

Surface Water Supply of the United States 1958

Part 3-B. Cumberland and Tennessee River Basins

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

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1556

*Prepared in cooperation with the States
of Alabama, Kentucky, North Carolina,
Tennessee, and Virginia, and with other
agencies*



UNITED STATES DEPARTMENT OF THE INTERIOR

FRED A. SEATON, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Alabama, Kentucky, North Carolina, Tennessee, and Virginia, and with other agencies, by personnel of the Water Resources Division, L. B. Leopold, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and F. J. Flynn, chief, Basic Records Section.

The data were collected and computed under supervision of district engineers, Surface Water Branch, as follows:

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E. B. Rice	Raleigh, N. C.
F. F. Schrader.....	Louisville, Ky.
D. S. Wallace, succeeded by J. W. Gambrell	Charlottesville, Va.
M. R. Williams.....	Montgomery, Ala.

CALENDAR FOR WATER YEAR 1958

OCTOBER 1957

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NOVEMBER 1957

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DECEMBER 1957

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JANUARY 1958

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FEBRUARY 1958

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APRIL 1958

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MAY 1958

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JUNE 1958

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JULY 1958

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AUGUST 1958

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SEPTEMBER 1958

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SURFACE WATER SUPPLY OF CUMBERLAND AND TENNESSEE RIVER BASINS, 1958

SCOPE OF WORK

This volume is one of a series of 18 reports presenting measurements of stage, discharge, and content of streams, lakes, and reservoirs in the United States during the water year ending September 30, 1958. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 14,000 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1958, the Geological Survey and cooperating organizations were maintaining 7,090 gaging stations, including those in Alaska and Hawaii. Partial-record stations for low flow or for flood flow have been operated at many other points. In addition discharge measurements are made at miscellaneous sites. The records for the water year October 1, 1957, to September 30, 1958, at gaging stations, partial-record stations, and miscellaneous sites in the Cumberland and Tennessee River basins are given in this report.

COOPERATION

Many State, municipal, and private organizations have cooperated with the Geological Survey in this work by either furnishing or helping to collect data. Organizations that supplied data are acknowledged in station descriptions, and organizations that assisted in the collection of data through cooperative agreements with the Survey are:

Alabama: State Geological Survey, W. B. Jones, State geologist.

Kentucky: Department of Economic Development, G. W. Hubley, Jr., commissioner; University of Kentucky, F. C. Dickey, president, through State Geological Survey, W. W. Hagan, director and state geologist.

North Carolina: State Department of Conservation and Development, W. P. Saunders, director; city of Asheville, Weldon Weir, city manager; city of Waynesville, W. H. Way, mayor.

Tennessee: State Department of Conservation, J. N. McCord, commissioner, succeeded by E. B. Noles, through Division of Water Resources, R. W. Robinson, water engineer; State Department of Public Health, R. H. Hutcheson, commissioner, through Stream Pollution Control, S. L. Jones, director; State Department of Highways and Public Works, W. M. Leech, commissioner, through H. M. Bates, chief engineer, and F. Greve, bridge engineer; city of Knoxville, Department of Public Service, R. I. Gentry, director; city of Murfreesboro, Water Department, J. W. Lovell, superintendent.

Virginia: State Department of Highways, J. A. Anderson, commissioner, succeeded by F. A. Davis, succeeded by S. D. May.

Under a cooperative agreement covering the Tennessee River basin and the Caney Fork basin above Great Falls Dam, the Tennessee Valley Authority furnished financial assistance for the operation of 96 gaging stations, of which 7 were in Alabama, 6 in Georgia, 1 in Kentucky, 19 in North Carolina, 47 in Tennessee, and 16 in Virginia.

Assistance in the form of funds or services was given by the Corps of Engineers, Department of the Army, in collecting records published herein for 15 gaging stations in Kentucky and 18 in Tennessee.

Assistance was also furnished by the Arnold Engineering Development Center, Department of the Air Force, Atomic Energy Commission, and the Weather Bureau, United States Department of Commerce.

The following organizations aided in collecting records:

North Carolina: Town of Highlands; American Enka Corp.; Carolina Power & Light Co.; Champion Paper & Fibre Co.; Olin Mathieson Chemical Corp.; and the Mead Corp., Sylva Division.

Tennessee: Aluminum Co. of America; Tennessee Copper Co; Bowaters Southern Paper Corp.

Virginia: American Cyanamid Co.

DIVISION OF WORK

The stream-gaging work was done by the Water Resources Division of the Geological Survey, under the direction of personnel shown in the preface. The data for stations in the several States were collected and prepared for publication in the district offices listed below.

<u>State</u>	<u>District office</u>	<u>Address</u>
Alabama.....	Montgomery.....	507 New Post Office Building.
Kentucky <u>a/</u>	Louisville.....	522 West Jefferson St.
North Carolina <u>b/</u>	Raleigh.....	Federal Building.
Tennessee <u>c/</u>	Chattanooga.....	823 Edney Building.
Virginia.....	Charlottesville.....	Natural Resources Building, University of Virginia.

a/ Except for Tennessee River near Paducah.

b/ Including stations in the Tennessee River basin in Georgia except those in the Toccoa River basin.

c/ Including stations in the Toccoa River basin in Georgia and Tennessee River near Paducah, Ky., Tennessee River at Florence and at Whitesburg, Ala., Bear Creek at Bishop, Ala., and Paint Rock River near Woodville, Ala.

Information of a more detailed nature than that published for most of the gaging stations given in this report is on file in the district offices listed above. All gaging-station records for Kentucky and North Carolina have been analyzed by electronic computer to give: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for periods of 7, 15, 30, 60, 120, and 183 consecutive days in each year; and (3) the highest mean discharge for periods of 3, 7, 15, 30, and 120 consecutive days in each year. Provisional records of discharge, information on the availability of electronic computer results, and other unpublished data concerning the gaging-station records may generally be obtained from the district offices.

DEFINITION OF TERMS AND ABBREVIATIONS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied herein only to those gaging stations where a continuous record of discharge is obtained.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

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

Runoff in inches (in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Acre-foot (ac-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, a long reach of the channel, or an artificial structure.

Contents is the volume of water in a reservoir. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

The drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

DOWNSTREAM ORDER AND STATION NUMBERS

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

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

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and regular gaging stations, so that the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete number for each station has eight digits, but the station number as shown in this report, just to the left of the station name, consists of only the essential digits of the complete number. For example, for a station with the complete number 3B-4515.00, the station number shown in this report is 4515. The notation in the two places to the left of the hyphen is the part number; it is 3B for all stations in this report and is therefore omitted.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

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

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage. If so, the rate of change in stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for other stations in the same or nearby basins. If the stage-discharge relation is affected by ice, this information is given in a note to the table. No mention is made of occasional days of ice effect if the degree of accuracy of daily records is not changed.

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1958 is shown on page IV for the purpose of finding the day of the week for any date.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations of revisions of the previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "Location" for some stations, is that determined and used by the Tennessee Valley Authority or the Corps of Engineers. Under "Records available" are given the periods for which there are published records generally equivalent to those at the present site. Under "Gage" are given the type of gage currently in use and the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of records available. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and conditions which affect the natural flow at the gaging station is given under "Remarks."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. In order to make it easier to find such revised records, a paragraph headed "Revisions (water years)" has been added to the description of all stations for which revised records have been published.

Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are concerned in the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton rating tables are generally published for all stations except those at which the daily discharge for the greater part of the open-water period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than one-tenth foot. Skeleton rating tables are generally not published for stations on canals.

For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the daily table gives the discharge corresponding to the daily mean gage height. For stations subject to such fluctuation the daily mean gage height may not indicate the true daily mean discharge, which must be obtained by averaging the discharge for parts of the day or by using the discharge integrator, an instrument for obtaining the daily mean discharge from a continuous gage-height graph and containing, as an essential element, a curve representing the stage-discharge relation at the station. For stations equipped with nonrecording gages, the table of daily discharge gives the discharge corresponding to once-daily readings of the gage, or to the mean of twice-daily readings, or to the mean gage height determined from gage-height graphs based on gage readings. For periods of rapidly changing stage, the daily mean discharge is determined from gage-height graphs based on gage readings, the frequency of which is stated in the station description.

In the table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Discharge for the month may be expressed in cubic feet per second per square mile (line headed "Cfsm"), or in inches (line headed "In."), or in acre-feet (line headed "Ac-ft"). Figures for cubic feet per second per square mile and runoff in inches are omitted if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence and corresponding gage heights of most stations are listed below the table of daily and monthly discharge. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man.

Footnotes to the table of daily discharge indicate periods when discharge was computed or estimated by unusual or special methods during periods of no gage-height record and ice effect, or by other effects that reduce the degree of accuracy of the records. Days on which discharge measurements were made are indicated by asterisk and footnote unless they were made at frequent regular intervals, in which instance the general frequency of discharge measurements is given under "Remarks" in the station description.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published each year for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

At many gaging stations water samples are collected from the streams for the purpose of making chemical analyses, computing dissolved solids, suspended sediment loads, and particle-size distribution, or measuring water temperatures. For most of these samples the results are published in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States" which is issued in four volumes. In this report under "Remarks" a reference is made to quality-of-water records collected at gaging stations on a regular basis and published in the quality-of-water reports. At many other gaging stations quality-of-water data are obtained at irregular intervals and published as "miscellaneous analyses" in quality-of-water reports; such records are not referred to in "Remarks" paragraph in this report. At many gaging stations water temperature is obtained also at the time a discharge measurement is made; such temperature readings are not reported in the quality-of-water annual reports.

Data collected at partial-record stations and at miscellaneous sites are given at the end of each report. Partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements at miscellaneous sites are given in a third table. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are given in special tables after the list of measurements at miscellaneous sites.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is believed to be less than 5 percent; "good," less than 10 percent; "fair," less than 15 percent; and "poor," probably

more than 15 percent. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

Discharge at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded does not actually show the water supply available at the stations for further development, because water must first be supplied to existing irrigation systems.

PUBLICATIONS

To facilitate publication of the annual series of reports, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the results of streamflow measurements were published in 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records are published in 18 volumes, there being 2 volumes each for Parts 1, 2, 3, and 6. The boundaries of the various parts are indicated by the following list and the map in 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.
 - 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.
- 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.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be purchased or consulted as follows:

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.
2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.
3. Sets are available for consultation in the offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page 2.

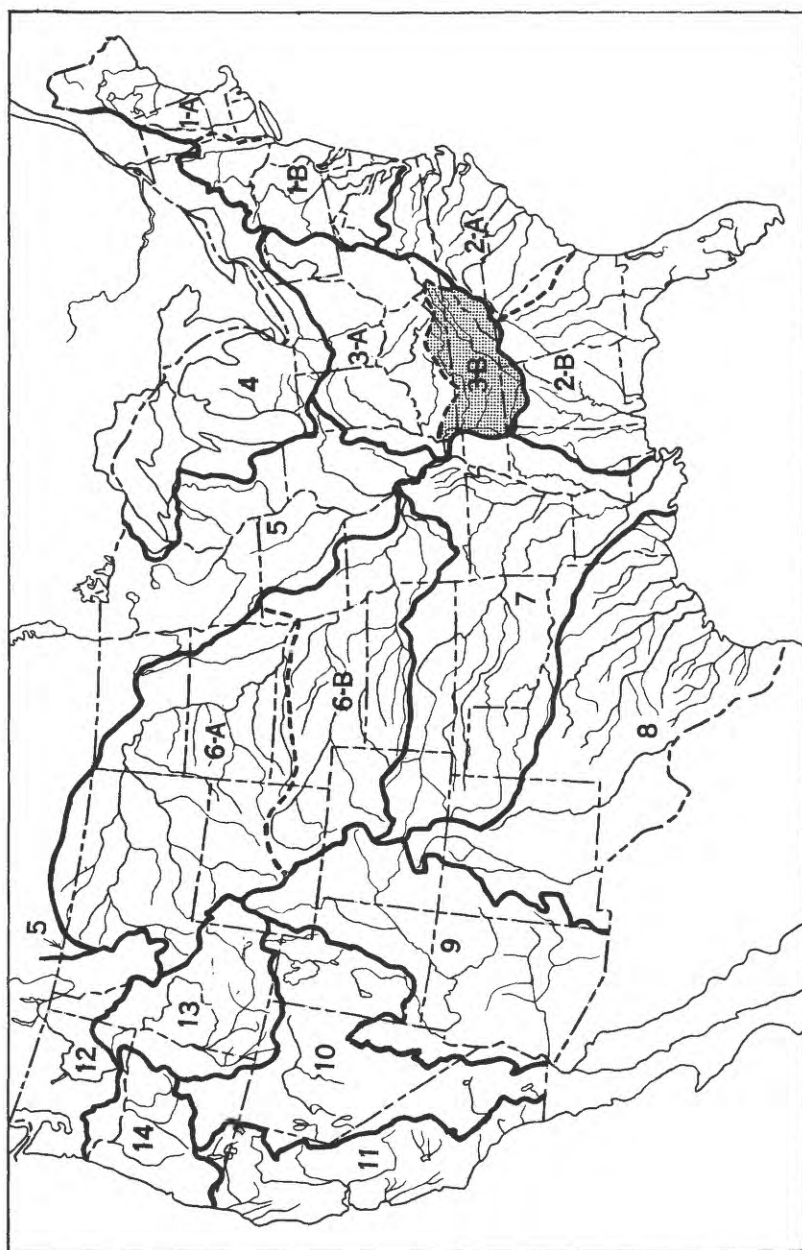


Figure 1.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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)

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

Reports on surface-water supply containing records from 1899 to date for drainage basins in this report are listed below. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained. Before 1951, records for the Cumberland and Tennessee River basins were included with those of the other streams of the Ohio River basin.

Numbers of water-supply papers containing results of stream measurements in Cumberland and Tennessee River basins, 1899-1958

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	36	1912	323	1925	603	1937	823	1949	1143
1900	48	1913	353	1926	623	1938	853	1950	1173
1901	65, 75	1914	383	1927	643	1939	873	1951	1206
1902	83	1915	403	1928	663	1940	893	1952	1236
1903	98	1916	433	1929	683	1941	923	1953	1276
1904	126	1917	453	1930	698	1942	953	1954	1336
1905	169	1918	473	1931	713	1943	973	1955	1386
1906	205	1919-20	503	1932	728	1944	1003	1956	1436
1907-8	243	1921	523	1933	743	1945	1033	1957	1506
1909	263	1922	543	1934	758	1946	1053	1958	1556
1910	283	1923	563	1935	783	1947	1083		
1911	303	1924	583	1936	803	1948	1113		

A compilation of records for the area covered by this report through September 1950 has been published as Water-Supply Paper 1306. That report contains a summary of monthly and annual discharges for all previously published records as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. 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. 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:

Report

WSP 334: The Ohio Valley flood of March-April 1913.
 WSP 771: Floods in the United States, magnitude and frequency.
 WSP 800: The floods of March 1936, Part 3, Potomac, James, and upper Ohio Rivers.
 WSP 838: Floods of Ohio and Mississippi Rivers, January-February 1937.
 WSP 847: Maximum discharges at stream-measurement stations through September 1938.
 WSP 1066: Floods of August 1940 in the southeastern States.
 WSP 1137-I: Summary of floods in the United States during 1950.
 WSP 1227-A: Floods of March-April 1951 in Alabama and adjacent States.
 WSP 1227-D: Summary of floods in the United States during 1951.
 WSP 1280-F: Summary of floods in the United States during 1952.
 Cir. 100: Floods in Georgia, frequency and magnitude.
 Cir. 342: Floods in Alabama, frequency and magnitude.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table below contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the water year October 1957 to September 1958 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey, nor have they been published elsewhere, except as noted in footnotes to the table.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Beech River.....	Near Darden, Tenn.....	1954-58	Tennessee Valley Authority.
Do.....	Near Lexington, Tenn.....	1953-58	Do.
Birdsong Creek.....	Near Holladay, Tenn.....	1940-58	Do.
Browns Creek.....	Near Chesterfield, Tenn.....	1953-58	Do.
Cane Creek.....	Near Shady Hill, Tenn.....	1953-58	Do.
Chambers Creek.....	Opposite Kendrick, Miss.....	1939-58a/	Do.
Chestuee Creek.....	Zion Hill, Tenn.....	1944-58	Do.
Do.....	Dentville, Tenn.....	1944-58	Do.
Coweeta Creek basin b/	Coweeta Hydrologic Laboratory near Franklin, N. C.	1934-58	U. S. Forest Service.
Cypress Creek (drainage ditch).	Near Gilbertsville, Ky.....	1943-58c/	Tennessee Valley Authority.
Harmon Creek.....	Near Lexington, Tenn.....	1953-58	Do.
Horse Creek.....	Near Savannah, Tenn.....	1939-58	Do.
Indian Creek.....	Near Cerro Gordo, Tenn.....	1939-58	Do.
Limestone Creek.....	U. S. Highway 72, near Athens, Ala.	1939-58	Do.
Little Chestuee Creek..	Below Wilson Station, Tenn.....	1947-58	Do.
Middle Creek.....	Below Highway 39 near Englewood, Tenn.	1944-58	Do.
Middleton Creek.....	Near Milledgeville, Tenn.....	1939-58	Do.
Millican Creek.....	Near Douglas Dam, Tenn.....	1942-58	Do.
Muddy Creek.....	Near Fort Loudon Dam, Tenn.....	1941-58d/	Do.
Parker Branch.....	Near Leicester, N. C.....	1952-58	Do.
Persimmon Creek.....	At Persimmon Creek Dam, near Letitia, N. C.	1942-58	Do.
Pigeon River basin e/..	Near Waynesville, N. C.....	1949-58	Do.
Pine Tree Branch.....	Near Lexington, Tenn.....	1941-58	Do.
Piney Creek.....	At Highway 104 near Lexington, Tenn.	1953-58	Do.
Pond Creek No. 1.....	Near Wilson Dam, Ala.....	1948-58	Do.
Pond Creek No. 2.....	...do.....	1948-58	Do.
Snake Creek.....	Near Adamsville, Tenn.....	1939-58	Do.
Turkey Creek (Beech River tributary).	Near Decaturville, Tenn.....	1953-58	Do.
Turkey Creek (Tennessee River tributary).	Near Savannah, Tenn.....	1939-58	Do.
West Flint Creek f/....	Near Hartselle, Ala.....	1941-58	Do.
White Creek.....	Near Sharps Chapel, Tenn.....	1934-58	Do.
White Oak Creek.....	Near Milledgeville, Tenn.....	1939-58	Do.
Yellow Creek.....	At Moser Bridge near Doskie, Miss.	1937-58	Do.

a/ Records observed near Kendrick from November 1939 to May 1942 and opposite Kendrick from May 1942 to 1958.

b/ The Southeastern Forest Experiment Station of the U. S. Forest Service operates 28 stations in Coweeta Creek basin in order to obtain records of runoff from small areas.

c/ Records for 1943-54 published in compilation report No. 1 by Tennessee Valley Authority; those for 1954-57 published in compilation report No. 2.

d/ Low-flow record only. Station not rated above 40 cfs, which is capacity of weir below gage.

e/ The Tennessee Valley Authority operates stations on 6 small watersheds ranging in area from 3.5 to 5.6 acres in the Pigeon River basin.

f/ Gage heights only when affected by backwater from Wheeler Reservoir.

HYDROLOGIC CONDITIONS

Streamflow averaged 20 to 45 percent above median during the 1958 water year at the five key gaging stations in the area covered by this report. Emory River at Oakdale, Tenn., had record-high monthly flow in October and November. Duck River above Hurricane Mills, Tenn., and Red River near Adams, Tenn., were also record-high for the month in November. Floods of November 18, 19 were the greatest known on several small streams in Kentucky and Tennessee, with records of 30 to 40 years. Monthly mean discharge of North Fork Holston River at Saltville, Va., was record-high for May. During February streamflow was deficient throughout Tennessee.

Figure 2, on page 13, for which records of three long-term gaging stations were used, shows a comparison of the monthly and yearly mean discharges for the 1958 water year with the median discharge for the period 1921-45.

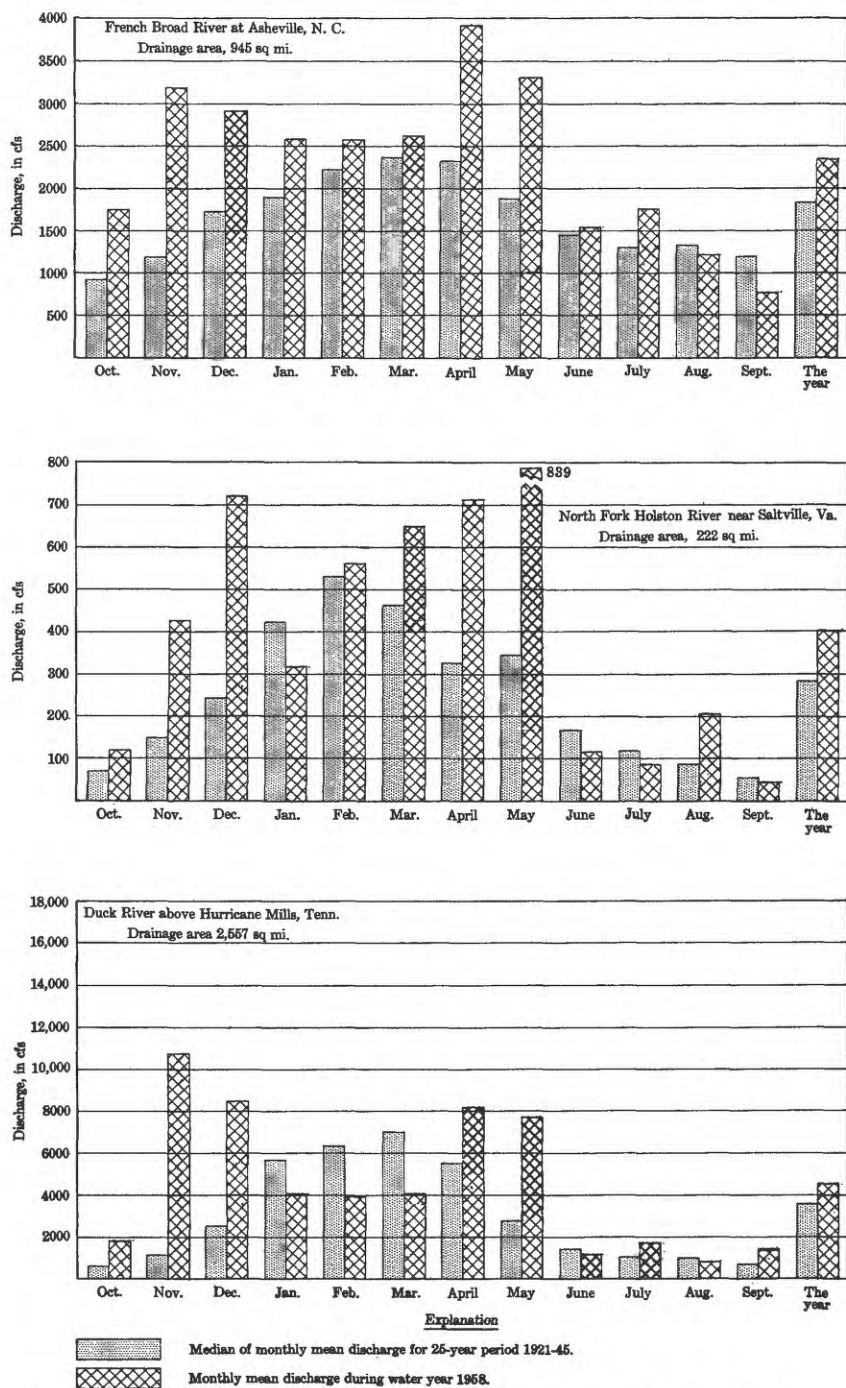


Figure 2. Comparison of discharge at three key gaging stations during 1958 water year with median discharge for 25-year period.

CUMBERLAND RIVER BASIN

4005. Poor Fork at Cumberland, Ky.

Location.--Lat 36°58'26" (revised), long 82°59'35", at left end downstream side of Second Street Bridge at Cumberland, Harlan County, 0.1 mile upstream from Cloverlick Creek and 0.5 mile downstream from Looney Creek.

Drainage area.--82.3 sq mi.

Records available.--March 1940 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,415.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--18 years, 142 cfs.

Extremes.--Maximum discharge during year, 4,190 cfs May 7 (gage height, 6.46 ft); minimum, 17 cfs Oct. 11-16.

1940-58: Maximum discharge, 11,800 cfs Jan. 29, 1957 (gage height, 11.50 ft), from rating curve extended above 3,500 cfs on basis of slope-area measurement of peak flow; no flow for part of Oct. 28, 1952.

Flood in January 1927 reached a stage of about 10.2 ft (discharge, 12,000 cfs, estimated by Corps of Engineers).

Remarks.--Records poor.

Revisions (water years).--WSP 923: 1940(M). WSP 1336: 1949-51, 1953(P). WSP 1506: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16, Dec. 1-6, May 11 to June 3, June 20-22, July 17, 18, July 22 to Aug. 3, Aug. 20-29)

-0.2	15	2.0	510
0.2	34	3.0	980
0.5	77	4.0	1,640
1.0	180	6.0	3,640
1.5	320		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67	29	115	147	346	410	382	500	109	24	113	32
2	41	28	99	125	394	281	317	370	182	22	195	31
3	32	28	91	b95	287	212	266	290	125	22	162	29
4	26	30	107	b85	212	165	260	250	74	22	130	26
5	22	30	*99	b82	192	139	254	300	58	22	100	26
6	20	30	95	b80	263	129	934	1,540	52	22	74	26
7	20	30	947	b79	582	119	740	5,480	45	24	60	25
8	20	50	*1,590	b74	518	109	570	1,040	42	25	56	24
9	18	74	755	b72	338	129	*402	454	52	26	74	24
10	18	79	458	b67	254	151	341	314	75	26	66	24
11	17	69	308	b64	195	145	442	290	50	33	56	*24
12	17	56	b205	b62	158	133	434	287	56	39	52	22
13	17	46	b165	b71	137	155	323	254	45	28	400	22
14	17	69	b150	*93	b115	220	261	222	40	22	250	22
15	17	95	151	119	b115	230	210	182	55	22	150	22
16	17	123	162	151	b95	202	182	160	50	26	200	22
17	19	259	158	151	85	170	153	145	43	155	350	22
18	22	815	149	131	76	165	139	135	37	82	250	22
19	21	1,120	145	113	72	155	129	123	37	411	170	22
20	22	498	677	111	70	153	119	119	91	1,200	*121	22
21	20	257	785	137	69	147	156	101	61	672	95	33
22	20	168	390	233	77	133	296	90	46	242	82	24
23	19	162	260	220	79	131	442	91	39	180	75	22
24	29	168	205	534	90	165	358	82	32	141	93	22
25	29	272	175	815	109	542	414	84	31	131	115	22
26	44	257	554	434	*165	486	438	82	29	113	84	22
27	48	192	494	287	530	390	640	71	29	123	66	22
28	41	153	323	210	810	326	1,220	71	28	137	55	22
29	33	151	236	172	-	281	1,070	*60	26	168	46	22
30	33	133	192	149	-	266	800	58	25	147	40	22
31	30	-----	165	139	-----	358	-----	56	-----	103	36	-----
Total	816	5,471	10,405	5,297	6,413	6,797	12,682	11,281	1,664	4,410	3,816	722
Mean	26.3	182	336	171	229	219	423	364	55.5	142	123	24.1
Cfs/m	0.320	2.21	4.08	2.08	2.78	2.66	5.14	4.42	0.674	1.73	1.49	0.293
In.	0.37	2.47	4.70	2.39	2.90	3.07	5.73	5.10	0.75	1.99	1.72	0.33
Calendar year 1957: Max	6,750			Min 13		Mean 170		Cfs/m 2.07		In. 28.03		
Water year 1957-58: Max	3,460			Min 17		Mean 191		Cfs/m 2.32		In. 31.52		

Peak discharge (base, 1,600 cfs, revised).--Dec. 8 (1 a.m.) 2,560 cfs (5.01 ft); May 7 (10 a.m.) 4,190 cfs (6.46 ft); July 20 (6:30 p.m.) 1,950 cfs (4.37 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Feb. 17-20, Apr. 30 to May 5, June 4-18, Aug. 4-19; discharge estimated on basis of weather records and records for stations on nearby streams.

4010. Cumberland River near Harlan, Ky.

Location (revised).--Lat 36°50'48", long 83°21'21", on left bank 10 ft downstream from bridge on U. S. Highway 119 at Loyall, 1.6 miles upstream from Fourmile Branch, 2.0 miles downstream from confluence of Poor and Clover Forks, and 2 miles west of Harlan, Harlan County.

Drainage area.--374 sq mi.

Records available.--March 1940 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,140.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 4, 1941, staff gage at same site and datum.

Average discharge.--18 years, 659 cfs.

Extremes.--Maximum discharge during year, 17,100 cfs Dec. 7 (gage height, 13.33 ft); minimum, 43 cfs Sept. 30 (gage height, 0.32 ft).

1940-58: Maximum discharge, 37,900 cfs Jan. 8, 1946 (gage height, 22.81 ft); minimum, 3.0 cfs Oct. 9, 1953.

Flood in 1918 and 1929 reached stages of about 22 and 20.0 ft, respectively, from information by local residents.

Remarks.--Records good except those for periods of ice effect, doubtful or no gage-height record, which are fair.

Revisions (water years).--WSP 953: 1940(M). WSP 1173: 1947(M).

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 3				Dec. 9 to Sept. 30			
0.5	53	2.5	920	0.3	40	2.5	925
.7	90	3.0	1,350	.6	100	3.0	1,350
1.0	165	5.0	3,550	1.0	210	5.0	3,550
1.5	330	8.0	7,750	1.5	372	8.0	7,750
2.0	590	11.0	12,700	2.0	600	11.0	12,700

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	286	76	475	700	1,350	1,970	1,240	2,680	207	d110	309	132
2	213	72	425	600	1,920	1,260	1,140	1,880	360	105	970	121
3	177	68	390	500	1,340	940	992	1,620	336	105	685	108
4	150	66	425	450	962	728	970	1,360	275	105	550	100
5	130	64	400	410	829	606	888	1,990	240	105	591	91
6	110	62	375	380	955	540	4,310	5,930	225	113	292	84
7	96	60	6,600	400	2,490	490	3,560	11,400	204	110	234	79
8	84	210	11,000	375	2,670	486	2,050	6,030	188	d160	202	75
9	76	315	3,860	350	1,630	648	*1,550	2,760	207	d150	316	69
10	70	350	2,110	320	1,110	1,450	1,300	1,750	225	121	264	*69
11	63	300	1,430	300	b640	1,130	d1,750	1,670	199	116	231	67
12	62	250	970	285	b660	872	d1,650	1,660	216	165	216	67
13	58	200	767	270	b580	932	d1,200	1,320	199	154	1,470	67
14	55	300	661	350	b485	1,400	d900	1,030	174	126	741	63
15	53	350	600	430	b460	1,280	d800	836	252	93	500	61
16	55	500	578	510	410	1,020	d720	709	252	110	728	63
17	82	1,000	578	525	370	829	d600	d600	135	160	1,380	59
18	96	3,450	584	495	350	836	d540	d540	168	231	748	57
19	76	4,500	600	434	330	872	d500	d470	157	670	459	59
20	70	2,590	3,500	414	320	836	d470	d430	485	2,200	333	65
21	63	1,170	4,000	434	310	767	861	d390	391	2,790	267	176
22	60	736	2,000	600	329	673	2,050	347	283	910	261	168
23	644	1,106	655	319	594	2,550	326	228	525	257	95	
24	147	656	900	1,040	322	638	1,840	343	d185	418	249	77
25	138	1,710	800	3,110	*347	1,370	2,350	d325	160	350	459	65
26	150	1,680	2,500	1,970	477	1,650	2,260	d340	146	302	376	61
27	141	1,040	2,300	1,280	2,220	1,450	3,860	d285	143	270	270	54
28	120	742	1,600	910	4,110	1,160	7,000	d275	129	286	222	50
29	100	662	1,106	722	978	5,830	d261	121	292	180	48	
30	66	560	920	625	872	5,160	229	d16	319	165	50	
31	60	-----	800	562	-----	1,060	-----	213	-----	249	148	-----
Total	3,221	24,383	54,348	20,383	28,515	30,337	60,891	49,998	6,682	11,920	13,863	2,400
Mean	104	813	1,753	658	1,018	979	2,030	1,613	223	385	447	80.0
Cfs/m	0.278	2.17	4.69	1.76	2.72	2.62	5.43	4.31	0.596	1.03	1.20	0.214
In.	0.32	2.42	5.40	2.03	2.84	3.02	6.05	4.97	0.66	1.19	1.38	0.24

Calendar year 1957: Max 22,700 Min 19 Mean 801 Cfs/m 2.14 In. 29.07
Water year 1957-58: Max 11,400 Min 48 Mean 841 Cfs/m 2.25 In. 30.52

Peak discharge (base, 8,200 cfs).--Dec. 7 (11 p.m.) 17,100 cfs (13.33 ft); Apr. 28 (7:30 a.m.) 8,260 cfs (8.32 ft); May 7 (3 p.m.) 14,600 cfs (12.06 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

c Doubtful gage-height record; discharge estimated from reconstructed gage-height graph based on recorded graph, weather records, and records for stations on nearby streams.

Note.--No gage-height record Oct. 29 to Nov. 19, Dec. 19 to Jan. 14, Feb. 16-21; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

CUMBERLAND RIVER BASIN

4020. Yellow Creek near Middlesboro, Ky.

Location (revised).--Lat 36°39'02", long 82°42'04", on right bank on U. S. Highway 25E, 0.4 mile upstream from Low Ash Hollow, 3 miles north of Middlesboro, Bell County, and 6.0 miles upstream from Clear Fork.

Drainage area.--58.2 sq mi.

Records available.--August 1940 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,104.20 ft above mean sea level, Sandy Hook datum. Prior to Jan. 7, 1941, staff gage at same site and datum.

Average discharge.--18 years, 106 cfs.

Extremes.--Maximum discharge during year, 2,960 cfs Dec. 8 (gage height, 13.28 ft); minimum, 5.5 cfs Sept. 14, 15 (gage height, 1.08 ft).
1940-58: Maximum discharge, 6,160 cfs Jan. 7, 1946 (gage height, 20.92 ft); no flow for part of Sept. 26, 1952 (caused by construction work above gage).
Flood in March 1929 reached a stage of about 19.6 ft; flood of Feb. 3, 1939, reached a stage of 18.5 ft, from floodmarks.

Remarks.--Records good except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 953: 1941(M). WSP 973: 1942(M). WSP 1436: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	3.0	3.0	281
1.1	6.3	6.0	750
1.2	13	9.0	1,450
1.5	44	11.0	2,020
2.0	119		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	28	81	111	407	319	151	376	34	11	52	10
2	16	26	74	89	359	201	144	287	37	10	66	9.0
3	206	26	70	b73	236	146	144	212	32	10	48	8.4
4	389	26	80	b68	156	117	127	170	28	18	39	7.8
5	167	22	66	b65	139	101	114	206	28	22	26	7.8
6	87	22	62	b60	214	92	880	1,010	26	14	22	7.3
7	57	20	1,510	b62	364	90	465	1,950	26	10	18	6.8
8	43	62	1,970	b56	309	113	*275	785	24	16	17	6.8
9	34	72	532	b47	214	260	194	390	44	22	77	6.3
10	28	57	294	b48	153	382	245	281	35	25	32	5.9
11	24	49	b195	b45	b120	256	276	215	35	26	32	*6.3
12	22	44	b125	43	b98	170	228	160	41	16	28	6.3
13	20	42	b105	*54	b84	256	170	133	30	13	82	6.3
14	18	78	b94	108	b72	303	139	116	24	12	262	5.5
15	16	139	92	108	b70	230	130	101	24	9.7	70	5.5
16	16	156	92	103	b60	168	116	92	24	25	52	9.4
17	30	410	97	95	b50	136	97	82	20	32	66	10
18	30	1,840	144	87	b48	160	87	74	16	23	42	11
19	22	1,340	244	75	b47	144	80	86	17	29	32	7.3
20	18	452	1,190	72	b45	138	76	76	124	26	26	8.2
21	18	233	670	80	b46	129	384	62	42	22	26	55
22	16	143	312	84	50	116	545	53	32	16	26	18
23	18	139	206	75	49	108	500	50	32	18	20	10
24	156	116	155	130	50	129	336	48	24	30	24	7.8
25	101	377	163	449	*52	262	844	89	18	24	28	6.8
26	74	299	938	292	155	264	583	72	18	18	20	6.8
27	196	490	194	770	223	872	53	20	18	18	16	6.8
28	44	139	295	136	772	175	1,210	*53	16	14	14	6.8
29	37	122	196	114	-	147	810	43	14	*10	13	6.3
30	34	98	143	100	-	156	620	37	13	9.7	12	7.8
31	32	-	121	93	-	158	-	35	-	14	11	-
Total	1,848	6,773	10,606	3,214	5,189	5,627	10,842	7,397	898	563.4	1,299	284.0
Mean	59.6	226	342	104	165	182	361	239	29.9	18.2	41.9	9.47
Cfsm	1.02	3.89	5.66	1.79	3.18	3.15	6.20	4.11	0.514	0.313	0.720	0.163
In.	1.18	4.33	6.78	2.05	3.32	3.60	6.93	4.73	0.57	0.36	0.83	0.18

Calendar year 1957: Max 3,010 Min 3.0 Mean 153 Cfsm 2.63 In. 35.64
water year 1957-58: Max 1,970 Min 5.5 Mean 149 Cfsm 2.56 In. 34.86

Peak discharge (base, 1,800 cfs).--Nov. 18 (3:30 a.m.) 2,770 cfs (12.88 ft); Dec. 8 (12:45 to 1:30 a.m.) 2,960 cfs (13.28 ft); Dec. 20 (5 p.m.) 1,830 cfs (10.37 ft); May 7 (12:15 p.m.) 2,440 cfs (12.05 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

4025. Cumberland River near Pineville, Ky.

Location.--Lat 36°48'48", long 83°45'58", on downstream side of bridge on U. S. Highway 25E, 0.5 mile south of Flat Lick, 2.4 miles downstream from Greasy Creek, 4.7 miles upstream from Stinking Creek, and 5.0 miles northwest of Pineville, Bell County.

Drainage area.--809 sq mi.

Records available.--August 1938 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 955.45 ft above mean sea level, Sandy Hook datum. Prior to June 23, 1939, wire-weight gage at bridge 200 ft upstream at same datum. June 23, 1939, to Mar. 19, 1956, water-stage recorder at bridge 200 ft upstream at same datum. Since May 26, 1943, auxiliary staff gage read twice daily. 1.9 miles upstream from base gage.

Average discharge.--20 years, 1,327 cfs.

Extremes.--Maximum discharge during year, 26,400 cfs Dec. 8; maximum gage height, 36.61 ft Dec. 8; minimum discharge, 66 cfs Sept. 16 (gage height, 5.42 ft).

1938-58: Maximum discharge, 57,900 cfs Jan. 8, 1946 (gage height, 49.31 ft), from rating curve extended above 36,000 cfs on basis of slope-area measurements at gage heights 44.34, 47.3, 47.35 and 49.31 ft; minimum, 5.6 cfs Aug. 14, 1957.

Flood in March 1929 reached a stage of 47.3 ft (discharge, 51,000 cfs).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Low flow regulated by powerplant 1.9 miles upstream from station.

Revisions (water years).--WSP 1053: 1939. WSP 1436: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor Dec. 8-11, 20-22, 27-29, Jan. 25-27, Feb. 1-3, 7-9, Feb. 27 to Mar. 1, Mar. 10, 11, 14, 15, 26-28, Apr. 7-9, Apr. 22 to May 2, May 4-12, July 21, 22)

5.4	63	9.0	1,380
5.6	94	13.0	3,800
6.0	176	17.0	7,100
7.0	450		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	494	180	1,000	1,540	2,790	5,260	2,330	6,490	300	147	310	172
2	398	170	900	*1,300	3,540	3,100	2,330	3,970	290	132	742	152
3	480	160	860	1,100	3,190	2,300	2,150	3,350	450	122	1,200	136
4	1,260	150	840	b900	2,440	1,770	1,910	2,720	404	120	920	124
5	786	145	900	b800	2,030	1,420	1,750	2,960	350	220	709	116
6	486	140	820	b740	2,200	1,240	6,240	10,300	326	156	490	110
7	356	135	1,000	b760	3,710	1,120	*9,530	*19,300	295	122	368	101
8	282	440	24,300	b740	5,230	1,220	4,360	*18,300	272	128	312	94
9	235	700	12,000	b700	3,490	1,510	3,050	7,850	395	139	394	86
10	202	1,000	5,500	b620	2,700	3,220	2,790	3,950	498	205	426	81
11	180	800	3,030	b580	2,090	2,930	2,920	2,860	415	196	350	78
12	161	600	2,300	b560	1,660	2,350	2,930	2,640	624	176	300	76
13	147	440	1,680	534	1,300	2,230	2,570	2,340	415	187	714	76
14	139	700	1,460	790	1,100	3,130	2,100	1,830	359	196	1,620	70
15	128	1,000	1,290	1,040	b1,050	2,980	1,780	1,460	550	176	940	72
16	122	1,500	1,180	1,180	900	2,540	1,600	1,220	426	152	678	74
17	130	3,200	1,260	1,240	800	2,030	1,340	1,050	350	180	1,370	89
18	185	6,000	1,260	1,210	740	1,900	1,170	905	280	209	1,340	105
19	191	11,000	1,520	1,110	700	1,960	1,050	648	242	315	794	98
20	194	6,000	4,870	955	680	1,910	970	858	1,070	1,220	514	103
21	172	2,500	10,400	960	660	1,810	2,800	704	890	3,610	380	220
22	150	2,000	4,620	1,120	624	1,610	6,660	596	594	1,830	368	312
23	145	1,600	3,040	1,270	624	1,420	7,140	510	429	940	332	280
24	200	1,700	2,270	1,590	*606	1,370	4,610	478	335	673	310	174
25	300	3,500	1,880	5,010	824	2,570	6,540	550	272	590	365	128
26	500	3,200	5,460	4,540	*885	3,240	5,480	610	240	474	570	105
27	390	2,100	7,700	3,040	3,980	2,940	9,000	502	240	390	422	92
28	300	1,600	3,900	2,320	9,660	2,620	*15,500	443	213	*541	315	85
29	260	1,400	2,720	1,780		2,210	12,200	422	187	359	260	75
30	215	1,200	2,160	1,500		1,900	*12,700	368	165	332	220	76
31	200		1,690	1,340		1,990		326		356	194	
Total	9,386	55,260	113,810	42,879	60,003	69,800	134,500	100,720	11,876	14,393	18,227	3,538
Mean	303	1,842	3,671	1,383	2,143	2,252	4,483	3,249	396	464	588	118
Cfs/m	0.375	2.28	4.54	1.71	2.65	2.78	5.54	4.02	0.489	0.574	0.727	0.146
In.	0.43	2.54	5.23	1.97	2.76	3.21	6.18	4.63	0.55	0.66	0.84	0.16

Calendar year 1957: Max 40,100 Min 7.0 Mean 1,756 Cfs/m 2.17 In. 29.48
Water year 1957-58: Max 24,500 Min 70 Mean 1,758 Cfs/m 2.15 In. 29.16

Peak discharge (base, 16,000 cfs).--Dec. 8 (1 p.m.) 26,400 cfs (36.61 ft at 3 p.m.; May 8 (1 a.m.) 24,600 cfs (36.56 ft at 2:30 a.m.).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Oct. 24 to Dec. 7, Feb. 13, 14, 16-21, Apr. 27, 28; discharge estimated on basis of 1 discharge measurement, recorded range in stage when available, weather records, and records for stations on nearby streams.

