707	3,147	2,857	3,107	3,322	3,011	3,194	3,276	3,191	2,667	2,912	1,651	2,818
1948	1,976	3,036	3,321	3,602	3,026	3,316	3,454	2,912	2,803	2,587	3,068	3,016	3,009
1949	3,047	3,011	2,750	3,350	3,405	3,449	3,289	3,196	3,383	2,964	3,478	3,403	3,217
1950	3,339	3,332	3,377	3,479	3,498	3,545	3,369	3,344	3,199	2,778	2,875	3,097	3,268

Note.--Record prior to Oct. 1, 1933, does not include diversion by city of Augusta for municipal supply and to operate pumps at city pumping station.

312. Savannah River at Augusta, Ga.

Location.--Lat 33°22'25", long 81°56'35", at New Savannah Bluff lock and dam, 0.2 mile upstream from Butler Creek, 12 miles downstream from Augusta, Richmond County, and at mile 188.2 upstream from Savannah.

Drainage area.--7,508 sq mi, including that of Butler Creek. At sites used prior to Oct. 1, 1936, 7,240 sq mi (revised).

Supplemental records available.--Gage-height records collected at practically same sites since 1875 are contained in reports of U. S. Weather Bureau. Records of chemical analyses and water temperatures for the period October 1949 to September 1950 are published in report of Geological Survey.

Gage.--Water-stage recorder. Datum of gage is 97.00 ft above mean sea level (Corps of Engineers benchmark).

Oct. 1, 1883, to Dec. 31, 1891, Jan. 1, 1896, to Dec. 31, 1906, Jan. 1, 1925, to Sept. 30, 1932, staff gage or water-stage recorder at Fifth Street Bridge at datum 102.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Engineering Co.).

Oct. 1, 1932, to Sept. 30, 1936, water-stage recorder at Thirteenth Street Bridge at datum 104.56 ft above mean sea level (levels by Corps of Engineers).

Oct. 1, 1936, to Nov. 10, 1948, water-stage recorder at site 0.2 mile downstream from present site and at present datum.

Average discharge.--43 years (1883-91, 1896-1906, 1925-50), 10,720 cfs.

Extremes.--1883-91, 1896-1906, 1925-50: Maximum discharge, 350,000 cfs Oct. 3, 1929; maximum gage height, 46.3 ft Sept. 27, 1929 (at site and datum then in use); minimum discharge, 648 cfs Sept. 24, 1939, from rating curve extended below 1,400 cfs; minimum daily, 1,040 cfs Oct. 2, 1927.

Maximum flood known occurred in 1796, discharge 360,000 cfs (gage height, 40 ft, marked by local residents, at site and datum of Fifth Street gage) by conveyance-slope study.

Remarks.--Flow partly regulated by reservoirs, powerplants, and New Savannah Bluff lock and dam above station.