CUMBERLAND RIVER BASIN

4035. Cumberland River at Barbourville, Ky.

Location.--Lat 36°51'45", long 83°53'13", near center of span on upstream side of bridge on State Highway 11, at Barbourville, Knox County, 0.4 mile upstream from Richland Creek.

Drainage area.--960 sq mi.

Records available.--October 1922 to September 1931, April 1948 to September 1958. Monthly discharge only April to June 1948, published in WSP 1306.

Gage.--Wire-weight gage and crest-stage indicator; gage read twice daily. Datum of gage is 942.97 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1931, staff or chain gage at same site and at datum 1.0 ft higher. Since Oct. 1, 1957, auxiliary water-stage recorder 11.7 miles upstream from base gage.

Average discharge.--19 years, 1,740 cfs.

Extremes.--Maximum discharge during year, 25,300 cfs May 8; maximum gage height, 33.45 ft May 8; minimum discharge observed, 70 cfs Sept. 14, 15.
1922-31, 1948-58: Maximum discharge, 47,900 cfs May 31, 1927, from rating curve extended above 30,000 cfs on basis of runoff comparisons with nearby stations; maximum gage height, 42.28 ft Jan. 30, 1957; minimum discharge observed, 0.2 cfs Oct. 5, 1930 (gage height, -0.25 ft, reach then in use).
Flood in January 1946 reached a stage of 42.8 ft, present datum.

Remarks.--Records fair. Diversion above station by city of Barbourville for municipal water supply.

Revisions (water years).--WSP 603: 1923-24. WSP 1336: 1923(M), 1925(M), 1927, 1929, 1950-51. WSP 1436: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor for most days above 2,500 cfs)

1.6	65	4.0	1,620
1.8	125	5.0	2,520
2.0	215	7.0	4,000
3.0	840		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	552	282	1,300	1,740	3,890	6,980	2,900	9,940	342	157	366	190
2	468	259	1,120	*1,480	6,450	4,350	2,690	6,320	330	122	631	170
3	432	237	1,020	1,270	4,700	2,300	2,440	4,060	354	125	1,420	161
4	1,410	226	1,010	b1,050	2,940	1,960	2,160	3,350	474	105	1,120	157
5	*966	215	988	b900	2,290	1,610	2,000	3,630	402	141	882	129
6	582	195	882	b860	2,410	1,410	5,340	11,100	366	165	606	115
7	426	180	a2,000	b900	4,510	1,240	9,210	20,500	306	122	450	112
8	350	185	20,500	b860	6,580	1,380	*6,210	23,400	282	141	390	95
9	259	372	18,000	b660	5,020	1,590	3,950	13,900	306	157	474	89
10	226	458	9,510	b640	3,150	3,700	3,090	7,840	588	195	498	84
11	200	458	5,860	b660	2,320	3,720	3,250	4,940	492	215	438	89
12	175	414	2,760	b580	1,840	2,750	3,240	3,120	756	205	372	*84
13	141	384	1,860	612	b1,500	2,430	2,860	2,410	516	205	414	73
14	133	366	1,600	1,080	b1,250	3,750	2,280	2,000	402	170	1,540	73
15	122	534	1,410	1,180	b1,100	3,750	1,980	1,670	644	165	1,590	73
16	112	742	1,300	1,340	b1,000	2,930	1,760	1,400	510	141	959	76
17	112	1,840	1,270	1,280	b800	2,180	1,550	1,190	432	180	1,330	78
18	149	*a12,000	1,340	1,110	b770	2,120	1,330	1,040	306	210	1,670	108
19	180	a14,000	1,620	1,260	b800	2,200	1,220	980	294	288	960	108
20	180	*a11,000	4,110	1,130	b740	2,160	1,140	1,010	1,170	990	651	102
21	170	*a8,000	10,300	1,160	714	2,050	3,530	840	1,040	3,510	470	216
22	145	*a3,000	7,060	1,280	700	1,860	*8,620	693	770	2,390	468	384
23	133	1,640	3,820	1,440	714	1,820	*8,720	600	522	1,040	426	580
24	372	1,520	2,810	1,710	*714	1,560	*6,630	558	402	770	468	220
25	805	2,380	2,140	5,150	714	2,580	7,080	700	294	686	492	149
26	644	a3,800	5,060	6,190	840	3,960	6,780	784	259	558	594	118
27	522	a2,600	11,500	4,130	3,120	3,720	a7,000	612	270	468	564	99
28	458	2,020	5,970	2,760	9,120	3,000	a12,000	522	226	*414	414	95
29	426	1,750	3,510	2,080	-	2,400	14,900	480	185	*444	324	89
30	354	1,460	2,320	1,780	-----	2,110	*15,500	438	165	402	242	81
31	300	-----	1,990	1,620	-----	2,300	-----	390	-----	426	220	-----
Total	11,464	72,477	135,940	49,892	70,486	81,470	151,340	150,397	13,405	15,307	21,443	3,947
Mean	370	2,416	4,385	1,609	2,517	2,628	5,045	4,206	447	494	692	132
Cfs/m	0.385	2.52	4.57	1.68	2.62	2.74	5.26	4.58	0.466	0.519	0.721	0.138
In.	0.44	2.81	5.27	1.93	2.73	3.16	5.86	5.05	0.52	0.59	0.83	0.15

Calendar year 1957: Max 39,200 Min 16 Mean 2,054 Cfs/m 2.14 In. 29.04
Water year 1957-58: Max 23,400 Min 73 Mean 2,076 Cfs/m 2.16 In. 29.34

Peak discharge (base, 18,000 cfs).--Dec. 8 (6 p.m.) 24,000 cfs (31.52 ft at 3:30 to 5 a.m. Dec. 9); May 8 (5 a.m.) 25,300 cfs (33.45 ft at 2 p.m.).

* Discharge measurement made on this day.

a No gage-height record at auxiliary gage; discharge estimated on basis of 7 discharge measurements, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

4040. Cumberland River at Williamsburg, Ky.

Location.--Lat 36°44'38", long 84°09'30". on left bank 10 ft downstream from bridge on U. S. Highway 25W and State Highway 92 at Williamsburg, Whitley County, and 2.1 miles downstream from Clear Fork.

Drainage area.--1,607 sq mi.

Records available.--October 1950 to September 1958. Gage-height records collected in this vicinity since 1908 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 891.52 ft above mean sea level, unadjusted. Prior to July 2, 1951, wire-weight gage at same site and datum.

Average discharge.--8 years, 2,768 cfs.

Extremes.--Maximum discharge during year, 27,900 cfs Nov. 20 (gage height, 24.76 ft); minimum, 108 cfs Sept. 16 (gage height, 2.29 ft).

1950-58: Maximum discharge, 49,700 cfs Jan. 31, 1957 (gage height, 33.78 ft); minimum, 6.1 cfs Oct. 23, 25, 26, 27, 1953 (gage height, 1.64 ft).

Maximum stage since at least 1918, 34.2 ft Jan. 10, 1946 (present datum), from graph based on U. S. Weather Bureau gage readings. Flood of Mar. 25, 1929, reached a stage of 32.7 ft, from graph based on U. S. Weather Bureau gage readings.

Remarks.--Records good except those for periods of ice effect, which are fair. Records of chemical analyses, suspended sediment loads, and water temperatures for the water year 1958 are given in WSP 1571.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	105	10.0	6,500
2.5	160	15.0	12,600
3.0	345	20.0	19,900
4.0	900	25.0	28,300
6.0	2,410		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	354	535	2,350	2,980	4,540	11,700	4,390	*19,500	558	262	540	293
2	600	485	2,020	2,640	9,330	8,400	4,840	15,800	520	234	1,400	254
3	912	445	1,780	2,220	9,280	5,030	4,220	9,590	505	216	2,410	226
4	3,300	415	1,690	b1,900	6,320	3,590	3,780	6,000	570	195	2,450	206
5	2,500	390	1,650	b1,800	4,500	*2,850	3,350	6,140	600	184	1,740	188
6	1,700	363	1,510	b1,400	4,140	2,320	4,520	12,300	500	195	1,250	170
7	1,180	333	3,020	b1,400	5,630	2,110	10,500	21,200	450	258	888	157
8	840	372	16,300	b1,430	8,500	2,160	11,500	25,700	400	240	660	*151
9	630	600	21,200	b1,300	9,150	2,480	7,770	23,900	376	226	540	139
10	490	816	19,800	b1,050	6,670	4,620	5,550	21,500	510	262	690	130
11	405	834	16,800	b1,100	4,550	6,390	5,630	16,200	798	293	720	128
12	341	768	8,720	b1,060	3,450	5,270	5,530	7,600	906	317	678	*120
13	305	708	3,800	1,040	2,730	4,360	4,980	4,680	966	297	564	120
14	275	690	2,820	1,220	2,140	5,770	4,140	3,650	714	256	1,080	118
15	244	1,030	2,570	1,750	b2,050	6,480	3,480	2,930	546	293	2,750	112
16	223	1,360	2,300	2,150	b1,900	5,510	3,110	2,400	762	273	2,040	118
17	220	2,830	2,190	2,260	b1,650	4,280	2,720	2,020	666	248	1,340	120
18	254	12,900	2,430	2,290	b1,800	3,790	2,300	1,780	520	273	2,020	122
19	313	26,100	2,900	2,160	b1,480	3,920	2,040	1,580	425	309	1,820	130
20	325	27,300	5,550	1,940	b1,400	3,830	1,900	1,620	798	341	1,150	154
21	297	21,100	13,400	1,880	b1,300	3,620	4,990	1,480	1,370	1,570	816	223
22	281	12,000	14,100	2,020	1,280	3,270	13,500	1,220	1,510	3,940	600	367
23	254	*4,370	9,520	2,150	1,260	2,880	15,800	1,040	980	2,200	582	588
24	568	2,910	5,290	2,540	1,240	2,640	13,800	924	696	1,240	600	455
25	1,500	3,480	3,900	6,260	1,240	3,780	13,400	1,080	535	990	598	317
26	1,540	6,050	5,220	9,710	1,380	6,070	12,600	1,300	440	876	642	234
27	1,200	6,130	10,600	8,310	2,820	6,610	13,500	1,280	381	858	810	188
28	954	4,210	11,500	5,600	8,670	5,590	17,500	1,000	372	*822	708	154
29	780	3,220	7,660	3,940	-	4,480	19,800	834	345	678	520	136
30	694	2,770	5,290	3,160	-----	-----	21,400	762	501	*582	415	130
31	600	-----	3,490	2,760	-----	3,740	-----	548	-----	525	345	-----
Total	24,059	145,514	210,910	83,220	110,200	141,280	242,340	217,658	19,600	19,455	33,356	5,948
Mean	776	4,850	6,804	2,685	3,936	4,557	8,078	7,021	653	628	1,076	198
Cfam	0.483	3.02	4.23	1.67	2.45	2.94	5.03	4.37	0.406	0.391	0.670	0.123
In.	0.56	3.37	4.88	1.93	2.55	3.27	5.61	5.04	0.45	0.45	0.77	0.14

Calendar year 1957: Max 47,600 Min 22 Mean 3,490 Cfam 2.17 In. 29.47
Water year 1957-58: Max 27,300 Min 112 Mean 3,434 Cfam 2.14 In. 29.02

Peak discharge (base, 20,000 cfs).--Nov. 20 (7 a.m.) 27,900 cfs (24.76 ft); Dec. 9 (9:30 a.m.) 21,600 cfs (21.04 ft); Apr. 30 (1 p.m.) 21,800 cfs (21.18 ft); May 8 (3 p.m.) 26,100 cfs (23.79 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

CUMBERLAND RIVER BASIN

4045. Cumberland River at Cumberland Falls, Ky.

Location.--Lat 36°50'14", long 84°20'36", on left bank 700 ft downstream from bridge on State Highway 90 and 1,200 ft upstream from Cumberland Falls, Whitley County.

Drainage area.--1,977 sq mi.

Records available.--August 1907 to December 1911, October 1914 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 825.49 ft above mean sea level. Sandy Hook datum, Aug. 15, 1907, to Dec. 10, 1911, staff gage at site 300 ft downstream at different datum, Apr. 3, 1915, to Sept. 1, 1933, staff gage at site 500 ft downstream at same datum.

Average discharge.--48 years, 3,148 cfs.

Extremes.--Maximum discharge during year, 33,700 cfs Nov. 19 (gage height, 10.92 ft); minimum, 112 cfs Sept. 13, 14 (gage height, 1.27 ft).

1907-11, 1914-58: Maximum discharge, 59,600 cfs Jan. 28, 1918 (gage height, 15.5 ft, present site and datum); minimum, 4 cfs Sept. 19, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions (water years).--WSP 1386: 1919. WSP 1436: Drainage area.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.2	70	4.5	6,120
1.4	200	6.0	11,000
1.8	580	8.0	18,800
2.5	1,520	11.0	34,100
3.0	2,430		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	361	640	2,820	3,540	6,470	11,500	5,020	20,900	760	325	a640	370
2	440	580	2,370	3,080	10,300	9,630	5,420	17,400	712	272	a1,200	316
3	688	536	2,110	2,630	10,600	7,300	5,100	11,700	688	240	a2,900	272
4	2,480	492	1,940	2,240	7,830	4,150	4,600	7,240	648	216	a3,050	240
5	4,300	470	1,850	1,940	5,560	3,290	4,050	*7,460	724	200	a2,000	216
6	2,630	430	1,740	1,730	5,050	*2,710	4,730	18,000	676	224	a1,400	193
7	1,520	400	3,190	1,640	6,500	2,410	*10,100	26,100	590	264	*a1,060	172
8	1,060	390	16,800	1,650	9,390	2,430	12,300	27,700	558	361	868	158
9	808	604	21,500	1,390	10,100	2,840	9,320	25,100	514	325	700	151
10	640	904	20,000	1,180	7,920	5,160	6,790	22,300	*470	298	640	144
11	514	*979	17,600	1,300	5,510	7,180	6,910	18,200	748	307	832	137
12	430	904	10,900	1,240	4,200	6,350	6,580	10,400	953	325	820	130
13	370	832	4,860	1,210	3,130	5,320	5,920	5,700	1,020	352	772	124
14	325	796	3,380	1,380	2,430	6,940	5,050	4,450	940	430	880	112
15	307	892	2,910	1,870	2,300	7,480	4,280	3,520	700	325	2,610	118
16	264	1,460	2,540	2,470	2,150	6,580	3,810	2,880	*664	316	2,550	124
17	256	2,960	2,410	2,670	a2,000	5,240	3,290	2,430	796	307	1,670	137
18	248	16,400	2,590	2,720	a1,800	4,580	2,820	2,160	664	a330	1,660	158
19	299	31,900	3,060	2,440	a1,650	4,710	2,510	1,890	558	a355	2,220	151
20	352	27,500	6,490	2,340	a1,550	4,630	2,320	1,820	712	a400	1,520	165
21	361	22,300	14,200	2,240	a1,450	4,380	9,500	1,780	1,020	a1,200	1,070	558
22	334	14,000	15,100	2,350	a1,400	3,980	16,700	1,520	1,830	a2,500	820	470
23	316	6,060	11,500	2,450	1,360	3,470	17,800	1,300	1,270	a3,500	664	a520
24	352	3,520	6,530	2,960	1,380	3,200	15,500	1,140	892	a1,600	724	a680
25	1,210	3,710	4,730	6,710	1,360	4,630	18,500	1,220	700	a1,300	700	a450
26	1,690	6,180	5,480	10,400	1,380	7,000	15,000	1,600	580	a1,100	688	a300
27	1,380	6,790	10,500	9,760	2,140	7,760	16,700	1,540	492	a1,050	772	a210
28	1,130	5,130	12,500	6,790	6,470	6,760	20,500	1,300	430	a1,020	892	a180
29	916	3,930	9,460	4,970	-	5,530	21,400	1,040	410	a820	712	a160
30	796	3,310	5,900	3,930	-----	4,660	22,700	940	370	a680	547	a150
31	712	-----	4,300	3,400	-----	4,600	-----	856	-----	a600	440	-----
Total	27,479	164,999	231,060	96,530	123,380	166,410	285,220	251,586	22,071	21,542	38,021	7,266
Mean	866	5,500	7,454	3,114	4,406	5,368	9,507	8,116	736	695	1,228	242
Cfsm	0.448	2.78	3.77	1.58	2.23	2.72	4.81	4.11	0.372	0.352	0.620	0.122
In.	0.52	3.10	4.35	1.82	2.32	3.13	5.37	4.73	0.42	0.41	0.72	0.14

Calendar year 1957: Max 49,500 Min 23 Mean 4,029 Cfsm 2.04 In. 27.66
 Water year 1957-58: Max 31,900 Min 112 Mean 3,933 Cfsm 1.99 In. 27.03

Peak discharge (base, 24,000 cfs).--Nov. 19 (2 p.m.) 33,700 cfs (10.92 ft); May 7 (11 p.m.) 28,700 cfs (10.04 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage when available, weather records, and records for stations on nearby streams.

4050. Laurel River at Corbin, Ky.

Location.--Lat 36°58'09", long 84°07'38", on left bank 200 ft downstream from bridge on State Highway 312, three-quarters of a mile northwest of Corbin, Whitley County, and 1.0 mile downstream from Lynn Camp Creek.

Drainage area.--201 sq mi.

Records available.--October 1922 to September 1924, July 1942 to September 1958. Prior to October 1953, published as Laurel River near Otas.

Gage.--Water-stage recorder. Datum of gage is 956.05 ft above mean sea level. Sandy Hook datum. Oct. 2, 1922, to Sept. 30, 1924, staff gage at site 200 ft upstream at datum 2.08 ft higher.

Average discharge.--18 years, 349 cfs.

Extremes.--Maximum discharge during year, 6,810 cfs Nov. 18 (gage height, 12.08 ft); minimum, 5.4 cfs Sept. 7-16 (gage height, 1.27 ft).

1922-24, 1942-58: Maximum discharge, 16,200 cfs Jan. 29, 1957 (gage height, 19.30 ft), from rating curve extended above 9,000 cfs on basis of contracted-opening measurement of peak flow; no flow Oct. 5, 6, 1922, Nov. 3, 1923, part of Sept. 19, 1956.

Floods in 1911, 1913, and 1922, reached a stage of 19 ft, present datum, from information by Corps of Engineers.

Remarks.--Records good except those for periods of ice effect, which are poor. Some regulation at low flow by city water-supply reservoir.

Revisions (water years).--WSP 1436: Drainage area. WSP 1506: 1946, 1948(M), 1951-52(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.0	3.0	210
1.4	9.5	4.0	490
1.6	17	6.0	1,430
1.9	35	9.0	3,460
2.2	62	12.0	6,710
2.5	102		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	29	188	b250	3,420	358	1,090	840	52	15	104	12
2	10	30	160	b200	2,700	282	666	686	109	15	280	9.5
3	20	27	150	b170	1,240	248	538	606	115	13	376	8.0
4	135	25	162	152	622	208	502	522	69	11	322	6.4
5	92	24	160	138	538	175	409	1,320	50	10	192	6.0
6	50	22	138	b120	726	160	1,120	4,390	16	13	111	5.6
7	37	20	1,320	b110	1,630	154	1,160	5,170	7.5	28	74	5.6
8	29	30	3,010	b100	1,590	180	674	3,270	6.8	82	54	5.4
9	21	60	1,820	94	860	232	463	1,510	15	128	57	5.4
10	19	55	815	93	494	370	*608	702	35	93	82	5.4
11	14	44	475	*90	b350	308	1,020	522	63	56	52	5.4
12	12	39	325	84	b250	270	694	1,060	60	45	94	5.4
13	11	38	250	94	b200	355	484	542	51	98	75	5.4
14	9.0	57	242	202	b170	654	388	328	65	*146	136	5.4
15	7.8	82	220	240	b150	502	337	248	248	72	379	5.4
16	7.0	*329	190	270	b130	406	310	190	118	50	158	6.6
17	9.9	941	210	255	b110	337	250	152	64	49	128	11
18	11	3,050	245	238	b100	370	205	130	63	49	*86	14
19	14	5,540	328	205	b90	406	185	122	89	133	54	13
20	11	2,590	1,850	200	84	367	198	172	1,700	292	37	15
21	9.0	925	2,270	268	b90	355	2,570	113	478	*415	28	508
22	8.8	415	1,270	391	b95	325	3,360	79	188	278	27	466
23	10	328	582	346	b100	298	2,460	63	111	530	51	160
24	63	282	445	550	b110	310	1,260	52	72	590	48	96
25	87	240	445	1,390	b120	1,040	1,950	418	49	262	116	56
26	67	198	1,320	1,080	152	1,140	1,570	502	41	212	88	41
27	54	160	1,320	658	218	775	2,340	*212	41	319	48	32
28	43	144	755	466	454	558	3,460	132	32	210	32	23
29	37	222	490	376	-	451	2,560	99	17	270	23	22
30	30	242	367	310	-----	499	1,410	74	13	165	18	22
31	31	-----	298	410	-----	1,330	-----	58	-----	88	15	-----
Total	970.5	16,188	21,820	9,550	16,793	13,423	34,241	24,284	4,038.3	4,739	3,353	1,571.9
Mean	31.3	540	704	308	600	433	1,141	783	135	153	109	52.4
Cfsm	0.156	2.69	3.50	1.53	2.99	2.15	5.68	3.90	0.672	0.761	0.537	0.261
In.	0.18	3.00	4.04	1.77	3.11	2.49	6.34	4.49	0.75	0.89	0.82	0.29

Calendar year 1957: Max 13,000 Min 2.7 Mean 404 Cfsm 2.01 In. 27.31
 Water year 1957-58: Max 5,540 Min 5.4 Mean 414 Cfsm 2.06 In. 27.95

Peak year discharge (base, 4,800 cfs).--Nov. 18 (12 p.m.) 6,810 cfs (12.08 ft); May 7 (8 a.m.) 5,550 cfs (11.05 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--Discharge computed from twice-daily or bihourly staff-gage readings Oct. 1 to Nov. 3, Apr. 19-21, May 27 to Aug. 3.

CUMBERLAND RIVER BASIN

4060. Wood Creek near London, Ky.

Location.--Lat 37°09'40", long 84°06'43", on left bank 50 ft downstream from bridge on U. S. Highway 25, 0.2 mile upstream from Peacock Branch, 2.8 miles northwest of London, Laurel County, and about 12 miles upstream from mouth.

Drainage area.--3.89 sq mi.

Records available.--September 1953 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1.123.50 ft above mean sea level, unadjusted.

Average discharge.--5 years, 5.59 cfs.

Extremes.--Maximum discharge during year, 337 cfs Nov. 18 (gage height, 5.18 ft), from rating curve extended above 160 cfs by logarithmic plotting; minimum daily, 0.4 cfs on several days.

1953-58: Maximum discharge, 506 cfs Feb. 17, 1956 (gage height, 6.23 ft), from rating curve extended above 160 cfs by logarithmic plotting; minimum, 0.2 cfs at times during several years; minimum gage height, 1.09 ft Aug. 22, 1954.

Remarks.--Records good except those for periods of ice effect, which are poor.

Revisions.--WSP 1496: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.18	0.4	1.5	5.1
1.2	.5	1.7	12
1.3	1.4	1.9	22
1.4	3.1	3.0	100

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.6	0.5	3.1	b6.0	58	3.1	12	16	8.3	0.6	25	1.1
2	.6	.5	2.9	b5.0	29	2.7	11	18	3.5	.6	15	1.0
3	.8	.5	3.3	b4.0	18	2.5	9.5	15	2.1	.6	8.6	1.0
4	.8	.5	4.1	b3.5	12	2.3	8.2	15	1.6	.5	6.3	.9
5	.6	.5	3.3	b5.0	12	2.1	8.1	45	1.4	.5	4.9	.9
6	.5	.4	3.1	b3.0	18	2.1	21	84	1.4	1.5	4.1	.9
7	.5	.4	50	b3.0	35	2.3	13	70	1.2	2.5	3.5	1.0
8	.5	.7	36	b3.0	20	2.3	11	35	1.1	1.6	3.3	.9
9	.5	.6	18	b2.5	15	3.7	9.1	20	2.5	1.3	3.1	.9
10	.5	.5	13	b2.3	11	3.3	16	15	1.4	.9	2.5	.9
11	.4	.4	9.5	b2.1	b8.0	3.3	*14	15	4.4	1.0	2.1	.9
12	.4	.5	7.8	b2.0	b6.5	3.3	12	13	2.1	.9	2.0	.8
13	.4	.5	6.9	b2.3	b5.5	6.3	9.5	9.5	1.5	8.3	5.1	.7
14	.4	1.3	6.3	b4.0	b4.5	5.4	8.2	7.5	1.8	*2.9	3.3	.7
15	.4	.9	5.4	b3.5	b4.0	4.9	7.5	6.6	2.7	1.4	2.9	.7
16	.4	4.3	4.9	*3.7	b3.5	4.5	6.6	5.7	1.5	6.1	3.3	.8
17	.6	13	5.7	3.5	b3.0	4.5	5.7	5.1	1.2	2.9	2.7	2.4
18	.6	76	4.9	3.3	b2.7	5.1	5.1	4.7	1.1	2.0	*2.0	1.1
19	.5	46	18	2.9	b2.5	4.7	6.0	6.5	3.1	2.0	1.5	.9
20	.4	13	48	3.1	b2.3	4.5	6.7	4.3	2.5	14	1.4	5.9
21	.4	7.8	25	5.4	b2.0	4.5	40	3.5	1.4	6.3	1.3	9.8
22	.4	6.0	16	4.7	b2.1	4.3	29	2.7	1.1	14	1.4	2.7
23	1.1	5.4	12	4.5	b2.3	4.1	22	2.5	1.0	10	1.5	1.6
24	2.9	4.5	11	12	b2.5	9.5	17	2.3	.9	6.6	7.3	1.3
25	1.0	4.1	10	13	2.7	17	15	3.1	.8	4.5	3.5	1.1
26	.8	3.5	21	10	2.9	12	22	*2.1	1.2	4.3	2.1	1.0
27	.7	3.3	14	8.6	4.1	10	76	1.6	1.3	3.5	1.6	1.0
28	.6	4.5	12	7.2	3.7	9.1	76	1.6	1.1	5.3	1.4	.9
29	.5	4.5	10	6.6	-	7.5	37	1.4	.9	3.5	1.3	.8
30	.6	3.5	7.8	5.7	-	14	1.3	2.5	.7	2.5	1.2	1.1
31	.6	-	b7.0	39	-	15	-	2.2	-	2.1	1.2	-
Total	20.1	208.1	400.0	181.4	292.8	179.9	555.2	434.2	56.8	112.7	126.2	45.7
Mean	0.65	6.94	12.9	5.85	10.5	5.80	18.5	14.0	1.89	3.64	4.07	1.52
Cfsm	0.167	1.78	3.32	1.50	2.70	1.49	4.76	3.60	0.466	0.936	1.05	0.391
In.	0.19	1.99	3.82	1.73	2.80	1.72	5.31	4.15	0.54	1.08	1.21	0.44

Calendar year 1957: Max 187 Min 0.4 Mean 7.17 Cfsm 1.84 In. 25.02
 Water year 1957-58: Max 84 Min 0.4 Mean 7.16 Cfsm 1.84 In. 24.98

Peak discharge (base, 100 cfs).--Nov. 18 (7 p.m.) 337 cfs (5.18 ft); Jan. 31 (11 p.m.) 109 cfs (3.11 ft); Apr. 27 (7:30 p.m.) 264 cfs (4.69 ft); May 6 (6:30 a.m.) 114 cfs (3.18 ft); Aug. 1 (6 p.m.) 139 cfs (3.49 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4065. Rockcastle River at Billows, Ky.

Location.--Lat 37°10'16", long 84°17'46", on left bank 200 ft upstream from bridge on State Highway 80 at Billows, Rockcastle County, 1.0 mile downstream from Hawk Creek, 1.0 mile upstream from Pine Creek, and 13 miles west of London.

Drainage area.--604 sq mi.

Records available.--July 1936 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 803.90 ft above mean sea level, datum of 1929. Prior to Nov. 19, 1940, staff gage at same site and datum.

Average discharge.--22 years, 903 cfs.

Extremes.--Maximum discharge during year, 19,100 cfs Nov. 19 (gage height, 27.27 ft); minimum, 26 cfs Oct. 16 (gage height, 1.07 ft).

1936-58: Maximum discharge, 46,800 cfs June 29, 1947 (gage height, 45.48 ft); minimum, 0.8 cfs Sept. 9, 1957 (gage height, 0.56 ft).

Flood in January 1913 reached a stage of about 40 ft. from information by Corps of Engineers.

Remarks.--Records good.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.0	20	6.0	1,560
1.4	55	10.0	3,580
2.0	128	15.0	6,950
2.5	220	20.0	11,300
3.0	340	25.0	16,500
4.0	680		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*85	102	688	784	9,080	532	3,080	2,620	120	55	1,250	150
2	83	96	564	660	6,180	445	2,110	2,010	764	48	2,540	130
3	78	91	500	508	2,660	418	1,670	1,900	442	42	1,900	111
4	72	84	525	424	1,760	391	1,880	1,560	268	39	1,300	96
5	66	79	518	361	1,440	358	1,980	2,220	194	34	812	85
6	58	74	466	352	1,610	340	4,180	7,720	150	34	542	77
7	52	70	2,410	352	5,020	334	4,180	12,600	130	58	374	72
8	48	70	13,000	346	4,740	331	2,380	7,590	111	371	292	69
9	42	76	5,620	282	2,540	370	1,670	3,060	105	608	280	70
10	38	102	2,320	278	1,710	732	2,040	2,010	576	334	226	62
11	35	101	1,560	258	1,260	732	*3,910	1,780	322	220	184	57
12	33	95	1,040	242	960	688	2,670	1,700	254	358	292	53
13	30	88	760	238	780	788	1,670	1,140	222	1,110	295	48
14	29	93	664	316	600	1,970	1,400	848	160	640	778	43
15	27	114	576	457	568	1,600	1,120	676	143	415	616	40
16	26	218	500	*508	504	1,270	932	550	603	838	475	40
17	35	956	475	556	385	1,030	752	460	292	2,600	784	43
18	52	3,720	514	553	355	960	624	397	200	1,530	542	66
19	53	16,100	576	514	331	952	542	340	155	1,150	340	69
20	47	6,300	6,230	475	290	908	500	331	196	2,260	268	99
21	43	1,840	9,770	668	272	900	1,580	292	176	5,110	194	944
22	42	1,040	3,120	1,190	282	852	4,350	244	137	1,940	155	944
23	42	748	1,940	1,040	298	772	3,650	216	108	2,080	132	415
24	164	600	1,410	1,170	292	812	2,560	192	91	3,020	225	268
25	292	478	1,190	3,310	300	3,740	2,000	180	83	1,400	3,940	204
26	246	403	2,190	2,910	305	3,780	1,680	174	81	832	1,330	160
27	180	340	3,300	2,060	*331	2,420	5,060	*168	81	756	497	134
28	142	308	2,190	1,540	518	1,720	15,200	143	83	604	346	117
29	130	562	1,560	1,170	-----	1,330	8,060	130	74	1,330	256	104
30	108	916	1,120	1,000	-----	1,340	4,200	115	65	1,170	212	95
31	106	-----	888	1,080	-----	4,010	-----	106	-----	*652	178	-----
Total	2,475	37,964	68,184	25,602	45,371	36,825	87,630	53,472	6,386	31,618	21,535	4,865
Mean	79.8	1,262	2,199	826	1,620	1,188	2,921	1,725	213	1,020	695	162
Cfs/m	0.132	2.09	3.64	1.37	2.68	1.97	4.84	2.86	0.353	1.69	1.15	0.268
In.	0.15	2.33	4.20	1.58	2.79	2.27	5.40	3.29	0.39	1.95	1.33	0.30

Calendar year 1957: Max 21,000 Min 0.9 Mean 1,077 Cfs/m 1.78 In. 24.19
 Water year 1957-58: Max 16,100 Min 26 Mean 1,156 Cfs/m 1.91 In. 25.98

Peak discharge (base, 14,000 cfs).--Nov. 19 (5:30 p.m.) 19,100 cfs (27.27 ft); Dec. 8 (1:30 p.m.) 14,400 cfs (23.08 ft); Apr. 28 (4 p.m.) 17,000 cfs (25.49 ft).

* Discharge measurement made on this day.

4071. Cane Branch near Parkers Lake, Ky.

Location.--Lat 36°52'04", long 84°26'57", on left bank 2,100 ft upstream from confluence with West Fork, 2.5 miles northeast of Parkers Lake, McCreary County, and 2.6 miles east of Greenwood.

Drainage area.--0.67 sq mi.

Records available.--February 1956 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 979.4 ft above mean sea level, datum of 1929 (levels by U. S. Forest Service).

Extremes.--Maximum discharge during year, 154 cfs Apr. 24 (gage height, 1.76 ft); minimum, 0.013 cfs Sept. 6, 7; minimum gage height, 0.43 ft Sept. 9.
1956-58: Maximum discharge, 198 cfs Jan. 29, 1957 (gage height, 2.43 ft, backwater from ice); minimum, 0.005 cfs Sept. 7, 8, 1957 (gage height, 0.43 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow affected slightly by pumping of water from coal mine above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1958, are given in WSP 1571.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.44	0.01	0.8	3.8
.50	.09	.9	7.0
.55	.26	1.0	11.8
.60	.56	1.1	18.9
.65	1.06	1.2	29
.7	1.74		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.10	0.09	0.39	0.56	9.6	0.49	2.2	1.89	0.22	0.057	0.13	0.034
2	.09	.09	*.39	.39	3.3	.45	1.74	1.81	.22	.057	.10	.021
3	.41	.10	.36	.31	2.2	.49	1.46	1.60	.18	.057	.17	.021
4	*.38	.09	.33	*b.3	1.67	*.45	1.19	1.77	.13	.057	.13	.021
5	.12	.09	.26	b.25	1.67	.45	.94	4.8	.12	.065	.077	.021
6	.09	.09	.26	b.25	1.96	.45	3.7	13.6	.13	.35	.065	.021
7	.085	.077	6.9	b.25	5.1	.66	2.12	12.8	.09	.48	.057	.021
8	.085	.22	4.6	b.2	3.0	.78	1.60	3.8	.10	.17	.050	.043
9	.065	.13	2.04	b.2	2.04	1.64	1.32	2.2	.12	.10	a.06	*.026
10	.057	.10	1.39	b.2	1.53	1.46	*5.9	1.53	.12	.077	a.05	.042
11	.057	.09	.94	b.2	b1.1	1.39	3.6	1.19	.14	.065	a.05	.049
12	.057	*.09	.56	b.2	b.8	1.19	2.2	.94	.12	.057	.050	.031
13	.057	.12	b.5	.73	b.55	2.4	1.60	.64	.077	.79	a.06	.026
14	.057	.57	b.45	.68	b.35	2.2	1.19	.56	.065	.17	.065	.031
15	.050	.31	.43	.73	b.3	1.67	1.19	.45	.12	.09	.057	.037
16	.062	1.00	.39	.83	b.3	1.32	.94	.42	.12	.24	.043	.050
17	.16	13.6	.52	.83	b.25	1.19	.68	.36	.065	.13	.043	.43
18	.085	22.9	.45	.73	b.25	1.32	.56	.31	.057	.12	.050	.079
19	.065	8.1	1.56	.60	b.25	1.12	.56	.45	.30	.077	.043	.057
20	.09	1.89	13.2	.64	b.25	1.06	.53	*.33	.15	.17	.037	.75
21	.09	1.06	3.25	1.00	b.2	1.00	*10.4	.24	.065	.12	.043	.92
22	.077	.68	1.74	.88	b.2	.94	4.4	.22	.065	.18	.043	.12
23	.23	.64	1.19	.78	a.2	.83	2.4	.20	.077	.23	.043	.10
24	1.08	.49	.94	3.1	a.2	*2.14	20.9	.16	.065	.10	.30	.09
25	.22	.61	.83	3.6	a.15	4.9	18.8	1.14	.065	.065	.077	.077
26	.15	.42	2.5	2.3	a.15	2.8	9.6	.42	.12	.065	.057	.077
27	.12	.36	1.60	1.67	a.3	2.04	8.9	.24	.09	.068	.043	.065
28	.12	.45	1.25	1.32	.60	1.60	7.1	.22	.065	.31	.043	.065
29	.10	.56	.94	1.12	-	1.25	3.5	.16	.065	.26	.043	.10
30	.12	.45	.68	1.00	-----	2.12	2.2	.13	.065	.09	.026	.16
31	.10	-----	.63	1.99	-----	3.1	-----	.12	-----	.077	.026	-----
Total	4.569	55.467	51.47	27.84	38.47	44.90	123.42	54.70	3.366	4.944	2.131	3.585
Mean	0.147	1.85	1.66	0.898	1.37	1.45	4.11	1.76	0.113	0.159	0.0687	0.120
Cfsm	0.219	2.76	2.48	1.34	2.04	2.16	6.13	2.63	0.169	0.237	0.103	0.179
In.	0.25	3.08	2.86	1.55	2.14	2.49	6.85	3.04	0.19	0.27	0.12	0.20

Calendar year 1957: Max 84 Min 0.010 Mean 1.23 Cfsm 1.84 In. 24.84
Water year 1957-58: Max 22.9 Min 0.021 Mean 1.14 Cfsm 1.70 In. 23.04

Peak discharge (base, 40 cfs).--Nov. 18 (8 p.m.) 96 cfs (1.56 ft); Apr. 24 (10 p.m.) 154 cfs (1.76 ft).

* Discharge measurement made on this day.

a No gage-height record (stage-discharge relation affected by ice during part of period); discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

4073. Helton Branch at Greenwood, Ky.

Location.--Lat 36°53'08", long 84°28'56", on left bank 250 ft upstream from mouth and 1 mile northeast of Greenwood, McCreary County.

Drainage area.--0.85 sq mi.

Records available.--January 1956 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 993.8 ft above mean sea level (levels by U. S. Forest Service).

Extremes.--Maximum discharge during year, 54 cfs Nov. 18 (gage height, 1.155 ft); minimum, 0.14 cfs on many days in August and September (gage height, 0.475 ft).

1956-58: Maximum discharge, 136 cfs Jan. 29, 1957 (gage height, 1.35 ft); maximum gage height, 1.46 ft Jan. 30, 1956 (backwater from debris); minimum discharge, 0.05 cfs Oct. 2, 1956.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1958 are given in WSP 1571.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17				Nov. 17 to Sept. 30			
0.49	0.17	0.70	2.20	0.46	0.16	0.75	4.2
.55	.44	.75	3.7	.55	.55	.80	5.9
.60	.81	.80	5.8	.60	1.12	.90	11.4
.65	1.30	.90	11.2	.65	1.85	1.00	20.5
				.70	2.8		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.19	0.21	0.76	1.12	9.0	0.65	3.0	3.0	0.41	0.18	ao.25	0.16
2	.17	.21	*.76	.94	4.0	a.6	2.2	2.8	.40	.18	a.2	.16
3	.25	a.25	.82	.82	2.6	a.6	1.90	2.5	.51	.18	a.25	.16
4	*.41	a.25	.76	.70	2.0	*.60	1.70	2.3	.29	.18	a.25	.16
5	.27	a.25	.65	.65	1.85	.55	1.40	5.0	.26	.20	a.2	.16
6	.25	a.25	.60	.65	2.7	a.55	2.6	15.3	.26	.20	.16	.16
7	.23	.21	7.9	b.6	*5.9	.89	2.2	13.9	.26	.20	.18	.16
8	.19	.30	8.4	b.5	3.6	al.0	2.0	6.1	.24	.22	.18	.16
9	.19	.29	3.8	b.45	2.6	2.0	1.45	3.6	.24	.22	.20	*.16
10	.19	.25	2.6	b.4	2.0	a2.0	*4.9	2.8	.24	.20	.20	.16
11	.21	.23	1.90	b.4	b1.7	2.0	4.2	2.4	.31	.20	.16	.20
12	.21	.21	al.4	.47	b1.4	al.5	2.6	1.85	.24	.20	.20	.16
13	.21	.25	1.12	.82	b1.1	2.8	2.0	1.40	.22	.51	.24	.16
14	.19	.69	al.2	1.12	b.9	2.4	1.70	1.12	.22	.29	.20	.16
15	.19	.61	al.1	1.06	b.8	a2.0	1.55	.94	.20	.24	.20	.16
16	.23	1.40	al.0	1.12	b.7	al.6	1.30	.82	.20	.28	.20	.20
17	.31	10.5	1.12	1.12	b.8	al.2	1.12	.70	.20	.26	a.2	.34
18	.27	17.7	1.12	1.00	a.6	1.40	1.06	.55	.20	.26	a.2	.16
19	.23	18.1	1.90	.82	a.6	1.45	.88	.62	.70	.24	.16	.16
20	.23	4.8	15.5	.88	b.5	1.45	.88	.80	.66	.26	a.2	.55
21	.23	2.5	6.3	1.30	b.5	1.30	*11.0	.47	.29	.24	.16	.72
22	.25	1.75	3.3	1.25	b.45	1.18	5.9	.45	.26	.28	.16	.31
23	.34	1.55	2.4	1.12	a.45	1.12	3.4	.40	.24	.37	.16	.20
24	.59	1.25	1.9	2.9	a.4	*2.1	9.2	.37	.20	.26	.24	.18
25	.34	1.12	1.75	4.4	a.4	5.3	18.5	1.60	.18	.24	.20	.16
26	.29	1.00	2.7	2.8	a.4	3.3	10.6	1.12	.24	.24	.16	.16
27	.29	.82	2.4	2.2	a.5	2.5	11.7	.65	.22	.22	.16	.18
28	.25	.82	2.0	1.70	a.75	1.90	10.6	.51	.20	.21	.16	.18
29	.23	1.06	1.70	1.55	-	1.60	5.7	.47	.18	.26	.16	.20
30	.23	1.00	1.40	1.40	-----	2.8	3.9	.37	.18	a.25	.16	.24
31	.23	-----	1.25	1.70	-----	4.3	-----	.37	-----	a.2	.16	-----
Total	7.89	67.63	81.41	37.96	49.00	54.63	131.54	75.26	8.25	7.47	5.95	6.42
Mean	0.255	2.25	2.63	1.22	1.75	1.76	4.39	2.43	0.275	0.241	0.192	0.214
Cfsm	0.300	2.65	3.09	1.44	2.06	2.07	5.15	2.86	0.324	0.284	0.226	0.252
In.	0.35	2.96	3.56	1.66	2.14	2.39	5.76	3.29	0.36	0.33	0.26	0.28

Calendar year 1957: Max 36 Min 0.09 Mean 1.41 Cfsm 1.66 In. 22.48
 Water year 1957-58: Max 18.5 Mean 0.16 Mean 1.46 Cfsm 1.72 In. 23.34

Peak discharge (base, 50 cfs).--Nov. 18 (8 p.m.) 54 cfs (1.155 ft).

* Discharge measurement made on this day.

a No gage-height record (stage-discharge relation affected by ice during part of period); discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

4075. Buck Creek near Shopville, Ky.

Location.--Lat 37°12'38", long 84°27'52", on right bank on downstream side of bridge on State Highway 461, 0.2 mile downstream from Brushy Creek, 3.7 miles north of Shopville, Pulaski County, and 11.5 miles northeast of Somerset.

Drainage area.--165 sq mi.

Records available.--December 1952 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 835.35 ft above mean sea level, unadjusted. Prior to Dec. 1, 1953, wire-weight gage and crest-stage indicator at same site and datum.

Average discharge.--5 years (1953-58), 239 cfs.

Extremes.--Maximum discharge during year, 14,900 cfs Nov. 19 (gage height, 19.55 ft), from rating curve extended above 6,700 cfs on basis of contracted-opening measurement of peak flow; minimum, 3.2 cfs Sept. 17 (gage height, 1.94 ft).
1952-58: Maximum discharge, that of Nov. 19, 1957; no flow at times in most years.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	2.7	2.7	75
2.0	4.5	3.0	155
2.1	7.2	4.0	560
2.2	9.0	5.0	1,090
2.3	17	8.0	3,200
2.5	37	14.0	8,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	36	246	228	2,720	162	670	690	42	13	202	41
2	*27	33	211	186	1,030	128	479	578	69	9.9	353	31
3	25	31	194	155	650	115	425	551	51	8.3	225	25
4	26	30	204	b140	497	100	479	412	35	6.6	176	21
5	26	27	162	a130	470	92	461	1,170	27	5.5	112	17
6	23	25	143	a120	690	88	1,060	2,590	23	5.8	78	15
7	20	24	2,180	b105	1,340	90	646	2,280	19	10	59	13
8	18	29	3,500	b90	a800	98	434	1,040	16	108	42	12
9	16	71	1,070	a86	a460	156	331	618	41	105	35	11
10	15	73	850	b80	a340	242	817	452	198	50	36	9.5
11	15	55	488	b72	a250	180	916	660	59	29	33	8.3
12	14	46	a390	b64	a200	152	551	425	55	41	238	7.2
13	12	44	a310	90	a170	476	402	281	37	115	150	6.3
14	11	103	281	278	a150	650	319	213	26	75	108	5.0
15	10	172	253	228	a140	416	288	176	82	46	71	4.5
16	9.5	274	236	253	a115	315	267	140	129	55	59	3.7
17	15	728	281	*214	a100	270	218	120	55	48	75	4.7
18	22	3,180	319	200	a95	311	190	108	33	69	57	6.6
19	19	*8,480	533	158	a90	319	166	92	44	102	39	4.3
20	17	1,310	*4,310	155	a88	278	169	92	345	197	30	29
21	15	582	1,750	329	a95	253	*739	73	92	239	23	581
22	14	389	720	438	a100	225	596	61	53	200	20	169
23	18	299	488	331	a105	200	438	53	37	741	17	90
24	125	250	402	749	a110	370	323	48	29	700	1,390	59
25	100	204	358	1,390	a110	*1,260	340	44	22	278	1,880	42
26	65	172	1,060	720	120	785	358	44	25	256	a1,000	31
27	51	143	855	524	*178	528	1,470	36	35	140	a250	25
28	41	160	474	402	253	420	3,660	32	30	162	a140	22
29	35	551	340	327	-	344	1,840	32	21	218	90	20
30	33	335	274	278	-----	723	1,130	26	16	*115	67	17
31	36	-----	252	563	-----	1,240	-----	23	-----	75	51	-----
Total	903.5	17,856	22,714	9,383	11,464	10,966	20,182	13,165	1,746	4,223.1	7,106	1,331.1
Mean	29.1	595	733	303	409	354	673	425	58.2	138	229	44.4
Cfs/m	0.176	3.61	4.44	1.84	2.48	2.15	4.08	2.58	0.353	0.824	1.39	0.269
In.	0.20	4.02	5.12	2.11	2.58	2.47	4.55	2.97	0.39	0.95	1.60	0.30

Calendar year 1957: Max 8,480 Min 0 Mean 356 Cfs/m 2.16 In. 29.24

Water year 1957-58: Max 8,480 Min 3.7 Mean 332 Cfs/m 2.01 In. 27.26

Peak discharge (base, 3,500 cfs).--Nov. 19 (2:30 p.m.) 14,900 cfs (19.55 ft); Dec. 8 (2:45 p.m.) 6,000 cfs (11.44 ft); Dec. 20 (1:45 p.m.) 5,820 cfs (11.25 ft); Feb. 1 (3 a.m.) 3,840 cfs (8.80 ft); Apr. 28 (8:15 a.m.) 5,260 cfs (10.58 ft); Aug. 24 (10:45 p.m.) 4,780 cfs (9.98 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage when available, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

4085. New River at New River, Tenn.

Location.--Lat 36°23'08", long 84°33'17", on left bank at town of New River, Scott County, 700 ft downstream from Phillips Creek, 1,000 ft downstream from bridge on U. S. Highway 27, 1.7 miles downstream from Brimstone Creek, and at mile 8.6.

Drainage area.--382 sq mi.

Records available.--August 1934 to September 1958. Gage-height records collected in this vicinity 1908-52 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 1,092.67 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 716 cfs.

Extremes.--Maximum discharge during year, 31,700 cfs Nov. 19 (gage height, 27.34 ft); minimum, 2.3 cfs Sept. 16, 17 (gage height, 1.26 ft).

1934-58: Maximum discharge, 44,300 cfs Feb. 3, 1939 (gage height, 33.58 ft); no flow part of each day Aug. 13-15, 1944.

Maximum stage known, 41.2 ft Mar. 23, 1929, on old U. S. Weather Bureau gage 1,200 ft upstream at datum 3.41 ft higher.

Remarks.--Records good.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.27	2.5	2.0	43	5.0	1,180
1.4	5.1	2.3	82	7.0	2,630
1.5	8.0	2.6	142	10.0	5,200
1.6	12	3.0	247	14.0	9,500
1.8	24	4.0	660	22.0	21,600

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	191	241	610	695	860	1,350	770	2,300	80	28	38	17
2	189	210	524	570	1,070	915	710	1,440	132	23	409	14
3	191	191	474	506	910	725	660	1,060	117	21	770	12
4	2,560	176	474	450	725	585	595	1,880	84	18	315	11
5	*2,450	162	422	402	745	479	524	1,970	67	16	168	9.0
6	975	146	370	378	935	430	1,430	7,540	60	14	119	7.7
7	615	156	9,190	378	2,410	406	1,610	6,370	54	14	82	6.4
8	410	443	10,600	346	2,250	528	1,070	4,010	50	16	62	6.4
9	304	1,440	3,410	315	1,310	940	940	2,170	50	56	54	5.9
10	231	875	1,810	297	955	2,090	875	1,480	67	54	74	5.1
11	191	615	1,250	260	780	1,350	1,440	1,190	86	44	58	4.6
12	164	470	870	237	610	955	1,250	1,010	89	41	73	4.2
13	144	394	705	244	506	945	970	805	70	35	67	4.0
14	125	1,530	620	536	442	1,280	795	620	55	40	148	3.5
15	108	3,760	556	845	422	1,040	*760	497	43	43	169	3.0
16	96	5,380	524	810	358	870	740	410	37	50	100	2.5
17	100	5,570	*610	715	312	725	640	343	31	*56	82	2.8
18	218	21,000	760	640	284	1,090	580	301	26	98	87	3.8
19	212	*21,000	920	528	264	1,370	542	304	*23	60	62	4.4
20	171	3,610	8,890	*474	234	1,140	497	*515	234	71	46	12
21	149	1,660	5,400	497	212	950	3,580	237	162	236	36	29
22	129	1,040	2,170	645	225	775	4,590	191	86	207	30	*120
23	127	990	1,310	600	231	645	3,250	169	67	95	27	82
24	1,140	995	965	1,040	*237	*640	1,820	169	66	68	27	47
25	1,250	2,130	810	3,580	241	1,910	3,470	183	57	104	44	33
26	755	2,250	2,460	2,120	277	2,070	3,040	174	53	100	*52	24
27	551	1,390	2,490	1,340	733	1,600	5,180	149	64	82	50	21
28	414	1,020	1,470	950	2,670	1,230	8,500	121	59	67	39	17
29	336	910	1,060	760	-	985	5,070	100	45	47	30	14
30	298	755	830	645	-----	860	4,750	86	34	37	24	13
31	273	-----	690	565	-----	855	-----	76	-----	31	20	-----
Total	14,847	80,494	63,244	22,418	21,211	31,713	60,548	36,670	2,148	1,874	3,382	539.3
Mean	479	2,683	2,040	723	758	1,023	2,018	1,183	71.6	60.5	109	18.0
Cfsm	1.25	7.02	5.34	1.89	1.98	2.68	5.28	3.10	0.187	0.158	0.285	0.047
In.	1.45	7.84	6.16	2.18	2.07	3.09	5.89	3.57	0.21	0.18	0.33	0.05

Calendar year 1957: Max 25,100 Min 3.8 Mean 1,105 Cfsm 2.89 In. 39.29
 Water year 1957-58: Max 21,000 Min 2.5 Mean 929 Cfsm 2.43 In. 33.02

Peak discharge (base, 18,000 cfs).--Nov. 19 (6 a.m.) 31,700 cfs (27.24 ft); Dec. 7 (9 p.m.) 20,000 cfs (21.04 ft); Dec. 20 (6:30 p.m.) 18,000 cfs (18.60 ft).

* Discharge measurement made on this day.

4035. Clear Fork near Robbins. Tenn.

Location.--Lat 36°23'18", long 84°37'49". on right bank 300 ft downstream from Burnt Mill Bridge, 3.3 miles northwest of Robbins, Scott County, and at mile 3.7.

Drainage area.--272 sq mi.

Records available.--October 1930 to September 1958. Published as Clear Fork River near Robbins October 1951 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,081.46 ft above mean sea level. Sandy Hook datum. Prior to Aug. 10, 1940, staff gage at site 300 ft upstream at datum 1.00 ft higher.

Average discharge.--28 years, 461 cfs.

Extremes.--Maximum discharge during year, 14,400 cfs Nov. 19 (gage height, 12.67 ft); minimum, 3.6 cfs Sept. 15-17 (gage height, 0.93 ft).
1930-58: Maximum discharge, 34,000 cfs Feb. 3, 1939 (gage height, 18.5 ft, from floodmarks, site and datum then in use), from rating curve extended above 14,000 cfs on basis of slope-area measurement of peak flow; minimum observed, 0.2 cfs Sept. 19-21, 1932; minimum gage height observed, 0.28 ft Oct. 1-3, 1936, site and datum then in use. Maximum stage known, 22.1 ft Mar. 23, 1929, former site and datum, from information by local residents.

Remarks.--Records good except those below 40 cfs and those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1306: 1931(M), 1935-37(M), 1943-44(M). WSP 1436: Drainage area.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19, Apr. 22 to Sept. 30				Nov. 20 to Apr. 21			
0.9	3.0	2.5	265	2.0	140		
1.0	5.3	3.0	460	2.5	290		
1.1	9.0	4.0	1,060	3.0	510		
1.3	24	6.0	2,700	5.0	1,840		
1.5	44	8.0	5,360	6.0	2,700		
1.8	88	12.0	12,700	9.0	6,960		
2.0	131						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	106	555	495	676	294	724	1,710	67	17	29	10
2	48	96	470	410	694	289	618	1,220	74	13	104	8.5
3	50	90	415	b330	590	260	550	914	67	11	287	7.6
4	991	86	406	b280	475	242	490	730	60	10	211	7.2
5	*1,300	86	354	b270	545	224	430	2,250	54	10	136	6.4
6	480	81	310	b280	640	215	654	6,670	45	9.7	84	5.8
7	286	74	2,820	275	1,100	221	772	4,370	41	36	63	5.5
8	202	56	4,840	b250	342	600	2,500	37	44	48	5.3	
9	153	286	2,140	b230	638	687	500	1,630	40	74	38	4.8
10	117	259	1,460	b210	b610	1,350	985	1,350	43	110	33	4.5
11	92	200	1,100	b200	b480	945	1,640	1,190	48	63	29	4.2
12	77	170	790	b190	b370	700	1,130	1,180	49	48	27	4.0
13	67	150	616	203	a370	760	820	874	42	46	24	4.0
14	60	240	560	410	a340	1,040	628	632	36	113	43	3.8
15	54	593	515	490	338	844	652	480	31	102	75	3.6
16	49	615	490	480	a290	694	*658	387	26	72	55	3.6
17	49	1,940	*555	445	a240	575	535	367	21	77	42	3.8
18	55	9,360	560	415	a210	1,010	460	505	18	*84	33	4.2
19	81	*11,000	644	366	a190	1,290	406	351	*18	57	27	4.5
20	66	3,120	6,800	334	a170	1,020	586	*420	35	56	22	5.6
21	55	1,440	3,960	*358	b160	802	3,740	304	28	120	18	123
22	48	924	1,790	394	167	634	3,350	235	27	223	16	166
23	46	862	1,210	334	b180	535	1,680	198	21	145	14	*69
24	222	796	892	749	188	570	1,140	165	18	122	19	46
25	367	1,550	736	2,420	*206	*1,820	1,460	190	15	100	28	52
26	247	1,520	1,180	1,550	212	1,730	1,590	200	18	100	33	26
27	195	1,040	1,250	1,080	254	1,440	2,760	160	26	83	*30	23
28	160	772	994	802	346	1,220	5,120	126	29	64	24	19
29	136	814	784	640	-	1,000	3,220	100	27	52	19	16
30	124	724	605	540	-----	850	3,030	83	21	41	15	18
31	117	-----	515	490	-----	856	-----	59	-----	34	13	-----
Total	6,043	39,082	40,316	15,920	11,969	24,439	40,726	31,540	1,080	2,138.7	1,639	644.9
Mean	195	1,303	1,301	514	427	788	1,440	1,017	36.0	69.0	52.9	21.5
Cfsm	0.717	4.79	4.78	1.89	1.57	2.90	4.98	3.74	0.132	0.254	0.194	0.079
In.	0.83	5.34	5.51	2.18	1.64	3.34	5.57	4.31	0.15	0.29	0.22	0.09
Calendar year 1957: Max			11,400				677		Cfsm	2.49	In.	33.77
Water year 1957-58: Max			11,000				591		Cfsm	2.17	In.	29.47

Peak discharge (base, 6,500 cfs).--Nov. 19 (4:30 a.m.) 14,400 cfs (12.67 ft); Dec. 7 (11:30 p.m.) 6,910 cfs (8.97 ft); Dec. 20 (3 p.m.) 10,400 cfs (10.91 ft); May 6 (7:30 a.m.) 8,390 cfs (9.84 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for New River at New River.

b Stage-discharge relation affected by ice.

4105. South Fork Cumberland River near Stearns, Ky.

Location.--Lat 36°37'37". long 84°32'00". on right bank at mouth of Bear Creek, 1,400 ft (revised) upstream from Salt Branch and 5.5 miles southwest of Stearns, McCreary County. Records include flow of Bear Creek.

Drainage area.--954 sq mi. includes that of Bear Creek.

Records available.--September 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 764.81 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 1,763 cfs.

Extremes.--Maximum discharge during year, 40,500 cfs Nov. 18 (gage height, 28.95 ft); minimum, 30 cfs Sept. 16 (gage height, 1.76 ft).

1942-58: Maximum discharge, 69,600 cfs Feb. 13, 1948 (gage height, 38.50 ft); minimum, 11 cfs Oct. 4, 1948, Sept. 17, 18, 19, 20, 1954; minimum gage height, 1.53 ft Sept. 17, 18, 19, 20, 1954.

Maximum stage known, 52.9 ft in March 1929, from information by local residents.

Remarks.--Records good except those below 50 cfs and those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1113: 1946(M). WSP 1436: Drainage area.

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	22	8.0	2,000
1.8	35	10.0	5,500
2.0	62	15.0	12,000
2.2	93	19.0	18,500
2.5	165	24.0	28,500
4.0	800	27.0	35,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	292	444	1,740	1,640	2,490	2,550	1,770	6,170	260	107	125	74
2	292	408	1,440	1,480	3,200	1,710	2,110	4,180	344	95	105	66
3	1,240	368	1,280	1,220	2,600	1,380	1,880	3,740	340	85	1,580	61
4	1,140	544	1,020	1,050	2,010	1,120	1,670	2,580	292	79	1,000	55
5	5,150	320	1,130	930	1,900	980	1,500	5,710	248	85	600	51
6	2,350	304	975	a900	2,260	875	2,180	18,500	204	123	412	47
7	1,290	280	7,130	a870	4,190	830	3,740	15,900	182	200	300	44
8	860	288	24,500	a810	5,000	1,020	2,840	10,400	165	159	236	42
9	615	1,250	8,650	a750	3,460	1,610	2,160	5,850	147	240	179	40
10	484	1,580	4,880	a700	2,530	4,570	2,490	4,590	150	364	150	38
11	404	1,090	3,480	a610	2,020	3,630	4,570	4,000	176	312	172	35
12	300	825	2,510	a580	1,580	2,660	3,820	3,550	212	236	168	32
13	296	690	1,910	600	b1,250	2,480	2,920	2,910	208	292	150	32
14	300	720	1,680	925	b1,070	3,360	2,270	2,230	176	444	196	31
15	224	4,180	1,530	1,680	b1,020	3,020	1,870	1,680	147	416	300	31
16	204	3,000	1,380	1,740	b900	2,470	2,190	1,360	128	312	336	32
17	196	10,400	1,610	1,600	b700	2,000	1,810	1,120	107	448	244	38
18	204	31,700	1,860	1,480	b640	2,340	1,580	1,150	95	416	208	74
19	244	a34,000	2,120	1,300	b620	3,570	1,430	980	87	360	176	71
20	344	12,200	14,200	1,150	b580	3,220	1,350	990	138	284	144	79
21	300	4,800	17,400	1,180	b555	2,650	9,620	900	336	296	116	590
22	204	3,040	7,760	1,330	820	2,110	12,400	690	288	674	102	520
23	224	2,440	3,890	1,360	615	1,730	7,130	576	*193	576	93	396
24	320	2,400	2,920	1,850	655	1,660	4,600	504	141	436	106	276
25	2,080	3,520	2,360	7,060	665	4,540	5,920	476	130	360	133	186
26	1,370	5,000	3,540	5,590	670	5,840	6,360	536	147	332	121	135
27	970	3,500	5,560	3,740	830	4,630	9,480	492	190	516	123	116
28	748	2,610	3,820	2,760	2,840	3,780	15,900	420	162	220	118	106
29	584	2,520	2,940	2,150	-	5,130	10,300	356	141	320	107	97
30	556	2,270	2,250	1,760	-----	2,660	10,700	308	128	172	93	88
31	476	-----	1,790	1,570	-----	2,680	-----	276	-----	*144	83	-----
Total	23,337	136,691	139,435	52,355	47,470	80,845	138,560	102,624	5,662	8,841	7,816	3,483
Mean	753	4,556	4,498	1,689	1,695	2,608	4,619	3,310	169	285	252	116
Cfsm	0.789	4.618	4.71	1.70	1.78	2.75	4.84	3.47	0.198	0.260	0.264	0.122
In.	0.91	5.33	5.44	2.04	1.85	3.15	5.40	4.00	0.22	0.34	0.30	0.14

Calendar year 1957: Max 55,500 Min 20 Mean 2,425 Cfsm 2.54 In. 34.53
 Water year 1957-58: Max 34,000 Min 31 Mean 2,047 Cfsm 2.15 In. 29.12

Peak discharge (base, 29,000 cfs).--Nov. 18 (3 to 3:30 p.m.) 40,500 cfs (28.95 ft); Dec. 8 (4 a.m.) 31,600 cfs (25.34 ft); Dec. 20 (12 p.m.) 29,400 cfs (24.40 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage when available, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

4155. Pitman Creek at Somerset, Ky.

Location.--Lat 27°07'01" (revised). long 84°35'31" (revised). on right bank 0.1 mile downstream from Dry Branch. 0.5 mile upstream from Caney Fork. and 1.9 miles northeast of Somerset, Pulaski County.

Drainage area.--31.3 sq mi.

Records available.--October 1953 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 867.34 ft above mean sea level, datum of 1929. Prior to Oct. 28, 1953, staff gage at same site and datum.

Average discharge.--5 years, 46.1 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Nov. 19 (gage height, 5.59 ft. from Floodmark); minimum, 0.7 cfs Sept. 15, 16 (gage height, 0.78 ft).
1953-58: Maximum discharge, 2,430 cfs Mar. 21, 1955 (gage height, 7.58 ft); minimum, 0.1 cfs Sept. 2-7, 11-19, 20, 1954, Sept. 19, 1955, Sept. 3, 4-9, 1957; minimum gage height, 0.60 ft Sept. 12-19, 20, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions.--WSP 1436. Drainage area.

Rating table, water year 1957-58 (gage height, in feet,
and discharge, in cubic feet per second)

0.7	0.3	1.5	22
.8	1.8	1.7	41
.9	1.7	2.0	82
1.0	3.1	2.5	230
1.1	5.2	3.0	420
1.2	7.7	4.0	820
1.3	11	5.0	1,220

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	9.7	43	46	520	28	107	97	15	2.0	158	4.6
2	*7.2	9.0	38	36	212	24	80	86	13	1.7	55	3.8
3	7.2	8.7	37	31	127	21	70	70	8.7	1.5	50	3.2
4	8.7	8.0	35	a27	89	19	67	56	7.2	1.4	34	2.7
5	7.0	7.7	28	a25	97	17	59	236	6.4	1.5	21	2.4
6	6.2	7.2	26	a23	196	17	220	392	5.7	1.5	15	2.0
7	5.4	7.0	644	20	348	17	102	404	4.8	5.3	12	1.7
8	5.2	13	404	a18	164	22	70	184	4.2	20	9.0	2.0
9	4.6	16	188	a17	100	39	57	109	9.7	11	7.4	1.8
10	4.2	11	114	a16	68	40	192	80	12	6.0	6.4	1.5
11	4.0	3.4	75	14	a50	33	130	82	6.0	4.3	7.0	1.4
12	3.8	9.4	56	13	a40	29	84	57	6.2	40	5.2	1.3
13	3.6	a9.0	48	35	a34	130	65	44	4.6	12	12	1.2
14	3.6	a20	44	50	a31	100	55	37	6.0	8.4	13	1.0
15	3.2	a35	38	49	a28	67	52	31	13	5.4	7.0	.7
16	3.4	a56	36	50	a23	55	44	26	8.7	5.0	11	.8
17	7.4	a150	48	*43	a20	50	37	25	5.4	8.0	9.7	3.5
18	7.0	a550	45	38	a19	58	32	21	4.2	4.8	6.0	3.9
19	5.2	a850	197	33	a18	51	29	20	6.3	8.9	4.4	1.8
20	4.2	a300	716	33	a17	46	36	18	28	7.7	3.6	44
21	3.8	a130	248	62	a19	44	188	15	8.7	6.7	3.0	109
22	3.6	a70	136	60	a20	39	109	13	6.2	8.9	2.7	24
23	10	a57	93	52	a20	36	77	12	4.8	17	2.2	15
24	51	a47	91	204	a21	126	61	11	4.2	38	106	11
25	22	a37	84	220	a21	*265	68	12	3.2	14	54	8.4
26	16	a32	244	130	22	151	104	11	7.3	23	24	7.0
27	14	28	122	93	43	104	400	8.7	5.7	11	16	5.7
28	11	64	89	70	*43	79	354	9.0	3.8	14	12	5.4
29	10	93	65	60	62	120	220	7.7	2.8	20	9.0	4.8
30	11	56	53	50	190	125	125	7.0	2.4	*9.7	7.0	4.6
31	12	-----	48	280	-----	174	-----	6.4	-----	7.4	5.4	-----
Total	273.2	2,700.1	4,133	1,898	2,410	2,122	3,303	2,185.8	224.2	326.1	769.0	280.2
Mean	8.81	90.0	133	61.2	96.1	68.5	110	70.5	7.47	10.5	24.8	9.34
Cfsm	0.281	2.88	4.25	1.96	2.75	2.19	3.51	2.25	0.239	0.335	0.792	0.298
In.	0.32	3.21	4.91	2.26	2.86	2.52	3.92	2.80	0.27	0.39	0.91	0.33

Calendar year 1957: Max 1,500 Min 0.1 Mean 67.6 Cfsm 2.16 In. 29.34
Water year 1957-58: Max 850 Min 0.7 Mean 56.5 Cfsm 1.81 In. 24.50

Peak discharge (base, 850 cfs).--Nov. 19 (time unknown) 1,460 cfs (5.59 ft), Dec. 7 (6:45 p.m.) 1,090 cfs (4.87 ft); Dec. 20 (7 to 7:30 a.m.) 1,200 cfs (4.94 ft); Jan. 31 (9 p.m.) 996 cfs (4.44 ft); Apr. 27 (8:30 p.m.) 1,120 cfs (4.75 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage when available, weather records, and records for stations on nearby streams.

4140. Cumberland River near Rowena, Ky.

Location.--Lat 36°53'02", long 85°08'22", on right bank 1.5 miles downstream from Wolf Creek Dam, 1.9 miles upstream from Blackfish Creek, 1.9 miles west of Rowena, Russell County, and at mile 459.4.

Drainage area.--5,790 sq mi.

Records available.--October 1939 to September 1958. Monthly discharge only October 1939, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 540.81 ft above mean sea level, Sandy Hook datum. Prior to Oct. 24, 1940, staff gage at same site and datum. Oct. 1, 1943, to Sept. 30, 1948, auxiliary staff gage at Rowena Ferry, 2.9 miles upstream.

Average discharge.--19 years, 8,780 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 26,900 cfs Apr. 28 (gage height, 21.12 ft); minimum daily, 100 cfs Mar. 2.

1939-58: Maximum discharge, 162,000 cfs Jan. 9, 1946; maximum gage height, 64.82 ft Jan. 9, 1946; no flow at times.

Maximum stage known, 69.5 ft in March 1826, from profile of Cumberland River.

Remarks.--Records good. Flow regulated by Lake Cumberland (see p. 67).

Revisions (water years).--WSP 953: Drainage area. WSP 1336: 1940.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,820	2,590	12,500	19,400	19,900	109	13,700	25,500	26,000	6,080	6,680	1,200
2	4,870	5,320	12,800	19,800	16,300	100	15,800	25,300	15,700	6,360	6,760	7,380
3	4,560	5,220	15,500	*19,600	18,300	104	13,000	25,300	11,100	8,300	6,440	7,980
4	4,760	7,220	*15,200	19,800	19,900	109	7,980	25,300	12,100	3,280	9,200	12,100
5	5,260	10,200	12,700	19,400	17,000	109	3,790	25,400	*12,700	4,420	12,800	*10,100
6	6,980	12,100	11,700	19,000	*15,200	1,320	2,440	*25,400	13,100	1,320	*13,200	9,450
7	7,400	12,800	11,400	21,800	18,200	1,350	8,690	25,300	6,680	*6,410	12,900	3,720
8	8,340	8,550	10,900	24,000	17,300	3,160	*7,740	24,700	3,650	2,200	11,000	4,010
9	7,260	6,380	13,900	24,200	14,900	6,006	6,330	24,700	3,500	5,080	3,920	7,820
10	7,760	2,100	14,100	23,900	16,700	6,620	14,800	24,500	9,050	7,510	3,090	4,670
11	8,250	8,740	14,600	21,400	16,100	2,940	10,700	24,400	5,570	7,850	9,380	1,500
12	6,080	7,140	11,600	23,300	17,900	3,900	11,000	*24,500	5,350	4,920	5,760	2,510
13	4,010	7,360	12,600	23,700	18,400	2,810	7,370	24,500	11,000	4,340	4,360	4,540
14	8,070	1,780	12,700	23,600	21,600	251	17,100	24,500	4,940	10,600	4,120	2,540
15	3,980	5,020	10,900	21,700	23,200	3,080	18,000	24,600	395	15,600	3,560	9,180
16	3,540	242	12,300	20,300	23,400	3,880	15,300	24,600	7,240	11,000	2,220	4,540
17	3,960	810	13,500	19,100	23,100	4,610	16,800	24,600	8,620	11,000	1,160	4,140
18	4,380	2,850	14,300	19,400	23,200	3,700	13,700	24,900	8,230	9,950	5,380	6,680
19	5,840	5,680	14,000	19,300	17,900	4,270	15,600	25,200	6,540	14,000	6,460	3,540
20	8,000	5,740	15,800	19,100	10,400	6,200	8,510	25,000	6,610	3,890	7,260	3,070
21	12,100	16,100	10,700	19,500	10,200	6,370	13,200	25,100	5,040	8,690	3,760	3,440
22	13,000	23,700	10,300	23,500	9,180	3,790	15,700	25,300	340	8,020	5,230	6,020
23	1,120	23,800	12,200	23,600	6,850	162	22,200	25,300	4,990	6,710	3,480	10,800
24	4,200	23,800	17,000	20,900	5,690	3,890	24,200	25,400	6,980	7,760	3,570	11,700
25	5,300	24,000	15,800	10,600	8,160	6,010	24,600	25,800	6,240	6,840	4,420	12,400
26	7,420	23,800	19,200	5,440	4,350	11,400	25,600	25,700	6,440	5,300	5,800	16,200
27	7,760	21,700	20,400	16,100	4,980	10,900	25,900	25,800	5,960	4,360	4,490	7,000
28	15,600	16,800	20,000	19,400	1,270	7,230	26,800	25,800	4,060	14,300	8,020	5,330
29	17,600	17,700	20,300	18,600	-	5,820	26,000	25,900	4,450	15,200	8,570	12,800
30	6,050	17,100	18,800	18,800	-----	3,990	25,700	26,100	4,320	13,100	6,010	10,000
31	1,320	-----	20,200	19,300	-----	14,400	-----	26,100	-----	7,140	3,530	-----
Total	210,590	326,142	447,700	617,540	419,580	128,584	458,550	780,500	232,895	241,530	190,530	206,560
Mean	6,795	10,870	14,440	19,320	14,980	4,148	15,280	25,180	7,763	7,791	6,146	6,885

Observed

Adjusted†

Calendar year 1957:	Max	27,400	Min	104	Mean	11,380	Mean	12,470	Cfsm	2.15	In.	29.24
Water year 1957-58:	Max	26,800	Min	100	Mean	11,670	Mean	11,670	Cfsm	2.02	In.	27.36

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland; records furnished by Corps of Engineers.

4145. East Fork Obey River near Jamestown, Tenn.

Location.--Lat 36°24'58", long 85°01'35", on right bank 200 ft upstream from bridge on State Highway 52, 0.5 mile upstream from Poplar Cove Creek, 5.3 miles west of Jamestown, Pentress County, and 12.8 miles upstream from confluence with West Fork.

Drainage area.--202 sq mi (includes 6 sq mi without surface drainage).

Records available.--October 1942 to September 1958. Prior to February 1943 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 680.30 ft above mean sea level, Sandy Hook datum. Feb. 24 to Apr. 7, 1943, staff gage 200 ft upstream at same datum.

Average discharge.--16 years, 395 cfs.

Extremes.--Maximum discharge during year, 14,600 cfs Nov. 18 (gage height, 17.89 ft); minimum, 14 cfs Sept. 15, 16, 17; minimum gage height, 0.94 ft Sept. 17.

1942-58: Maximum discharge, 28,300 cfs Feb. 13, 1948 (gage height, 27.20 ft); minimum, 3.6 cfs Sept. 26-28, 1948; minimum gage height, 0.55 ft Sept. 12-17, 1954.

Maximum stage known, about 30.7 ft in March 1929, from flood profile by Corps of Engineers.

Remarks.--Records good.

Revisions (water years).--WSP 1003: 1943. WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 5

May 6 to Sept. 30

1.1	28	3.0	478	0.9	12	1.6	92
1.3	51	4.0	910	1.0	16	2.0	186
1.5	87	6.0	2,180	1.2	29	2.5	320
2.0	196	10.0	5,350	1.4	54		
2.5	320	13.0	8,450				

Note.--Same as preceding table above 2.5 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	72	404	372	635	289	478	1,040	50	18	31	23
2	37	66	360	326	622	266	427	797	53	17	66	22
3	112	65	328	281	537	251	391	640	56	17	246	20
4	694	75	320	256	444	232	363	568	51	16	194	20
5	662	87	286	232	464	215	328	3,270	43	16	107	19
6	326	79	258	220	720	203	454	5,720	38	g20	68	19
7	215	72	3,470	220	1,180	201	437	3,330	35	g20	50	18
8	152	74	3,210	206	890	302	375	1,720	32	g20	40	18
9	*110	125	1,360	170	666	665	340	1,040	30	g56	43	17
10	87	143	870	178	529	990	628	890	36	g44	36	17
11	72	123	662	174	441	707	885	905	36	g30	30	17
12	60	110	503	159	363	537	676	895	31	g31	30	16
13	51	104	417	176	315	572	553	698	28	g166	35	16
14	46	908	391	400	281	671	447	541	24	g124	194	15
15	42	980	363	437	273	560	424	441	23	g51	110	15
16	38	779	*375	420	246	482	*400	363	22	g51	63	14
17	37	2,950	451	378	198	424	342	309	20	g103	47	16
18	46	8,320	458	342	183	756	307	284	*19	*68	36	20
19	54	*6,220	454	299	174	846	284	*256	19	46	30	23
20	46	1,530	4,220	*279	165	689	266	300	20	59	26	44
21	g39	828	2,190	299	163	572	2,340	241	19	114	24	1,320
22	g39	590	1,060	378	178	478	1,920	189	18	112	23	*492
23	g39	514	748	345	183	420	1,010	157	18	99	23	259
24	g70	468	590	183	*183	*582	758	133	17	107	76	145
25	g126	925	485	1,660	183	2,070	856	119	17	164	114	96
26	g110	824	865	965	185	1,330	900	110	19	107	*96	70
27	100	618	806	725	215	1,010	1,720	96	20	67	59	58
28	91	500	662	572	510	810	3,720	82	21	48	44	65
29	81	564	537	475	-	662	2,020	72	20	37	35	56
30	78	496	444	417	-	572	1,750	63	18	33	76	48
31	76	-	391	388	-	541	-	56	-	31	26	-
Total	3,792	29,201	27,923	12,604	10,926	18,905	25,769	25,325	853	1,892	2,031	2,998
Mean	122	973	901	407	390	610	859	817	28.4	61.0	65.5	99.9
Cfsm	0.604	4.82	4.46	2.01	1.93	3.02	4.25	4.04	0.141	0.302	0.324	0.495
In.	0.70	5.38	5.14	2.32	2.01	3.48	4.74	4.66	0.16	0.35	0.37	0.55

Calendar year 1957: Max 12,800 Min 8.3 Mean 521 Cfsm 2.58 In. 35.01
Water year 1957-58: Max 8,320 Min 14 Mean 444 Cfsm 2.20 In. 29.86

Peak discharge (base, 8,000 cfs).--Nov. 18 (12 p.m.) 14,600 cfs (17.89 ft); May 6 (1 a.m.) 9,110 cfs (15.59 ft).

* Discharge measurement made on this day.

g Computed from bihourly radio-gage readings, furnished by Corps of Engineers.

4150. West Fork Obey River near Alpine, Tenn.

Location--Lat 36°23'49", long 85°10'28", on upstream end of left pier of bridge on State Highway 52. 0.3 mile upstream from Nettlecarrier Creek. 2.4 miles east of Alpine, Overton County, and 7.8 miles above confluence with East Fork.

Drainage area--115 sq mi (includes 34 sq mi without surface drainage).

Records available--October 1942 to September 1958. Prior to January 1943 monthly discharge only, published in WSP 1306.

Gage--Water-stage recorder. Datum of gage is 684.28 ft above mean sea level, unadjusted, datum of 1929.

Average discharge--16 years, 169 cfs.

Extremes--Maximum discharge during year, 9,510 cfs Nov. 18 (gage height, 12.65 ft); minimum, 4.8 cfs Sept. 15, 16 (gage height, 0.38 ft).

1942-58: Maximum discharge, 15,100 cfs Mar. 21, 1955 (gage height, 16.30 ft); minimum, 2.6 cfs Sept. 13-19, 1954; minimum gage height, that of Sept. 15, 16, 1958.

Maximum stage known, that of Mar. 21, 1955. Flood in March 1929 reached a stage about 2 ft lower than that of Mar. 21, 1955.

Remarks--Records good except those below 10 cfs, which are fair.

Revisions (water years)--WSP 1386: 1943-45(P), 1946, 1948, 1952(P). WSP 1506: Drainage area.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18			Nov. 19 to May 4			May 5 to Sept. 30		
0.6	7.7	2.0	275	1.2	55	0.3	3.4	1.3
7	11	3.0	185	1.5	107	.4	5.2	1.6
1.0	33	5.0	1,580	2.0	250	.6	10	2.0
1.3	69	7.0	2,910	3.0	610	.8	18	4.0
1.5	111	8.0	3,860	5.0	1,580	1.0	30	6.0
				7.0	2,910			2,160

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	18	132	146	322	103	217	472	27	10	17	7.1
2	11	16	117	120	301	91	202	364	27	10	52	6.8
3	29	17	105	107	262	87	187	280	26	9.6	212	6.6
4	264	17	101	85	220	82	172	564	23	9.4	57	6.3
5	156	17	85	85	229	76	157	1,750	22	17	33	6.1
6	61	16	80	83	329	74	458	1,830	22	16	22	6.1
7	38	16	1,570	83	580	76	329	1,610	21	13	18	5.8
8	28	17	1,220	78	455	143	250	815	20	14	15	5.8
9	*21	32	566	68	336	352	217	490	20	20	13	5.8
10	16	33	385	63	265	466	472	426	22	19	13	5.4
11	13	29	277	61	226	318	514	410	20	15	13	5.4
12	12	26	205	56	187	247	368	366	18	29	13	5.4
13	11	24	175	76	157	265	280	290	17	24	11	5.4
14	9.8	301	149	223	130	287	235	223	16	22	13	5.2
15	9.1	293	127	193	120	244	217	177	15	18	11	5.0
16	8.7	196	*130	178	101	217	*193	145	14	43	9.9	4.8
17	11	1,050	181	160	85	196	168	120	14	38	9.8	10
18	11	*3,770	190	146	76	460	146	100	*14	*25	8.8	17
19	10	2,490	184	122	71	410	130	*87	13	17	8.5	13
20	9.4	690	1,400	*114	66	312	122	80	13	15	7.9	43
21	8.7	350	750	130	63	259	1,330	67	13	21	7.6	476
22	8.0	217	458	166	65	217	869	59	14	18	7.6	*98
23	9.4	172	308	135	83	190	469	54	13	20	8.5	45
24	44	146	247	610	*63	*235	346	48	12	19	21	29
25	48	435	211	842	63	638	371	47	12	58	26	22
26	38	329	348	483	63	514	441	44	16	28	*20	17
27	31	241	298	346	85	420	914	39	19	20	13	16
28	26	196	259	265	143	336	1,460	35	15	15	10	20
29	23	193	217	226	-	274	896	32	13	13	9.4	20
30	21	189	184	199	-----	250	714	29	12	12	8.5	16
31	19	-----	160	187	-----	241	-----	27	-----	11	7.6	-----
Total	1,018.1	11,516	10,799	5,846	5,136	8,080	12,842	11,080	523	639.0	696.9	935.0
Mean	32.8	384	348	189	183	261	428	357	17.4	20.6	22.5	31.2
Cfsm	0.285	3.34	3.03	1.64	1.59	2.27	3.72	3.10	0.151	0.179	0.196	0.271
In.	0.33	3.72	3.49	1.89	1.66	2.61	4.15	3.58	0.17	0.21	0.23	0.30

Calendar year 1957: Max 5,440

Min 5.3

Mean 206

Cfsm 1.79

In. 24.35

Water year 1957-58: Max 3,770

Min 4.8

Mean 189

Cfsm 1.64

In. 22.34

Peak discharge (base, 3,400 cfs)--Nov. 18 (9:30 p.m.) 9,510 cfs (12.65 ft).

* Discharge measurement made on this day.

CUMBERLAND RIVER BASIN

4160. Wolf River near Byrdstown, Tenn.

Location.--Lat 36°33'40", long 85°04'20", on right bank a quarter of a mile upstream from bridge on county road, half a mile upstream from Widow Creek, 3 miles east of Byrdstown, Pickett County, and 5 miles upstream from Lick Creek.