SAVANNAH RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Savannah River at Augusta, Ga.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1884	*2,611	*3,902	*4,263	10,575	13,307	33,191	18,105	6,541	15,073	8,359	4,618	2,689	*10,255
1885	2,370	2,903	9,972	22,016	18,661	8,520	5,366	7,056	6,455	3,886	3,935	7,791	8,186
1886	11,735	11,608	11,269	23,722	9,011	13,072	21,569	19,562	16,583	19,233	7,250	5,431	14,220
1887	3,251	5,252	6,784	6,117	13,081	9,832	5,653	4,645	6,404	12,162	35,541	4,957	9,486
1888	5,571	4,305	8,504	16,938	19,881	24,526	14,749	13,788	8,361	5,256	6,097	*47,853	*14,578
1889	12,659	19,509	12,725	26,885	26,322	15,505	10,652	6,606	6,551	10,746	16,129	9,471	14,410
1890	4,974	10,061	5,443	5,076	9,383	12,344	8,355	9,673	5,491	8,193	6,004	8,249	7,753
1891	19,541	5,370	7,079	14,641	34,124	41,631	19,654	8,769	8,646	6,532	13,358	5,623	15,320
1892	3,494	6,017	4,591	-	-	-	-	-	-	-	-	-	-
1896	-	-	-	*11,260	*16,820	*7,005	*5,298	*4,906	*3,951	*16,810	*3,431	*3,402	-
1897	*2,792	*7,905	*10,290	*9,170	*24,470	*20,200	*16,640	*7,518	*5,538	*7,301	*8,177	*4,100	*10,410
1898	*3,741	*3,658	*5,265	*6,520	*4,929	*6,299	*11,710	*4,416	*3,576	*11,160	*13,440	*21,490	*8,037
1899	*14,520	*10,130	*10,300	*16,028	*34,891	*24,804	*14,386	*7,640	*6,090	*5,148	*5,126	*5,554	*12,747
1900	5,611	4,807	7,043	7,267	26,261	18,322	20,096	9,264	22,702	9,590	5,776	6,199	*11,780
1901	6,681	7,431	9,704	14,295	16,566	15,133	25,365	15,344	19,574	8,981	26,256	20,568	15,450
1902	9,172	7,547	18,565	11,689	27,399	36,025	13,466	8,394	7,489	*5,525	5,843	7,458	*13,159
1903	6,423	5,851	12,700	10,591	39,580	32,924	19,907	10,040	*17,287	*7,277	*8,195	5,315	*14,498
1904	4,179	4,979	4,405	5,583	9,206	8,579	5,512	4,292	4,088	3,769	11,710	7,596	5,837
1905	2,079	3,015	4,772	7,075	18,780	7,275	5,416	9,764	4,704	12,620	7,745	4,218	7,227
1906	3,916	3,789	19,270	*28,700	10,600	23,300	10,800	8,020	16,100	19,500	16,200	19,600	*15,000
1907	*18,100	8,820	9,580	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	40,410	10,240	8,892	7,369	5,212	3,258	3,002	1,707	1,455	-
1926	2,659	5,756	4,542	12,970	16,340	11,930	11,930	3,985	3,434	4,959	6,857	3,992	7,386
1927	3,119	5,438	8,613	5,842	10,400	10,340	5,846	3,428	as,613	9,280	3,570	2,730	as,163
1928	2,620	3,120	12,000	6,570	9,380	9,540	13,300	13,300	8,330	10,100	30,000	14,500	11,100
1929	7,490	6,320	5,540	8,180	22,700	52,400	14,900	20,700	10,400	8,320	5,700	35,800	16,500
1930	42,200	17,000	15,100	13,400	12,000	12,000	8,910	7,300	5,590	4,810	3,640	4,510	12,200
1931	3,350	7,630	8,790	9,930	6,970	8,290	10,800	9,360	3,790	4,720	4,300	2,500	6,700
1932	2,400	2,610	15,800	*20,400	17,900	12,300	9,840	7,200	10,600	*4,160	9,264	3,400	*9,627
1933	11,020	10,510	27,380	14,860	19,310	9,089	8,304	6,967	5,020	5,124	4,612	5,285	*10,640
1934	3,386	3,583	4,357	5,288	6,113	15,440	7,814	8,019	15,900	6,369	5,920	4,751	7,246
1935	10,590	4,389	6,989	11,620	8,819	12,130	10,510	9,667	4,364	6,806	6,907	6,246	8,006
1936	2,924	7,046	5,659	40,980	23,470	16,650	58,700	7,896	5,768	4,323	6,989	4,026	15,290
1937	18,760	5,771	12,620	31,620	23,190	13,620	15,720	13,710	7,242	5,520	8,200	6,792	13,750
1938	13,270	6,245	6,430	6,472	4,814	8,598	19,680	6,219	8,524	13,920	7,190	3,980	8,802
1939	3,010	4,587	5,190	6,503	25,092	22,410	10,740	8,399	6,032	5,861	11,830	4,927	9,437
1940	3,432	3,192	4,304	8,433	13,890	10,150	8,762	4,497	4,436	4,371	27,130	8,205	8,410
1941	2,682	6,602	7,500	8,308	5,188	10,730	7,052	3,615	6,138	15,870	5,322	2,735	6,838
1942	2,325	2,673	10,800	7,382	15,650	26,590	8,490	8,897	5,832	5,784	7,266	5,046	8,723
1943	4,072	4,472	10,360	26,330	14,670	19,380	14,610	8,975	6,725	13,620	6,219	4,932	11,210
1944	3,662	4,528	6,157	10,460	18,720	33,660	20,620	9,586	5,936	4,745	4,493	3,701	10,500
1945	3,953	4,066	4,671	5,802	13,400	9,961	12,720	6,855	4,507	5,182	5,008	7,770	6,936
1946	3,897	4,527	15,990	26,180	21,370	16,560	15,740	13,080	7,316	5,522	5,368	3,906	11,580
1947	7,506	5,844	5,093	21,560	8,909	16,070	14,610	6,030	5,870	4,366	4,336	3,248	8,632
1948	4,887	20,450	13,970	11,310	29,050	24,120	17,220	8,419	6,631	10,330	8,349	6,834	13,390
1949	4,791	21,250	21,670	17,920	25,140	12,860	14,550	18,670	11,940	14,190	11,800	13,080	15,580
1950	9,557	9,393	8,433	9,481	8,759	11,570	7,607	5,907	7,448	6,916	4,358	8,250	8,135

* Revised.

† Corrected.

* Not previously published; estimated or partly estimated on basis of unpublished records of Geological Survey.

† Computed on basis of records to June 10 by Corps of Engineers and subsequent to June 10, by Geological Survey.