Drainage area.--105 sq mi.

Records available.--October 1942 to September 1958. Prior to July 1943 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 707.54 ft above mean sea level, Sandy Hook datum.

Average discharge.--16 years, 180 cfs.

Extremes.--Maximum discharge during year, 8,480 cfs Nov. 18 (gage height, 7.89 ft): minimum, 9.0 cfs Sept. 16 (gage height, 0.80 ft).
1942-58: Maximum discharge, 22,600 cfs Jan. 29, 1957 (gage height, 10.84 ft), from rating curve extended above 7,300 cfs on basis of velocity-area study; minimum, 2.0 cfs Sept. 17, 1954 (gage height, 0.50 ft).

Remarks.--Records good except those below 50 cfs, which are fair. Some regulation at low flow caused by small mills above station.

Revisions (water years).--WSP 1276: 1943.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

1.0	12	3.0	400
1.2	21	4.0	1,040
1.5	43	5.0	2,040
1.8	78	6.0	3,490
2.6	240	7.0	5,770

0.8	9.0	2.5	250
1.0	14	3.0	440
1.2	22	3.5	680
1.5	47	4.0	1,040
1.8	88	5.0	2,040
2.2	165	6.0	3,490

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	40	168	165	756	121	336	462	51	19	31	13
2	22	37	155	147	585	110	296	380	63	18	35	12
3	28	34	145	133	424	106	284	320	49	17	40	12
4	41	33	135	121	324	99	229	452	41	17	37	12
5	59	31	117	112	313	90	208	1,680	37	21	31	11
6	48	30	110	108	444	88	929	2,320	35	55	26	11
7	39	28	1,350	110	898	92	570	1,820	34	55	22	11
8	33	30	1,300	102	620	153	412	980	33	92	21	11
9	*30	30	615	90	436	475	328	585	31	137	20	10
10	27	28	432	85	340	580	584	485	31	141	20	10
11	25	26	320	82	268	392	630	462	31	88	19	10
12	23	25	235	79	217	296	449	428	29	218	18	10
13	22	25	193	86	180	352	348	332	28	343	19	9.8
14	21	114	170	143	157	404	285	257	26	404	21	9.5
15	20	170	153	141	149	328	*284	205	26	172	22	9.2
16	20	166	145	141	129	274	247	170	26	117	20	9.2
17	24	1,390	*605	135	110	232	208	147	25	*117	21	18
18	23	3,680	467	131	101	316	185	129	23	106	22	21
19	22	2,840	408	117	92	310	168	117	*23	78	18	20
20	20	*698	1,930	116	86	285	161	*106	54	62	17	55
21	18	424	920	*125	84	247	2,050	93	55	53	16	384
22	18	288	540	139	85	211	1,010	82	39	47	15	127
23	22	229	392	125	85	188	570	74	27	124	15	*70
24	121	188	308	441	84	247	504	67	23	143	26	46
25	94	250	254	761	*85	*1,000	1,220	73	21	92	25	34
26	74	247	320	508	85	692	896	70	29	70	23	28
27	60	208	306	376	108	516	1,150	59	29	57	*18	26
28	53	188	271	292	149	408	1,160	53	26	47	16	25
29	48	205	223	241	-	336	716	48	22	41	15	23
30	46	199	190	211	-	328	570	44	20	36	14	22
31	44	-	172	222	-	388	-	41	-	31	14	-
Total	1,168	11,881	13,027	5,785	7,384	9,864	16,947	12,441	967	3,018	677	1,069.7
Mean	37.7	396	420	187	264	312	565	401	32.2	97.4	21.8	35.7
Cfsm	0.359	3.77	4.00	1.78	2.51	2.97	5.38	3.82	0.307	0.928	0.208	0.340
In.	0.41	4.21	4.61	2.05	2.62	3.42	6.00	4.41	0.34	1.07	0.24	0.38

Calendar year 1957: Max 11,000 Min 9.7 Mean 266 Cfsm 2.53 In. 34.35
Water year 1957-58: Max 3,680 Min 9.2 Mean 230 Cfsm 2.19 In. 29.76

Peak discharge (base, 3,600 cfs).--Nov. 18 (12 p.m.) 8,480 cfs (7.89 ft).

* Discharge measurement made on this day.

4170. Obey River below Dale Hollow Dam, Tenn.

Location.--Lat 36°32'12", long 85°27'22", on right bank 1,200 ft downstream from Dale Hollow Dam, 3 miles east of Celina, Clay County, 7.1 miles upstream from mouth, and 24 miles downstream from Wolf River.

Drainage area.--935 sq mi.

Records available.--October 1938 to September 1958 (discontinued). Published as "near Celina" prior to September 1943. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level, Sandy Hook datum. Jan. 25, 1939, to Nov. 22, 1940, wire-weight gage and Nov. 23, 1940, to Sept. 30, 1942, water-stage recorder, at site 5.2 miles upstream, at datum 12.46 ft higher. Water-stage recorder for station on Cumberland River at Celina is used as an auxiliary gage for this station.

Average discharge.--20 years, 1,395 cfs (unadjusted).

Extremes.--Maximum discharge during year, 6,060 cfs Apr. 28; maximum gage height, 18.82 ft Apr. 28 (backwater from Cumberland River); minimum discharge not determined; minimum gage height, 4.72 ft Feb. 21.

1938-58: Maximum discharge, 41,400 cfs Feb. 4, 1939, site and datum then in use, from rating curve extended above 20,000 cfs; maximum gage height, 43.40 ft Jan. 12, 1946 (backwater from Cumberland River); minimum discharge not determined.

Remarks.--Records good except those for periods of backwater from Cumberland River and those for which computed outflow from Dale Hollow Reservoir was used, which are fair. Flow completely regulated by Dale Hollow Reservoir, beginning Aug. 30, 1943 (see p. 67). Figures of daily discharge shown only when there is outflow from Dale Hollow Reservoir; when not shown, discharge is negligible.

Cooperation.--Records of outflow from Dale Hollow Reservoir furnished by Corps of Engineers.

Rating tables, water year 1957-58, except periods of backwater from Cumberland and computed outflow from Dale Hollow Reservoir (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-5

Oct. 6 to Sept. 30

6.6	470	5.2	105	9.0	1,420
7.0	600	5.5	170	11.0	2,520
7.4	750	6.0	295	14.0	4,700
		7.0	600		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	538	-	c1,330	c5,390	-	-	-	c5,840	-	1,460	3,120	372
2	600	-	1,540	c5,430	-	-	1,600	c5,780	e17	1,760	1,320	1,400
3	486	116	2,130	c5,430	c2,120	e17	1,170	c5,780	107	2,200	1,100	-
4	556	754	1,800	c5,490	c1,830	-	1,180	c5,800	-	-	1,620	3,400
5	713	e10	1,750	c5,470	c1,040	-	-	c5,850	186	568	3,300	4,020
6	e19	-	1,620	c5,550	1,850	(*)	-	c5,830	2,520	-	3,020	2,020
7	1,430	-	c2,070	*c5,110	c1,590	-	1,150	c5,800	2,020	1,940	3,180	-
8	1,680	-	-	c4,050	c574	-	1,180	c5,740	293	792	2,160	800
9	1,600	-	c3,440	c4,560	-	-	1,620	c5,770	761	726	1,380	1,060
10	1,680	-	c3,290	c4,540	1,330	-	c3,670	c5,740	112	1,580	-	957
11	1,720	3,980	c3,440	-	992	-	-	c5,760	-	1,540	3,140	-
12	-	4,100	3,350	-	864	-	2,360	*c5,750	112	1,340	3,160	156
13	e29	3,290	3,380	c1,430	c2,210	-	1,310	c5,790	-	442	2,040	605
14	3,440	1,250	1,660	c1,710	c5,990	-	2,120	c5,800	152	2,470	1,360	-
15	2,380	589	-	c3,640	c5,630	-	1,180	c5,800	-	1,880	882	125
16	2,380	-	3,400	c2,460	c3,090	-	c1,540	c5,800	782	2,020	129	-
17	2,310	-	3,560	c2,470	c2,000	e17	c4,200	c4,010	-	1,940	-	145
18	2,430	890	*3,560	c2,490	c1,930	-	c3,450	c4,010	140	2,900	1,960	-
19	1,300	1,800	c3,560	-	c980	-	3,260	c3,920	215	3,900	2,080	176
20	-	2,470	c2,690	c1,630	-	-	355	c4,340	120	2,500	1,860	1,450
21	887	489	c2,290	c3,100	-	-	992	c1,790	-	2,540	1,380	928
22	903	c2,990	-	c2,130	-	-	926	c1,510	118	1,560	2,060	2,540
23	620	c374	3,320	c1,980	-	-	c4,300	c1,390	2,030	1,150	-	2,960
24	1,070	-	c3,400	c1,610	-	-	c5,640	c1,720	936	1,340	1,330	3,460
25	677	c2,300	-	-	-	-	c5,740	c780	776	2,720	2,440	4,510
26	140	c3,450	c4,240	-	-	-	c5,750	-	666	2,280	2,200	4,280
27	1,330	c3,560	c5,560	526	-	-	c5,830	c866	646	2,160	945	1,390
28	3,120	c3,670	c5,020	c4,160	-	-	c5,920	-	-	3,300	3,120	1,380
29	c3,490	-	c4,760	c3,960	-	-	c5,970	-	113	4,630	3,290	2,260
30	c3,470	c496	c5,300	c3,850	-	-	c5,850	-	1,020	2,290	1,020	3,090
31	-	-	c5,380	c3,520	-	-	-	-	-	3,320	284	-
Total	40,998	36,578	86,860	89,686	30,120	34	78,263	116,966	13,842	59,248	54,880	43,284
Mean	1,323	1,219	2,802	2,893	1,076	1.1	2,609	3,773	461	1,911	1,770	1,443

Observed

Adjusted †

Calendar year 1957:	Max	5,940	Min	-	Mean	1,995	Mean	2,151	Cfsm	2.30	In.	31.23
Water year 1957-58:	Max	5,970	Min	-	Mean	1,783	Mean	1,798	Cfsm	1.92	In.	26.10

* Discharge measurement made on this day.

† Adjusted for change in contents in Dale Hollow Reservoir.

c Backwater from Cumberland River; discharge computed by using fall as determined by gage-height record at auxiliary gage as a factor.

e Discharge is computed outflow from Dale Hollow Reservoir.

Note.--Discharge negligible on days for which no discharge is shown.

CUMBERLAND RIVER BASIN

4175. Cumberland River at Celina, Tenn.

Location.--Lat 36°33'20", long 85°30'47", on right pier of bridge on State Highway 52 at Celina, Clay County, 600 ft downstream from Obey River and at mile 380.8.

Drainage area.--7,320 sq mi, approximately.

Records available.--October 1922 to September 1958. Gage-height records collected at same site 1903-54 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 488.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 20, 1930, staff gage at site 400 ft downstream at same datum.

Average discharge.--36 years, 11,340 cfs (unadjusted).

Extremes.--Maximum discharge during year, 44,600 cfs Apr. 28; maximum gage height, 25.80 ft Apr. 28; minimum discharge, 470 cfs Mar. 6, 7 (gage height, 1.72 ft).
1922-58: Maximum discharge, 145,000 cfs Dec. 23, 1926; maximum gage height, 57.25 ft Dec. 29, 1926, from graph based on gage readings; minimum discharge observed, 69 cfs Sept. 2, 11-14, 26, 1925 (gage height, 0.20 ft).
Maximum stage known since at least 1793, 59.2 ft in March 1826, from Cumberland River profile.

Remarks.--Records good. Flow regulated by Lake Cumberland and Dale Hollow Reservoir (see p. 67).

Revisions (water years).--WSP 893: 1923-38. WSP 1276: 1924.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 1, 22-24, 28, 29, 31, Nov. 9, 12, 15, 17, 22, 29, Dec. 7, 9, 20-22, 24, 26, 28, 29, Jan. 8, 11, 24-26, 28, Feb. 2, 14, 20, 24, 26, Mar. 25, 29, Apr. 1, 5, 8, 10, 11, 15, 20, 23, 24, 27, June 2, 3, 8, 10, 15, July 8, 15, 21, 23, 25, 29, Aug. 1, 5, 12, Sept. 4, 8, 16, 24, 27-29)

Oct. 1-29		Oct. 30 to Sept. 30	
5.0	4,300	1.7	450
9.0	10,100	2.0	770
		4.0	3,450
		10.0	11,800
		20.0	31,600
		26.0	44,200

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,760	2,880	19,100	26,400	27,000	3,550	15,900	34,000	26,700	6,320	11,200	5,310
2	5,840	2,320	15,000	26,000	22,900	1,510	17,000	33,100	25,800	7,150	8,960	3,630
3	5,820	4,920	15,800	26,000	21,700	a540	17,500	32,600	16,000	9,060	8,630	5,750
4	5,560	6,910	17,600	26,500	21,600	a520	15,300	32,300	12,000	8,070	8,430	10,800
5	5,440	*6,940	17,100	25,900	22,200	a500	9,680	32,500	12,200	5,440	12,500	15,100
6	5,330	10,400	15,100	25,500	19,900	*470	8,700	34,000	14,700	4,270	15,300	13,000
7	7,750	11,700	21,200	*23,900	21,500	500	7,570	34,200	15,300	4,650	16,200	9,750
8	9,400	13,400	26,900	28,800	21,800	1,940	10,500	33,500	8,350	6,690	16,000	6,120
9	10,100	10,100	19,900	28,900	18,300	3,170	10,500	32,400	5,910	4,910	11,900	4,820
10	9,050	7,070	19,500	29,200	18,700	6,720	16,800	32,000	8,030	5,810	5,750	8,270
11	9,140	7,690	19,200	24,300	18,400	7,500	21,200	32,500	9,220	8,210	6,460	5,710
12	8,120	12,000	18,400	22,600	18,000	4,800	16,600	*32,700	6,750	9,330	11,400	3,330
13	6,690	11,400	16,100	25,200	20,600	5,860	14,000	32,000	5,660	6,560	9,200	2,880
14	7,740	9,320	15,300	27,400	23,100	5,840	12,000	31,400	9,950	7,550	6,300	4,620
15	10,100	5,980	13,200	28,300	26,300	4,100	19,100	31,200	6,320	10,800	5,280	2,670
16	8,220	7,250	14,700	25,900	27,500	2,790	20,900	31,000	3,720	16,300	3,900	8,030
17	5,310	9,320	17,900	23,800	26,500	5,440	20,800	29,700	4,920	13,300	2,960	6,170
18	6,540	15,900	19,000	22,500	25,900	5,610	21,100	29,200	8,080	13,600	*4,270	4,840
19	5,880	17,000	19,800	20,700	25,100	5,420	18,800	29,400	8,420	14,600	5,510	6,560
20	5,400	12,800	29,900	21,600	16,400	5,450	16,500	29,600	7,270	15,700	8,220	5,760
21	9,120	8,590	25,100	21,900	11,000	7,200	13,100	27,700	6,950	8,910	8,390	5,120
22	13,600	21,500	14,600	25,000	10,600	6,700	16,100	27,500	5,380	9,120	6,690	6,560
23	12,700	25,300	14,900	26,700	9,580	5,350	23,100	27,100	4,860	8,830	5,410	8,430
24	5,800	25,000	18,300	32,900	7,570	2,870	29,900	27,400	4,420	9,300	6,080	12,900
25	4,660	26,900	18,500	30,600	6,360	6,660	33,700	27,800	6,750	9,420	6,990	15,700
26	5,370	28,200	22,400	15,300	7,540	9,150	34,100	28,100	7,300	9,750	6,870	17,200
27	9,320	28,400	27,800	9,380	6,620	12,200	37,200	27,300	7,150	8,280	6,780	16,900
28	11,300	26,200	27,300	21,900	6,420	12,100	42,800	26,600	6,220	7,960	7,090	9,870
29	19,900	19,900	26,500	24,600	-	9,170	39,200	26,400	4,940	17,400	8,750	7,940
30	20,600	19,700	26,900	23,500	-	7,370	35,700	26,400	5,790	17,400	9,390	14,700
31	8,730	-	25,800	23,600	-	6,420	-	26,500	-	16,100	7,370	-
Total	264,270	414,790	617,800	762,780	509,090	157,920	615,050	938,100	275,110	299,770	258,160	248,240
Mean	8,525	13,030	19,930	24,610	18,180	5,094	20,500	30,260	9,170	9,670	8,328	8,275
Observed							Adjusted†					
Calendar year 1957:	Max	58,600	Min	792	Mean	14,920	Mean	16,170	Cfsm	2.21	In.	29.98
Water year 1957-58:	Max	42,800	Min	470	Mean	14,690	Mean	14,700	Cfsm	2.01	In.	27.26

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland and Dale Hollow Reservoir.

a No gage-height record; discharge estimated on basis of weather records and recorded releases from Lake Cumberland and Dale Hollow Reservoir, furnished by Corps of Engineers.

4180. Roaring River near Hilham, Tenn.

Location.--Lat 36°20'27", long 85°25'35", on left bank 700 ft upstream from Cleek Branch, 800 ft downstream from old Crawford Mill site, 0.2 mile downstream from bridge on State Highway 136, 1.4 miles upstream from Flat Creek, 5.0 miles south of Hilham, Overton County, and 13 miles north of Cookeville.

Drainage area.--78.7 sq mi (includes 27.1 sq mi without surface drainage).

Records available.--October 1931 to September 1958. Prior to July 1932 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Concrete control since Sept. 21, 1940. Altitude of gage is 770 ft (by barometer). Prior to July 25, 1933, staff gage at site 800 ft upstream at different datum. July 25 to Nov. 7, 1933, staff gage 150 ft downstream at different datum. Nov. 8, 1933, to Sept. 23, 1940, staff gage at present site and datum.

Average discharge.--27 years, 109 cfs.

Extremes.--Maximum discharge during year, 2,580 cfs Nov. 19 (gage height, 6.35 ft); minimum, 5.6 cfs Sept. 15, 16, 17 (gage height, 0.81 ft). 1931-58: Maximum discharge, 5,550 cfs Mar. 22, 1955 (gage height, 9.39 ft); minimum, 1.9 cfs Oct. 19, 24, 26, 28, Nov. 9, 1940; minimum daily, 2.4 cfs Sept. 12, 13, 15-19, 1954; minimum gage height, 0.16 ft Oct. 5, 1936.

Remarks.--Records fair. Prior to 1951, some diurnal fluctuation at low flow caused by mills above station.

Revisions (water years).--WSP 1033: 1939(M). WSP 1143: 1948. WSP 1276: 1942. WSP 1436: Drainage area.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17

Nov. 18 to Sept. 30

1.0	17	0.8	5.2	2.0	135
1.3	37	.9	9.0	3.0	500
1.6	73	1.1	20	4.0	950
2.0	140	1.3	35	5.0	1,530
3.0	510	1.7	84	6.0	2,270

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	26	107	103	215	56	151	350	39	16	35	8.2
2	18	25	97	89	204	53	137	295	42	15	29	7.5
3	18	25	90	80	180	52	130	228	37	15	61	7.5
4	129	25	86	74	151	49	124	231	35	14	33	7.1
5	109	24	74	69	155	46	117	1,270	33	13	24	7.1
6	63	23	69	66	186	46	439	715	32	12	20	7.1
7	48	22	775	66	322	49	792	792	31	15	18	7.1
8	37	22	850	64	314	70	220	484	29	19	16	7.5
9	*32	25	414	56	242	172	178	362	33	186	15	6.7
10	29	25	314	54	190	238	400	358	32	31	19	6.7
11	28	24	233	53	153	162	383	337	29	24	19	6.7
12	25	22	165	50	131	131	300	295	26	42	19	6.3
13	24	22	137	64	114	149	224	228	25	43	14	6.3
14	23	53	124	98	102	153	180	175	24	45	15	6.3
15	21	105	110	90	98	135	*168	145	22	29	15	6.0
16	21	86	*108	83	86	124	143	124	22	24	12	5.6
17	24	393	115	78	74	117	124	114	21	24	12	27
18	24	*1,560	115	74	a70	233	110	102	20	*22	11	42
19	21	1,560	112	67	a67	233	103	*165	*19	20	10	18
20	19	488	563	*66	a65	190	98	112	19	46	10	108
21	19	300	422	71	a63	158	614	89	21	38	9.5	612
22	18	194	300	73	a60	133	468	80	24	33	9.5	*127
23	19	158	215	65	56	121	324	73	19	35	10	78
24	69	135	165	315	*56	*128	256	67	18	35	23	57
25	43	290	141	520	56	314	328	70	17	34	26	45
26	36	220	204	346	56	332	397	64	40	29	*16	37
27	32	165	165	260	66	305	637	56	28	24	12	35
28	30	145	147	190	69	242	950	53	21	21	10	34
29	29	143	128	153	-	194	568	46	19	19	10	30
30	28	126	115	133	-----	178	439	44	18	17	8.6	27
31	28	-----	105	139	-----	175	-----	42	-----	16	8.2	-----
Total	1,081	6,431	6,765	3,709	3,641	4,738	9,020	7,568	795	956	549.8	1,386.7
Mean	34.9	214	218	120	130	153	301	244	26.5	30.8	17.7	46.2
Cfsm	0.443	2.72	2.77	1.52	1.65	1.94	3.82	3.10	0.337	0.391	0.225	0.587
In.	0.51	3.04	3.20	1.75	1.72	2.24	4.26	3.58	0.38	0.45	0.26	0.66
Calendar year 1957: Max	3,890				Min 5.0		Mean 147	Cfsm 1.87	In. 25.43			
Water year 1957-58: Max	1,560				Min 5.6		Mean 128	Cfsm 1.63	In. 22.05			

Peak discharge (base, 1,200 cfs).--Nov. 19 (2 a.m.) 2,580 cfs (6.35 ft); Dec. 7 (8 p.m.) 1,340 cfs (4.68 ft); Apr. 28 (1 a.m.) 1,270 cfs (4.57 ft); May 5 (3 a.m.) 1,890 cfs (5.53 ft); Sept. 21 (3 a.m.) 1,280 cfs (4.59 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for West Fork Obey River near Alpine.

CUMBERLAND RIVER BASIN

4200. Calfkiller River below Sparta, Tenn.

Location.--Lat 35°54'31", long 85°28'46", on right bank three-quarters of a mile downstream from abandoned hydroelectric powerplant of Tennessee Valley Authority, 1½ miles downstream from Town Creek, 1½ miles southwest of Sparta, White County, and 9 miles upstream from mouth.

Drainage area.--178 sq mi.

Records available.--August 1940 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 820 ft (from topographic map).

Average discharge.--18 years, 371 cfs.

Extremes.--Maximum discharge during year, 9,280 cfs Nov. 19 (gage height, 18.54 ft); minimum, 26 cfs Sept. 16, 17 (gage height, 1.15 ft).

1940-58: Maximum discharge, 14,600 cfs Jan. 5, 1949 (gage height, 25.80 ft); minimum, 11 cfs Oct. 18, 1953.

Flood in March 1929 reached a discharge of 25,000 cfs (estimated) in this vicinity.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
1.3	53	7.0	2,620	1.16	28		
1.5	101	10.0	4,140	1.5	104		
2.0	280	14.0	6,370	2.0	280		
4.0	1,160	17.3	8,410				

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	101	499	414	400	324	454	a3,500	121	55	66	44
2	107	93	440	384	427	276	400	a3,500	115	53	66	42
3	101	123	400	340	384	256	372	a1,800	112	50	87	46
4	185	184	380	308	344	236	348	a1,300	110	48	126	87
5	553	178	340	284	336	213	324	a1,500	102	48	126	80
6	360	156	312	268	589	202	320	a2,000	102	48	92	68
7	244	142	2,570	260	1,150	205	336	a2,800	97	50	73	57
8	188	164	4,000	252	949	316	296	a2,200	94	64	66	46
9	156	244	1,790	221	710	540	276	a1,700	90	62	62	42
10	132	236	1,180	206	566	872	478	a2,000	92	57	57	35
11	116	195	*882	198	472	656	859	a1,500	90	53	80	32
12	101	174	852	188	400	508	648	a1,100	85	73	129	32
13	93	164	522	188	*352	468	517	a850	82	92	115	30
14	88	916	458	248	312	589	432	a650	78	164	94	30
15	83	1,360	400	292	300	499	396	a480	78	129	71	28
16	78	2,010	392	*276	272	432	380	*384	78	99	64	28
17	96	2,720	472	260	244	398	332	332	73	78	57	33
18	*83	8,270	486	244	221	760	308	296	68	71	55	42
19	93	*8,400	472	225	202	866	288	272	66	66	50	44
20	85	3,030	2,190	213	195	697	276	264	66	73	46	56
21	75	1,550	2,260	225	184	558	1,150	240	68	73	44	1,420
22	73	1,080	1,260	348	184	463	*1,720	217	71	68	46	666
23	71	868	895	352	188	400	a1,150	198	66	*73	44	234
24	91	756	634	604	192	392	895	184	64	124	48	178
25	150	1,010	566	1,490	192	1,040	a3,000	181	62	164	71	129
26	153	1,090	900	1,060	192	1,090	a3,800	174	*92	142	*90	104
27	139	872	949	769	225	957	a3,200	164	80	110	85	90
28	126	702	764	584	360	*828	a2,700	150	68	87	68	78
29	116	656	616	476	-	684	a2,900	136	62	78	50	*73
30	113	602	508	414	-	584	a4,500	129	57	75	44	68
31	107	-----	432	376	-----	a600	-----	124	-----	71	42	-----
Total	4,272	38,026	28,671	11,947	10,542	16,930	33,037	29,325	2,489	2,498	2,214	3,992
Mean	138	1,288	925	385	376	546	1,101	946	83.0	80.6	71.4	133
Cfsm	0.775	7.12	5.20	2.16	2.11	3.07	6.19	5.31	0.466	0.453	0.401	0.747
In.	0.89	7.94	5.99	2.50	2.20	3.54	6.90	6.13	0.52	0.52	0.46	0.83

Calendar year 1957: Max 8,400 Min 27 Mean 520 Cfsm 2.92 In. 39.66
 Water year 1957-58: Max 8,400 Min 28 Mean 504 Cfsm 2.83 In. 38.42

Peak discharge (base, 4,400 cfs).--Nov. 19 (7 a.m.) 9,280 cfs (18.54 ft); Dec. 8 (2 a.m.) 5,340 cfs (12.17 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

4210. Collins River near McMinnville, Tenn.

Location.--Lat 35°42'32", long 85°43'46", on left bank 10 ft downstream from bridge on U. S. Highway 70S, 1½ miles downstream from Barren Fork, and 2½ miles northeast of McMinnville, Warren County.

Drainage area.--624 sq mi.

Records available.--October 1924 to September 1958. Prior to April 1925 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 825.78 ft above mean sea level, Sandy Hook datum. Prior to Oct. 16, 1926, chain gage on upstream side of bridge at same datum.

Average discharge.--34 years, 1,134 cfs.

Extremes.--Maximum discharge during year, 33,000 cfs Nov. 19 (gage height, 27.20 ft); minimum, 112 cfs Sept. 10, 11 (gage height, 1.44 ft).

1924-58: Maximum discharge, 75,300 cfs Mar. 23, 1929 (gage height, 39.1 ft), from rating curve extended above 32,000 cfs on basis of slope-area measurement of peak flow; minimum, 35 cfs Sept. 21, 1930; minimum gage height, 0.70 ft Oct. 16, 1931.

A flood in 1854 is believed to have been approximately equal to that of Mar. 23, 1929, from information by local residents.

Remarks.--Records excellent.

Revisions (water years).--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19				Nov. 19 to Sept. 30	
1.88	230	12.0	8,510	1.45	114
3.0	640	15.0	12,300	2.0	245
5.0	1,750	20.0	19,400	3.0	670
8.0	4,060	26.0	30,000	5.0	1,820
				8.0	4,060

Note.--Same as preceding table above 8.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	484	390	1,560	1,170	1,420	1,860	1,290	4,910	370	215	312	158
2	532	362	1,350	1,140	1,420	1,440	1,180	3,580	640	210	346	144
3	1,560	330	1,220	995	1,220	1,220	1,070	2,690	585	199	595	138
4	2,500	306	1,150	912	1,100	1,080	1,030	2,150	470	188	565	135
5	2,820	306	1,090	841	1,120	918	1,140	2,290	378	183	502	129
6	1,960	292	968	786	2,980	830	1,570	3,490	340	185	402	127
7	1,240	283	4,780	764	5,740	802	2,340	5,360	318	188	326	127
8	855	312	12,300	756	4,430	898	1,850	5,170	294	199	280	119
9	875	588	6,930	650	2,950	1,020	1,440	3,450	298	199	259	114
10	532	793	3,830	*615	2,240	1,200	2,130	4,650	340	239	239	114
11	456	676	*2,750	595	1,830	1,080	3,020	4,720	358	245	242	114
12	390	580	2,100	560	1,510	978	2,280	4,510	543	1,080	486	117
13	337	524	1,690	540	1,290	968	1,830	4,290	290	2,640	824	119
14	330	1,240	1,490	786	*1,120	1,200	1,520	3,290	259	2,800	1,270	117
15	262	3,380	1,350	1,150	1,050	1,130	1,430	2,400	242	1,560	731	117
16	244	6,580	1,430	1,070	968	1,030	1,520	*1,860	230	1,060	520	116
17	250	10,400	1,840	968	846	984	1,270	1,490	218	874	414	129
18	*258	22,400	1,720	868	742	1,800	1,100	1,240	212	710	346	140
19	320	*50,000	1,620	780	670	2,180	1,010	1,110	204	590	298	*153
20	309	15,800	6,850	705	625	1,670	934	1,140	202	520	259	162
21	271	5,780	8,880	700	595	1,580	2,250	1,000	199	448	242	1,310
22	241	3,040	4,900	808	610	1,380	2,940	852	230	430	218	940
23	230	2,750	2,910	802	690	1,190	*2,340	742	239	858	207	758
24	232	2,740	2,260	1,870	720	1,150	2,070	655	224	*836	202	475
25	762	3,550	1,890	5,710	715	1,710	6,320	595	210	665	199	343
26	855	4,800	2,000	3,670	695	2,170	7,600	565	*346	1,030	218	262
27	690	3,460	1,870	2,670	1,070	2,010	6,630	511	475	786	*248	224
28	576	2,570	1,590	2,110	2,170	1,830	4,600	466	382	620	212	199
29	508	2,380	1,460	1,690	-	*1,560	4,920	430	298	498	193	185
30	452	1,960	1,300	1,460	-----	1,380	8,160	402	245	410	178	180
31	416	-----	1,180	1,300	-----	1,310	-----	374	-----	343	167	-----
Total	21,742	128,572	68,258	39,421	42,536	41,736	78,784	70,162	9,439	20,808	11,502	7,465
Mean	701	4,286	2,847	1,272	1,519	1,346	2,626	2,263	315	671	371	249
Cfsm	1.12	6.87	4.56	2.04	2.43	2.16	4.21	3.63	0.505	1.08	0.595	0.399
In.	1.30	7.66	5.28	2.35	2.54	2.49	4.70	4.18	0.56	1.24	0.69	0.44

Calendar year 1957: Max 30,500 Min 77 Mean 1,701 Cfsm 2.73 In. 37.00
 Water year 1957-58: Max 30,000 Min 114 Mean 1,535 Cfsm 2.46 In. 35.41

Peak discharge (base, 11,000 cfs).--Nov. 19 (11 a.m.) 33,000 cfs (27.20 ft); Dec. 8 (8 a.m.) 13,300 cfs (16.08 ft); Dec. 20 (12 p.m.) 12,200 cfs (14.88 ft).

* Discharge measurement made on this day.

4225. Caney Fork near Rock Island, Tenn.

Location.--Lat 35°48'26", long 85°37'44", on right bank 180 ft downstream from powerhouse of Tennessee Valley Authority, half a mile downstream from dam at mouth of Collins River, 1 mile northwest of Rock Island, Warren County, 64 miles upstream from Center Hill Dam, and at mile 90.3.

Drainage area.--1,640 sq mi, approximately.

Records available.--November 1911 to April 1913, July 1913 to May 1914, August 1914 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 650.09 ft above mean sea level, datum of 1929. Nov. 14, 1911, to Mar. 30, 1924, at sites from half a mile upstream to 100 ft downstream from powerplant at various datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 2.00 ft higher.

Average discharge.--44 years (1914-58), 3,212 cfs (unadjusted).

Extremes.--Maximum discharge during year, 75,600 cfs Nov. 19 (gage height, 23.70 ft); minimum, 38 cfs Sept. 16, 17 (gage height, -0.88 ft); minimum daily, 39 cfs Sept. 15, 16. 1911-58: Maximum discharge, 210,000 cfs Mar. 23, 1929 (gage height, 40.6 ft, present datum, from floodmark), from rating curve extended above 110,000 cfs; minimum daily, 25 cfs several days in August to October 1951. Flood of Mar. 23, 1929, reached a stage about 1 ft higher than that of March 1902 at a point 8 miles downstream, from profile by Corps of Engineers.

Remarks.--Records good. Flow regulated by Great Falls Lake beginning Dec. 8, 1916 (see p. 67).

Revisions (water years).--WSP 1276: 1934, 1937.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

-0.9	37	5.0	2,610
-5	62	7.0	4,500
0.0	133	10.0	9,180
.5	225	13.0	17,200
1.0	338	18.0	37,000
2.0	654	23.0	70,000
3.0	1,170		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	823	2,050	4,020	3,450	3,440	3,240	3,850	12,600	48	238	486	47
2	1,370	48	3,670	3,450	3,510	3,270	3,610	8,520	998	44	50	47
3	1,460	48	3,430	3,440	3,450	3,270	3,530	7,660	1,820	44	50	47
4	1,580	844	3,400	3,420	3,370	3,290	3,520	5,970	1,240	43	615	1,370
5	1,830	1,050	3,400	3,400	3,370	3,260	3,500	8,220	1,220	43	1,120	1,290
6	1,860	1,320	3,380	3,370	4,780	3,240	3,460	12,700	1,180	44	1,250	998
7	1,890	1,490	12,800	3,360	13,800	3,240	3,500	16,000	44	486	1,380	904
8	1,680	2,190	29,300	3,360	9,930	2,000	3,520	14,600	43	580	1,180	46
9	2,300	64	16,500	3,330	6,720	48	3,520	9,030	1,070	699	49	45
10	3,060	48	9,350	3,280	4,960	2,030	4,140	10,900	990	642	49	45
11	2,460	1,180	7,140	3,260	4,280	2,990	7,430	10,200	1,290	599	772	45
12	880	1,210	4,910	2,730	3,890	3,340	5,250	9,840	1,140	2,190	517	47
13	47	2,590	4,210	2,870	3,520	3,350	5,290	8,930	928	2,060	736	40
14	1,490	3,220	3,880	2,540	3,400	3,350	3,720	7,210	45	2,020	1,410	40
15	1,380	3,300	3,650	3,180	3,400	3,360	3,760	4,790	44	3,090	1,850	39
16	2,450	16,100	3,550	3,180	3,400	3,360	3,710	*4,020	954	3,020	1,680	39
17	1,580	25,700	4,570	*3,180	3,380	3,370	3,520	3,660	990	3,050	50	41
18	259	54,500	4,270	44	3,380	3,360	3,490	3,360	926	2,570	892	40
19	47	83,200	4,370	44	3,360	3,420	3,500	3,220	735	1,700	947	*40
20	48	28,700	19,200	3,060	3,350	3,500	3,480	3,220	526	46	822	323
21	574	13,400	21,600	2,820	3,290	3,500	4,020	3,180	44	820	892	1,790
22	748	*7,230	11,400	2,300	3,260	3,500	9,180	3,130	44	965	772	1,920
23	1,040	6,790	7,030	2,920	3,220	3,500	7,010	3,080	631	*915	50	1,170
24	704	6,660	5,540	3,070	3,200	3,500	6,120	3,040	842	1,400	50	420
25	1,720	6,400	4,930	3,260	3,170	5,520	22,100	3,060	829	1,670	1,290	766
26	47	11,800	4,810	5,170	2,480	7,450	19,100	3,060	1,590	47	1,280	603
27	47	8,140	5,110	5,630	2,750	6,630	17,700	3,080	1,130	47	1,260	46
28	1,170	6,430	4,760	5,170	3,190	*4,900	17,400	3,050	45	1,180	1,310	46
29	1,840	4,840	3,880	4,310	-	4,650	16,100	3,020	45	1,470	1,340	558
30	2,020	4,520	5,550	3,750	-----	4,210	20,200	2,930	45	414	48	1,170
31	1,780	-----	5,450	3,520	-----	4,050	-----	2,960	-----	611	47	-----
Total	40,384	287,242	225,060	99,668	117,220	111,718	218,230	198,300	21,277	33,047	24,244	14,022
Mean	1,303	9,575	7,260	3,215	4,186	3,604	7,274	6,397	709	1,066	782	467

Observed

Adjusted

Calendar year 1957:	Max	66,300	Min	39	Mean	4,285	Mean	4,299	Cfsm	2.62	In.	35.58
Water year 1957-58:	Max	63,200	Min	39	Mean	3,809	Mean	3,815	Cfsm	2.33	In.	31.58

* Discharge measurement made on this day.

† Adjusted for change in contents in Great Falls Lake.

2425. Caney Fork below Center Hill Dam, near Lancaster, Tenn.

Location.--Lat 36°06'10", long 85°50'40", on left bank 1.1 miles downstream from Center Hill Dam, 2 miles south of Lancaster, Smith County, 4.7 miles upstream from Indian Creek, 10 miles north of Smithville, and at mile 25.5.

Drainage area.--2,200 sq mi, approximately.

Records available.--October 1922 to September 1958 (discontinued). Published as "near Silver Point" October 1922 to June 1948, and as "near Lancaster" May 1944 to September 1950; records published for both sites May 1944 to June 1948. Prior to December 1922, monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 469.00 ft above mean sea level, Sandy Hook datum (levels by Corps of Engineers). Nov. 23, 1922, to July 28, 1926, staff gage and July 29, 1926, to Feb. 3, 1939, water-stage recorder, at site 19.4 miles upstream at datum 30.60 ft higher. Feb. 4, 1939, to June 17, 1948, water-stage recorder at site 16.1 miles upstream at datum 27.44 ft higher. May 27, 1944, to Sept. 30, 1950, water-stage recorder at site 7.7 miles downstream at datum 6.62 ft lower.

Average discharge.--36 years, 3,807 cfs (unadjusted).

Extremes.--Maximum discharge during year, 22,000 cfs Nov. 20 (gage height, 25.47 ft); minimum, 48 cfs Oct. 20, 21; minimum gage height, 5.01 ft Aug. 19, 20, 21.

1922-58: Maximum discharge, 178,000 cfs Mar. 23, 1929, from rating curve extended above 94,000 cfs on basis of slope-area measurement of peak flow; maximum gage height, 60.2 ft Mar. 23, 1929, from floodmarks, site and datum then in use; minimum daily discharge, 12 cfs Oct. 1-18, 20-22, 1950.

Maximum stage known, that of Mar. 23, 1929, which at present site was about 61 ft, from flood profile by Corps of Engineers.

Remarks.--Records good except those for periods of backwater or no gage-height record, which are fair. Flow regulated by Great Falls Lake and by Center Hill Reservoir beginning Nov. 27, 1948 (see p. 67).

Cooperation.--Record of outflow from Center Hill Reservoir furnished by Corps of Engineers.

Revisions (water years).--WSP 853: 1923-30, 1935-37. WSP 1276: 1932-33, 1939, 1951.

WSP 1306: 1923-39 (monthly and yearly runoff).

Rating tables, water year 1957-58, except period of backwater (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 19, Dec. 15)

Oct. 1 to Nov. 20				Nov. 21 to Sept. 30			
5.2	48	8.0	1,330	5.0	56		
5.4	58	10.0	3,100	5.4	86		
5.6	78	15.0	8,350	6.0	200		
6.0	155	20.0	14,400	7.0	600		
6.5	325	26.0	22,700	8.0	1,330		
7.0	590						

Note.--Same as preceding table above 8.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,540	186	13,000	12,400	2,990	224	7,500	13,200	68	960	3,130	a650
2	1,580	50	13,000	12,500	242	72	8,920	13,200	3,460	958	758	a2,600
3	1,340	252	12,900	12,300	2,480	1,030	7,340	12,100	4,280	3,000	722	a4,000
4	1,600	403	12,900	10,800	3,840	1,960	5,320	13,000	3,960	72	1,840	a5,900
5	1,280	4,440	12,900	12,300	698	5,660	142	13,100	5,760	425	5,260	a5,800
6	790	*4,260	12,800	12,300	2,780	4,230	106	13,100	6,520	68	2,720	a4,300
7	1,100	3,720	13,400	12,200	4,740	4,160	3,860	13,300	1,240	3,860	2,250	a60
8	1,020	1,980	13,500	12,000	5,060	609	3,020	13,200	584	1,180	1,780	al,650
9	1,620	274	13,200	3,510	2,380	89	4,600	13,200	1,780	1,200	300	a450
10	1,910	50	13,000	3,770	5,630	84	5,020	13,100	1,920	3,280	67	a550
11	1,590	4,200	13,000	114	4,240	79	100	13,200	*1,930	3,340	980	a60
12	836	2,620	12,900	67	5,920	77	5,610	13,200	2,360	2,040	1,020	*a200
13	784	3,200	*12,800	1,580	7,850	585	7,410	13,200	3,200	98	69	65
14	4,790	317	12,900	3,000	8,810	*80	8,510	13,200	280	3,040	174	117
15	4,530	1,280	12,100	4,680	8,580	77	7,500	13,100	59	1,620	344	68
16	5,800	53	11,100	4,770	6,840	77	6,830	13,000	1,710	1,910	182	148
17	4,780	154	11,900	5,060	6,040	1,920	3,210	12,900	2,560	2,010	68	79
18	5,120	7,890	12,700	5,380	5,090	1,540	3,920	10,200	1,480	3,100	1,220	304
19	4,380	16,800	12,600	a5,300	3,310	2,360	2,960	7,880	1,820	5,180	60	242
20	129	21,600	13,100	6,030	872	2,040	5,770	7,220	1,590	3,140	142	151
21	4,200	21,500	12,800	6,300	1,660	2,040	c5,600	5,260	1,910	2,880	a100	863
22	8,060	20,800	12,800	6,920	1,560	2,000	4,400	4,080	71	1,960	a200	1,850
23	6,550	20,600	12,700	5,940	71	77	*5,080	4,480	850	1,240	a120	2,130
24	2,520	20,500	12,400	4,320	2,380	1,020	7,600	4,120	72	4,920	a400	3,830
25	2,350	19,000	12,400	645	1,020	5,780	9,000	4,700	3,310	4,730	a350	5,680
26	60	19,500	12,600	87	374	8,980	12,200	4,250	1,360	3,360	a950	7,420
27	2,220	17,400	12,700	3,670	251	8,380	12,100	2,640	1,360	1,940	al,450	1,400
28	3,840	15,200	12,600	8,680	273	7,100	13,000	970	180	5,180	al,850	1,120
29	3,160	13,700	12,600	11,800	-	265	13,200	136	68	6,560	a2,250	1,400
30	3,340	13,000	12,500	12,000	-	81	13,200	69	808	4,220	al,750	2,390
31	56	-----	12,400	8,620	-----	5,180	-----	68	-----	4,120	a60	-----
Total	82,875	254,929	394,200	209,343	95,879	68,057	192,308	279,373	56,379	77,896	32,364	55,477
Mean	2,673	8,498	12,720	6,753	3,424	2,195	6,410	9,012	1,879	2,513	1,044	1,849

Observed

Adjusted†

Calendar year 1957:	Max	30,000	Min	42	Mean	5,428	Mean	5,574	Cfsm	2.53	In.	54.39
Water year 1957-58:	Max	21,600	Min	50	Mean	4,929	Mean	4,941	Cfsm	2.25	In.	30.49

* Discharge measurement made on this day.