† Computed on basis of records to July 31 by Geological Survey and subsequent to that date by Corps of Engineers.

Note.--Records June 11, 1933, to Sept. 30, 1936, not previously published, are computed by Corps of Engineers, on basis of gage heights and discharge measurements.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1884	*0.42	*0.60	*0.68	1.68	1.98	5.28	2.79	1.04	2.32	1.33	0.74	0.41	*19.27
1885	.38	.45	1.59	3.50	2.69	1.36	2.83	1.12	1.00	.62	.63	1.20	15.37
1886	1.87	1.78	1.80	3.78	1.29	2.09	3.32	3.11	2.56	3.07	1.15	.84	26.66
1887	.52	.61	1.03	.97	1.89	1.57	.67	.74	.98	1.94	5.65	.76	17.78
1888	.89	.68	1.38	2.70	2.97	3.91	2.29	2.19	1.28	1.84	1.97	*.58	*27.42
1889	2.02	3.00	2.03	4.28	5.79	2.47	1.64	1.05	1.01	1.71	2.57	1.46	27.03
1890	.79	1.55	.87	.81	1.35	1.96	1.28	1.54	.85	1.30	.96	1.27	14.53
1891	3.11	.83	1.13	2.33	4.90	6.63	3.02	1.40	1.33	1.04	2.13	.87	28.72
1892	.56	.93	.73	-	-	-	-	-	-	-	-	-	-
1896	-	-	-	*1.80	*2.50	*1.12	*.82	*.78	*.61	*2.68	*.55	*.52	-
1897	*.44	*1.22	*1.64	*3.48	*3.52	*3.22	*2.27	*1.20	*.85	*1.16	*1.30	*.63	*19.51
1898	*.60	*.59	*.84	*1.04	*.71	*1.00	*1.81	*.70	*.55	*1.78	*2.14	*3.31	*15.07
1899	*2.32	*1.56	*1.64	*2.55	5.02	3.95	2.22	1.22	.94	.82	.82	.86	*23.92
1900	.89	.74	1.12	1.15	3.78	2.92	†3.10	1.48	3.50	1.52	.92	.96	†22.08
1901	1.06	1.15	1.54	2.27	2.38	2.41	3.90	2.44	3.01	1.43	4.18	3.17	28.94
1902	1.46	1.16	2.95	1.86	3.97	5.74	2.08	1.34	1.15	*.88	*.93	1.15	*24.67
1903	1.02	.90	2.02	1.68	5.70	5.25	3.07	1.60	*2.67	*1.16	*1.30	.82	*27.19
1904	.67	.77	.70	.89	1.37	1.36	.85	.68	.63	.60	1.87	.58	10.97
1905	.33	.46	.76	1.13	2.70	1.15	.83	1.56	.73	2.01	1.23	.63	13.54
1906	.62	.59	3.07	*4.56	1.52	3.71	1.66	1.28	2.48	3.10	2.58	3.02	*28.18
1907	*2.88	1.36	1.52	-	-	-	-	-	-	-	-	-	-

* Revised.

† Corrected.

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Savannah River at Augusta, Ga.