† Adjusted for change in contents in Great Falls Lake and Center Hill Reservoir.

a No gage-height record; discharge estimated on basis of weather records and computed outflow from Center Hill Reservoir.

c Backwater from local inflow.

4250. Cumberland River at Carthage, Tenn.

Location.--Lat 36°14'42", long 85°57'15", on left pier of Cordell Hull Bridge on State Highway 25, at Carthage, Smith County, 1 mile downstream from Caney Fork and at mile 308.2.

Drainage area.--10,700 sq mi, approximately.

Records available.--October 1922 to September 1958. Gage-height records collected in this vicinity since 1885 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 437.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 12, 1936, staff and wire-weight gages at site 1,000 ft downstream at same datum. May 12 to July 17, 1936, wire-weight gage at present site and datum. Since Oct. 1, 1957, auxiliary water-stage recorder 15.8 miles downstream.

Average discharge.--36 years, 17,180 cfs (unadjusted).

Extremes.--Maximum discharge during year, 62,200 cfs Apr. 29 (gage height, 25.50 ft); minimum daily, 3,240 cfs Nov. 3; minimum gage height, 5.85 ft Aug. 18.

1922-58: Maximum discharge, 210,000 cfs Dec. 30, 1926; maximum gage height, 59.8 ft Dec. 30, 1926; minimum daily discharge, 366 cfs Oct. 29, 1940.
Maximum stage known since at least 1793, that of Dec. 30, 1926.

Remarks.--Records good except those for periods of no gage-height record and those computed from Telemark gage readings, which are fair. Flow regulated by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, and Center Hill Reservoir (see p. 67).

Revisions (water years).--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M).

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,900	8,560	34,000	39,200	32,200	7,500	18,500	51,800	27,400	6,700	19,400	7,400
2	9,500	3,700	31,900	39,300	30,500	4,600	28,100	49,100	27,000	*7,140	15,000	6,380
3	8,620	3,240	29,000	38,900	26,000	3,820	27,300	47,400	23,000	8,960	11,400	6,490
4	11,600	5,920	30,700	37,500	*26,900	3,800	25,300	46,100	19,600	9,730	10,800	10,300
5	11,900	9,750	33,200	38,800	25,800	*5,480	18,800	46,500	17,700	7,690	12,500	19,100
6	8,810	*12,400	29,400	39,500	25,400	6,360	17,500	49,100	18,400	5,370	18,300	19,000
7	8,490	15,700	35,900	37,500	32,100	6,180	16,500	51,100	20,300	5,960	18,400	15,400
8	10,900	15,700	35,900	*36,600	33,000	5,150	14,500	50,400	14,200	6,780	19,500	9,620
9	12,800	15,900	40,700	34,800	28,600	5,300	17,500	48,100	9,610	7,750	16,700	6,670
10	12,900	10,600	33,400	32,800	24,400	8,640	24,500	47,600	7,160	7,250	11,400	5,810
11	11,700	10,400	34,700	30,900	26,500	10,700	31,800	48,500	*10,400	9,380	6,270	7,940
12	11,900	13,100	33,300	24,800	25,400	9,940	28,100	49,700	10,800	11,600	8,170	*5,530
13	10,200	16,000	*31,200	24,600	27,600	7,950	27,200	47,400	9,490	11,000	11,800	3,650
14	10,400	14,300	29,800	30,600	31,200	*9,240	23,400	45,800	8,330	8,510	8,550	3,290
15	14,700	12,300	28,700	33,100	34,500	8,410	24,600	45,000	9,900	9,940	*6,660	4,540
16	16,900	9,740	25,000	34,100	36,400	5,880	30,100	44,300	7,080	14,600	5,800	3,580
17	14,100	15,100	28,700	31,700	34,700	6,930	28,500	43,200	5,520	18,000	4,490	7,810
18	11,700	*40,300	32,500	29,500	33,500	10,600	26,000	40,000	7,000	16,900	4,000	6,560
19	13,000	*52,100	32,900	29,500	32,000	12,100	25,500	38,300	9,400	19,600	5,250	5,640
20	9,760	*44,900	42,300	27,500	26,800	11,200	24,300	37,800	9,420	21,700	6,170	10,000
21	8,620	*37,200	49,000	28,800	17,800	10,700	28,400	35,800	9,180	18,900	8,630	24,000
22	17,100	*33,500	39,300	31,600	14,100	10,600	27,100	33,500	7,740	12,500	8,340	11,300
23	25,900	43,600	30,000	33,400	11,600	9,180	*27,100	32,500	5,940	11,000	7,070	9,980
24	15,900	45,400	29,900	38,800	11,400	8,160	35,800	32,200	5,120	11,900	8,160	12,900
25	*10,400	45,900	33,200	50,100	9,350	11,200	45,500	33,200	6,460	11,900	8,210	19,500
26	8,070	48,700	34,300	35,100	7,090	21,600	53,200	33,700	10,500	14,600	8,380	23,100
27	8,420	47,100	40,000	21,300	9,030	23,500	55,400	*31,600	8,810	12,800	8,750	23,800
28	13,200	44,500	43,000	20,900	8,750	24,400	58,700	29,900	8,060	12,300	8,400	16,500
29	17,900	40,900	41,000	37,000	-	18,500	61,200	27,000	6,430	16,100	9,260	10,600
30	24,600	35,400	40,500	38,200	-	12,000	56,800	27,000	5,560	23,500	11,000	11,500
31	20,400	-	39,500	34,700	-	12,700	-	27,100	-	21,600	10,700	-
Total	597,000	751,910	*1,090,4	*1,040,1	682,620	512,220	927,200	*1,269,7	346,610	381,680	317,480	327,690
Mean	12,810	25,060	35,170	33,550	24,380	10,070	30,910	40,960	11,550	12,310	10,240	10,920
Observed												
Adjusted†												
Calendar year 1957:	Max	89,400	Min	2,700	Mean	22,350	Mean	23,740	Cfam	2.22	In.	30.12
Water year 1957-58:	Max	61,200	Min	3,240	Mean	21,490	Mean	23,520	Cfam	2.01	In.	27.29

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, and Center Hill Reservoir.

‡ Expressed in thousands.

g Computed from once- or twice-daily Telemark gage readings, furnished by Corps of Engineers.

Note.--No gage-height record at base gage Dec. 27-29, Apr. 26, 27, June 2, 3, and at auxiliary gage Feb. 18, 19; discharge estimated on basis of weather records and records for Cumberland River at Celina and Caney Fork below Center Hill Dam near Lancaster.

4255. Spring Creek near Lebanon, Tenn.

Location.--Lat 36°10'50", long 86°14'35", on downstream end of middle pier of bridge on Eastover Road, half a mile downstream from Black Branch, and 3½ miles southeast of Lebanon, Wilson County.

Drainage area.--34 sq mi, approximately.

Records available.--October 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 556.32 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 4,480 cfs Apr. 27 (gage height, 8.06 ft); minimum daily, 0.1 cfs Sept. 15, 16.

1954-58: Maximum discharge, 7,980 cfs Mar. 21, 1955 (gage height, 10.13 ft), from rating curve extended above 4,200 cfs on basis of slope-area measurement of peak flow; no flow many days in 1956 and 1957.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Cooperation.--Two discharge measurements furnished by Corps of Engineers.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17					Nov. 18 to Sept. 30				
0.4	1.8	1.0	46		0.2	0.04	0.9	29	
.5	4.8	1.2	86		.3	.3	1.2	67	
.6	10	1.5	172		.4	1.5	1.4	102	
.7	16	2.0	380		.5	3.4	1.6	160	
.8	24	3.0	855		.6	7.5	2.0	336	
.9	33				.7	13	4.0	1,300	

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.7	16	52	44	36	32	53	83	a3.5	1.3	7.5	1.0
2	4.0	14	40	33	33	28	48	64	a3.5	1.0	12	.9
3	3.6	36	54	29	31	24	45	50	a3.5	.7	9.7	.6
4	259	26	28	26	*30	22	43	139	a2.5	.5	5.6	.5
5	72	20	24	22	36	20	118	158	a3.5	.3	3.6	.4
6	37	17	22	21	80	19	621	328	a5	.3	3.1	.3
7	27	14	888	a17	205	123	94	*333	a3.5	.3	2.7	.3
8	19	268	282	a15	85	131	66	112	a2.5	*.7	2.2	.3
9	14	100	98	*13	59	186	53	77	37	1.9	4.1	.3
10	10	51	67	13	46	98	868	271	*11	.7	2.9	a.2
11	7.6	37	49	13	38	70	170	195	a6	.4	a2.0	a.2
12	5.7	29	35	12	33	56	89	108	a4	278	a1.5	a.2
13	4.4	27	30	39	28	78	66	67	*2.5	25	a1.2	a.2
14	3.6	182	27	57	24	69	53	50	1.8	15	a1.0	a.2
16	*2.7	79	25	38	24	57	*80	40	1.3	6.5	*.9	a.1
16	3.3	421	*63	31	23	49	60	32	1.0	6.2	.7	a.1
17	67	714	95	27	a19	90	49	27	.7	64	.7	a.2
18	28	966	60	24	a16	244	41	21	.5	31	.5	a.2
19	18	*296	123	21	a16	96	37	19	.4	9.5	.3	a.2
20	12	98	801	20	a14	69	75	18	.3	111	.5	200
21	8.1	63	122	31	a14	57	686	14	.3	38	.2	707
22	6.2	49	73	32	a17	48	147	12	.3	200	.2	54
23	199	46	56	28	a16	63	85	10	.2	211	2.9	*26
24	216	43	44	584	15	*179	216	9.5	.2	68	293	12
25	68	108	48	206	15	177	442	15	.2	34	39	8.4
26	40	60	160	96	15	110	397	12	52	21	12	6.5
27	30	45	60	66	60	83	988	a10	9.2	12	6.5	4.3
28	24	209	50	50	45	66	377	a7	4.7	8.4	5.9	3.4
29	19	131	43	43	-	56	321	a6	2.9	7.0	2.7	2.7
30	19	70	35	36	-----	61	127	a5	2.0	5.6	2.0	2.3
31	18	-----	34	33	-----	61	-----	a4	-----	27	1.5	-----
Total	1,250.9	4,235	3,547	1,720	1,073	2,522	6,405	2,296.5	165.5	1,186.3	426.4	1,033.0
Mean	40.4	141	114	55.5	38.3	81.4	214	74.1	5.52	38.3	13.8	34.4
Cfsm	1.19	4.15	3.35	1.33	1.13	2.39	6.29	2.18	0.162	1.13	0.406	1.03
In.	1.37	4.63	3.88	1.88	1.17	2.76	7.01	2.51	0.18	1.30	0.47	1.13

Calendar year 1957: Max 1,710 Min 0 Mean 77.0 Cfsm 2.26 In. 30.75
 Water year 1957-58: Max 966 Min 0.1 Mean 70.9 Cfsm 2.09 In. 28.29

Peak discharge (base, 2,700 cfs).--Nov. 17 (7 p.m.) 4,120 cfs (7.75 ft); Dec. 20 (4 a.m.) 2,740 cfs (6.17 ft); Apr. 6 (2 a.m.) 3,430 cfs (7.03 ft); Apr. 10 (8 a.m.) 3,160 cfs (6.71 ft); Apr. 27 (8 p.m.) 4,460 cfs (8.06 ft); Sept. 21 (3 a.m.) 3,610 cfs (7.23 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Bradley Creek at Lascassas.

4260. Drakes Creek above Hendersonville, Tenn.

Location.--Lat 36°22'14", long 86°37'00", on left downstream wingwall of abutment on Long Hollow Pike Bridge, at Shackle Island, 2 miles downstream from Hogan Branch and 4.5 miles north of Hendersonville, Sumner County.

Drainage area.--19.2 sq mi.

Records available.--October 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage 503.06 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,370 cfs Nov. 18 (gage height, 10.56 ft); minimum, 0.3 cfs Sept. 14-16 (gage height, 1.03 ft).
1954-58: Maximum discharge, that of Nov. 18, 1957; minimum, 0.02 cfs many days in September 1955 and Sept. 8, 1956; minimum gage height, 0.90 ft Sept. 12, 1955.

Remarks.--Records fair.

Cooperation.--One discharge measurement furnished by Corps of Engineers.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18					Nov. 19 to Feb. 6					Feb. 7 to Sept. 30				
1.0	0.3	1.8	65		1.5	9.8	2.5	231		1.03	0.3	1.5	25	
1.1	1.8	2.0	104		1.5	26	3.0	391		1.07	.6	1.8	55	
1.2	5.2	2.5	231		1.7	51	3.3	620		1.1	1.2	2.0	90	
1.3	10	3.0	391		2.0	104	3.5	698		1.2	3.8	2.4	175	
1.4	17	4.0	607							1.3	8.5	2.7	260	
1.5	26	6.0	1,300											

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	5.2	34	24	46	27	32	65	7.9	0.8	26	1.7
2	1.6	9.5	32	21	39	23	30	50	11	.8	21	1.4
3	3.6	26	24	19	34	21	28	40	6.5	1.0	14	1.2
4	3.0	14	21	17	30	18	27	41	6.0	1.4	10	1.0
5	2.4	11	17	16	33	17	62	257	5.2	10	7.1	.8
6	1.8	9.2	17	16	53	16	138	258	4.4	15	5.2	.5
7	1.6	8.6	548	16	62	34	60	140	4.1	10	4.8	.6
8	1.2	90	204	13	48	53	42	77	3.8	6.0	3.8	.8
9	1.0	44	83	12	38	113	37	54	4.1	4.8	3.3	.5
10	.8	26	58	12	32	70	*219	54	3.8	3.5	3.0	.5
11	.8	19	42	12	27	47	102	64	3.5	3.0	3.8	.5
12	.7	15	*31	11	23	37	60	49	3.5	3.0	3.5	.5
13	.7	30	25	29	19	51	44	38	3.3	4.4	3.3	.4
14	.6	247	23	35	18	45	38	29	2.8	3.8	3.0	.3
15	.6	67	20	30	18	39	58	24	2.5	2.8	2.5	.3
16	*2.6	43	22	24	14	33	53	20	2.5	18	2.2	1.2
17	20	584	35	21	10	38	45	18	2.2	11	2.2	1.4
18	8.1	1,280	35	19	11	62	38	14	2.0	5.6	1.7	1.2
19	5.2	514	98	17	10	49	34	14	1.7	4.4	1.4	.6
20	3.6	*94	426	17	*10	*39	37	12	1.7	7.1	1.2	20
21	3.0	54	110	34	10	36	42	*10	1.7	88	1.2	15
22	2.4	38	64	34	12	31	36	*8.5	1.7	45	1.2	6.0
23	29	32	48	30	11	40	*30	7.1	1.4	34	1.4	4.1
24	32	26	38	383	12	204	27	6.5	*1.2	21	88	3.3
25	16	24	55	156	12	170	39	33	1.0	78	14	2.8
26	11	21	102	83	12	88	53	15	3.2	49	6.5	*2.2
27	9.2	18	64	*55	45	58	105	11	2.5	23	4.4	2.0
28	7.6	51	52	42	35	43	118	8.5	1.7	15	3.5	1.7
29	6.6	69	41	34	-	37	159	7.1	1.2	12	*3.0	1.4
30	6.2	47	33	30	-	38	100	8.0	1.0	8.5	2.5	1.4
31	6.2	-----	30	33	-----	37	-----	5.2	-----	*9.1	2.0	-----
Total	191.2	3,296.5	2,432	1,295	724	1,614	1,891	1,435.9	99.1	499.0	250.7	75.5
Mean	6.17	110	78.5	41.8	25.9	52.1	63.0	46.3	3.30	16.1	8.09	2.52
Cfs/m	0.321	5.73	4.09	2.18	1.35	2.71	3.28	2.41	0.172	0.839	0.421	0.131
In.	0.37	6.39	4.71	2.51	1.40	3.13	3.66	2.78	0.19	0.97	0.49	0.15

Calendar year 1957: Max 1,280 Min 0.1 Mean 45.5 Cfs/m 2.37 In. 32.20
Water year 1957-58: Max 1,280 Min 0.3 Mean 37.8 Cfs/m 1.97 In. 26.75

Peak discharge (base, 1,000 cfs).--Nov. 18 (11 a.m.) 3,370 cfs (10.56 ft); Dec. 20 (2:30 a.m.) 1,020 cfs (5.24 ft).

* Discharge measurement made on this day.

4265. Cumberland River below Old Hickory, Tenn.
(Formerly published as Cumberland River at dam 3, near Old Hickory)

Location.--Lat 36°15'39", long 86°40'30", on downstream end of left pier of bridge on State Highway 45, 1.5 miles west of Old Hickory, Davidson County, 2.1 miles east of Madison, 3.3 miles downstream from Mansker Creek, 4.1 miles downstream from Old Hickory Dam, and at mile 212.1. Prior to June 30, 1953, at site 6.2 miles upstream.

Drainage area.--11,700 sq mi, approximately.

Records available.--October 1931 to September 1942, October 1947 to September 1958. Prior to July 1953, published as "at dam 3, near Old Hickory."

Gage.--Water-stage recorder. Datum of gage is 380.00 ft above mean sea level, datum of 1929. Prior to Nov. 16, 1933, and July 1, 1953, to June 10, 1954, staff gage at site 6.1 miles upstream, read twice daily; Nov. 16, 1933, to Sept. 30, 1942, and Oct. 1, 1947, to June 30, 1953, water-stage recorder at site 6.2 miles upstream; both gages at datum 10.67 ft higher. June 11, 1954, to Sept. 30, 1956, headwater and tailwater gages at Old Hickory Dam, read four or more times daily. Since Apr. 1, 1957, auxiliary long-distance water-stage recorder in Old Hickory powerhouse connected to well on downstream end of lock wall in lower pool at Old Hickory Dam; Oct. 1, 1956, to Mar. 31, 1957, auxiliary staff gage on lower lock wall, read four times daily.

Average discharge.--22 years, 18,390 cfs (unadjusted).

Extremes.--Maximum and minimum discharges for the water years 1953-58 are contained in the following table:

Water year	Maximum			Minimum daily	
	Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)
1953	Feb. 22, 1953	55,700	20.53	July 16, 1953	†1,080
1954	Jan. 22, 1954	68,700	‡27.13	June 11, 1954	700
1955	Mar. 23, 1955	105,000	-	Oct. 7, 1954	690
1956	Feb. 19, 1956	94,000	-	Jan. 20-23, 1956	1,100
1957	Jan. 31, 1957	99,200	††40.37	Oct. 26, 1956	1,600
1958	Nov. 18, 1957	85,200	32.46	Nov. 3, 1957	200

† Minimum observed.

‡ Occurred Jan. 23, 1954.

†† Occurred Jan. 30, 1957.

1931-42, 1947-58: Maximum discharge, 173,000 cfs Jan. 29, 1937; maximum gage height, 47.40 ft Jan. 29, 1937 (site and datum then in use); minimum daily discharge, 86 cfs Aug. 15, 1936.

Maximum stage known, 57.4 ft Dec. 31, 1926, present site and datum, from profile by Corps of Engineers (discharge, 200,000 cfs).

Remarks.--Records good prior to June 11, 1954, and after Sept. 30, 1957, and fair June 11, 1954, to Sept. 30, 1957, except those for periods of no gage-height record, which are poor. Discharge figures prior to June 11, 1954, include 50 cfs diverted from dam 3 pool and returned to stream below the dam. Flow regulated by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, and Center Hill Reservoir, and by Old Hickory Lake after June 1954 (see p. 67).

Cooperation.--Seventeen discharge measurements, dam 3 gage-height readings, auxiliary gage-height record, and computed outflow from Old Hickory Reservoir furnished by Corps of Engineers. Discharge records June 11, 1954, to Sept. 30, 1956 (not previously published) collected and computed by Corps of Engineers and reviewed by Geological Survey.

Revisions (water years).--WSP 923: 1932-40. WSP 1113: 1940(m).

Note.--Records for Oct. 1, 1952, to June 30, 1953, previously published in WSP 1276 are republished herewith.

CUMBERLAND RIVER BASIN

4265. Cumberland River below Old Hickory, Tenn.--Continued

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,140	2,440	1,590	23,200	20,000	22,300	26,800	28,000	19,500	3,770	15,600	5,420
2	1,600	2,680	2,810	18,300	15,600	23,500	23,400	21,000	17,900	6,880	13,000	5,960
3	1,920	2,520	5,310	13,100	13,900	36,200	24,900	11,600	24,000	8,950	8,560	6,140
4	2,390	2,290	8,630	8,320	14,100	53,900	26,900	7,350	27,800	15,100	5,600	10,400
5	2,420	2,210	11,800	9,630	17,200	*50,200	26,100	8,830	30,500	10,200	11,000	8,560
6	2,210	1,680	12,200	12,900	18,700	41,100	26,300	7,680	32,700	6,320	17,500	8,180
7	2,060	1,800	9,790	15,800	23,500	51,200	29,400	*7,870	30,800	6,880	19,700	5,780
8	2,040	2,470	7,270	21,300	20,300	25,500	29,400	8,020	24,000	8,950	20,600	4,230
9	1,870	2,390	6,530	20,900	14,000	24,400	27,400	8,980	22,000	9,350	13,600	2,900
10	2,370	2,500	6,500	31,900	11,100	21,000	26,000	6,790	24,600	8,180	8,370	1,990
11	2,630	2,550	9,260	29,800	13,300	19,200	26,600	4,190	28,200	7,990	6,690	3,770
12	2,630	2,490	12,100	22,000	34,700	18,900	26,700	7,090	27,000	4,720	5,780	3,320
13	2,390	2,510	15,300	20,100	40,500	14,200	30,000	9,960	24,800	2,650	8,560	3,620
14	2,270	2,520	16,100	18,800	20,000	12,400	32,500	8,360	24,100	2,120	8,180	4,320
15	*2,240	2,620	16,100	18,300	30,000	11,500	31,800	10,800	21,200	1,420	10,600	4,550
16	1,850	2,490	17,500	13,600	25,200	12,500	30,800	15,600	24,500	1,190	12,500	2,900
17	2,500	2,410	22,600	13,500	21,500	18,200	28,300	29,000	22,700	4,550	12,800	2,120
18	2,570	2,280	23,900	20,500	23,200	27,200	29,500	25,900	21,500	7,620	10,400	3,920
19	2,370	2,220	22,300	22,000	27,900	33,100	26,800	35,500	21,900	6,690	7,240	4,550
20	2,090	1,980	19,000	16,600	27,900	32,800	22,000	44,800	19,500	6,500	10,200	3,180
21	1,920	2,210	12,200	20,600	51,600	25,900	27,900	36,100	16,200	6,320	9,150	2,630
22	2,210	3,910	9,500	*27,200	20,600	24,100	25,000	17,300	5,780	7,800	2,500	2,500
23	1,900	3,460	11,300	25,900	40,500	23,500	26,100	18,600	14,100	11,000	8,370	2,500
24	2,260	2,620	14,800	36,400	30,100	25,200	18,300	23,800	12,300	11,400	7,240	1,880
25	2,500	2,500	19,600	38,200	28,300	30,500	13,700	28,800	15,200	8,180	7,240	2,240
26	2,680	2,390	14,500	30,500	28,300	35,200	12,200	31,800	17,700	8,180	8,180	3,030
27	2,260	1,910	10,300	22,700	28,400	34,400	12,400	30,000	18,500	7,430	6,690	2,900
28	2,060	2,030	6,900	18,300	24,400	33,400	16,100	27,800	18,600	3,770	5,240	2,240
29	2,210	2,260	8,290	20,200	-	31,300	19,200	27,800	11,600	3,470	3,620	2,500
30	1,870	2,410	10,900	22,600	-----	24,900	30,500	26,100	4,820	6,320	3,320	2,120
31	2,060	-----	14,900	19,800	-----	23,900	-----	25,800	-----	14,800	5,620	-----
Total	68,490	72,560	379,830	652,950	728,930	837,100	746,600	606,920	635,520	216,660	296,950	120,260
Mean	2,209	2,419	12,250	21,060	26,030	27,000	24,890	19,580	21,180	6,989	9,579	4,009

Observed

Adjusted†

Calendar year 1952: Max	83,500	Min	1,370	Mean	20,310	Mean	15,900	Cfsm	1.36	In.	18.50
Water year 1952-53: Max	53,900	Min	1,190	Mean	14,690	Mean	15,010	Cfsm	1.28	In.	17.42

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, and Center Hill Reservoir.

Note.--Discharge for periods Oct. 22 to Dec. 8, Dec. 25-31, Jan. 5-8, 11-18, 21, Jan. 24 to Mar. 2, Mar. 4, July 1 to Sept. 30 computed from twice-daily (4 times daily in October) upper lock 3 staff-gage readings (furnished by Corps of Engineers) and recorded range in stage when available.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,530	4,080	7,430	14,100	24,400	19,400	7,430	15,900	6,890	6,550	4,860	4,570
2	1,530	3,030	7,430	13,400	19,400	20,300	7,240	11,000	8,950	4,850	5,450	4,070
3	1,530	3,320	11,200	18,900	18,900	19,400	5,600	11,400	16,400	6,820	4,440	5,940
4	1,420	3,320	10,600	16,200	18,000	19,400	9,350	15,900	14,100	4,340	3,150	6,240
5	1,420	3,320	8,950	16,400	17,800	23,200	10,400	20,000	11,200	3,050	5,570	6,480
6	1,530	4,550	6,500	16,400	20,900	24,600	10,600	20,600	7,990	1,650	9,720	3,890
7	1,390	4,550	3,620	22,000	18,600	24,100	9,760	19,400	5,060	1,230	11,200	3,940
8	1,390	5,240	2,900	22,900	13,000	22,300	9,560	21,800	2,760	1,590	6,350	4,050
9	1,390	5,240	3,180	19,400	13,000	23,500	10,600	21,800	1,640	1,830	2,680	4,340
10	1,390	7,620	3,180	13,200	17,800	21,800	10,400	21,800	1,190	3,510	1,860	6,910
11	1,390	5,420	7,800	13,000	18,600	18,300	9,760	25,800	700	2,830	6,220	11,000
12	1,880	6,140	5,240	12,100	13,400	15,900	11,000	23,800	1,810	2,840	2,460	10,500
13	3,770	7,240	3,920	11,000	11,000	9,350	12,300	5,530	5,330	1,730	4,030	8,170
14	6,140	5,420	3,770	17,800	18,000	5,960	14,100	22,300	4,570	1,850	4,140	7,180
15	4,720	3,470	3,320	23,400	12,100	10,600	14,800	22,300	4,390	3,200	3,270	4,630
16	3,770	3,470	4,720	50,000	9,560	11,200	33,000	20,300	6,180	3,430	5,960	6,280
17	2,630	4,080	7,990	43,400	20,900	17,000	56,100	14,800	13,400	4,120	6,350	9,940
18	2,210	4,230	20,000	14,200	18,900	20,600	48,400	10,400	15,400	3,350	5,460	8,050
19	1,390	3,180	23,800	14,200	17,800	19,700	28,200	9,150	12,900	4,290	7,730	7,470
20	1,880	4,230	24,100	19,200	22,600	17,000	20,000	11,400	11,100	3,220	7,470	6,080
21	1,420	3,030	15,600	59,000	17,500	12,800	15,400	15,400	6,070	3,180	7,190	8,670
22	985	2,780	11,900	67,600	14,100	10,800	15,100	17,800	5,810	4,520	5,390	5,610
23	798	2,120	8,370	85,600	11,900	12,500	17,500	16,200	6,080	6,180	3,860	4,350
24	1,080	1,420	12,300	54,100	12,800	33,200	17,000	7,620	12,000	6,310	3,750	2,100
25	1,300	1,420	12,500	38,900	12,800	44,800	24,100	10,200	10,400	6,090	4,220	2,140
26	1,530	2,120	11,400	32,000	11,400	36,100	25,200	11,400	7,000	4,570	6,820	1,000
27	2,240	3,770	5,960	37,500	9,150	24,500	23,800	17,200	6,190	2,320	7,520	1,810
28	2,780	4,390	3,030	35,600	12,300	14,400	20,300	17,500	4,250	1,650	7,320	1,810
29	2,900	5,060	6,500	32,400	-	10,800	23,200	16,700	4,810	1,800	7,630	1,570
30	4,890	6,140	15,400	30,000	-----	7,620	22,900	13,200	4,840	1,850	7,030	5,560
31	5,240	-----	12,800	28,500	-----	8,950	-----	6,660	-----	3,700	5,730	-----
Total	73,073	123,380	277,010	878,200	445,710	580,080	542,460	511,630	217,600	108,430	174,790	164,350
Mean	2,357	4,113	8,936	28,330	15,920	18,710	18,080	16,500	7,253	3,498	5,638	5,478

Observed

Adjusted†

Calendar year 1953: Max	53,900	Min	798	Mean	14,560	Mean	14,430	Cfsm	1.23	In.	16.74
Water year 1953-54: Max	67,600	Min	700	Mean	11,220	Mean	11,380	Cfsm	0.973	In.	13.20

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.

Note.--Discharge for period Oct. 1 to June 10 computed from twice-daily upper lock 3 staff-gage readings (furnished by Corps of Engineers).

CUMBERLAND RIVER BASIN

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4265. Cumberland River below Old Hickory, Tenn.--Continued

Discharge, in cubic feet per second, water year October 1954 to September 1955

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,920	10,500	15,100	20,600	35,900	33,900	68,500	29,500	21,900	7,810	1,980	6,080
2	12,700	8,510	23,100	19,000	35,700	29,900	67,200	18,800	17,400	5,580	2,110	5,840
3	7,580	10,800	15,900	9,700	35,700	29,600	63,100	14,100	21,200	7,290	2,710	3,910
4	4,520	13,800	19,000	6,550	34,900	19,400	58,400	12,300	24,100	8,120	2,970	3,780
5	2,450	14,500	25,000	5,940	35,700	19,400	55,100	12,400	21,100	8,720	3,920	3,920
6	1,990	13,500	31,900	8,640	56,100	35,100	58,000	9,130	14,600	7,630	3,920	5,820
7	890	12,100	31,600	9,090	70,400	37,400	62,600	10,000	10,400	8,330	5,470	6,880
8	1,760	11,200	25,300	9,370	59,400	36,700	61,100	8,300	8,350	7,870	6,820	6,350
9	1,990	10,500	18,700	11,500	40,600	36,500	57,500	8,000	8,990	5,570	6,140	5,100
10	2,380	6,890	17,900	14,100	24,900	36,500	59,800	7,510	9,870	5,570	2,260	4,490
11	1,740	4,890	21,800	14,900	22,300	32,500	60,500	10,600	31,400	6,000	4,300	5,660
12	1,080	4,720	20,800	15,400	29,400	30,900	58,500	10,600	34,500	4,060	5,260	6,890
13	970	2,870	17,000	28,600	27,800	30,400	56,600	13,800	18,700	2,760	5,400	5,460
14	1,130	2,510	13,800	35,000	22,300	24,900	56,200	9,500	9,400	3,720	5,600	4,390
15	3,710	2,070	12,800	34,400	26,900	19,700	56,000	11,200	15,300	3,420	4,190	5,590
16	2,000	1,690	22,000	36,100	27,100	30,200	54,900	14,700	19,500	5,030	3,350	6,790
17	1,980	1,280	24,200	32,800	20,100	41,500	53,100	14,500	12,800	5,890	3,320	7,090
18	3,380	1,520	26,800	33,100	24,000	59,100	50,900	11,400	11,200	4,840	5,320	9,840
19	4,420	4,130	21,700	34,500	20,000	69,300	48,200	15,000	13,700	3,040	6,140	8,440
20	4,030	2,240	13,400	34,200	18,600	70,700	45,100	16,200	16,100	3,610	5,560	7,370
21	5,880	2,490	8,860	30,500	21,500	83,600	43,300	13,700	18,000	4,480	6,510	9,340
22	9,090	2,660	9,540	36,400	53,200	100,000	40,500	14,800	15,100	4,100	6,150	12,600
23	9,330	4,470	11,100	39,000	64,400	38,600	41,200	9,070	14,500	4,200	4,200	14,100
24	9,370	8,740	10,400	34,500	53,200	100,000	42,800	10,900	14,100	3,550	4,200	18,600
25	7,100	11,800	9,010	33,300	40,200	85,700	42,000	13,300	15,400	2,680	7,280	19,300
26	5,410	14,700	9,850	33,900	34,600	71,000	41,700	24,900	10,600	1,960	9,500	15,700
27	4,290	17,200	2,950	31,200	32,200	89,000	37,600	31,000	10,200	1,670	9,390	13,000
28	4,310	12,400	5,040	30,400	29,900	68,900	33,200	34,000	8,560	3,820	7,710	9,440
29	5,160	16,000	37,700	31,500	-----	68,100	39,500	34,600	7,140	5,970	4,650	4,700
30	6,960	16,000	40,700	35,700	-----	68,000	38,300	30,700	7,790	1,810	4,610	11,300
31	11,400	-----	29,400	36,800	-----	68,500	-----	23,600	-----	1,590	3,910	-----
Total	145,690	251,080	588,550	784,690	997,000	1,604,8	1,551,4	497,910	461,700	150,270	155,050	246,370
Mean	4,700	8,369	18,980	25,310	35,610	51,770	51,710	16,060	15,390	4,847	5,002	8,212

Observed

Adjusted†

Calendar year 1954:	Max	67,600	Min	690	Mean	12,630	Mean	13,800	Cfsm	1.18	In.	16.01
Water year 1954-55:	Max	170,000	Min	690	Mean	20,370	Mean	20,190	Cfsm	1.73	In.	23.43

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.

* Expressed in thousands.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,530	11,500	22,800	18,700	*52,900	48,200	36,700	27,400	3,380	11,500	2,650	11,500
2	7,670	11,900	21,400	18,000	38,300	47,100	35,500	30,300	2,960	4,410	2,990	8,000
3	10,500	15,300	13,100	8,760	*47,200	46,900	39,200	32,600	2,960	5,940	2,940	3,920
4	9,720	13,500	12,400	10,500	58,600	50,200	46,000	32,600	2,960	6,880	2,580	1,810
5	2,920	12,000	15,100	9,200	*61,700	49,800	51,500	34,400	3,320	12,700	2,470	1,120
6	1,500	11,800	18,400	6,310	*50,000	46,300	55,500	27,400	4,980	13,200	2,600	7,690
7	1,290	14,200	21,400	4,850	*40,300	46,000	69,800	23,300	10,200	8,850	2,600	13,200
8	3,080	14,200	17,700	8,310	*37,300	54,500	70,500	28,600	12,800	5,890	2,840	10,800
9	4,940	14,500	12,400	4,050	59,100	58,100	60,300	31,400	12,300	13,700	4,990	9,330
10	3,790	16,200	14,500	5,600	40,800	57,400	49,200	31,400	12,400	12,500	7,440	7,870
11	3,390	14,800	20,200	7,270	46,500	53,200	45,900	31,600	9,840	8,250	8,350	6,910
12	3,630	12,000	5,030	9,100	44,000	49,400	42,200	32,000	7,050	12,100	8,520	9,200
13	6,360	7,630	14,400	8,950	43,200	48,400	40,700	27,100	6,950	10,900	8,010	14,100
14	9,420	5,030	20,900	4,040	40,200	59,400	38,900	15,800	10,700	8,550	6,940	15,200
15	10,400	5,130	29,400	2,820	45,000	67,200	35,700	17,300	12,500	4,420	6,140	16,100
16	11,600	4,480	28,600	1,220	46,300	67,300	35,000	13,000	11,200	2,860	8,190	11,700
17	10,100	6,540	24,600	1,120	51,400	65,300	41,500	12,900	6,770	2,400	9,220	3,560
18	9,050	11,800	17,700	1,120	79,800	60,300	43,500	12,500	4,240	2,570	9,250	6,650
19	10,800	17,500	5,970	1,120	*81,600	55,600	42,700	12,200	3,500	2,920	9,100	2,070
20	13,200	22,100	8,120	1,100	*90,400	55,100	43,000	6,930	7,220	2,500	7,500	2,090
21	12,100	19,500	6,510	1,100	*85,610	50,500	58,800	*4,610	*11,800	2,080	4,260	2,210
22	10,400	15,100	5,980	1,100	*71,000	46,800	39,400	6,090	13,000	2,030	2,050	9,880
23	8,930	12,400	8,340	1,100	*67,800	43,200	36,800	8,630	11,500	2,130	2,150	11,500
24	8,610	13,000	5,680	1,140	66,900	39,900	36,000	11,600	8,570	1,900	3,070	4,510
25	4,160	8,680	3,260	1,640	66,000	37,600	35,200	13,900	10,600	1,990	7,040	1,750
26	4,290	6,340	2,610	1,990	65,100	40,000	34,800	11,700	10,800	2,260	11,600	1,120
27	7,090	3,790	4,160	1,670	60,400	42,000	*31,800	7,100	11,300	2,350	13,700	1,120
28	8,550	5,480	5,440	2,000	53,800	37,700	32,700	5,630	12,000	2,330	7,450	9,040
29	10,400	12,800	4,710	32,500	50,600	34,100	25,300	4,550	13,500	2,200	8,570	10,700
30	14,000	17,000	7,870	*79,100	-----	34,100	27,700	3,900	14,200	2,090	12,100	10,600
31	15,200	-----	11,700	*74,000	-----	35,600	-----	3,820	-----	2,120	12,500	-----
Total	243,140	353,800	408,380	327,260	1,611,7	*1,525,4	*1,279,8	565,180	285,510	176,500	199,810	225,240
Mean	7,843	11,790	13,170	10,560	55,580	49,210	42,660	18,230	8,850	5,694	6,445	7,508

Observed

Adjusted†

Calendar year 1955:	Max	100,000	Min	1,290	Mean	20,420	Mean	18,930	Cfsm	1.62	In.	21.96
Water year 1955-56:	Max	91,600	Min	1,100	Mean	19,620	Mean	20,230	Cfsm	1.73	In.	23.54

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.

* Expressed in thousands.

4656. Cumberland River below Old Hickory, Tenn.--Continued

Discharge, in cubic feet per second, water year October 1956 to September 1957											
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1	7,210	2,290	8,310	18,000	*30,000	*42,800	18,000	18,500	7,140	7,090	14,500
2	5,080	5,500	10,100	13,000	78,700	39,800	17,000	17,800	7,230	8,910	14,300
3	6,130	5,300	9,610	14,000	77,500	40,000	19,000	17,700	7,480	9,820	14,800
4	10,600	5,300	5,710	23,000	*72,000	39,000	26,000	9,920	7,320	14,500	15,300
5	11,100	3,300	3,200	35,000	*67,800	39,000	50,000	8,330	9,800	14,400	13,100
6		9,450	2,700	4,300	30,000	*66,800	39,000	45,000	8,080	15,000	14,300
7		8,940	2,300	7,800	28,000	66,700	47,000	51,000	8,180	13,500	14,800
8		7,020	2,700	9,680	28,000	66,800	55,000	50,000	7,740	11,000	14,100
9		2,580	6,270	9,180	26,000	67,100	55,000	47,000	*7,540	4,480	15,100
10		2,790	6,530	6,610	26,000	69,000	48,000	45,000	7,230	12,300	15,000
11		4,340	13,000	8,000	27,000	70,300	36,000	45,000	7,230	8,510	14,700
12		10,900	11,100	15,200	31,000	68,600	38,000	34,000	7,250	5,720	14,600
13		10,800	5,000	35,400	31,000	66,700	45,000	41,000	8,910	6,650	14,500
14		11,400	4,760	*42,700	30,000	55,500	46,000	40,000	7,090	6,810	14,400
15		5,670	9,270	47,100	30,000	55,000	46,000	34,000	7,150	7,170	11,500
16		1,770	14,500	35,500	10,000	55,200	45,000	33,000	6,860	6,980	11,400
17		1,850	13,100	22,800	32,000	51,100	41,000	33,000	7,830	6,840	15,900
18		9,510	9,980	21,400	37,000	*47,000	37,000	33,000	7,870	7,100	14,600
19		2,500	7,520	8,300	32,000	56,200	34,000	41,000	11,400	7,770	14,600
20		2,000	6,740	25,300	31,000	56,800	30,000	40,000	6,190	8,290	14,900
21		2,800	6,940	31,000	29,000	60,000	34,000	35,000	7,420	8,280	14,800
22		2,000	10,400	57,000	39,000	59,600	38,000	19,000	14,900	8,410	14,700
23		2,000	8,880	55,000	70,000	56,000	35,000	16,000	16,800	8,560	14,700
24		1,900	12,500	46,000	*62,500	53,100	31,000	23,000	16,700	8,210	14,700
25		1,700	3,520	44,000	55,600	49,200	25,000	23,000	16,600	8,220	14,400
26		1,800	12,000	40,000	36,500	48,900	23,000	18,000	15,300	*7,770	14,400
27		2,000	14,500	27,000	29,200	50,000	23,000	18,000	15,300	7,060	14,500
28		3,500	15,500	36,000	34,000	47,000	23,000	13,000	9,400	7,120	14,500
29		*4,160	14,400	19,000	*84,400	-	25,000	18,000	7,020	7,440	*14,800
30		5,290	12,100	18,000	*88,100	-----	23,000	*25,000	7,220	7,360	14,500
31		4,390	-----	24,000	*95,500	-----	21,000	6,760	-----	14,200	5,810
Total	164,180	247,700	743,580	*1,178	*1,777.7	*1,145.4	910,000	315,520	244,980	425,120	275,500
Mean	5,296	8,257	23,980	31,600	61,700	36,880	30,530	10,180	8,166	13,710	8,681

Observed						Adjusted†					
Calendar year 1956: Max	91,800	Min	1,100	Mean	20,050	Mean	22,090	Cfsm	1.89	In.	25.70
Water year 1956-57: Max	95,500	Min	1,800	Mean	20,390	Mean	21,110	Cfsm	1.80	In.	24.50

* Discharge measurement made on this day.
† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.
‡ Expressed in thousands.
Note.--No gage height record at base gage Oct. 21-28, Nov. 3-8, Dec. 5, 6, Dec. 21 to Jan. 23, Feb. 27, 28, Mar. 3 to Apr. 30; discharge estimated on basis of records for station below Cheatham Dam and computed outflow from Old Hickory Lake.