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1884	(a)	\$61,000	Apr. 16, 1884	\$2,060	\$10,255	\$1.42	\$19.27	10,640	19.99
1885	(a)	\$77,000	Jan. 26, 1885	1,980	8,186	1.13	15.37	9,857	18.40
1886	(a)	\$135,000	May 21, 1886	3,500	14,220	1.96	26.66	12,560	23.62
1887	(a)	\$173,000	July 31, 1887	3,020	9,466	1.31	17.78	9,731	18.27
1888	(a), 1433	\$303,000	Sept. 11, 1888	3,500	\$14,578	\$2.01	\$27.42	\$16,782	\$31.57
1889	(a)	\$149,000	Feb. 19, 1889	4,340	14,410	1.99	27.03	12,445	23.19
1890	(a)	\$48,500	Feb. 27, 1890	2,700	7,753	1.07	14.53	8,728	16.39
1891	(a)	\$197,000	Mar. 10, 1891	3,300	15,320	2.12	28.72	13,928	25.87
1892	(a)	\$140,000	Jan. 20, 1892	-	-	-	-	-	-
1896	1433	\$107,000	July 10, 1896	-	-	-	-	\$7,603	\$14.69
1897	1433	\$95,300	Apr. 6, 1897	\$1,990	\$10,410	\$1.44	\$19.51	\$9,731	\$18.24
1898	1433	\$117,000	Sept. 2, 1898	\$2,080	\$8,037	\$1.11	\$15.07	\$9,896	\$18.56
1899	197, 1433	\$113,000	Feb. 8, 1899	2,350	\$12,747	\$1.76	\$23.92	\$11,275	\$21.15
1900	197	\$138,000	Feb. 15, 1900	3,000	\$11,780	\$1.63	\$22.08	\$12,309	\$23.08
1901	197	\$124,000	Apr. 4, 1901	3,940	15,450	2.13	28.94	\$16,426	\$30.76
1902	197, 1433	\$175,000	Mar. 1, 1902	\$3,920	\$15,159	\$1.82	\$24.67	\$12,288	\$23.04
1903	197, 1433	\$147,000	Feb. 9, 1903	3,740	\$14,498	\$2.00	\$27.19	\$15,531	\$25.39
1904	197	\$65,000	Aug. 10, 1904	2,060	5,857	.806	10.97	\$15,529	10.38
1905	197	\$64,800	Feb. 14, 1905	1,450	7,227	.998	13.54	\$16,677	16.26
1906	204, 1433	\$96,600	Jan. 5, 1906	2,650	\$15,000	\$2.07	\$26.18	\$15,800	\$29.67
1907	204, 1433	\$52,000	Oct. 5, 1906	-	-	-	-	-	-
1925	(b)	\$150,000	Jan. 20, 1925	-	-	-	-	7,893	14.79
1926	(b)	\$55,300	Jan. 20, 1926	1,380	7,586	1.02	13.85	7,744	14.51
1927	(b), 642	\$59,000	Dec. 30, 1926	1,160	6,163	.851	11.57	6,220	11.67
1928	662	\$226,000	Aug. 17, 1928	1,040	11,100	1.53	20.84	11,210	21.07
1929	682	\$43,000	Sept. 27, 1929	3,580	16,500	2.28	30.95	21,130	39.66
1930	697	\$50,000	Oct. 3, 1929	1,970	12,200	1.69	22.96	7,637	14.31
1931	712	26,100	Nov. 17, 1930	1,420	6,700	.925	12.55	6,806	12.74
1932	727, (b)	\$93,800	Jan. 9, 1932	1,230	\$9,627	\$1.35	\$18.09	\$11,990	\$22.53
1933	(b)	\$92,800	Oct. 18, 1932	2,280	\$10,640	\$1.47	\$19.92	\$7,462	\$15.97
1934	(c)	\$73,200	Mar. 5, 1934	1,950	7,246	1.00	13.56	8,115	15.21
1935	(c)	\$63,700	Mar. 14, 1935	2,095	8,006	1.11	15.01	7,495	14.06
1936	(c)	\$258,000	Apr. 8, 1936	1,595	15,290	2.11	28.74	17,110	32.00
1937	(c)	\$91,400	Jan. 4, 1937	2,975	13,750	1.83	24.87	12,800	23.15
1938	(c)	\$91,400	Oct. 21, 1937	1,860	8,802	1.17	15.91	7,672	13.86
1939	872	\$0,900	Mar. 2, 1939	1,770	9,437	1.26	17.07	9,298	16.81
1940	892	\$39,000	Aug. 15, 1940	1,340	8,410	1.12	15.23	8,898	\$16.12
1941	922	\$5,300	July 8, 1941	1,510	6,858	.911	\$12.37	6,765	\$12.25
1942	952	\$105,000	Mar. 23, 1942	1,390	8,723	1.16	\$15.79	8,982	16.24
1943	972	\$117,000	Jan. 20, 1943	2,700	11,210	1.49	\$20.25	10,820	19.56
1944	1002	\$128,000	Mar. 22, 1944	2,780	10,500	1.40	\$19.02	10,360	18.78
1945	1032	\$64,000	Apr. 27, 1945	2,350	6,956	.924	12.53	7,930	14.33
1946	1052	\$97,200	Jan. 9, 1946	2,550	11,580	1.54	20.96	11,070	20.03
1947	1082	\$6,000	Jan. 22, 1947	1,840	9,632	1.15	15.62	10,360	18.75
1948	1112	\$5,200	Feb. 10, 1948	1,900	13,390	1.78	24.27	14,100	25.57
1949	1142	\$85,000	Nov. 30, 1948	2,930	15,580	2.08	28.17	13,890	25.09
1950	1172	\$2,500	Oct. 9, 1949	2,850	8,135	1.08	14.71	-	-

* Revised.

† Corrected.

‡ Not previously published.

a 14th Ann. Rept. Pt. 2.

b From Congressional documents: 74th Cong., 1st Sess., H. Doc. 64, Savannah River Jan. 1, 1925, to June 10, 1927, Aug. 1, 1932, to June 11, 1933.

c From unpublished records of Corps of Engineers, U. S. Army June 12, 1933, to Sept. 30, 1938.

Note.--Monthly figures of discharge, in cubic feet per second per square mile, and runoff in inches, for 1927-39 previously published in water-supply papers may be subject to appreciable error because of regulation in reservoirs upstream. These figures are not included in this report and should not be used.

313. Savannah River at Burtons Ferry Bridge, near Millhaven, Ga.

Location.--Lat 32°56'20", long 81°30'10", at bridge on U. S. Highway 301, 2 miles downstream from Rocky Creek, 9 miles east of Millhaven, Screven County, and at mile 114.5 upstream from Savannah.

Drainage area.--8,650 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 52.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 28, 1939, staff gage at same site and datum.

Average discharge.--11 years (1939-50), 11,170 cfs.

Extremes.--1939-50: Maximum discharge, 141,000 cfs Aug. 18, 1940 (gage height, 27.0 ft); minimum daily, 2,240 cfs Oct. 18, 25, 1941. Flood of October 1929 reached a stage of 30.8 ft, from information by Corps of Engineers.

Remarks.--Flow partly regulated by reservoirs, powerplants, and New Savannah Bluff lock and dam above station.

Monthly and yearly mean discharge, in cubic feet per second, of Savannah River at Burtons Ferry Bridge, near Millhaven, Ga.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	4,182	3,807	4,792	9,086	14,790	10,680	9,345	5,114	5,071	5,078	28,040	9,677	9,131
1941	3,573	6,783	8,139	9,548	6,139	9,687	9,919	4,192	5,262	19,400	6,376	3,597	7,746
1942	2,984	3,284	9,764	11,050	14,670	28,120	11,900	9,450	7,007	6,498	7,474	5,739	9,817
1943	4,945	5,249	8,130	27,530	21,820	21,240	16,320	10,740	7,371	15,380	7,433	5,931	12,640
1944	4,566	5,540	6,401	12,630	18,780	33,880	25,430	13,270	6,894	5,651	5,308	4,576	11,890
1945	4,602	4,332	5,919	6,787	12,290	11,690	10,270	11,840	5,172	5,405	6,006	8,201	7,680
1946	4,877	5,025	12,290	33,190	22,330	16,690	19,180	14,100	8,167	6,172	5,966	4,574	12,670
1947	8,020	7,210	9,733	23,610	10,480	17,680	16,660	7,625	7,618	5,541	5,497	4,479	9,746
1948	5,954	22,070	16,130	12,860	50,440	26,710	21,570	9,045	8,674	10,430	9,177	17,979	15,000
1949	6,818	12,150	32,430	21,650	26,880	14,960	15,760	20,630	13,050	15,050	12,100	16,100	17,250
1950	10,510	10,470	9,305	11,070	10,440	12,580	9,574	6,944	8,663	7,730	5,609	8,917	9,307

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.56	0.49	0.64	1.21	1.84	1.42	1.20	0.68	0.65	0.68	3.74	1.25	14.36
1941	.48	.87	1.08	1.27	.74	1.29	1.28	.56	.68	2.58	.85	.46	12.14
1942	.40	.42	1.30	1.48	1.77	3.75	1.54	1.26	.90	1.00	.74	.74	15.43
1943	.66	.68	1.08	3.67	2.62	2.84	2.11	1.43	.99	2.05	.99	.77	19.85
1944	.61	.71	1.86	1.66	†2.34	4.52	3.28	1.76	.85	.75	.71	.59	18.69
1945	.61	.56	.79	.90	1.48	1.56	1.33	1.58	.67	.72	.80	1.06	12.06
1946	.65	.65	1.64	4.43	2.69	2.22	2.48	1.88	1.05	.82	.80	.59	19.90
1947	1.07	.80	.74	2.87	1.26	2.35	2.15	1.02	.98	.74	.73	.58	15.29
1948	.79	2.84	2.14	1.72	3.80	3.56	2.78	1.21	1.12	1.40	1.22	1.03	23.61
1949	.91	1.56	4.32	2.88	3.24	1.99	2.03	2.74	1.68	2.01	1.61	2.08	27.05
1950	1.41	1.35	1.24	1.48	1.26	1.67	1.24	.93	1.12	1.03	.75	1.15	14.63

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	892	141,000	Aug. 18, 1940	2,400	9,131	1.06	14.36	9,607	15.10
1941	922	38,400	July 13, 1941	2,320	7,746	.895	12.14	7,546	11.83
1942	952	75,000	Mar. 26, 1942	2,240	9,817	1.13	15.43	10,000	15.73
1943	972	80,900	Jan. 23, 1943	3,600	12,640	1.46	19.85	12,490	19.60
1944	1002	89,300	Mar. 26, 1944	3,440	11,890	1.37	18.69	11,750	18.48
1945	1032	42,900	May 1, 1945	3,120	7,680	.888	12.06	8,302	13.04
1946	1052	68,600	Jan. 12, 1946	3,530	12,670	1.46	19.90	12,470	19.57
1947	1082	67,500	Jan. 25, 1947	2,720	9,746	1.13	15.29	11,770	18.45
1948	1112	61,000	Feb. 14, 1948	3,230	15,000	1.73	23.61	15,640	24.63
1949	1142	108,000	Dec. 3, 1948	4,900	17,250	1.99	27.05	15,460	24.26
1950	1172	18,500	Oct. 14, 1949	4,120	9,307	1.08	14.63	-	-

314. Brier Creek at Millhaven, Ga.

Location.--Lat 32°56'00", long 81°39'05"; near right bank on downstream side of pier of highway bridge at Millhaven, Screven County, 8½ miles upstream from Beaver Dam Creek.