Discharge, in cubic feet per second, water year October 1957 to September 1958											
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1	7,550	9,290	36,100	40,400	30,000	3,670	20,800	56,000	31,000	6,910	20,000
2	6,980	4,290	33,600	40,200	30,000	5,400	21,200	51,000	31,100	7,180	14,000
3	7,740	6,500	33,600	38,000	29,000	8,390	20,900	48,000	15,700	7,520	11,000
4	7,150	8,730	31,500	58,400	29,000	8,880	27,200	48,000	19,000	5,030	14,000
5	8,260	15,800	30,100	39,800	*29,700	8,590	15,300	52,000	22,000	7,180	18,000
6	11,400	15,800	29,400	*39,600	30,500	8,610	12,600	53,000	22,000	7,320	18,000
7	14,800	*15,100	39,300	38,300	31,600	8,540	13,500	58,000	15,000	6,810	18,000
8	12,700	14,900	60,400	39,900	32,100	*4,110	20,300	58,000	15,900	8,810	18,000
9	11,200	16,500	55,700	27,900	30,500	5,180	25,500	52,000	8,270	*10,200	17,000
10	11,200	15,800	42,100	28,800	30,300	10,300	26,600	50,000	10,400	9,820	10,000
11	11,400	17,600	36,600	26,200	30,500	18,700	33,800	50,000	9,170	9,920	8,000
12	9,780	19,700	35,600	28,900	30,800	12,900	31,400	50,000	15,400	10,100	7,000
13	9,060	9,790	32,000	30,800	31,500	8,940	30,400	48,000	*13,400	9,950	8,500
14	11,300	12,100	31,200	31,200	29,600	9,710	30,300	46,000	10,400	9,490	10,000
15	17,500	13,600	29,300	31,700	30,600	5,960	31,000	45,000	7,600	10,900	12,900
16	15,900	15,300	29,500	31,100	31,400	5,780	*30,700	43,000	7,860	13,500	5,960
17	10,300	16,700	29,100	30,600	31,000	20,200	*23,500	45,000	9,260	20,900	4,100
18	13,600	*57,100	30,600	30,500	30,700	18,100	25,000	42,000	10,200	22,400	6,920
19	3,860	71,000	37,300	30,500	30,600	11,300	30,000	*40,000	10,100	16,100	*5,700
20	10,100	*59,700	64,600	*30,700	28,600	16,500	25,000	39,900	10,500	11,800	5,660
21	15,000	42,800	59,200	31,300	20,200	11,400	25,000	41,600	9,580	11,500	5,800
22	17,500	36,400	51,700	31,700	18,100	3,720	32,000	*32,100	8,670	14,700	5,590
23	*17,000	37,900	38,100	31,500	9,680	5,600	31,000	35,600	8,120	19,600	9,100
24	4,260	42,500	40,800	32,100	8,280	20,400	31,000	36,500	7,490	19,200	5,880
25	15,000	46,800	40,700	52,900	10,500	17,100	36,000	31,100	6,720	14,000	11,700
26	14,000	*51,600	40,400	53,400	11,300	21,300	44,000	30,700	10,400	14,000	20,300
27	15,400	45,800	40,400	*58,700	11,900	23,300	56,000	29,100	11,700	14,000	9,140
28	14,300	46,500	40,100	54,800	8,820	22,600	54,000	29,500	14,700	14,000	7,140
29	12,400	46,700	40,800	28,700	-----	28,300	47,000	25,500	7,500	10,000	7,370
30	13,300	39,100	40,600	30,000	-----	15,800	63,000	29,900	7,200	20,000	12,700
31	18,000	-----	40,100	30,000	-----	13,600	-----	30,500	-----	20,600	6,060
Total	377,310	644,700	*1,220.5	*1,071.5	705,980	375,460	951,500	*1,326.1	372,840	585,840	333,520
Mean	12,170	20,810	39,370	34,560	25,210	12,110	31,720	42,760	12,430	10,450	10,750

Observed						Adjusted†					
Calendar year 1957: Max	95,500	Min	300	Mean	24,420	Mean	25,640	Cfsm	2.21	In.	29.47
Water year 1957-58: Max	71,000	Min	200	Mean	22,750	Mean	22,760	Cfsm	1.95	In.	26.90

* Discharge measurement made on this day.
† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.
‡ Expressed in thousands.
e No outflow from Old Hickory Lake; discharge estimated on basis of 6 lockages plus local inflow.
Note.--No gage-height record at base gage Jan. 30 to Feb. 4, Apr. 18 to May 19, July 25 to Aug. 14; discharge estimated on basis of records for station below Cheatham Dam and computed outflow from Old Hickory Lake.

4270. Bradley Creek at Lascassas, Tenn.

Location.--Lat 35°55'39", long 86°17'25", on downstream end of county road bridge pier, near midstream, 900 ft south of Lascassas, Rutherford County, 0.4 mile downstream from Jarman Branch, 2.0 miles upstream from mouth, and 6.0 miles northeast of Murfreesboro.

Drainage area.--38 sq mi, approximately.

Records available.--October 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 548.24 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 5,750 cfs Sept. 21 (gage height, 8.00 ft); minimum, 0.06 cfs July 5, 6, Sept. 9, 10; minimum gage height, 0.64 ft Sept. 9, 10.
1954-58: Maximum discharge, 12,800 cfs Mar. 21, 1955 (gage height, 10.66 ft); from rating curve extended above 4,700 cfs on basis of slope-area measurement of peak flow; minimum, 0.01 cfs Aug. 22 to Sept. 9, 1957; minimum gage height, 0.50 ft Sept. 7-10, 1955.

Remarks.--Records fair.

Cooperation.--Three discharge measurements furnished by Corps of Engineers.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.5	0.01	1.2	51
.6	.09	1.4	90
.7	.6	1.7	170
.8	4.1	2.0	290
.9	11	3.0	820
1.0	21	4.0	1,510

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	8.5	53	35	34	36	45	80	3.1	0.1	2.7	0.6
2	36	7.8	41	27	31	31	40	58	3.1	.1	2.7	.4
3	120	32	35	22	28	24	35	43	2.7	.09	2.7	.2
4	288	14	29	18	27	19	35	54	2.3	.07	1.8	.2
5	115	13	22	16	35	17	38	59	2.7	.07	1.5	.1
6	58	10	*19	15	446	15	348	181	5.8	.06	1.0	.09
7	35	*8.5	941	14	454	52	69	329	2.7	.09	.8	.09
8	*21	87	210	11	130	96	40	*102	1.8	.1	.8	.07
9	13	60	125	10	75	103	37	71	14	.1	.6	.06
10	10	38	77	9.2	53	75	597	182	18	.1	7.4	*.07
11	8.5	28	55	9.2	40	53	142	341	4.6	.07	16	.1
12	7.1	19	37	8.5	32	43	77	185	2.7	.4	36	.3
13	5.8	18	31	19	25	55	53	90	*2.5	.6	19	.4
14	5.2	160	28	43	22	53	41	58	1.5	.8	*4.6	.2
15	4.6	75	25	31	21	43	*71	40	1.0	1.0	1.5	.1
16	4.6	112	80	25	17	35	31	31	.8	.8	.8	.1
17	20	1,260	119	21	15	58	41	24	.6	14	.6	31
18	13	1,400	77	17	13	214	35	19	.4	3.6	.4	23
19	8.5	404	62	15	13	*90	31	19	.3	12	.3	5.2
20	7.1	144	484	15	11	60	31	18	.5	2.3	.2	540
21	5.8	84	138	*21	*11	45	453	15	.3	257	.2	1,200
22	5.2	60	82	21	13	37	130	13	.2	48	.1	110
23	68	62	58	18	12	38	77	11	.2	15	1.4	46
24	159	130	46	622	12	62	77	8.5	.1	80	9.9	25
25	55	342	38	253	11	257	449	11	.1	*34	20	15
26	35	115	75	108	11	140	286	15	13	17	7.1	8.5
27	22	71	45	71	107	115	193	8.5	4.6	7.1	5.2	6.4
28	15	95	38	55	60	77	134	7.1	1.5	3.6	3.6	5.2
29	13	109	32	43	-	58	346	6.4	.4	2.7	2.7	4.6
30	13	71	28	35	-	51	135	5.2	.2	2.3	1.5	4.6
31	12	-	27	31	-	51	-	4.6	-	1.8	1.0	-
Total	1,200.4	5,037.8	3,157	1,638.9	1,759	2,125	4,145	6,049.3	91.5	504.95	154.1	2,025.58
Mean	38.7	168	102	52.9	62.8	68.5	138	66.1	3.04	16.3	4.97	67.5
Cfs/m	1.02	4.42	2.68	1.39	1.65	1.80	3.63	1.74	0.080	0.429	0.151	1.75
In.	1.17	4.93	3.09	1.60	1.72	2.08	4.06	2.01	0.09	0.49	0.15	1.98

Calendar year 1957: Max 1,730 Min 0.01 Mean 79.3 Cfs/m 2.09 In. 28.33

Water year 1957-58: Max 1,400 Min 0.06 Mean 65.4 Cfs/m 1.72 In. 23.57

Peak discharge (base, 3,000 cfs).--Nov. 18 (6:30 p.m.) 5,640 cfs (7.95 ft); Sept. 21 (2 a.m.) 5,750 cfs (8.00 ft).

* Discharge measurement made on this day.

4275. East Fork Stones River near Lascassas, Tenn.

Location (revised).--Lat 35°55'07", long 86°20'01", at downstream end of right pier of highway bridge, 2.5 miles southwest of Lascassas, Rutherford County, 3.7 miles downstream from Bradley Creek, 6.0 miles northeast of Murfreesboro, and 15½ miles upstream from confluence with West Fork.

Drainage area.--264 sq mi.

Records available.--February 1951 to November 1958 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 507.88 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--7 years, 431 cfs.

Extremes.--1957-58: Maximum discharge during water year, 12,200 cfs Nov. 18 (gage height, 23.42 ft); minimum, 6.6 cfs Sept. 15 (gage height, 2.67 ft); minimum daily, 8.1 cfs Sept. 9, 15.

1958: Maximum discharge during period October to November, 1,480 cfs Nov. 19 (gage height, 8.00 ft); minimum, 12 cfs Oct. 22, 23 (gage height, 2.77 ft).

1951-58: Maximum discharge, 21,300 cfs Mar. 22, 1955 (gage height, 34.07 ft); minimum, 0.2 cfs Oct. 23, 1953 (gage height, 2.22 ft); minimum daily, 0.4 cfs Aug. 31, 1953.

Remarks.--Records good. Frequent diurnal fluctuations at low flow caused by small mill above station.

Cooperation.--Three discharge measurements furnished by Corps of Engineers.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	160	70	416	273	422	443	328	854	58	39	47	16
2	156	71	335	232	386	328	277	678	55	29	40	20
3	1,330	98	223	210	328	266	243	539	55	27	47	17
4	1,290	84	249	184	292	217	229	431	49	29	61	15
5	905	71	212	168	300	187	206	673	50	24	48	15
6	467	54	*186	156	1,040	166	1,070	1,640	47	24	36	16
7	293	*54	5,110	152	2,470	178	533	2,240	46	25	31	12
8	*190	250	2,620	145	1,050	557	355	1,050	44	29	29	8.7
9	140	418	1,160	129	694	563	287	745	42	26	36	8.1
10	109	236	797	118	515	611	2,370	838	135	35	33	*11
11	86	176	563	113	407	464	1,260	1,300	86	30	85	14
12	71	141	408	107	328	365	755	*902	62	34	74	10
13	64	123	327	118	266	398	542	624	*51	146	525	11
14	54	624	280	346	224	479	422	455	48	195	*128	14
15	54	572	247	298	213	377	494	345	39	78	75	8.1
16	41	2,180	431	238	187	317	488	274	39	138	53	15
17	73	4,100	1,020	206	a160	303	*374	226	40	340	42	24
18	87	10,000	862	184	a150	1,300	308	189	31	131	35	162
19	67	6,130	524	164	a140	*809	269	172	32	80	30	82
20	54	1,380	3,250	150	a130	598	243	174	31	91	25	600
21	49	796	1,410	*158	*119	458	2,460	142	31	455	29	5,530
22	45	542	822	204	119	365	1,190	124	41	166	25	800
23	59	515	592	180	128	331	761	109	47	116	26	362
24	856	550	458	2,800	126	380	566	99	39	588	32	206
25	363	2,130	377	2,520	124	803	4,040	99	26	*363	48	137
26	213	1,040	1,050	1,040	122	691	2,000	99	43	290	52	101
27	156	591	694	726	889	739	1,780	84	142	306	36	84
28	122	595	527	542	710	601	1,310	78	70	119	29	71
29	102	768	413	434	-	479	1,800	72	51	78	25	61
30	89	542	332	356	-	416	1,290	66	41	61	21	56
31	87	-	283	309	-	396	-	62	-	52	21	-
Total	7,808	34,999	26,028	12,959	12,030	14,565	28,230	15,393	1,652	4,160	1,814	8,486.9
Mean	252	1,167	840	419	430	470	941	497	55.1	134	58.5	283
Cfsm	0.955	4.42	3.18	1.58	1.63	1.78	3.56	1.88	0.209	0.508	0.222	1.07
In.	1.10	4.93	3.67	1.63	1.68	2.05	3.98	2.37	0.23	0.89	0.26	1.20

Calendar year 1957: Max 10,500 Min 2.6 Mean 554 Cfsm 2.10 In. 28.48
 Water year 1957-58: Max 10,000 Min 8.1 Mean 461 Cfsm 1.75 In. 23.70

Peak discharge (base, 7,000 cfs).--Nov. 19 (6 a.m.) 12,200 cfs (23.42 ft); Dec. 7 (1 p.m.) 8,000 cfs (19.12 ft); Sept. 21 (5 a.m.) 9,990 cfs (20.61 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for West Fork near Murfreesboro.

Discharge, in cubic feet per second, 1959

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	50	23	7	35	28	13	24	20	19	20	914
2	55	30	8	*30	27	14	26	21	20	24	446
3	50	40	9	29	23	15	20	25	21	22	-
4	44	37	10	33	22	16	19	33	22	17	-
5	41	31	11	27	23	17	16	40	23	14	-
6	40	29	12	32	18	18	19	56	24	19	-
Total	265	1,167	840	419	430	470	941	497	55.1	134	58.5
Mean	0.955	4.42	3.18	1.58	1.63	1.78	3.56	1.88	0.209	0.508	0.222
Cubic feet per second per square mile	1.10	4.93	3.67	1.63	1.68	2.05	3.98	2.37	0.23	0.89	0.26
Runoff in inches	1.10	4.93	3.67	1.63	1.68	2.05	3.98	2.37	0.23	0.89	0.26

Peak discharge (base, 7,000 cfs).--No peak above base.

* Discharge measurement made on this day.

4280. West Fork Stones River near Murfreesboro, Tenn.

Location.--Lat 35°49'20", long 86°25'03", on downstream end of second pier from right abutment of bridge on State Highway 99, 0.8 mile downstream from Middle Fork and 2.2 miles southwest of Murfreesboro, Rutherford County.

Drainage area (revised).--128 sq mi (includes 3 sq mi without surface drainage).

Records available.--October 1931 to September 1958. Prior to June 1932 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 567.02 ft above mean sea level, datum of 1929. June 30, 1932, to June 30, 1934, staff gage at same site and datum.

Average discharge.--27 years, 215 cfs.

Extremes.--Maximum discharge during year, 11,300 cfs Nov. 18 (gage height, 15.25 ft); minimum, 2.4 cfs Sept. 16, 17 (gage height, 1.02 ft).

1931-58: Maximum discharge, 38,000 cfs Feb. 13, 1948 (gage height, 22.73 ft, from floodmarks), from rating curve extended above 13,000 cfs on basis of contracted-opening measurements at gage heights 21.23 and 22.73 ft; no flow Sept. 18-20, 1954, Aug. 7-10, Sept. 4-10, 1957; minimum gage height, 0.56 ft Oct. 9, 1935, Oct. 6, 7, 1940, Sept. 8, 1957.

Maximum stage known, 25.0 ft in March 1902 (discharge, about 50,000 cfs, from report of Tennessee Valley Authority).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some diversion for irrigation.

Cooperation.--Two discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 783: 1932-34. WSP 1306: 1934(M), 1937-41(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 1-17)

Oct. 1 to Nov. 17, May 11 to Sept. 30				Nov. 18 to May 10			
1.4	8.5	3.0	195	1.9	52	4.0	674
1.5	13	4.0	600	2.0	64	5.0	2,800
2.0	52	8.0	2,800	2.5	154	11.0	4,900
2.5	109			3.0	286		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	40	223	135	216	169	146	362	27	29	60	8.1
2	68	35	190	114	169	135	133	303	25	22	88	5.6
3	652	33	169	103	150	114	125	235	25	18	62	4.9
4	508	30	148	92	137	99	131	200	21	14	47	4.7
5	245	28	127	86	154	90	118	362	19	12	39	4.3
6	122	26	*114	a80	215	84	583	1,400	16	11	33	4.0
7	89	*24	2,970	a80	649	86	249	1,440	14	9.2	26	3.8
8	*70	94	1,120	a75	359	107	181	*550	13	89	22	3.7
9	56	122	566	a70	261	127	154	506	81	56	19	3.4
10	47	81	377	a65	210	141	*1,460	645	144	33	77	*3.2
11	39	65	283	a60	178	122	591	582	52	24	44	3.2
12	33	55	210	a55	150	108	362	417	36	736	56	3.1
13	27	50	178	a55	129	152	261	204	*29	220	94	2.9
14	24	357	167	a140	116	178	208	150	24	222	*92	2.6
15	22	170	152	a105	114	146	283	125	19	103	45	2.6
16	21	1,680	229	a90	98	129	243	109	16	269	33	2.5
17	32	2,310	218	a85	86	138	186	97	13	251	28	3.5
18	58	4,720	188	a80	80	832	158	87	11	111	21	25
19	43	2,190	176	a75	70	*583	141	83	9.2	82	19	19
20	34	645	1,590	a75	63	270	131	80	8.5	116	16	323
21	29	414	542	*78	*60	215	1,310	71	8.8	132	15	2,460
22	26	313	348	a100	68	176	538	65	96	141	14	270
23	30	369	261	a80	74	165	324	60	29	815	14	134
24	461	355	213	1,370	76	158	255	53	26	462	14	97
25	127	1,150	186	768	74	229	2,220	56	21	429	12	77
26	86	493	587	418	72	243	1,160	52	180	783	12	64
27	67	338	284	*310	597	238	815	44	104	216	13	54
28	54	383	216	240	267	203	682	41	65	151	12	44
29	418	418	178	198	-	178	259	37	48	*104	11	37
30	43	289	154	176	-----	167	538	33	37	85	10	32
31	43	-----	137	158	-----	165	-----	30	-----	70	9.2	-----
Total	3,065	17,277	12,481	5,616	4,892	5,943	14,645	9,079	1,225.5	5,795.2	1,057.2	3,702.1
Mean	98.9	576	403	181	175	192	488	293	40.8	187	34.1	123
Cfsm	0.773	4.50	3.15	1.41	1.37	1.50	3.81	2.29	0.319	1.46	0.266	0.961
In.	0.89	5.02	3.63	1.63	1.42	1.73	4.26	2.64	0.36	1.68	0.31	1.08
Calendar year 1957: Max	5,760											
Water year 1957-58: Max	4,720											
Min	0											
Mean	248											
Cfsm	1.94											
In.	26.31											
Mean	232											
Cfsm	1.81											
In.	24.65											

Peak discharge (base, 7,000 cfs).--Nov. 18 (1 a.m.) 11,300 cfs (15.25 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for East Fork near Lascassas and Stewart Creek near Smyrna.

CUMBERLAND RIVER BASIN

4290. Stones River near Smyrna, Tenn.

Location.--Lat 35°59'59", long 86°27'35", on right bank 30 ft downstream from highway bridge at Jefferson Springs, 1.5 miles (revised) downstream from confluence of East and West Forks, 3.5 miles northeast of Smyrna, Rutherford County, 4.1 miles upstream from Falls Creek, and at mile 37.2.

Drainage area.--552 sq mi.

Records available.--July 1925 to September 1955.

Gage.--Water-stage recorder. Datum of gage is 459.76 ft above mean sea level, Sandy Hook datum. Prior to Sept. 22, 1926, tape gage at same site and datum.

Average discharge.--33 years, 952 cfs.

Extremes.--Maximum discharge during year, 21,600 cfs Nov. 18 (gage height, 24.87 ft); minimum, 13 cfs Sept. 14 (gage height, 0.94 ft).
1925-58: Maximum discharge, 54,100 cfs Feb. 13, 1948 (gage height, 41.03 ft, from floodmark), from rating curve extended above 20,000 cfs on basis of slope-area measurement at gage height 36.5 ft. from profile and map prepared by Corps of Engineers; minimum observed, 0.3 cfs Aug. 17, 22, 1925 (gage height, 0.50 ft).
Maximum stage known, 43.4 ft in March 1902.

Remarks.--Records good except those for periods of backwater from aquatic vegetation, which are fair, and those for periods of no gage-height record, which are poor.

Cooperation.--One discharge measurement furnished by Corps of Engineers.

Revisions (water years).--WSP 853: 1923(M). WSP 953: 1928(M), 1929, 1934-37. WSP 1276: 1942. WSP 1436: 1948-49(P), 1950-52, 1953(P), 1954-55.

Rating table, water year 1957-58, except periods of backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 18-19, Dec. 7, 8, 20,
Jan. 24, Apr. 10, 25)

0.9	10	3.0	670
1.0	18	4.0	1,320
1.3	63	8.0	4,800
1.6	133	15.0	11,600
2.4	400		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	272	215	1,090	700	822	886	744	2,100	171	102	170	65
2	245	207	882	600	804	680	640	1,660	159	90	200	59
3	1,870	192	738	500	680	561	580	1,330	153	77	180	56
4	1,900	192	655	450	600	489	552	1,060	142	69	150	54
5	1,950	165	561	400	575	436	548	1,750	130	67	130	50
6	894	168	494	350	981	392	2,110	4,270	125	59	110	47
7	570	165	5,120	320	5,340	388	1,380	5,680	115	59	100	42
8	404	281	7,810	300	2,580	786	900	2,820	110	65	93	23
9	309	900	*3,240	280	1,650	858	715	1,940	123	102	93	17
10	245	556	2,060	270	1,200	1,060	*4,770	2,270	344	110	114	*16
11	201	408	1,510	280	948	834	3,880	3,160	272	85	213	16
12	165	327	1,090	250	786	690	2,080	2,440	177	280	204	16
13	136	288	878	270	655	670	1,460	1,580	*139	538	590	16
14	115	806	762	600	566	942	1,130	1,140	120	575	364	14
15	*102	*1,380	670	700	530	774	1,160	894	107	320	255	14
16	95	3,530	792	500	480	685	1,340	738	95	195	156	16
17	100	5,330	1,890	400	412	615	995	640	89	773	117	30
18	159	18,100	1,320	350	360	*2,700	822	552	83	408	102	47
19	174	*13,900	1,070	330	330	2,000	705	507	77	248	85	130
20	133	3,870	5,950	320	312	1,360	650	484	75	177	77	516
21	107	2,180	3,600	*330	295	1,080	4,810	436	77	334	73	11,200
22	90	1,500	2,060	408	295	858	3,350	*392	75	652	71	2,280
23	125	1,350	1,500	396	309	756	1,990	353	136	368	75	1,010
24	1,450	1,320	1,150	3,350	309	892	1,470	323	112	1,680	107	650
25	894	4,370	900	6,460	*306	1,490	8,080	316	90	726	*123	472
26	525	2,700	2,300	2,680	298	1,640	4,610	292	145	1,660	97	364
27	388	1,710	1,700	1,780	1,250	1,510	4,780	258	445	828	83	302
28	312	1,310	1,300	1,500	1,600	1,280	3,450	238	255	460	81	255
29	268	2,010	1,000	1,020	-	1,040	3,960	216	165	*527	77	207
30	242	1,430	860	846	-----	894	3,390	192	125	250	71	180
31	222	-	740	720	-----	846	-----	180	-----	200	67	---
Total	14,562	70,858	55,490	27,440	25,273	29,954	67,011	40,211	4,428	11,864	4,426	18,174
Mean	473	2,362	1,790	885	903	966	2,234	1,297	148	383	143	606
Cfsm	0.857	4.28	3.24	1.60	1.64	1.75	4.05	2.35	0.268	0.694	0.259	1.10
In.	0.99	4.77	3.74	1.85	1.70	2.02	4.51	2.71	0.30	0.80	0.30	1.22

Calendar year 1957: Max 20,000 Min 12 Mean 1,227 Cfsm 2.22 In. 30.16
Water year 1957-58: Max 18,000 Min 14 Mean 1,013 Cfsm 1.84 In. 24.91

Peak discharge (base, 17,000 cfs).--Nov. 18 (10:30 a.m.) 21,600 cfs (24.87 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 23 to Jan. 20, July 30 to Aug. 6; discharge estimated on basis of weather records, recorded range in stage when available, and records for station above Donelson, East Fork near Lascassas, and West Fork near Murfreesboro. Backwater from aquatic vegetation Oct. 1-3, May 1-5, May 8 to July 29, Aug. 7 to Sept. 6, Sept. 18-20, 22-30.

4295. Stewart Creek near Smyrna, Tenn.

Location (revised).--Lat 35°59'54", long 86°30'18", on upstream end of right abutment of bridge on Fifteenth Avenue, 0.4 mile downstream from Harts Branch, 0.7 mile southwest of headquarters at Sewart Air Force Base, 1.3 miles northeast of Smyrna, Rutherford County, and 5.3 miles upstream from mouth.

Drainage area (revised).--69.7 sq mi (includes 7.6 sq mi without surface drainage).

Records available.--June 1952 to September 1958 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 490.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--6 years, 107 cfs.

Extremes.--Maximum discharge during year, 2,430 cfs Nov. 17 (gage height, 9.18 ft); minimum, 0.8 cfs Sept. 15, 16 (gage height, 1.41 ft).

1952-58: Maximum discharge, 8,700 cfs Mar. 21, 1955 (gage height, 17.61 ft), from rating curve extended above 4,300 cfs on basis of contracted-opening measurement of peak flow; no flow at times each year 1953-57.

Flood of Feb. 13, 1948, reached about the same stage as that of Mar. 21, 1955.

Remarks.--Records fair except those below 10 cfs, which are poor. Occasional regulation at low flow caused by small dams above station.

Cooperation.--Four discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 1386; 1953-54.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 25)

Oct. 1 to Nov. 17

Nov. 18 to Sept. 30

1.5	2.1	2.5	81	1.4	0.7	2.5	75
1.7	7.0	3.0	170	1.6	3.0	3.0	155
1.8	10	4.0	440	1.7	4.6	3.5	275
2.0	22	6.0	1,270	1.8	8.0	4.0	434
				2.0	19	7.0	1,620
				2.2	38		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	19	139	86	100	76	100	268	16	6.8	5.4	2.3
2	2.3	16	118	74	86	67	90	207	15	5.4	4.6	2.1
3	58	21	100	66	76	58	82	167	14	4.6	4.2	2.0
4	286	16	86	58	68	52	76	144	13	4.0	3.5	1.9
5	108	14	72	51	67	46	105	141	12	3.6	3.1	1.8
6	51	12	*63	48	94	43	556	188	11	3.3	2.8	1.6
7	31	*11	853	44	413	51	177	221	10	3.5	2.6	1.6
8	*20	380	546	37	216	135	135	165	9.3	3.5	2.3	1.4
9	14	170	311	33	161	111	116	141	12	3.5	10	1.3
10	11	93	224	30	131	96	*986	193	11	3.2	14	*1.3
11	9.1	68	171	27	111	87	413	211	8.8	3.0	4.9	1.3
12	7.9	53	131	23	96	*78	265	*184	8.0	3.6	31	1.2
13	6.8	45	108	37	82	88	199	139	7.2	37	80	1.2
14	6.0	234	94	74	72	100	161	118	6.8	16	47	1.1
15	4.9	144	81	60	68	88	231	100	6.0	8.0	14	.8
16	4.9	616	111	49	58	81	202	68	*5.4	6.0	10	.9
17	86	980	186	43	50	91	153	75	4.9	4.9	7.2	.9
18	25	1,380	137	38	43	308	132	66	4.4	4.4	4.9	1.0
19	11	778	135	33	38	182	116	60	4.0	3.6	3.8	1.3
20	7.9	349	995	31	35	144	111	56	4.0	3.6	3.2	104
21	6.5	238	349	*66	*33	121	715	49	4.0	14	2.8	1,000
22	5.7	186	241	90	33	105	318	44	6.8	6.8	2.4	173
23	152	169	175	70	32	130	209	39	4.4	172	2.6	126
24	408	151	139	1,010	29	226	165	36	3.6	135	32	90
25	111	290	125	570	26	285	740	38	3.5	*36	*17	67
26	71	193	399	302	26	226	490	35	55	22	9.3	55
27	50	148	182	216	114	177	680	29	27	13	6.0	45
28	39	235	146	189	108	148	530	27	16	10	4.4	36
29	31	318	123	141	-	129	710	23	12	8.8	3.5	30
30	26	184	105	121	-----	121	392	22	8.8	7.6	3.0	26
31	22	93	110	-----	-----	113	-----	19	-----	6.4	2.4	-----
Total	1,675.5	7,511	6,738	3,807	2,468	3,765	9,355	3,293	323.9	564.3	323.9	1,779.0
Mean	54.0	250	217	123	86.1	121	312	106	10.8	18.2	10.4	59.3
Cfsm	0.775	3.59	3.11	1.76	1.26	1.74	4.48	1.52	0.155	0.261	0.149	0.851
In.	0.89	4.01	3.60	2.03	1.32	2.01	4.99	1.76	0.17	0.30	0.17	0.95

Calendar year 1957: Max 1,960 Min 0 Mean 135 Cfsm 1.94 In. 26.33
Water year 1957-58: Max 1,380 Min 0.8 Mean 114 Cfsm 1.64 In. 22.20

Peak discharge (base, 1,800 cfs).--Nov. 17 (8:30 p.m.) 2,430 cfs (9.18 ft); Sept. 21 (6:30 a.m.) 1,820 cfs (7.62 ft).

* Discharge measurement made on this day.

4300. Stones River above Donelson, Tenn.

Location.--Lat 36°04'23", long 86°33'30", on left bank 0.5 mile downstream from Hurricane Creek, 3.3 miles upstream from county highway bridge at Couchville, 8.8 miles (revised) southeast of Donelson, Davidson County, and at mile 17.7.

Drainage area.--834 sq mi.

Records available.--October 1938 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Prior to October 1940, published as "near Donelson."

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level. Sandy Hook datum, January 1939 to September 1940 wire-weight gage at site 10.5 miles downstream at datum 18 ft lower.

Average discharge.--20 years, 1,394 cfs.

Extremes.--Maximum discharge during year, 24,200 cfs Nov. 19 (gage height, 40.93 ft); minimum, 29 cfs Sept. 16, 17 (gage height, 10.91 ft).

1938-58: Maximum discharge, 68,700 cfs Feb. 14, 1948; maximum gage height, 58.46 ft Feb. 14, 1948; minimum discharge, 10 cfs Sept. 21, 22, 24, 1940; minimum gage height, 10.60 ft Sept. 19, 20, 1954, present site and datum.

Maximum stage known, about 59.6 ft in March 1902 (discharge, 73,000 cfs), from high-water profile by Corps of Engineers, present site and datum.

Remarks.--Records good. Some regulation at low flow.

Cooperation.--Five discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 1143: 1948.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 4-8, 17-19, 21-23, Feb. 16-18, Mar. 4-7, May 19-22, June 27, July 15, 21, July 28 to Aug. 3, Aug. 10-16, 24-26, Sept. 24-30; rate of change in stage used as a factor Nov. 16-20, Dec. 7-9, 20, 21, Jan. 24, 25, Feb. 7, Mar. 18, Apr. 10, 11, 21, 22, 25-30, May 7, Sept. 21, 22)

11.0	30	13.0	490
11.4	77	14.0	930
12.0	165	16.0	2,040
12.5	300	20.0	4,750

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	276	1,800	1,020	1,140	1,470	1,200	3,400	248	161	294	86
2	285	245	1,430	950	1,240	1,060	1,040	2,550	235	156	265	76
3	1,260	294	1,220	808	1,050	858	915	2,050	219	118	252	71
4	3,400	406	1,060	709	920	709	840	1,640	209	100	221	66
5	3,260	321	910	624	871	606	817	2,080	197	84	193	62
6	1,530	260	794	570	1,180	546	4,260	4,520	181	78	169	57
7	955	225	7,280	534	6,820	588	2,740	2,390	171	77	140	55
8	660	1,700	12,600	506	4,210	1,690	1,590	4,420	159	118	123	50
9	478	2,050	*5,140	466	2,570	1,670	1,220	2,770	*175	334	114	*39
10	349	1,240	3,240	435	1,890	1,780	6,870	2,950	261	231	348	34
11	273	817	2,380	418	1,510	1,420	7,240	3,950	482	173	250	31
12	229	*619	1,750	394	1,230	1,150	3,370	3,710	291	154	262	39
13	197	514	1,370	450	1,030	1,090	2,330	2,500	215	915	579	41
14	171	1,640	1,200	817	971	1,430	1,790	1,810	179	910	682	35
15	*144	2,630	1,070	1,060	781	1,280	1,820	1,410	156	619	370	32
16	136	3,700	1,180	830	714	1,680	2,240	1,160	135	366	245	30
17	358	8,580	2,940	686	590	1,000	*1,660	870	122	744	185	30
18	378	22,000	2,360	698	510	*3,450	1,330	808	111	794	152	36
19	507	20,500	2,090	530	474	5,310	1,140	700	106	466	123	98
20	250	7,050	8,190	494	446	2,160	1,120	646	90	321	107	236
21	199	3,420	7,120	*526	430	1,650	6,280	582	99	678	97	13,400
22	163	2,370	3,440	736	416	1,330	6,030	*510	97	1,100	69	5,820
23	302	1,960	2,400	754	434	1,280	3,160	474	97	2,010	89	1,860
24	2,940	1,820	1,820	4,180	438	1,870	2,190	442	159	2,920	494	1,090
25	2,030	4,580	1,540	10,400	*434	2,870	7,680	458	125	1,570	*666	736
26	1,040	4,080	3,250	4,320	426	2,890	7,130	446	440	2,370	258	550
27	700	2,580	2,750	2,850	870	2,350	7,870	406	526	1,370	173	434
28	546	1,980	1,860	2,090	2,700	2,010	7,340	366	466	799	136	349
29	418	3,420	1,530	1,640	-	1,620	5,900	332	282	506	118	276
30	346	2,420	1,260	1,380	-----	1,400	5,840	291	207	*363	106	237
31	300	-----	1,090	1,190	-----	1,320	-----	265	-----	498	94	-----
Total	23,912	103,597	88,034	42,938	36,197	48,925	105,152	56,006	6,440	21,083	7,414	25,946
Mean	771	3,453	2,840	1,385	1,293	1,578	3,505	1,607	215	680	239	865
Cfs/m	0.924	4.14	3.41	1.66	1.55	1.89	4.20	2.17	0.258	0.815	0.287	1.04
In.	1.07	4.62	3.93	1.91	1.61	2.18	4.69	2.50	0.29	0.94	0.33	1.16
Calendar year 1957: Max			25,300	Min	14	Mean	1,608	Cfs/m	2.17	In.	29.44	
Water year 1957-58: Max			22,000	Min	30	Mean	1,550	Cfs/m	1.86	In.	25.23	

Peak discharge (base, 16,000 cfs).--Nov. 18 (5 p.m.) 24,200 cfs (40.93 ft); Dec. 8 (2 a.m.) 17,300 cfs (34.34 ft); Sept. 21 (4:30 p.m.) 18,400 cfs (35.42 ft).

* Discharge measurement made on this day.

4310. Mill Creek near Antioch, Tenn.

Location.--Lat 36°04'54", long 86°40'50", at downstream end of center bridge pier on Franklin-Limestone Road, 900 ft upstream from Louisville & Nashville Railroad spur track bridge, 1.6 miles north of Antioch, Davidson County, 2.1 miles downstream from Whittemore Branch, and 4.0 miles southeast of Radnor.

Drainage area.--64.0 sq mi.

Records available.--October 1953 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 472.93 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 98.5 cfs.

Extremes.--Maximum discharge during year, 5,120 cfs Dec. 20 (gage height, 12.97 ft); minimum, 0.4 cfs Sept. 16, 17; minimum gage height, 2.84 ft June 25.

1953-58: Maximum discharge, 17,000 cfs Mar. 21, 1955 (gage height, 19.73 ft); no flow many days each year 1953-56.

Maximum stage known since at least 1920, that of Mar. 21, 1955.

Remarks.--Records fair above 10 cfs and poor below. Minor diversion from gage pool for industrial use.

Cooperation.--Three discharge measurements furnished by Corps of Engineers.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 28 to Sept. 20)

Oct. 1 to Nov. 17				Nov. 18 to Apr. 10				Apr. 11 to Sept. 30			
2.9	4.2	4.1	207	3.1	21			2.8	0.6		
3.0	9.3	5.0	455	3.3	49			2.9	2.8		
3.2	36	6.0	830	3.5	85			3.0	7.2		
3.5	89	8.0	1,850	4.1	207			3.2	31		
								3.5	83		

Note.--Same as preceding table above 4.1 ft.

Note.--Same as preceding table above 3.5 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	16	83	87	79	78	91	228	13	5.3	8.7	2.2
2	4.2	14	72	70	67	85	*81	178	16	2.8	8.7	1.4
3	250	16	62	63	60	57	74	140	11	2.5	7.2	1.0
4	553	14	54	57	55	52	74	113	9.5	2.5	6.0	1.0
5	122	13	46	51	57	48	226	111	7.9	2.2	5.0	.8
6	66	*11	*43	46	127	46	639	154	7.2	2.5	4.5	.8
7	41	*11	854	46	333	82	186	158	6.0	2.8	4.5	1.0
8	*29	728	399	a39	163	169	140	103	8.0	3.3	4.5	1.0
9	22	171	240	35	127	158	117	87	6.6	4.1	4.5	*1.0
10	17	102	178	34	105	121	*1,240	167	11	5.0	4.5	.8
11	13	73	131	32	87	99	344	236	7.9	6.6	4.1	.6
12	12	57	99	31	74	85	218	200	5.5	5.5	183	.6
13	10	50	83	54	63	131	167	121	5.0	47	56	.5
14	9.3	392	74	74	*55	115	138	95	4.5	29	14	.5
15	8.6	153	65	55	55	97	267	76	3.7	7.2	9.5	.5
16	11	314	234	48	a48	85	178	65	*2.8	4.5	7.2	.4
17	228	1,720	226	43	a40	153	136	54	2.2	6.6	6.0	.5
18	58	928	157	41	a35	346	115	45	2.0	3.7	5.0	.6
19	36	456	280	38	a31	184	97	42	1.8	2.8	4.1	.6
20	26	223	1,800	36	a29	*142	240	39	1.8	2.2	3.7	42
21	18	152	359	*48	a28	117	824	33	27	25	4.5	380
22	17	115	230	48	a28	97	252	*27	4.0	595	6.0	39
23	196	111	171	43	a27	222	171	24	2.0	556	9.5	19
24	156	91	136	1,080	a24	404	131	21	1.6	188	502	12
25	69	200	263	402	a23	305	395	31	1.6	*65	*52	8.7
26	48	131	528	235	a21	223	433	24	122	41	15	7.2
27	36	101	194	171	189	176	971	17	18	25	7.9	6.6
28	28	136	161	134	105	140	519	20	7.9	19	5.0	5.5
29	25	144	127	109	-	117	956	16	6.0	15	3.7	4.5
30	23	105	105	95	-----	119	338	14	4.5	11	3.3	6.0
31	22	-----	91	83	-----	107	-----	12	-----	9.5	2.8	-----
Total	2,158.7	6,746	7,575	3,430	2,141	4,337	9,758	2,631	326.0	1,695.6	962.4	546.3
Mean	69.6	225	244	111	76.5	140	325	84.9	10.9	54.7	31.0	18.2
Cfsm	1.09	3.52	3.81	1.73	1.20	2.19	5.08	1.33	0.170	0.855	0.484	0.284
In.	1.25	3.92	4.40	1.99	1.24	2.52	5.67	1.53	0.19	0.99	0.56	0.32
Calendar year 1957: Max	2,680			Min	0.02	Mean	142	Cfsm	2.22	In.	30.12	
Water year 1957-58: Max	1,800			Min	0.4	Mean	116	Cfsm	1.81	In.	24.58	

Peak discharge (base, 2,000 cfs).--Nov. 17 (8 p.m.) 4,240 cfs (11.92 ft); Dec. 20 (6 a.m.) 5,120 cfs (12.97 ft); Dec. 26 (12:30 a.m.) 2,330 cfs (8.88 ft); Jan. 24 (12 m.) 2,540 cfs (9.26 ft); Apr. 6 (12:30 a.m.) 2,750 cfs (9.62 ft); Apr. 10 (8 a.m.) 3,420 cfs (10.73 ft); Apr. 27 (8 p.m.) 3,420 cfs (10.74 ft); Apr. 29 (9 a.m.) 3,130 cfs (10.25 ft); July 22 (6:30 p.m.) 3,120 cfs (10.23 ft); Aug. 24 (11 a.m.) 2,120 cfs (8.49 ft); Sept. 21 (2 a.m.) 2,100 cfs (8.46 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, normal recession, and records for Stewart Creek near Smyrna.