Drainage area.--646 sq mi (revised).

Gage.--Wire-weight gage. Datum of gage is 95.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1950, staff gage at site 200 ft downstream at same datum.

Average discharge.--14 years (1936-50), 649 cfs.

Extremes.--1936-50: Maximum discharge, 25,400 cfs Aug. 16, 1940 (gage height, 17.4 ft, from graph based on gage readings); minimum observed, 110 cfs June 30, July 2, 1945. Maximum stage known, 25.1 ft in September or October 1929, from information by Georgia State Highway Department.

Remarks.--Slight diurnal fluctuation at low flow caused by gristmills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	#850	#530	#1,320	#1,350	#1,700	#1,240	#1,232	1,141	439	316	356	443	#906
1938	303	391	495	433	390	422	1,155	405	460	392	352	186	452
1939	209	294	429	452	963	1,892	806	351	311	520	425	373	584
1940	305	255	366	729	1,026	706	590	265	249	336	2,817	411	673
1941	326	626	687	681	541	728	639	215	301	1,103	368	271	543
1942	267	309	849	1,123	1,019	2,150	1,073	637	469	423	300	255	740
1943	261	327	689	1,246	1,029	1,576	869	578	350	445	372	270	667
1944	210	310	504	971	1,160	2,211	1,386	719	323	267	280	354	724
1945	355	353	484	506	598	614	366	358	153	194	435	384	399
1946	338	308	710	1,234	767	788	800	802	366	362	328	275	593
1947	508	489	417	792	555	1,581	1,485	603	550	333	552	389	688
1948	571	1,580	1,944	1,490	2,376	2,635	2,014	805	597	633	534	954	1,339
1949	916	965	2,091	1,264	1,635	1,078	836	837	894	482	527	639	1,011
1950	497	457	623	542	512	848	485	327	315	294	167	312	448

* Not previously published; estimated or partly estimated on basis of records for South Fork Edisto River near Denmark, S. C.

Monthly and yearly runoff, in inches, of Brier Creek at Millhaven, Ga.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	#1.52	#0.91	#2.35	#2.41	#2.74	#2.21	#2.13	2.04	0.76	0.56	0.64	0.77	#19.04
1938	.54	.68	.87	.88	.61	.75	2.00	.72	.79	.70	.63	.32	9.49
1939	.37	.51	.77	.81	1.55	3.38	1.40	.63	.54	.93	.76	.64	12.29
1940	.54	.44	.65	1.50	1.72	1.26	1.02	.47	.43	.60	5.03	.71	14.17
1941	.58	1.08	1.22	1.21	.87	1.30	1.10	.38	.52	1.97	.69	.47	11.39
1942	.48	.53	1.51	2.01	1.64	3.84	1.85	1.14	.81	.76	.53	.44	15.54
1943	.47	.56	1.23	2.22	1.66	2.81	1.51	1.03	.60	.79	.66	.47	14.01
1944	.37	.54	.90	1.73	1.94	3.94	2.40	1.28	.56	.48	.50	.61	15.25
1945	.63	.61	.86	.90	.96	1.10	.63	.64	.26	.35	.78	.66	8.38
1946	.60	.53	1.27	2.20	1.27	1.41	1.38	1.43	.67	.65	.59	.48	12.48
1947	.91	.84	.74	1.42	.89	2.82	2.57	1.08	.95	.59	.98	.67	14.46
1948	1.02	2.73	3.47	2.66	3.97	4.70	3.48	1.44	1.03	1.13	.95	1.65	28.23
1949	1.64	1.66	3.74	2.26	2.64	1.92	1.44	1.50	1.54	.86	.94	1.10	21.24
1950	.89	.79	1.11	.97	.83	1.51	.84	.58	.54	.52	.30	.54	9.42

* Not previously published; see footnote to preceding table.

Year	W.S.P. no.	Yearly discharge, in cubic feet per second							Calendar year	
		Water year ending Sept. 30					Runoff in inches	Mean	Runoff in inches	
		Momentary maximum		Minimum day	Mean	Per square mile				
Discharge	Date									
1937	822	-	-	-	-	#906	#1.40	#19.04	#777	#16.35
1938	852	3,110	Apr. 13, 1938	147	452	.700	.949	431	9.05	
1939	872	5,900	Mar. 3, 5, 1939	139	584	.904	12.29	583	12.27	
1940	892	25,400	Aug. 16, 1940	147	673	1.04	14.17	732	15.42	
1941	922	2,720	July 22, 1941	123	543	.941	11.39	526	11.03	
1942	952	4,100	Mar. 26, 1942	164	740	1.15	15.54	727	15.28	
1943	972	4,100	Mar. 26, 1943	171	667	1.03	14.01	646	13.56	
1944	1002	6,360	Mar. 28, 1944	180	724	1.12	15.25	738	15.54	
1945	1032	997	Mar. 3, 1945	110	399	1.68	8.38	413	8.68	
1946	1052	2,040	Jan. 1, 1946	167	593	.918	12.48	598	12.57	
1947	1082	3,800	Mar. 13, 1947	176	688	1.07	14.46	913	19.19	
1948	1112	4,980	Sept. 11, 1948	266	1,339	2.07	28.23	1,331	28.05	
1949	1142	4,700	Dec. 3, 1948	317	1,011	1.57	21.24	808	16.99	
1950	1172	1,200	Mar. 16, 1950	117	448	.695	9.42	-	-	

* Not previously published.

315. Savannah River near Clio, Ga.

Location.--Lat 32°31'30", long 81°15'45", at bridge on Seaboard Air Line Railroad 3 miles north of Clio, Effingham County, and at mile 50.1 upstream from Savannah.

Drainage area.--9,850 sq mi, approximately.

Supplemental records available.--Records of chemical analyses and water temperature for the period October 1938 to September 1939 are published in report of Geological Survey. Gage-height records collected at same site 1921-43 by U. S. Weather Bureau (unpublished prior to 1933).

Gage.--Water-stage recorder. Datum of gage is 13.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 31, 1933, staff gage at same site and datum 4.00 ft higher. Jan. 31, 1933, to June 12, 1945, staff gage at same site and datum.

Average discharge.--17 years (1929-33, 1937-50), 12,180 cfs.

Extremes.--1929-33, 1937-50: Maximum gage height, 29.7 ft (present datum, from information by Corps of Engineers) Oct. 6, 1929 (discharge not determined); minimum daily discharge, 1,950 cfs Sept. 27, 1931.

Remarks.--Flow partly regulated by Burton and Mathis Reservoirs (see elsewhere in this report), powerplants, and New Savannah Bluff lock and dam above station.

Cooperation.--Records for 1930-33 not previously published by the Geological Survey are furnished by Corps of Engineers.

Monthly and yearly mean discharge, in cubic feet per second, of Savannah River near Clio, Ga.

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1930	83,660	19,440	21,270	18,580	20,390	16,790	14,140	9,365	8,053	7,042	5,915	6,524	19,330
1931	5,081	9,472	10,900	13,500	9,136	10,410	12,540	11,610	5,316	5,272	5,801	3,098	8,499
1932	2,774	3,234	12,350	24,350	17,370	17,870	11,830	8,526	10,470	8,351	9,614	4,417	10,760
1933	10,520	12,230	19,530	27,360	22,910	16,370	11,100	9,577	6,142	6,744	5,318	6,982	12,860
1938	10,520	10,840	8,729	9,233	6,922	9,275	22,960	7,663	9,678	7,822	15,890	5,173	10,410
1939	4,249	5,214	5,948	8,527	20,580	31,050	13,600	9,493	7,487	6,506	10,450	7,298	10,820
1940	5,094	4,321	5,122	9,487	13,320	12,820	10,340	5,935	5,660	5,705	32,850	9,971	10,060
1941	4,293	7,204	8,886	10,670	7,180	9,833	11,240	4,873	4,951	21,260	7,430	4,119	8,523
1942	3,431	3,847	7,581	14,880	13,680	29,180	17,220	9,391	9,072	7,328	7,841	6,483	10,820
1943	5,406	5,597	8,475	26,100	23,750	19,750	16,400	12,660	8,151	14,570	8,205	6,222	12,890
1944	4,679	5,720	6,143	14,000	18,110	34,780	30,780	14,610	7,426	6,165	5,535	5,199	12,740
1945	5,164	4,855	6,843	7,605	10,670	13,640	9,871	12,470	5,496	5,435	7,242	9,327	8,207
1946	5,456	5,157	10,160	34,230	19,590	17,310	17,970	14,280	9,243	6,704	6,500	5,007	12,610
1947	8,299	7,346	6,235	19,280	12,860	20,280	20,800	9,733	9,479	6,514	6,152	5,250	11,010
1948	7,124	26,510	20,750	17,750	37,320	33,880	30,850	10,820	9,983	10,920	10,140	9,550	18,690
1949	8,511	11,200	39,150	23,670	26,930	17,980	16,710	22,240	13,890	15,150	12,760	17,700	18,800
1950	11,450	11,150	9,870	11,650	11,260	13,400	10,610	7,500	9,273	7,871	6,318	10,330	10,040

* Not previously published; estimated or partly estimated by the Geological Survey on basis of once-daily gage readings by U. S. Weather Bureau and estimated rating curve and records for station at Augusta.