4335. West Harpeth River near Leipers Fork, Tenn.

Location.--Lat 35°53'56", long 86°58'01", on downstream end of center pier of bridge on State Highway 96, 0.6 mile downstream from Murfrees Fork, 1.2 miles upstream from Leipers Fork, 1.8 miles east of town of Leipers Fork, Williamson County, and 5.7 miles west of Franklin.

Drainage area.--66.9 sq mi (revised).

Records available.--October 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 634.10 ft above mean sea level, unadjusted (Tennessee Valley Authority bench mark).

Extremes.--Maximum discharge during year, 3,940 cfs Nov. 17 (gage height, 12.81 ft); minimum, 0.1 cfs Sept. 10-12, 16, 17 (gage height, 0.63 ft).

1954-58: Maximum discharge, 18,900 cfs Mar. 21, 1955 (gage height, 14.8 ft, from floodmarks), from rating curve extended above 3,000 cfs on basis of contracted-opening and flow-over-road measurement of peak flow; no flow Sept. 20-23, 26, 27, 1955.

Remarks.--Records good except those below 10 cfs and those for periods of no gage-height record, which are fair.

Cooperation.--One discharge measurement furnished by Corps of Engineers.

Revisions (water years).--WSP 1436; 1955(P).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17				Nov. 18 to June 25				June 26 to Sept. 30			
0.9	7.8	2.0	102	0.9	3.1	2.0	99	0.63	0.1	1.3	24
1.0	13	5.0	604	1.0	6.4	5.0	627	.7	.6	1.6	51
1.2	23	9.0	1,360	1.1	11	9.0	1,360	.8	2.0	2.0	99
1.5	44			1.4	32			.9	4.7	3.0	267
								1.0	8.5		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	35	112	112	95	102	98	251	22	6.9	8.5	1.0
2	*8.5	32	98	96	81	91	*89	198	21	6.1	8.9	.9
3	45	32	89	85	73	80	84	160	20	*5.1	8.0	.6
4	87	29	78	78	*67	72	84	294	19	5.1	6.5	.3
5	48	27	69	71	69	*65	148	305	17	4.4	5.8	*.3
6	33	25	65	67	171	60	281	348	16	8.5	5.1	.3
7	28	24	789	62	261	65	141	267	15	17	*4.4	.5
8	22	506	442	54	17	87	115	208	14	13	4.1	*.2
9	19	177	287	49	144	85	104	211	13	13	3.8	.2
10	17	123	215	*46	125	74	837	310	*12	8.5	3.2	.2
11	16	98	163	44	109	67	343	535	11	6.9	27	.1
12	14	*131	41	92	62	62	231	390	11	7.6	11	.2
13	13	123	117	50	81	84	179	222	9.3	39	6.5	.2
14	12	576	104	52	74	78	150	*169	8.4	20	5.4	.3
15	11	225	96	46	72	73	299	141	7.5	12	4.4	.2
16	79	263	99	41	66	69	189	117	7.1	9.8	3.8	.2
17	379	1,240	95	40	62	120	155	98	6.4	8.9	2.9	.2
18	97	1,290	92	37	58	217	134	84	5.6	7.6	2.4	.5
19	66	627	154	36	54	171	117	79	5.0	5.8	2.0	.4
20	50	*343	1,280	56	50	145	192	69	5.0	12	1.5	47
21	39	238	362	47	47	125	325	60	4.7	15	1.3	214
22	34	164	251	44	43	109	204	54	4.3	33	1.3	30
23	260	169	196	41	41	147	160	47	4.0	69	1.3	19
24	164	158	163	633	39	394	144	40	3.4	56	38	15
25	105	191	398	395	57	312	306	42	4.9	29	11	12
26	83	155	578	260	36	231	303	35	66	23	5.1	11
27	64	134	260	193	235	188	479	30	18	19	3.8	8.9
28	51	160	210	155	129	157	377	27	12	14	2.7	7.6
29	46	161	165	131	-	133	658	26	9.8	12	2.2	6.5
30	44	131	139	115	-----	128	339	25	8.5	11	1.8	6.1
31	39	-----	126	105	-----	115	-----	23	-----	11	1.3	-----
Total	1,980.1	7,560	7,423	3,262	2,608	3,886	7,265	4,863	400.9	489.2	195.0	363.5
Mean	63.9	252	239	105	93.1	125	242	157	13.4	15.8	6.29	12.8
Cfsm	0.955	3.77	3.57	1.57	1.39	1.87	3.62	2.35	0.200	0.236	0.094	0.191
In.	1.10	4.20	4.13	1.81	1.45	2.16	4.04	2.70	0.22	0.27	0.11	0.21

Calendar year 1957: Max 3,450 Min 0.02 Mean 136 Cfsm 2.03 In. 27.53

Water year 1957-58: Max 1,290 Min 0.1 Mean 110 Cfsm 1.84 In. 22.40

Peak discharge (base, 1,900 cfs).--Nov. 17 (8:30 p.m.), 3,940 cfs (12.81 ft); Dec. 20 (5:30 a.m.), 3,040 cfs (12.45 ft); Dec. 25 (12 p.m.), 1,900 cfs (10.97 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Feb. 16-26, May 23 to June 3; discharge estimated on basis of weather records, and records for Rutherford Creek near Carters Creek and Mill Creek near Antioch.

4335. Harpeth River at Bellevue, Tenn.

Location.--Lat 36°03'16", long 86°55'42", on right bank 45 ft upstream from bridge on State Highway 100, 0.1 mile downstream from Little Harpeth River, and 0.9 mile southeast of Bellevue, Davidson County.

Drainage area (revised).--408 sq mi. At site $2\frac{1}{2}$ miles downstream, 417 sq mi.

Records available.--April 1920 to September 1958. Monthly discharge only for November 1929 to December 1931, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 541.04 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, staff or chain gage at site $2\frac{1}{2}$ miles downstream at datum 7.85 ft lower.

Average discharge.--38 years, 563 cfs.

Extremes.--Maximum discharge during year, 9,160 cfs Nov. 18 (gage height, 15.45 ft); minimum, 5.6 cfs Sept. 14-20 (gage height, 0.94 ft).

1920-58: Maximum discharge, 40,000 cfs Feb. 13, 1948 (gage height, 24.34 ft, from floodmarks); no flow Oct. 5-10, 1922.
Maximum stage known since at least 1902, that of Feb. 13, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Minor diversion for irrigation.

Cooperation.--Eight discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 953: 1920-30, 1932-35. WSP 1386: 1948.

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-3

Oct. 4 to Sept. 30

1.1	26	0.9	4.1	2.5	470
1.2	40	1.0	14	3.0	755
1.4	75	1.2	42	5.0	1,950
1.7	142	1.4	76	10.	5,100
2.0	248	1.7	150	15.0	8,700
2.5	470	2.0	255		
3.0	800				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	182	797	652	596	624	624	1,610	150	56	53	19
2	39	160	694	555	514	498	549	1,270	200	50	48	18
3	490	160	612	486	450	430	498	1,030	141	44	47	15
4	*1,650	*150	*543	440	398	380	432	954	*124	40	42	*14
5	706	136	455	393	*388	341	505	1,570	114	39	37	14
6	350	121	406	*367	514	317	2,080	2,070	104	36	33	12
7	247	114	2,970	354	1,710	362	1,110	1,570	95	37	33	9.6
8	192	2,030	3,850	325	a1,200	445	*820	1,220	86	69	30	8.6
9	150	1,540	2,010	293	a900	585	694	1,040	84	50	27	7.6
10	124	797	*1,430	274	a700	525	3,540	1,690	89	53	23	7.6
11	109	585	*1,110	259	a600	450	2,840	2,730	89	45	21	7.6
12	95	455	870	244	a500	406	1,590	2,850	80	47	42	6.6
13	86	406	*744	251	a420	445	1,190	1,530	76	48	70	6.6
14	78	2,330	640	329	a360	*537	978	1,130	67	242	89	6.6
15	72	1,540	596	317	a320	470	1,370	906	62	119	52	5.6
16	*70	1,510	826	282	a290	425	1,350	744	56	76	37	5.6
17	933	3,900	906	259	a270	460	990	618	53	63	30	5.6
18	435	8,350	785	240	a260	1,350	820	514	50	65	24	5.6
19	278	6,100	1,590	228	b270	1,180	706	450	48	56	21	5.6
20	214	2,570	7,220	217	b250	930	670	411	47	47	19	35
21	176	1,660	2,990	244	244	767	1,700	*358	45	66	15	1,770
22	147	1,240	1,740	341	240	652	1,630	317	44	141	9.6	575
23	332	1,110	1,310	309	247	842	1,070	282	48	309	17	225
24	1,720	948	1,070	2,270	240	1,730	854	255	50	350	320	133
25	706	1,390	972	3,550	236	1,890	2,190	240	44	221	209	95
26	450	1,190	2,670	1,780	228	1,440	2,170	244	270	160	82	76
27	346	936	1,400	1,300	865	1,180	2,440	214	282	116	48	62
28	282	848	1,160	1,030	924	966	2,610	200	121	97	*37	50
29	236	1,490	948	854	-	815	3,280	182	84	76	31	45
30	217	1,000	803	735	-	767	2,390	160	67	*67	27	40
31	203	-	694	640	-	733	-	147	-	60	23	-
Total	11,172	44,948	44,841	19,816	14,134	22,942	43,750	28,506	2,870	2,947	1,590.6	3,286.8
Mean	360	1,498	1,446	639	505	740	1,458	920	95.7	95.1	51.3	110
Cfsm	0.882	3.67	3.54	1.57	1.24	1.81	3.57	2.25	0.235	0.233	0.126	0.270
In.	1.02	4.10	4.09	1.81	1.29	2.09	3.99	2.60	0.26	0.27	0.14	0.30

Calendar year 1957: Max 10,100 Min 5 Mean 824 Cfsm 2.02 In. 27.40
Water year 1957-58: Max 8,350 Min 5.6 Mean 660 Cfsm 1.62 In. 21.96

Peak discharge (base, 7,500 cfs).--Nov. 18 (6 p.m.) 9,160 cfs (15.45 ft); Dec. 20 (5:30 p.m.) 8,300 cfs (14.54 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for station near Kingston Springs.

b Stage-discharge relation affected by ice.

4345. Harpeth River near Kingston Springs, Tenn.

Location.--Lat 36°07'18", long 87°05'56", on right bank 400 ft upstream from bridge on U. S. Highway 70, 2 miles northeast of Kingston Springs, Cheatham County, 3 miles downstream from Turnbull Creek, and at mile 32.4.

Drainage area.--687 sq mi.

Records available.--October 1924 to September 1958. Prior to July 1925 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 448.04 ft above mean sea level, datum of 1929. July 8, 1925, to Jan. 22, 1939, staff gage at site 150 ft downstream at same datum.

Average discharge.--34 years, 946 cfs.

Extremes.--Maximum discharge during year, 18,700 cfs Nov. 19 (gage height, 20.36 ft); minimum, 58 cfs Sept. 11, 12, 14-16 (gage height, 1.20 ft).

1924-58: Maximum discharge, 60,000 cfs Jan. 7, 1946 (gage height, 32.20 ft, from high-water mark in gage house); minimum, 12 cfs Sept. 18, 1939; minimum gage height observed, 0.26 ft Sept. 24, 1931.

Maximum stage known, that of Jan. 7, 1946. Flood in March 1902 reached a stage about 3 ft lower than that of Jan. 7, 1946.

Remarks.--Records good.

Cooperation.--Six discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

(Stage-discharge relation affected by ice Feb. 18, 19)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

1.4	101	5.0	2,000	1.2	58	3.0	600
1.9	194	10.0	6,250	1.4	80	7.0	3,600
2.4	338	17.0	13,800	1.6	110	14.0	10,200
3.0	630			2.0	206	17.0	13,800
				2.5	370		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	293	1,470	1,100	1,040	1,000	1,120	2,940	414	148	159	85
2	107	272	1,230	970	918	8800	984	2,270	799	132	132	79
3	135	269	1,080	860	808	a680	905	1,850	442	122	124	74
4	1,520	266	957	a800	721	622	912	1,540	352	112	112	*69
5	1,260	244	840	a720	715	578	898	1,980	316	105	104	66
6	625	223	751	a640	1,380	540	3,120	2,960	262	122	96	65
7	433	*216	4,650	a600	2,380	600	*2,260	2,520	259	275	91	66
8	327	2,030	6,710	a560	2,560	1,160	1,530	2,000	240	163	87	70
9	272	3,030	3,740	*520	1,700	1,450	1,240	1,650	228	179	84	65
10	231	1,360	2,580	500	1,380	1,340	4,500	1,900	253	151	63	61
11	204	917	2,000	486	1,170	*1,080	*5,380	2,300	*228	144	102	59
12	185	709	1,560	454	984	898	1,900	4,660	220	231	116	68
13	170	625	1,270	468	840	912	2,110	2,920	206	195	135	61
14	158	4,550	1,140	530	757	991	1,710	*2,080	190	269	156	59
15	148	3,250	1,020	572	715	905	2,250	1,650	171	378	161	58
16	*152	1,940	1,050	520	655	820	2,820	1,360	161	226	128	59
17	537	4,570	1,780	482	540	840	2,010	1,150	151	187	104	63
18	956	13,700	1,480	454	480	1,980	1,620	1,970	142	163	88	62
19	486	13,200	2,320	430	*540	2,220	1,360	872	132	146	79	61
20	360	4,820	9,620	422	472	1,690	1,190	794	132	132	73	246
21	293	2,860	6,540	490	459	1,360	1,620	703	159	124	69	1,090
22	255	2,110	3,120	567	459	1,140	2,540	616	130	152	68	1,800
23	467	1,800	2,320	611	459	1,430	1,660	550	122	374	76	505
24	2,220	1,590	1,880	2,360	454	3,460	1,530	500	120	515	1,350	522
25	1,360	1,730	1,640	5,710	446	3,960	1,980	530	122	486	825	237
26	751	1,950	3,060	3,150	446	2,820	3,300	515	215	337	350	190
27	561	1,510	2,400	2,240	802	2,170	3,500	459	500	272	206	161
28	442	1,530	1,860	1,730	1,530	1,740	4,620	438	326	228	*144	132
29	378	2,300	1,610	1,430	-	1,420	5,370	398	217	237	118	116
30	338	1,920	1,360	1,240	-----	1,350	4,840	352	176	*184	102	108
31	316	-----	1,190	1,100	-----	1,310	-----	322	-----	163	93	-----
Total	16,054	75,784	74,228	32,716	25,810	43,286	71,579	52,749	7,385	6,652	5,555	6,155
Mean	518	2,526	2,394	1,055	922	1,396	2,386	1,702	246	215	179	205
Cfs/m	0.754	3.68	3.48	1.54	1.34	2.03	3.47	2.48	0.359	0.313	0.261	0.298
In.	0.87	4.10	4.02	1.77	1.40	2.34	3.87	2.86	0.40	0.36	0.30	0.33

Calendar year 1957: Max 24,600 Min 53 Mean 1,396 Cfs/m 2.03 In. 27.60
 Water year 1957-58: Max 13,700 Min 58 Mean 1,145 Cfs/m 1.67 In. 22.62

Peak discharge (base, 10,000 cfs).--Nov. 19 (3 a.m.) 18,700 cfs (20.36 ft); Dec. 20 (2 p.m.) 12,800 cfs (16.15 ft); May 11 (7 a.m.) 16,200 cfs (18.65 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for station at Bellevue.

4350. Cumberland River below Cheatham Dam, Tenn.

Location (revised).--Lat 36°19'26", long 87°13'32", on downstream end of lock wall in lower pool at Cheatham Dam, 2.0 miles southwest of Neptune, Cheatham County, 3.0 miles upstream from Half Pone Creek, 9.7 miles west of Ashland City, and at mile 148.4.

Drainage area.--14,200 sq mi, approximately.

Records available.--October 1954 to September 1958.

Gage (revised).--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929; gage readings have been reduced to 350.00 ft above mean sea level. Auxiliary water-stage recorder and staff gage on lock wall in upper pool at lock B, 8.1 miles downstream; staff gage read four times daily.

Extremes.--Maximum discharge during year, 118,000 cfs Nov. 19; maximum gage height, 37.00 ft Nov. 20; minimum daily discharge, 1,570 cfs Nov. 3; minimum gage height, 8.13 ft Aug. 14.

1954-58: Maximum discharge, 176,000 cfs Mar. 23, 1955; maximum gage height, 45.93 ft Mar. 24, 1955; minimum daily discharge, 783 cfs July 22, 1956; minimum gage height, 7.00 ft Aug. 16, 1957.

Maximum stage known (corrected), 53.5 ft Jan. 25, 1937, from profile by Corps of Engineers (discharge, about 200,000 cfs on Jan. 24, 1937). Flood of Jan. 1, 1927, reached a stage of 51.7 ft from profile (discharge, about 205,000 cfs).

Remarks.--Records fair. Some regulation by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake (see p. 67), and by Cheatham Dam.

Cooperation.--Gage-height records for base gage, lock B staff-gage readings, and record of wicket manipulation furnished by Corps of Engineers.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e8,530	e13,800	42,900	42,000	34,200	*e8,200	21,300	73,700	31,700	e7,430	18,900	e7,080
2	e8,940	e8,890	39,500	42,800	34,300	e7,520	23,400	61,600	33,200	e7,020	16,400	e8,010
3	e10,000	e11,570	38,200	41,100	33,300	e9,460	27,400	55,900	18,900	e6,750	13,600	e8,010
4	e10,500	e8,370	34,700	39,400	32,400	*e10,300	24,400	54,300	19,300	e6,930	e12,900	e9,640
5	e12,400	e12,300	*33,500	41,700	32,900	e9,730	17,500	58,100	22,100	e6,120	16,300	e17,100
6	e13,500	15,800	33,300	41,400	*35,300	e9,430	17,000	*67,400	21,900	e5,780	16,800	e16,200
7	e15,800	16,000	48,800	41,600	41,400	e9,520	19,600	68,400	17,800	*e7,970	17,100	e9,270
8	e14,900	23,700	80,800	40,600	45,200	e11,600	24,300	69,100	14,900	e7,940	17,000	e8,620
9	e12,800	25,000	79,800	*34,200	38,100	e10,900	24,800	60,600	e10,900	e7,940	16,800	e8,100
10	e11,400	23,300	58,500	30,800	35,800	14,500	33,500	58,800	*e9,460	e10,800	e11,200	e6,900
11	e11,600	19,500	46,600	30,500	34,500	19,200	49,200	73,200	e11,500	e10,700	e8,980	*e7,780
12	e11,300	22,600	42,100	29,600	34,600	20,400	39,300	66,700	e10,500	e10,600	e7,280	e7,120
13	e8,990	13,700	38,700	31,100	34,600	e11,300	34,500	59,800	e13,800	e10,800	e9,120	e5,340
14	e11,400	29,500	35,200	33,000	34,100	e13,100	31,100	54,400	e10,600	e11,800	*e9,290	e4,370
15	e16,900	22,700	38,000	33,400	31,900	e11,500	32,500	52,000	e9,060	e11,500	e14,100	e3,580
16	e18,300	22,200	34,400	33,800	35,200	e9,360	35,600	49,000	e7,450	e14,700	e9,560	e4,120
17	e12,500	43,100	34,000	32,600	32,400	15,800	27,500	47,600	e7,190	17,100	e5,920	e5,620
18	e17,200	96,500	35,100	32,300	32,500	28,800	23,800	46,900	e8,060	23,900	e6,160	e7,220
19	e13,500	116,000	41,400	32,000	32,700	20,000	28,200	42,200	e9,230	21,600	e5,210	e8,110
20	e11,000	101,000	68,400	32,100	31,400	21,800	26,500	41,400	e9,200	17,200	e5,210	e7,500
21	e12,300	67,500	84,800	32,100	25,000	17,900	25,100	41,600	e8,810	e13,300	e5,410	e18,900
22	e18,900	48,200	66,200	33,900	19,500	e9,840	*42,300	36,400	e8,470	e14,200	e6,000	37,800
23	e19,100	45,600	49,800	33,800	14,400	e9,540	39,100	34,100	e6,930	18,100	e9,220	17,400
24	e11,300	48,200	45,900	40,500	e10,100	19,900	56,400	40,600	e7,280	26,100	e13,000	e16,800
25	e18,600	54,700	44,500	62,800	e8,980	32,200	38,600	32,600	e7,040	14,100	e13,600	16,300
26	e18,000	62,000	47,200	70,900	e11,700	28,100	56,100	31,200	e7,290	16,500	17,300	20,500
27	e18,300	55,200	48,300	49,700	e15,400	31,100	65,800	29,700	e14,400	14,700	e13,800	20,000
28	e18,600	54,700	44,200	46,000	e13,200	29,800	79,700	27,100	e9,710	15,900	e7,730	e17,200
29	e16,000	56,300	44,300	33,800	-----	32,200	83,400	28,100	e7,480	16,000	e7,720	e14,400
30	e15,000	51,500	42,700	35,000	-----	26,800	85,700	30,000	e7,410	18,900	e10,700	e14,900
31	e18,100	-----	41,600	34,900	-----	18,100	-----	31,400	-----	19,600	e7,600	-----
Total	433,660	1,177,430	1,463,400	1,188,400	815,080	527,900	1,113,600	1,523,900	381,550	412,080	350,110	353,800
Mean	13,990	39,250	47,210	38,370	29,110	17,030	37,120	49,160	12,720	13,290	11,290	11,790
Observed												
Adjusted†												
Calendar year 1957:	Max	143,000	Min	1,570	Mean	29,830	Mean	31,250	Cfsm	2.20	In.	29.88
Water year 1957-58:	Max	116,000	Min	1,570	Mean	26,690	Mean	26,720	Cfsm	1.88	In.	25.54

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.

e Crest-wicket manipulation at dam B; discharge computed by weir formula plus leakage.

CUMBERLAND RIVER BASIN

4355. Red River near Adams, Tenn.

Location (revised).--Lat 36°35'19", long 87°05'21", on downstream end of right bank pier of bridge on U. S. Highway 41, 0.5 mile downstream from Elk Fork, 1.5 miles northwest of Adams, Robertson County, and at mile 33.0.

Drainage area.--678 sq mi.

Records available.--June 1920 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 398.34 ft above mean sea level, Sandy Hook datum (Corps of Engineers bench mark). Prior to Oct. 8, 1926, chain gage and Oct. 8, 1926, to Nov. 13, 1939, water-stage recorder, at site half a mile downstream at same datum.

Average discharge.--38 years, 985 cfs.

Extremes.--Maximum discharge during year, 16,700 cfs Nov. 19 (gage height, 26.9 ft, from floodmark); minimum, 63 cfs Oct. 14-16 (gage height, 1.80 ft).
1920-58: Maximum discharge, 42,000 cfs Jan. 23, 1937 (gage height, 37.5 ft, from floodmarks, converted to present site by curve of relation), from rating curve extended above 25,000 cfs; minimum, 30 cfs Sept. 10, 1925 (gage height, 1.30 ft, site then in use).
Flood in 1913, from profile by Corps of Engineers, reached a stage about equal to that of Jan. 23, 1937.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions (water years).--WSP 953: 1920-27. WSP 1276: 1928, 1932(M), 1935(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

(Rate of change in stage used as a factor Dec. 7, 8, 20, 21)

1.8	63	6.0	1,890
2.0	93	10.0	4,410
2.5	205	20.0	11,400
3.0	337	26.0	15,900
4.0	745		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*85	117	1,130	1,460	2,470	750	1,880	2,380	459	176	315	165
2	83	113	989	1,300	2,280	637	1,690	2,130	1,700	170	628	*153
3	82	117	895	1,180	1,910	574	1,570	2,200	989	165	529	144
4	82	113	840	1,080	1,670	534	1,480	1,950	691	158	384	135
5	82	115	755	1,000	1,540	498	1,390	1,750	570	158	326	128
6	82	110	714	940	1,630	475	1,590	2,850	498	158	278	124
7	83	115	3,610	910	1,960	480	1,640	2,600	459	225	250	120
8	80	1,700	8,820	870	1,880	637	1,290	2,210	404	273	228	113
9	77	1,800	4,720	800	1,600	910	1,150	1,880	374	263	212	111
10	74	1,100	3,220	750	1,430	1,180	1,610	1,720	352	235	242	107
11	73	770	2,620	714	1,330	994	2,510	2,200	346	200	323	103
12	71	580	2,090	686	1,220	875	1,880	2,380	331	191	468	97
13	67	440	1,780	678	1,110	1,110	1,590	1,980	312	273	744	93
14	64	3,500	1,590	830	1,020	2,220	1,400	1,670	298	364	733	93
15	65	4,000	1,420	855	940	1,780	1,370	1,460	284	276	352	90
16	67	2,100	1,310	760	860	1,540	1,700	1,300	281	263	289	91
17	76	3,600	2,200	700	780	1,400	1,490	1,180	*301	1,220	301	95
18	74	13,300	2,730	655	720	1,400	1,340	1,060	271	642	306	93
19	90	15,200	4,340	614	680	1,490	1,240	978	250	404	240	93
20	93	6,900	11,300	588	655	1,400	1,180	895	242	358	215	236
21	83	*3,640	8,270	691	614	1,300	1,690	825	235	682	195	919
22	77	2,740	4,450	1,280	610	1,190	1,620	750	220	1,320	198	655
23	115	2,210	3,440	1,070	606	1,360	1,380	696	220	1,070	176	358
24	413	1,900	2,620	1,190	601	2,220	1,240	650	210	755	410	292
25	492	1,640	2,460	2,940	596	4,130	1,530	736	205	524	1,710	222
26	273	1,440	2,850	2,520	592	3,280	1,560	1,280	205	435	580	198
27	205	1,270	2,560	2,160	624	2,680	2,220	770	200	428	317	176
28	175	1,190	2,210	1,820	*925	2,240	4,890	855	198	340	252	158
29	155	1,460	1,980	1,580		1,910	3,540	*583	198	208	218	144
30	135	1,360	1,780	1,420		1,890	*3,060	524	*181	317	198	140
31	*124		*1,610	*1,380		*2,260		480		*361	179	
Total	3,795	74,640	91,543	35,421	32,853	45,144	53,720	44,722	11,454	12,663	11,786	5,646
Mean	122	2,488	2,953	1,143	1,173	1,456	1,791	1,443	382	408	380	188
Cfsm	0.180	3.67	4.36	1.69	1.73	2.15	2.64	2.13	0.563	0.602	0.560	0.277
In.	0.21	4.09	5.02	1.94	1.80	2.48	2.95	2.45	0.63	0.69	0.65	0.31

Calendar year 1957: Max 18,900 Min 59 Cfsm 1,424 In. 28.52
Water year 1957-58: Max 15,200 Min 63 Mean 1,160 Cfsm 1.71 In. 23.22

Peak discharge (base, 8,000 cfs)--Nov. 19 (about 12 m.) 16,700 cfs (26.9 ft); Dec. 8 (10 a.m.) 9,710 cfs (17.59 ft); Dec. 20 (9 p.m.) 12,100 cfs (20.99 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 28-30, Nov. 5-20, Feb. 15-19; discharge estimated on basis of weather records, recorded range in stage, floodmark, and records for Sulphur Fork near Adams and Harpeth River near Kingston Springs.

4360. Sulphur Fork Red River near Adams, Tenn.

Location (revised).--Lat 36°30'55", long 87°03'32", on left bank 600 ft downstream from highway bridge, 2.8 miles downstream from Millers Creek, 4.6 miles south of Adams, Robertson County, and 10.2 miles upstream from mouth.

Drainage area.--185 sq mi.

Records available.--October 1938 to September 1958. Prior to January 1939 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 424.36 ft above mean sea level, Sandy Hook datum. Jan. 20, 1939, to Nov. 25, 1940, wire-weight gage at site 600 ft (revised) upstream at same datum.

Average discharge.--20 years, 240 cfs.

Extremes.--Maximum discharge during year, 5,940 cfs Nov. 18 (gage height, 14.29 ft); minimum, 11 cfs Sept. 13-16; minimum gage height, 3.36 ft Sept. 14-16.
1938-58: Maximum discharge, 13,200 cfs Mar. 22, 1952 (gage height, 22.75 ft); minimum, 1.8 cfs Sept. 27, 1948; minimum gage height, 3.15 ft Sept. 21-23, 1955.
Maximum stage known, 25.1 ft in June 1934, from floodmarks. Flood in January 1937 reached a stage about 2.5 ft lower than that in June 1934.

Remarks.--Records fair.

Cooperation.--One discharge measurement furnished by Corps of Engineers.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 26 to Apr. 9, Apr. 12-26, Apr. 30 to May 5)

Oct. 1-23		Oct. 24 to Nov. 18				Nov. 19 to Sept. 30			
3.5	18	3.8	46	6.0	715	3.35	10	4.0	90
3.6	24	4.0	79	8.0	1,760	3.4	13	4.5	254
3.8	42	4.5	200	12.0	4,340	3.5	21	6.0	895
3.9	54	5.0	350			3.7	41	9.0	2,450
4.1	97					3.9	70	12.0	4,340

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*27	45	286	258	742	198	374	598	203	30	62	19
2	26	51	*261	236	540	174	338	508	448	29	197	*17
3	25	135	247	222	454	165	322	454	168	28	86	16
4	27	105	240	201	382	152	306	390	126	27	56	15
5	28	79	211	184	382	142	286	629	105	31	44	15
6	24	68	204	181	494	136	550	1,680	90	29	36	13
7	23	66	2,530	181	738	174	378	782	80	29	33	12
8	22	885	2,240	174	566	394	306	559	74	36	30	13
9	21	444	1,080	162	454	540	279	438	70	45	28	13
10	20	251	764	155	390	512	1,150	410	65	39	26	12
11	19	189	562	155	346	394	908	944	82	44	26	12
12	20	162	418	149	310	322	630	774	72	38	54	12
13	19	159	346	158	276	418	478	535	62	36	68	12
14	20	1,940	302	225	258	450	410	406	57	41	33	11
15	22	695	268	204	250	374	450	326	54	36	28	11
16	20	413	321	187	229	330	458	276	54	40	26	13
17	49	2,320	944	178	204	310	390	243	*50	113	25	22
18	56	4,070	724	171	174	494	354	218	49	53	24	19
19	32	3,100	2,440	162	142	446	326	201	44	42	22	17
20	26	1,100	3,940	155	133	386	334	187	44	48	20	243
21	24	738	1,580	208	105	322	410	168	42	110	19	320
22	23	530	972	276	130	279	342	155	40	375	19	104
23	61	430	728	247	165	310	298	142	38	168	20	56
24	326	362	571	798	162	964	294	130	37	105	220	41
25	145	510	474	998	165	1,160	378	136	*36	70	149	36
26	102	276	692	670	162	805	358	146	36	56	49	31
27	77	254	474	482	216	612	859	117	37	50	33	27
28	63	318	418	378	*236	470	1,340	114	36	41	27	25
29	54	474	358	326	-	394	972	*99	33	45	25	23
30	50	358	514	290	-	434	*742	88	31	45	22	22
31	*49	-----	*286	*350	-----	*434	-----	84	-----	*60	20	-----
Total	1,519	20,327	25,195	8,721	8,805	12,695	15,000	11,936	2,362	1,939	1,527	1,202
Mean	49.0	678	813	281	314	410	500	385	78.7	62.5	49.3	40.1
Cfsm	0.265	3.66	4.39	1.52	1.70	2.22	2.70	2.08	0.425	0.338	0.266	0.217
In.	0.31	4.09	5.06	1.75	1.77	2.55	3.02	2.40	0.47	0.39	0.31	0.24

Calendar year 1957: Max 10,000 Min 5.8 Mean 394 Cfsm 2.13 In. 28.90
Water year 1957-58: Max 4,070 Min 11 Mean 305 Cfsm 1.65 In. 22.36

Peak discharge (base, 3,400 cfs).--Nov. 18 (11 p.m.) 5,940 cfs (14.29 ft); Dec. 7 (10 p.m.) 3,770 cfs (11.12 ft); Dec. 20 (6 a.m.) 5,220 cfs (13.26 ft).

* Discharge measurement made on this day.

4367. Yellow Creek near Shiloh, Tenn.

Location.--Lat 36°20'55", long 87°32'15", on downstream end of left bank pier of bridge on State Highway 13, 2½ miles downstream from Leatherwood Creek, 3 miles west of Shiloh, Montgomery County, 7 miles upstream from mouth, and 9 miles east of Erin.

Drainage area.--120 sq mi, approximately.

Records available.--October 1957 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map). Prior to Oct. 15, 1957, wire-weight gage read once daily, at same site and datum.

Extremes.--Maximum discharge during year, 4,040 cfs Nov. 17 (gage height, 11.42 ft); minimum, 18 cfs Sept. 13-16 (gage height, 2.72 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Cooperation.--Four discharge measurements furnished by Corps of Engineers.

Rating table, water year 1957-58 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used Nov. 8, 9)

2.7	17	5.0	520
3.0	38	8.0	1,730
3.4	97	10.0	2,980
4.0	205		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a39	44	218	171	251	109	260	436	87	42	39	22
2	a38	43	193	158	230	104	239	384	141	41	38	22
3	*38	44	181	148	212	100	225	359	107	40	35	21
4	41	43	165	140	197	99	220	323	95	39	34	20
5	39	42	*151	133	195	97	203	423	88	38	32	20
6	37	40	150	128	284	95	215	*696	82	40	32	20
7	35	43	1,540	126	532	106	201	528	80	*40	30	20
8	*34	*368	1,440	122	436	167	179	415	75	47	30	20
9	32	380	820	*117	350	398	169	341	72	48	31	19
10	32	233	576	112	296	478	280	308	*70	43	a33	19
11	a32	171	a430	109	254	368	380	362	82	42	a35	*19
12	a31	143	323	106	215	293	314	323	74	42	a33	19
13	30	145	263	109	189	290	263	272	78	47	a31	19
14	29	2,140	220	109	173	272	230	222	70	51	a30	18
15	28	1,060	193	104	167	245	343	195	67	44	a29	18
16	*30	568	185	102	153	225	664	a180	64	42	a28	19
17	32	1,840	212	99	140	222	516	a200	63	48	a28	21
18	32	*2,850	242	95	131	380	412	a170	60	46	a28	22
19	31	2,020	1,090	94	124	418	347	a150	57	42	a27	22
20	30	920	2,350	94	*117	*359	299	a140	57	40	a26	38
21	29	568	1,070	114	112	308	308	a130	57	39	a25	82
22	29	394	684	145	109	260	*311	a125	56	39	a25	50
23	36	308	474	150	107	287	257	a120	54	43	a25	37
24	80	254	365	169	106	580	242	a120	53	47	a50	32
25	75	218	314	233	104	768	496	a115	50	42	a28	30
26	63	189	320	320	104	600	513	a110	51	39	a26	28
27	57	*173	281	359	114	460	588	*104	51	38	a25	32
28	53	185	260	329	114	362	532	104	47	38	a25	32
29	50	278	228	284	-	302	513	97	46	39	*24	29
30	48	266	201	251	-----	290	499	92	43	36	23	28
31	47	-----	167	230	-----	281	-----	88	-----	34	23	-----
Total	1,238	15,970	15,306	4,960	5,516	9,323	10,218	7,632	2,077	1,298	907	798
Mean	39.9	532	494	160	197	301	341	246	69.2	41.8	29.3	26.6
Cfs/m	0.332	4.43	4.12	1.33	1.64	2.51	2.84	2.05	0.577	0.348	0.244	0.222
In.	0.36	4.95	4.74	1.54	1.71	2.89	3.17	2.37	0.64	0.40	0.28	0.25

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
Water year 1957-58: Max 2,850 Min 18 Mean 206 Cfs/m 1.72 In. 23.32

Peak discharge (base, 2,200 cfs).--Nov. 14 (4 p.m.) 3,330 cfs (10.50 ft); Nov. 17 (8 p.m.) 4,040 cfs (11.42 ft); Dec. 20 (9 a.m.) 3,250 cfs (10.39 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for Piney River at Vernon and Sulphur Fork Red River near Adams.

4370. Cumberland River at Dover, Tenn.

Location.--Lat 36°29'26", 87°50'20", on center pier of bridge on U. S. Highway 79 at Dover, Stewart County, 0.1 mile upstream from Dyers Creek, 0.8 mile upstream from lock and dam D, and at mile 88.8.

Drainage area.--16,530 sq mi, approximately, includes that of Dyers Creek.

Records available.--October 1937 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 324.25 ft above mean sea level, Sandy Hook datum (levels by Corps of Engineers). Prior to Feb. 8, 1939, and during periods of crest-wicket manipulation at dam D (Feb. 8, 1929, to Sept. 30, 1951) staff gage at upper lock D, 0.8 mile downstream at same datum. Auxiliary staff gage, 19.7 miles upstream, below spillway at lock and dam C, read four times daily.

Average discharge.--21 years, 24,720 cfs (unadjusted).

Extremes.--Maximum discharge during year, 126,000 cfs Nov. 20; maximum gage height, 38.77 ft Nov. 21; minimum daily discharge, 3,870 cfs Sept. 15; minimum gage height, 10.19 ft July 3.

1937-58: Maximum discharge, 188,000 cfs Feb. 15, 1950; maximum gage height, 48.13 ft Feb. 16, 1950; minimum daily discharge, 414 cfs Oct. 4, 1947; minimum gage height observed, 7.10 ft (upper lock D gage) Sept. 16, 1947.

1916-37 at lock D, from unpublished records of Corps of Engineers: Maximum gage height observed, 56.8 ft Jan. 25, 1937 (discharge, about 280,000 cfs); minimum observed, 6.8 ft in September 1925.

Maximum stage known, that of Jan. 25, 1937.

Remarks.--Records good except those for periods computed by using fall as a factor and those for periods of wicket manipulation, which are fair. Some regulation by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake (see p. 67), and by Cheatham and other navigation dams on Cumberland River.

Cooperation.--Lock gage readings, records of wicket manipulation, and six discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 1276: 1942. WSP 1306: 1943-48 (monthly runoff).

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e8,460	e18,600	49,200	c47,300	41,000	e12,000	c24,500	c85,100	34,700	e7,960	e21,500	e6,590
2	e7,450	e9,590	43,600	c47,000	41,300	e9,490	c27,300	c75,100	36,800	e7,890	e20,000	e7,090
3	e8,050	e4,970	41,600	c47,800	40,400	e10,500	34,300	c68,500	33,000	e7,140	e16,400	e7,450
4	e9,640	e8,280	39,600	c43,900	39,200	e12,500	35,300	c63,400	19,500	e7,160	e13,600	e11,000
5	e12,600	e11,300	38,000	c43,900	38,700	e11,800	33,300	c63,800	22,800	e6,560	e15,000	e14,600
6	e14,500	15,400	37,800	45,200	39,100	e11,600	25,100	c72,200	25,200	e6,380	e18,400	e21,500
7	e15,300	15,000	51,000	44,000	43,600	e12,000	28,100	c74,500	23,700	e7,560	e18,400	e12,800
8	e17,000	23,200	78,600	42,500	47,700	e16,700	33,000	c75,400	18,500	e9,140	e18,800	e8,130
9	e14,100	29,800	93,400	40,300	45,500	15,500	33,600	c70,200	e15,300	e8,420	e18,600	e9,730
10	e12,200	28,100	e81,500	34,600	41,300	20,600	38,600	c64,700	e20,600	e9,620	e16,200	e7,450
11	e12,500	e20,800	e62,900	33,000	39,900	21,400	51,900	c69,700	e13,200	e11,000	e10,900	e7,850
12	e11,900	22,800	e62,100	32,200	39,200	27,900	53,500	c73,800	e10,500	e10,800	e8,500	e7,810
13	e9,880	c19,400	47,200	33,000	38,800	19,200	45,800	c70,000	e15,700	e11,200	e8,340	e6,260
14	e10,100	36,900	c40,800	35,300	38,600	19,200	41,500	c63,100	e13,800	e11,800	e9,470	e4,790
15	e13,900	c41,200	41,500	36,700	36,000	19,000	40,900	c58,100	e10,700	e12,000	e13,100	e3,870
16	e20,300	c31,400	40,900	37,300	36,800	15,700	43,800	c54,900	e9,100	e12,900	e13,100	e4,160
17	e17,100	37,200	41,600	36,200	36,700	15,800	41,500	c52,700	e7,490	e17,900	e8,290	e4,860
18	e14,500	83,200	43,600	35,400	35,300	31,100	35,900	c52,300	e8,740	e26,300	e4,890	e5,680
19	e15,800	c118,000	51,700	34,600	35,100	c28,600	37,200	c49,200	e9,240	e25,600	e5,790	e7,770
20	e11,900	e25,000	77,200	34,500	34,700	c24,300	38,800	c46,900	e9,800	e21,000	e4,940	e8,580
21	e11,600	e11,000	97,400	35,300	29,700	c25,400	34,100	c45,600	e9,860	e13,600	e6,030	e13,100
22	e16,600	e82,600	c95,700	37,700	24,800	18,100	42,200	c44,500	e9,180	e15,700	e5,560	e41,300
23	e20,300	c63,400	e70,900	*38,600	19,200	-	45,000	c37,800	e8,800	e19,800	e5,890	e28,200
24	e19,800	e57,300	e61,400	39,600	13,800	21,300	41,400	e11,600	e7,820	e27,900	e8,500	e21,800
25	e14,200	c56,200	c54,600	50,800	*11,700	45,600	42,000	40,100	e7,770	e19,600	e16,400	e18,900
26	e23,000	*60,600	c53,500	67,200	11,800	c40,800	50,300	*36,200	e7,500	e17,300	e19,600	e24,900
27	e20,000	e59,500	55,900	c63,500	16,500	*41,000	59,900	34,500	e11,000	e17,500	e22,400	e28,000
28	e21,500	c55,400	e52,900	54,900	17,100	39,900	74,000	35,200	e12,900	e16,400	e10,900	e21,300
29	e19,200	57,100	e50,300	c45,700	-	38,800	85,400	29,900	e8,960	e16,300	e7,590	e16,600
30	e16,200	56,100	51,000	40,000	-	38,000	90,500	32,900	e7,980	e19,600	e9,000	e15,400
31	e17,100	-----	c48,400	40,000	-----	c25,000	-----	33,400	-----	e21,100	e10,100	-----
Total	456,680	1,359,340	*1,749.7	*1,295.9	933,500	703,690	*1,308.7	*1,713.1	440,240	443,130	386,190	397,570
Mean	14,730	45,310	56,440	41,800	33,340	22,700	43,620	55,260	14,670	14,290	12,460	13,250
Observed												
Adjusted †												
Calendar year 1957:	Max	149,000	Min	2,840	Mean	33,900	Mean	35,320	Cfsm	2.14	In.	29.00
Water year 1957-58:	Max	125,000	Min	3,870	Mean	30,650	Mean	30,680	Cfsm	1.86	In.	25.19

* Discharge measurement made on this day.