Monthly and yearly runoff, in inches

Water year	Monthly												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1930	9.79	2.20	2.49	2.18	2.16	1.96	1.61	1.10	0.91	0.82	0.69	0.74	26.65
1931	5.59	1.07	1.28	1.56	.97	1.22	1.42	1.36	.60	.62	.68	.35	11.72
1932	.33	.37	1.44	2.85	1.90	2.09	1.34	1.00	11.18	7.74	11.13	.50	14.87
1933	11.23	11.38	2.28	3.20	2.43	1.91	1.26	1.12	1.70	1.79	1.62	1.79	17.71
1938	1.23	1.23	1.02	1.08	.74	1.09	2.60	.90	1.10	.92	1.86	.59	14.36
1939	.50	.62	.70	.97	2.18	3.63	1.54	1.11	.85	.76	1.22	.83	14.91
1940	.60	.49	.60	1.11	1.46	1.50	1.17	.70	.84	.67	3.85	1.13	13.92
1941	.50	.82	1.04	1.24	.76	1.15	1.27	.57	.56	2.49	.87	.47	11.74
1942	.40	.44	.89	1.74	1.45	3.41	1.95	1.10	1.03	.86	.92	.73	14.92
1943	.63	.63	.99	3.06	2.51	2.32	1.85	1.49	.92	1.71	.96	.71	17.78
1944	.55	.65	.72	1.64	1.98	4.07	3.48	1.71	.84	.72	.65	.59	17.60
1945	.60	.55	.80	.89	1.12	1.59	1.12	1.46	.62	.64	.85	1.06	11.30
1946	.64	.58	1.19	4.01	2.07	2.03	2.03	1.67	1.05	.79	.76	.57	17.39
1947	.97	.83	.73	2.26	1.36	2.38	2.35	1.14	1.07	.76	.72	.59	15.16
1948	.85	3.00	2.45	2.08	4.09	5.97	3.49	1.27	1.13	1.28	1.19	1.08	25.84
1949	1.00	1.27	4.58	2.77	2.84	2.11	1.90	2.61	1.57	1.78	1.50	2.01	25.94
1950	1.34	1.26	1.15	1.36	1.19	1.57	1.20	.88	1.05	.92	.74	1.17	13.83

* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	(a)	-	Oct. 6, 1929	3,720	19,330	1.96	26.65	10,960	15.11
1931	(a)	18,200	Nov. 28, 1930	1,950	8,499	1.863	11.72	7,913	10.92
1932	(a)	59,600	Jan. 15, 1932	2,260	10,760	1.09	14.87	12,760	17.62
1933	(a)	59,600	Jan. 4, 1933	3,630	12,860	1.31	17.71	-	-
1938	872	48,400	Apr. 15, 1938	3,620	10,410	1.06	14.36	9,200	12.70
1939	872	70,100	Mar. 7, 8, 1939	3,350	10,820	1.10	14.91	10,720	14.78
1940	892, 1112	128,000	Aug. 21, 22, 1940	3,460	10,060	1.02	13.92	10,550	14.59
1941	922, 1112	36,500	July 17, 1941	3,010	8,523	.865	11.74	8,063	11.11
1942	952	73,000	Mar. 29, 1942	2,830	10,820	1.10	14.92	11,210	15.44
1943	972	73,000	Jan. 27, 1943	4,090	12,890	1.31	17.78	12,640	17.45
1944	1002	95,200	Mar. 29, 1944	4,280	12,740	1.29	17.60	12,770	17.63
1945	1032	34,400	May 5, 1945	3,580	8,207	.833	11.50	8,538	11.76
1946	1052	64,400	Jan. 16, 1946	4,120	12,610	1.28	17.59	12,700	17.51
1947	1082	63,200	Jan. 28, 1947	3,420	11,010	1.12	15.16	13,720	18.89
1948	1112	71,000	Feb. 17, 1948	4,050	18,690	1.90	25.84	19,120	26.43
1949	1142	104,000	Dec. 6, 1948	6,100	18,800	1.91	25.94	16,560	22.84
1950	1172	16,000	(b)	4,860	10,040	1.02	13.83	-	-

* Not previously published.
 a From Congressional documents: 74th Congress, 1st Session; H. Doc. 64, Savannah River, except for periods estimated or partly estimated by the Geological Survey.
 b Oct. 18, 19, 1949, Mar. 24, 1950.

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