† Adjusted for change in contents in Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake.

c Expressed in thousands.

e Discharge computed using fall from auxiliary gage as a factor.

* Crest-wicket manipulation at dam D; discharge computed by weir formula plus leakage.

4375. South Fork Little River at Hopkinsville, Ky.

Location.--Lat 36°50'22", long 87°28'52", on right bank at downstream side of bridge on U. S. Highway 41A, 1 mile south of city limits of Hopkinsville, Christian County, and 6 miles upstream from North Fork.

Drainage area.--46.2 sq mi.

Records available.--October 1949 to September 1958.

Gage.--Water-stage recorder. Concrete control since Dec. 6, 1949. Datum of gage is 499.71 ft above mean sea level, datum of 1929. Prior to Dec. 22, 1949, wire-weight gage; Dec. 22, 1949, to Dec. 30, 1955, water-stage recorder; Dec. 31, 1955, to July 30, 1956, staff gage; and July 31 to Oct. 17, 1956, wire-weight gage, all at present site and datum.

Average discharge.--9 years, 79.4 cfs.

Extremes.--Maximum discharge during year, 9,320 cfs Nov. 18 (gage height, 21.51 ft); minimum, 0.8 cfs Oct. 1-7.

1949-58: Maximum discharge, that of Nov. 18, 1957; minimum observed, 0.1 cfs Oct. 22, 1949.

Maximum stage known prior to November 1957, 20.4 ft in January 1937, from floodmark.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some regulation at low flow by Western State Hospital, 2 miles above station.

Rating table, water year 1957-58 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used between 100 and 220 cfs)

1.2	0.8	1.9	45
1.3	2.2	2.5	163
1.4	4.5	5.0	548
1.5	8.3	15.0	2,860
1.6	15	17.3	3,840
1.7	22		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	2.8	73	54	233	35	171	161	45	5.1	35	7.0
2	.8	2.8	61	50	174	32	157	27	27	4.5	28	6.2
3	.8	3.6	58	45	161	30	142	334	20	4.5	27	5.4
4	.8	2.6	50	42	125	28	113	195	18	4.2	22	5.4
5	.8	2.4	47	40	147	27	89	548	*17	4.2	20	5.1
6	.8	2.2	53	38	182	26	119	737	15	7.0	18	4.8
7	.8	18	1,240	37	196	34	88	232	13	22	16	4.5
8	1.1	284	376	35	170	94	58	190	12	136	15	4.5
9	1.2	84	218	32	131	174	52	178	11	26	37	4.2
10	1.1	27	188	31	94	142	115	173	11	17	145	4.2
11	1.1	20	173	29	73	89	77	176	13	13	23	4.5
12	1.1	16	142	28	58	65	61	142	11	11	27	3.6
13	1.1	146	113	37	52	*194	54	85	9.4	13	20	3.4
14	1.1	1,240	89	56	47	173	52	65	8.3	12	15	3.4
15	1.1	229	68	42	45	142	63	56	64	9.4	13	3.6
16	1.4	183	85	38	41	100	89	52	22	245	193	4.5
17	1.4	188	a150	36	40	85	61	47	10	93	60	5.1
18	1.2	*3,780	a170	33	40	113	56	41	10	42	26	4.2
19	1.2	a2,000	a200	31	37	125	52	40	7.8	74	20	4.2
20	1.2	a800	*a600	32	32	77	52	37	10	132	16	35
21	1.4	a200	a300	183	29	63	152	32	8.8	303	14	55
22	1.1	a150	a150	186	29	56	65	30	7.4	279	12	14
23	1.1	a130	a120	119	30	134	54	27	6.6	*233	11	9.4
24	*3.6	a110	a100	172	30	347	*52	25	6.2	77	86	7.0
25	3.6	a100	a90	193	31	244	59	163	6.6	61	24	5.4
26	4.2	a90	a100	184	32	185	77	41	7.4	123	15	5.1
27	3.2	a80	a90	176	41	171	184	33	6.6	45	13	4.5
28	2.2	146	a80	166	44	142	176	32	6.2	42	*10	4.2
29	2.0	166	a70	136	-	113	193	26	5.4	40	8.8	4.2
30	3.4	94	a65	*100	-----	153	174	23	5.1	31	8.3	3.9
31	3.0	-----	59	210	-----	284	-----	23	23	27	7.4	-----
Total	59.6	102,572.0	5,378	2,571	2,345	3,677	2,885	4,217	420.8	2,135.9	985.5	235.5
Mean	1.92	342	173	82.9	83.8	119	96.2	136	14.0	68.9	31.8	7.85
Cfsm	0.042	7.40	3.74	1.79	1.81	2.58	2.08	2.94	0.303	1.49	0.688	0.170
In.	0.05	8.28	4.33	2.07	1.89	2.96	2.32	3.39	0.34	1.72	0.79	0.19

Peak discharge (base, 1,600 cfs).--Nov. 14 (1 p.m.) 1,650 cfs (9.98 ft); Nov. 18 (7 p.m.) 9,320 cfs (21.51 ft); Dec. 7 (4:30 p.m.) 1,630 cfs (9.87 ft); May 6 (4:30 a.m.) 1,670 cfs (10.04 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for Little River near Cadiz.

4380. Little River near Cadiz, Ky.

Location.--Lat 36°46'40", long 87°43'18", on right bank at upstream side of highway bridge, 50 ft downstream from Casey Creek and 8½ miles southeast of Cadiz, Trigg County.

Drainage area.--249 sq mi.

Records available.--February 1940 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 391.45 ft above mean sea level, unadjusted. Prior to July 31, 1945, wire-weight gage at same site and datum.

Average discharge.--18 years, 353 cfs.

Extremes.--Maximum discharge during year, 13,600 cfs Nov. 19 (gage height, 20.69 ft); minimum, 23 cfs Oct. 14, 15.

1940-58: Maximum discharge, 14,200 cfs Jan. 14, 1951 (gage height, 21.00 ft); minimum observed, 1.0 cfs Oct. 3, 1941.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some regulation at low flow by small mill at Pee Dee, 5 miles above station.

Revisions (water years).--WSP 1173: 1942-43, 1946(M), 1949. WSP 1306: 1940(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19

Nov. 20 to Sept. 30

2.7	20	11.0	2,970	2.8	37	10.0	2,570
2.9	43	15.0	5,500	3.0	69	13.0	4,370
3.3	111	18.0	8,780	3.5	176	17.2	7,740
3.7	230	19.6	11,400	5.0	790		
6.0	1,190						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	37	666	540	1,240	295	790	558	a320	56	280	77
2	31	35	606	485	946	254	682	698	a240	55	220	73
3	30	37	572	445	754	233	626	1,740	a175	53	182	69
4	30	35	532	410	654	216	586	1,320	a150	51	163	65
5	29	33	490	382	602	200	536	1,070	*132	50	143	62
6	29	37	555	360	742	194	576	2,270	128	56	130	60
7	28	62	3,440	352	966	227	581	1,350	122	141	120	58
8	28	1,230	2,910	331	822	380	455	1,010	118	647	112	55
9	27	962	1,450	306	670	918	a360	842	110	556	106	51
10	26	360	1,160	291	598	898	a600	750	106	220	249	50
11	26	237	982	276	540	634	a560	726	108	155	200	47
12	26	184	838	265	480	532	a500	654	118	128	122	45
13	24	577	738	262	430	*762	a450	558	122	118	110	44
14	24	4,050	682	291	387	1,110	a400	480	102	120	96	43
15	23	2,940	630	339	365	778	a500	420	96	108	86	41
16	26	1,210	630	302	335	658	*450	382	270	304	88	43
17	26	998	1,450	276	308	594	420	348	155	1,160	626	45
18	24	7,650	1,400	258	280	598	365	318	104	554	185	45
19	26	*1,400	1,700	247	265	670	339	295	94	387	126	45
20	31	7,670	*4,420	240	251	606	322	280	88	491	102	88
21	32	1,770	2,240	652	240	532	343	265	88	958	90	194
22	32	1,410	1,400	934	233	475	391	244	92	722	80	153
23	60	1,220	1,150	606	230	726	331	226	80	1,120	75	92
24	*99	1,090	978	550	226	1,500	299	213	75	*568	124	75
25	95	970	874	830	226	1,590	291	265	71	382	272	62
26	58	874	922	806	226	1,150	322	490	69	410	153	55
27	42	798	850	806	237	922	480	251	67	335	126	50
28	37	770	742	726	295	778	666	216	67	244	116	47
29	35	894	686	646	-	678	674	203	64	254	*104	44
30	35	766	650	*594	-----	910	718	a190	50	216	94	43
31	33	-----	590	676	-----	1,120	-----	a180	-----	191	84	-----
Total	1,103	50,306	36,913	14,484	13,546	21,138	14,633	18,812	3,591	10,810	4,764	1,919
Mean	35.6	1,677	1,191	467	484	682	488	607	120	349	154	64.0
Cfsm	0.143	6.73	4.78	1.88	1.94	2.74	1.96	2.44	0.482	1.40	0.618	0.257
In.	0.16	7.51	5.51	2.16	2.02	3.16	2.19	2.81	0.54	1.61	0.71	0.29

Calendar year 1957: Max 11,400

Min 23

Mean 634

Cfsm 2.55

In. 34.55

Water year 1957-58: Max 11,400

Min 23

Mean 526

Cfsm 2.11

In. 28.67

Peak discharge (base, 3,500 cfs).--Nov. 14 (12 m.) 4,920 cfs (14.32 ft); Nov. 19 (10 p.m.) 13,600 cfs (20.69 ft); Dec. 7 (3:30 p.m.) 4,790 cfs (13.60 ft); Dec. 20 (3:30 a.m.) 4,770 cfs (13.57 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for nearby stations.

4385. Cumberland River at Smithland, Ky.

Location.--Lat 37°08'45", long 88°24'25", on downstream side of left center pier of bridge on U. S. Highway 60 at Smithland, Livingston County, 1 mile downstream from McCormick Creek and 2.8 miles upstream from mouth.

Drainage area.--18.080 sq mi, approximately.

Records available.--February 1939 to September 1958 (fragmentary prior to March 1940). Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 300.00 ft above mean sea level, Sandy Hook datum. Prior to Aug. 4, 1945, wire-weight gage at same site and datum. Auxiliary water-stage recorder at Dycusburg, 16.8 miles upstream, since Nov. 20, 1944. Prior to Oct. 1, 1944, auxiliary wire-weight gage at Eureka, 28.7 miles upstream and Oct. 1 to Nov. 19, 1944, auxiliary staff gage at present site. During periods of crest-wicket operation, staff gage above spillway at lock and dam F, 40.8 miles upstream, read four times daily.

Average discharge.--18 years (1940-58), 27,790 cfs (unadjusted).

Extremes.--Maximum discharge during year, 127,000 cfs Nov. 21; maximum gage height, 26.65 ft Nov. 23; minimum daily discharge, 4,560 cfs Sept. 16.
1939-58: Maximum discharge, 201,000 cfs Feb. 18, 1950; maximum gage height, 43.10 ft Feb. 13, 1950; minimum daily discharge, 1941-58, 453 cfs June 23, 1944.
Maximum stage known, 51.1 ft January to February 1937.

Remarks.--Record good above 15,000 cfs and fair below. Discharge above 15,000 cfs computed using fall as determined by auxiliary gage as a factor; discharge below 15,000 cfs computed using upper gage at lock and dam F with wicket operation at dam as a factor. Some regulation by navigation dams on Cumberland River, and by Great Falls Lake, Lake Cumberland, Dale Hollow, and Center Hill Reservoirs and Old Hickory Lake. (See following page.) Records of chemical analyses and water temperatures for the water year 1958 are given in WSP 1571.

Cooperation.--Gage-height record for lock and dam F and record of wicket manipulations furnished by Corps of Engineers.

Revisions (water years).--WSP 1173: 1947(M). WSP 1336: 1940-43.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,540	19,100	60,400	54,300	48,100	18,600	32,400	89,600	35,500		28,200	9,930
2	9,930	13,500	51,700	52,700	48,800	10,700	33,800	85,000	35,000	*8,690	29,900	8,450
3	8,780	8,910	48,200	53,500	48,000	10,600	35,800	86,400	37,100	8,150	25,600	9,170
4	11,100	7,530	45,800	53,700	45,800	13,400	39,000	82,000	27,600	7,180	20,600	11,100
5	12,700	11,400	41,600	53,900	43,500	13,400	39,200	76,200	22,800	7,440	20,900	13,500
6	14,900	15,600	39,700	*54,600	42,600	12,900	35,300	77,400	25,300	6,540	23,700	19,100
7	15,500	17,400	54,600	54,300	45,600	15,500	33,800	80,600	26,700	8,430	24,100	17,600
8	17,100	25,700	72,500	51,600	50,200	18,800	36,100	81,700	23,200	13,500	24,100	11,100
9	16,300	33,700	86,700	48,500	51,900	22,400	37,400	81,200	20,000	11,000	24,700	10,700
10	13,500	31,400	92,600	43,000	47,500	25,300	38,900	78,200	10,900	10,300	23,000	9,930
11	13,100	27,500	86,200	37,600	44,100	26,500	49,900	74,900	13,200	12,000	20,300	9,170
12	12,700	23,600	70,200	35,100	42,100	29,400	59,900	76,900	12,600	12,400	16,900	9,170
13	12,300	33,300	57,100	34,100	41,100	31,200	53,900	76,800	16,000	12,400	15,200	8,780
14	10,700	50,700	50,500	35,500	40,500	*27,100	47,600	74,200	17,000	12,800	17,400	6,750
15	13,100	59,600	46,900	36,800	40,400	26,200	45,400	69,000	12,600	13,700	17,800	5,560
16	17,700	48,500	48,000	37,200	39,100	23,600	47,000	64,600	10,800	16,300	18,800	4,560
17	19,000	38,100	53,000	37,500	40,300	21,700	48,900	62,300	8,660	18,800	15,700	4,960
18	14,000	83,900	55,700	36,300	38,400	28,100	43,600	60,500	8,760	25,000	6,800	5,860
19	17,000	116,000	58,700	35,400	36,900	36,400	40,100	59,000	9,780	27,100	4,960	8,450
20	14,400	121,000	82,400	35,800	36,500	31,800	42,100	56,800	11,100	24,000	6,450	10,700
21	12,300	126,000	93,500	41,600	35,000	31,500	40,800	56,600	11,600	23,900	*6,750	12,700
22	14,400	*125,000	101,000	40,600	30,000	27,600	41,000	59,600	10,900	24,500	6,750	23,800
23	*19,500	118,000	101,000	39,700	25,400	25,500	49,100	54,900	10,400	24,700	7,090	34,200
24	21,000	98,800	89,000	39,800	19,500	34,500	47,400	51,600	10,000	30,000	10,300	22,800
25	15,000	78,900	73,500	46,800	13,900	45,700	44,900	48,000	9,640	30,700	18,000	19,100
26	19,800	71,300	64,500	63,000	12,400	51,000	48,800	41,300	9,640	24,000	17,400	21,600
27	20,300	71,500	62,400	73,100	15,900	46,000	59,800	37,800	10,800	23,500	21,700	24,800
28	20,300	67,900	62,600	66,300	20,700	44,600	70,300	35,300	18,800	22,900	16,400	23,500
29	20,200	66,100	58,300	55,900	-	41,900	*81,600	32,900	10,200	24,100	10,300	20,100
30	18,200	65,200	56,400	46,300	-----	42,600	87,300	32,400	8,950	24,900	9,540	17,100
31	17,000	-----	56,100	44,700	-----	37,900	-----	54,100	-----	27,400	13,100	-----
Total	471,350	1,675,040	*2,020.8	*1,439	*1,044.2	872,400	*1,411.1	*1,980.8	495,530	545,020	522,440	414,240
Mean	15,200	55,830	65,190	46,420	37,290	28,140	47,040	63,900	16,520	17,580	16,850	13,810

Observed				Adjusted†			
Calendar year 1957:	Max	143,000	Min	3,710	Mean	38,710	
Water year 1957-58:	Max	126,000	Min	4,560	Mean	35,320	
					Mean	40,130	Cfsm 2.22 In. 30.13
						35,350	Cfsm 1.96 In. 26.54

* Discharge measurement made on this day.

† Adjusted for change in contents in Great Falls Lake, Lake Cumberland, Dale Hollow, and Center Hill Reservoirs, and Old Hickory Lake; records furnished by Corps of Engineers and Tennessee Valley Authority.

* Expressed in thousands.

Reservoirs in Cumberland River basin

Lake Cumberland.--Lat 36°52'09", long 85°08'45". In pylon of Wolf Creek Dam on Cumberland River, 10 miles southwest of Jamestown, Russell County, Ky. Drainage area, 5,789 sq mi (revised). Records available, July 1950 to September 1958 in reports of Geological Survey; April to July 1950 in files of Corps of Engineers. Prior to October 1954, published as Wolf Creek Reservoir. Water-stage recorder. Datum of gage is at mean sea level. Sandy Hook datum. Prior to Dec. 6, 1950, staff gage at same site at datum 545.0 ft higher. Maximum contents during year, 2,429,100 cfs-days May 12 (elevation, 738.60 ft); minimum contents, 1,260,000 cfs-days Nov. 14 (elevation, 689.96 ft). Maximum contents during period 1950-58, 2,505,800 cfs-days Dec. 23, 1951 (elevation, 741.32 ft); minimum (after first filling), 934,400 cfs-days Jan. 1, 1956 (elevation, 673.01 ft).

Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 taintor gates, 37 ft high by 50 ft wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft (top of gates) is 3,070,000 cfs-days, of which 1,056,000 cfs-days above elevation 723.00 ft (crest of spillway) are reserved for flood control and 1,080,000 cfs-days between elevations 673.00 ft (minimum power pool) and 723.00 ft will be used for power production. Figures given herein represent total contents, of which 934,000 cfs-days below elevation 673.00 ft are dead storage. Reservoir is used for flood control, power, and navigation. Records furnished by Corps of Engineers.

Dale Hollow Reservoir.--Lat 36°32'19", long 85°27'05", at Dale Hollow Dam on Obey River, 3 miles east of Celina, Clay County, Tenn., and 7.3 miles upstream from mouth. Drainage area, 935 sq mi. Records available, August 1943 to September 1958. Water-stage recorder. Datum of gage is at mean sea level. Sandy Hook datum. Prior to June 25, 1946, staff gage at same site and datum. Maximum contents during year, 702,000 cfs-days May 8 (elevation, 652.40 ft); minimum, 483,100 cfs-days Nov. 14 (elevation, 635.48 ft). Maximum contents observed during period 1943-58, 780,000 cfs-days Feb. 10, 1950 (elevation, 657.8 ft); minimum observed (after first filling), 428,000 cfs-days Sept. 11, 1944 (elevation, 630.63 ft).

Reservoir is formed by concrete gravity dam. Spillway is equipped with 6 taintor gates each 12 ft high by 60 ft wide. Storage began Aug. 30, 1943, and water in reservoir first reached minimum pool elevation May 7, 1944. Total capacity at elevation 663.0 ft (top of gates) is 860,000 cfs-days of which 177,700 cfs-days (corrected) between elevations 663.0 ft (top gates) and 651.0 ft (crest of spillway) is reserved for flood control, and 250,200 cfs-days (corrected) between elevations 651.0 and 631.0 ft (ordinary minimum pool) is used for power production. Reservoir is used for flood control, navigation, and power. Records furnished by Corps of Engineers.

Revisions (water years).--WSP 1306: 1944.

Great Falls Lake.--Lat 35°48'10", long 85°38'00", at penstock inlet on Collins River, 800 ft southwest of powerhouse of Tennessee Valley Authority, 0.9 (corrected) miles northwest of Rock Island, Warren County, Tenn., 2.3 miles upstream from mouth, and 2.4 miles upstream from Great Falls Dam on Caney Fork. Drainage area, 1,640 sq mi, approximately. Records available, January 1917 to September 1958. Remote indicator gage. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 28,700 cfs-days Nov. 26 (elevation, 805.98 ft); minimum, 8,800 cfs-days Sept. 7 (elevation, 781.37 ft). Maximum 12 p.m. elevation during period 1916-58, 817.48 ft Mar. 23, 1929 (contents not determined); minimum 12 p.m. contents, 1,700 cfs-days Aug. 19, 1918 (elevation, 756.3 ft).

Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates each 14 ft high by 35 ft wide. Dam completed and storage began in 1916; dam redesigned and crest raised 25 ft in 1925. Total capacity at elevation 804.9 ft (top of gates) is 27,400 cfs-days, of which 24,900 cfs-days is controlled storage above elevation 762.0 ft (minimum pool). Reservoir is used primarily for power. Records furnished by Tennessee Valley Authority.

Center Hill Reservoir.--Lat 36°05'48", long 85°49'38", at Center Hill Dam on Caney Fork, 10 miles north of Smithville, DeKalb County, 14 miles southeast of Carthage, Smith County, Tenn., and at mile 26.6. Drainage area, 2,195 sq mi. Records available, October 1948 to September 1958. Water-stage recorder. Datum of gage is at mean sea level. Sandy Hook datum. Prior to Mar. 14, 1949, staff gage a quarter of a mile upstream at same datum. Maximum contents during year, 745,800 cfs-days Nov. 21 (elevation, 655.99 ft); minimum, 495,900 cfs-days Jan. 23 (elevation, 627.62 ft). Maximum contents during period 1948-58, 1,005,000 cfs-days Feb. 10, 1950 (elevation, 680.6 ft); minimum observed (after first filling), 171,000 cfs-days Dec. 1, 2, 1949 (elevation, 576.1 ft).

Reservoir is formed by concrete dam with earth embankment. Spillway equipped with 8 taintor gates, 37 ft high and 50 ft wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Total capacity at elevation 685.0 ft (top of gates) is 1,054,900 cfs-days (corrected), of which 384,600 cfs-days (corrected) between elevations 685.0 ft (top of gates) and 648.0 ft (crest of spillway) is reserved for flood control, and 248,000 cfs-days between elevations 648.0 ft (crest of spillway) and 618.0 ft (ordinary minimum pool) will be used for power production. Reservoir is used for navigation, flood control, and power. Records furnished by Corps of Engineers.

Old Hickory Lake.--Lat 36°17'50", long 86°39'20", at Old Hickory Dam on Cumberland River, 2.0 miles west of Hendersonville, Sumner County, 10 miles northeast of Nashville, Davidson County, Tenn., and at mile 216.2. Drainage area, 11,700 sq mi, approximately. Records available, June 1954 to September 1958. Water-stage recorder. Datum of gage is 408.5 ft above mean sea level, datum of 1929; gage readings have been reduced to elevations above mean sea level. Prior to Apr. 4, 1957, staff gage at same site and datum. Maximum contents during year, 215,400 cfs-days Dec. 20 (elevation, 445.33 ft); minimum, 179,400 cfs-days Oct. 22 (elevation, 441.96 ft). Maximum contents during period 1954-58, 241,600 cfs-days Jan. 30, 1957 (elevation, 447.5 ft); minimum (after first filling to ordinary minimum pool), that of Oct. 22, 1957.

Reservoirs in Cumberland River basin--Continued

Old Hickory Lake--Continued

Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with 6 taintor gates, 41 ft high and 45 ft wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Total capacity at elevation 450.0 ft (maximum allowable pool) is 274,700 cfs-days of which 63,100 cfs-days between elevation 450.0 ft and 445.0 ft (normal pool) is induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days between elevation 445.0 ft and 442.0 ft (ordinary minimum pool) will be used for power drawdown. Reservoir is used for navigation and power. Records furnished by Corps of Engineers.

Cheatham Lake on Cumberland River, 20 miles southeast of Clarksville, Montgomery County, Tenn., with total capacity of 52,000 cfs-days of which 10,000 cfs-days is controlled storage. Records of contents not published herein.

Month-end elevation and contents, water year October 1957 to September 1958						
Date	Elevation (feet)†	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)†	Contents (cfs-days)	Change in contents (cfs-days)
Lake Cumberland			Dale Hollow Reservoir			
Sept. 30.....	700.34	1,479,300	-	638.88	523,700	-
Oct. 31.....	693.57	1,334,400	-144,900	636.34	493,200	-30,500
Nov. 30.....	703.96	1,559,500	+225,100	641.60	557,500	+64,300
Dec. 31.....	714.93	1,814,600	+255,100	643.19	577,700	+20,200
Calendar year 1957.	-	-	+397,100	-	-	+57,100
Jan. 31.....	701.84	1,512,300	-302,300	640.20	540,000	-37,700
Feb. 28.....	700.46	1,481,900	-30,400	641.85	560,600	+20,600
Mar. 31.....	714.04	1,793,200	+311,300	647.69	636,900	+76,300
Apr. 30.....	730.20	2,200,400	+407,200	651.52	689,600	+52,700
May 31.....	724.44	2,050,600	-149,800	649.58	662,700	-26,900
June 30.....	717.76	1,883,300	-167,300	648.98	654,400	-8,300
July 31.....	712.25	1,750,600	-132,700	645.72	610,600	-43,800
Aug. 31.....	708.14	1,654,600	-96,000	641.90	561,200	-49,400
Sept. 30.....	700.27	1,477,800	-176,800	639.32	529,100	-32,100
Water year 1957-58	-	-	-1,500	-	-	+5,400
Great Falls Lake			Center Hill Reservoir			
Sept. 30.....	786.90	12,000	-	637.40	576,400	-
Oct. 31.....	786.93	12,000	0	633.45	543,200	-33,200
Nov. 30.....	805.79	28,500	+16,500	647.58	666,500	+123,300
Dec. 31.....	805.02	27,600	-900	637.06	573,500	-93,000
Calendar year 1957.	-	-	+4,900	-	-	+48,400
Jan. 31.....	805.29	27,900	+300	628.32	501,500	-72,000
Feb. 28.....	788.47	13,000	-14,900	635.83	546,300	+44,800
Mar. 31.....	805.64	28,300	+15,300	642.76	623,000	+76,700
Apr. 30.....	805.38	28,000	-300	652.01	707,600	+84,600
May 31.....	784.74	10,700	-17,300	647.70	667,600	-40,000
June 30.....	787.66	12,500	+1,800	644.84	641,600	-26,000
July 31.....	789.68	13,800	+1,300	641.46	611,600	-30,000
Aug. 31.....	785.85	11,300	-2,500	641.07	608,100	-3,500
Sept. 30.....	789.92	14,000	+2,700	637.69	578,900	-29,200
Water year 1957-58	-	-	+2,000	-	-	+2,500
Old Hickory Lake						
Sept. 30.....	443.73	197,600	-			
Oct. 31.....	443.80	198,400	+800			
Nov. 30.....	444.96	211,200	+12,800			
Dec. 31.....	443.53	195,500	-15,700			
Calendar year 1957.	-	-	+10,700			
Jan. 31.....	444.07	201,300	+5,800			
Feb. 28.....	443.87	199,100	-2,200			
Mar. 31.....	443.07	190,600	-8,500			
Apr. 30.....	445.00	211,600	+21,000			
May 31.....	443.76	198,000	-13,600			
June 30.....	443.57	195,900	-2,100			
July 31.....	443.62	196,500	+600			
Aug. 31.....	443.97	200,200	+3,700			
Sept. 30.....	443.82	198,600	-1,600			
Water year 1957-58	-	-	+1,000			

† Elevation at 12 p.m.

3490. French Broad River at Rosman, N. C.

Location.--Lat 35°08'32", long 82°49'28", on left bank at upstream side of bridge on U. S. Highway 178 at Rosman, Transylvania County, 1.0 mile upstream from East Fork and at mile 216.4.

Drainage area.--67.9 sq mi.

Records available.--May 1907 to June 1909, October 1935 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,173.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 30, 1909, staff gage at site 500 ft downstream at different datum. Jan. 1, 1936, to July 6, 1937, wire-weight gage at present site and datum.

Average discharge.--24 years (1907-8, 1935-58), 231 cfs.

Extremes.--Maximum discharge during year, 3,380 cfs Dec. 20 (gage height, 8.90 ft); minimum, 85 cfs Sept. 29 (gage height, 1.81 ft).
1907-9, 1935-58: Maximum discharge, 9,410 cfs Aug. 30, 1940 (gage height, 11.86 ft), from rating curve extended above 4,300 cfs on basis of slope-area measurement of peak flow; minimum, 23 cfs Jan. 3, 1940 (gage height, 1.51 ft), result of freezeup; minimum daily, 37 cfs Sept. 25-28, Oct. 5, 6, 25, 26, 1954.
Maximum stage known, 13.9 ft in July 1916, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect, which are good. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1938(M), 1939. WSP 1306: 1908(M), 1936(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
2.1	150	4.0	790	1.8	83	3.0	422
2.4	232	5.0	1,200	2.1	155	3.5	600
2.7	320	6.0	1,700	2.4	238	4.1	830
3.0	415			2.7	326		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*226	174	350	332	446	359	368	474	287	128	*147	121
2	218	169	335	311	347	326	*332	*523	267	*123	172	*111
3	430	184	*329	296	320	299	314	463	241	121	182	111
4	509	*158	335	287	302	*287	326	415	230	123	147	109
5	371	158	302	278	299	276	311	396	224	210	139	106
6	296	155	293	276	380	273	756	575	221	196	144	104
7	249	150	335	276	412	270	463	718	216	158	147	102
8	218	266	502	261	353	270	392	520	207	561	142	100
9	199	204	380	b250	323	314	357	460	202	360	142	98
10	185	180	344	*244	*305	284	491	419	*196	357	144	96
11	174	172	320	241	293	267	442	439	196	354	160	99
12	210	166	b290	235	278	255	389	406	193	296	147	139
13	180	166	b275	439	270	278	357	379	182	255	312	109
14	166	1,090	278	454	258	258	338	354	177	235	202	100
15	161	538	270	338	b270	246	422	338	188	216	212	100
16	158	499	261	305	b245	238	488	329	174	190	199	102
17	296	454	255	284	b240	238	409	320	166	182	174	98
18	224	679	249	270	b250	278	376	305	160	168	160	96
19	190	1,510	264	258	b255	261	354	293	155	160	144	91
20	177	722	1,390	252	b240	246	338	299	155	176	139	96
21	166	538	690	538	b230	238	323	282	147	331	133	193
22	161	465	492	418	235	229	348	270	155	279	126	171
23	161	598	422	544	232	226	329	261	155	218	160	104
24	540	482	394	498	226	258	308	270	147	244	204	100
25	293	*756	384	498	226	359	311	423	139	221	232	96
26	249	590	606	415	537	332	293	320	174	190	177	94
27	224	502	454	371	673	374	308	282	155	185	179	91
28	210	457	408	341	457	344	817	264	147	188	150	89
29	199	418	374	326	-----	311	699	250	136	160	139	87
30	190	387	350	308	-----	356	534	241	131	147	128	91
31	182	-----	335	317	-----	482	-----	273	-----	147	126	-----
Total	7,492	12,987	12,266	10,251	8,902	9,032	12,293	11,561	5,523	6,859	5,111	3,154
Mean	242	433	396	331	318	291	410	373	184	221	165	105
Cfsm	3.56	6.38	5.83	4.87	4.88	4.29	6.04	5.49	2.71	3.25	2.43	1.55
In.	4.10	7.11	6.72	5.61	4.88	4.95	6.73	6.33	3.03	3.76	2.80	1.73

Calendar year 1957: Max 2,540 Min 77 Mean 290 Cfsm 4.27 In. 57.88
Water year 1957-58: Max 1,510 Min 67 Mean 289 Cfsm 4.26 In. 57.75

Peak discharge (base, 2,000 cfs).--Nov. 14 (12 m.) 2,440 cfs (7.34 ft); Nov. 19 (4:30 a.m.) 2,550 cfs (7.55 ft); Dec. 20 (2:30 p.m.) 3,380 cfs (8.90 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4410. Davidson River near Brevard, N. C.

Location.--Lat 35°16'23", long 82°42'21", on right bank 150 ft upstream from State Highway 280, 2.0 miles upstream from mouth, 2.1 miles downstream from Avery Creek, and 3.3 miles northeast of Brevard, Transylvania County.

Drainage area.--40.4 sq mi.

Records available.--October 1920 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,115.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Apr. 4, 1929, staff gage and Apr. 4, 1929, to May 17, 1934, chain gage, at site 50 ft downstream at same datum.

Average discharge.--38 years, 126 cfs.

Extremes.--Maximum discharge during year, 2,060 cfs Dec. 20 (gage height, 5.05 ft): minimum, 36 cfs Sept. 9, 10, 11, 28-30 (gage height, 0.55 ft).

1920-58: Maximum discharge, 8,400 cfs Aug. 15, 1928 (gage height, 11.8 ft), from rating curve extended above 1,300 cfs; minimum, 13 cfs Oct. 11, 1954 (gage height, 0.31 ft).

Remarks.--Records excellent except those for periods of ice effect, which are good.

Revisions (water years).--WSP 823: Drainage area. WSP 1336: 1921, 1922(M), 1923, 1924-25(M), 1926, 1927(M), 1929-32(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20, May 25 to Sept. 30				Dec. 21 to May 24			
0.5	30	2.0	385	0.8	79	2.0	405
.6	43	2.5	580	1.0	118	2.5	595
.8	73	3.0	815	1.5	247		
1.0	111	3.5	1,080				
1.5	236						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*147	86	182	177	247	205	215	259	143	57	*60	47
2	147	84	*172	182	192	182	*192	*259	131	*57	68	*44
3	304	82	170	154	170	187	180	238	124	56	73	44
4	355	*78	170	147	b155	*154	192	218	124	56	82	43
5	225	*77	150	140	150	147	180	210	120	87	56	42
6	174	75	145	137	195	147	455	291	118	101	80	42
7	143	73	168	137	208	144	277	339	111	68	88	40
8	126	123	250	128	177	147	262	265	107	226	68	39
9	113	97	192	b125	160	180	208	235	103	*155	63	38
10	105	84	170	*b125	*150	160	277	218	*97	131	62	38
11	97	82	157	118	142	147	247	244	97	109	62	100
12	111	80	b135	114	135	140	218	277	91	122	62	95
13	97	78	b135	194	130	154	200	230	87	101	78	57
14	89	495	133	227	b120	142	187	208	84	91	70	49
15	86	242	129	172	b120	135	238	195	86	96	75	46
16	86	228	126	154	b100	128	292	184	82	80	80	49
17	144	208	122	142	b95	128	235	200	78	73	75	47
18	113	*361	118	135	b100	154	210	187	77	70	63	44
19	97	*852	133	128	b110	142	197	172	73	65	59	40
20	91	367	*783	125	b115	132	187	172	70	68	56	42
21	86	271	374	245	b115	125	180	160	70	145	54	95
22	84	250	271	208	118	120	187	150	71	124	54	60
23	84	337	232	172	114	118	174	144	73	67	57	50
24	221	262	213	232	112	137	164	204	68	128	73	47
25	138	*483	213	235	112	187	182	248	65	101	127	44
26	120	349	352	208	322	187	167	195	71	84	73	43
27	109	280	256	180	*373	218	177	170	70	80	63	40
28	101	248	227	174	259	195	456	155	62	77	54	38
29	97	225	205	164		172	355	143	62	70	54	38
30	93	205	192	157	-----	218	298	133	60	65	51	39
31	89	-----	180	162	-----	274	-----	159	-----	62	49	-----
Total	4,072	6,762	6,455	5,088	4,504	4,986	6,989	6,462	2,675	2,882	2,052	1,478
Mean	131	225	208	164	161	161	233	208	89.2	93.0	66.2	49.3
Cfs/m	3.24	5.57	5.15	4.06	3.99	3.99	5.77	5.15	2.21	2.50	1.54	1.22
In.	3.75	6.22	5.94	4.68	4.15	4.59	6.43	5.95	2.46	2.65	1.89	1.36

Calendar year 1957: Max 1,730 Min 30 Mean 160 Cfs/m 3.96 In. 53.60
Water year 1957-58: Max 852 Min 36 Mean 149 Cfs/m 3.69 In. 50.07

Peak discharge (base, 1,000 cfs).--Nov. 14 (11 a.m.), 1,260 cfs (3.84 ft); Nov. 19 (4 a.m.), 1,540 cfs (4.30 ft); Dec. 20 (1:30 p.m.), 2,060 cfs (5.05 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4430. French Broad River at Blantyre, N. C.

Location.--Lat 35°17'56", long 82°37'27", on left bank at upstream side of highway bridge, 700 ft east of Blantyre railroad station, Transylvania County, 3.4 miles downstream from Little River, and at mile 183.7.

Drainage area.--296 sq mi.

Records available.--October 1920 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,060.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 5, 1930, chain gage at same site and datum.

Average discharge.--38 years, 930 cfs.

Extremes.--Maximum discharge during year, 4,270 cfs Nov. 19; maximum gage height, 16.06 ft Nov. 20; minimum discharge, 277 cfs Sept. 29 (gage height, 3.53 ft).

1920-58: Maximum discharge, 26,500 cfs Aug. 16, 1928 (gage height, 22.9 ft), from rating curve extended about 11,500 cfs; minimum, 119 cfs Oct. 11, 1954 (gage height, 2.36 ft).

Maximum stage known, 27.1 ft in July 1916, from floodmarks.

Remarks.--Records excellent except those for period of no gage-height record, which are good. Considerable diurnal fluctuation at low flow caused by powerplant above station. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 3-6, 18, 24, 25, Nov. 9, 14-27, Dec. 7-10, 20-23, 26, 27, Jan. 13-15, 21-26, 31, Feb. 1, 2, 26-28, Mar. 1, 25-27, 30, 31, Apr. 1, 6-8, 10, 11, 15-17, 27-30, May 1-4, 6-9, 25, 26, July 8-10, 12, 21, 22)

3.5	272	10.0	2,000
4.0	360	12.0	2,630
5.0	560	14.0	3,280
6.0	798	16.0	4,200
8.0	1,360		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1,430	726	1,490	1,290	1,910	1,730	1,960	2,150	1,000	505	594	396
2	1,170	710	1,390	1,200	1,590	1,470	1,650	2,310	1,030	461	588	*408
3	1,440	693	*1,270	*1,140	1,380	1,340	*1,460	2,190	1,020	449	681	396
4	2,290	676	1,280	1,100	1,260	1,220	1,460	1,900	899	445	638	392
5	1,770	*657	1,170	1,050	1,210	1,150	1,390	*1,770	855	569	*560	587
6	1,340	640	1,080	1,010	1,360	1,110	3,020	2,000	870	798	540	377
7	1,110	606	1,130	1,020	1,580	*1,100	2,580	875	674	594		335
8	952	788	1,320	985	1,490	1,120	1,900	2,350	820	1,730	657	335
9	862	986	1,640	910	1,310	1,220	1,660	1,950	789	*1,920	712	356
10	803	777	1,440	912	1,220	1,290	1,820	1,770	798	1,400	627	351
11	762	796	1,100	860	*1,170	1,140	2,010	1,750	*736	1,120	588	455
12	845	710	988	870	1,110	1,080	1,700	1,810	746	1,220	606	572
13	810	666	1,050	1,090	1,060	1,110	1,530	1,620	700	1,070	736	433
14	741	1,670	1,040	2,230	1,010	1,120	1,420	1,480	695	1,030	734	351
15	707	2,440	1,030	1,560	1,030	1,030	1,540	1,400	662	1,010	640	344
16	690	1,970	1,000	1,300	1,010	990	2,260	1,330	695	988	782	392
17	870	1,910	966	1,180	885	960	1,850	1,350	638	830	686	375
18	1,110	*2,880	960	1,100	a850	1,150	1,640	1,280	620	765	601	381
19	852	3,890	977	1,020	a850	1,170	1,510	1,200	601	722	553	353
20	784	*4,110	2,540	990	a860	1,060	1,420	1,190	594	700	519	346
21	743	2,900	3,560	1,590	900	1,000	1,350	1,150	583	907	499	640
22	719	2,020	2,610	2,100	910	952	1,370	1,090	569	1,410	481	583
23	705	2,390	1,780	1,540	939	923	1,400	1,040	618	923	465	441
24	1,190	2,080	1,610	1,980	918	928	1,260	1,040	583	1,020	538	413
25	1,210	2,760	1,540	2,700	912	1,540	1,280	1,470	549	1,020	820	368
26	982	2,730	2,250	2,030	1,680	1,430	1,200	1,540	574	822	674	358
27	900	2,150	1,990	1,730	2,680	1,660	1,240	1,160	717	760	618	335
28	832	1,920	1,710	1,530	2,470	1,530	3,640	1,080	592	865	525	292
29	794	1,770	1,540	1,390	-	1,390	3,820	1,010	534	777	493	294
30	772	1,630	1,400	1,320	-----	1,420	2,830	952	505	686	457	320
31	753	-----	1,320	1,280	-----	2,430	-----	942	-----	606	336	-----
Total	30,938	50,651	46,771	42,007	35,554	38,763	55,170	48,084	21,438	28,202	18,602	11,779
Mean	998	1,688	1,509	1,385	1,270	1,250	1,839	1,551	715	910	600	393
Cfs/m	3.37	5.70	5.10	4.58	4.29	4.22	6.21	5.24	2.42	3.07	2.03	1.33
In.	3.89	6.36	5.88	5.28	4.47	4.87	6.93	6.04	2.69	3.54	2.34	1.48

Calendar year 1957: Max 9,000

Water year 1957-58: Max 4,110

Min 266

Min 292

Mean 1,151

Mean 1,172

Cfs/m 3.89

Cfs/m 3.96

In. 52.78

In. 53.77

Peak discharge (base, 4,300 cfs).--No peak above base.

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for station at Rosman.

4460. Mills River near Mills River, N. C.

Location.--Lat 35°23'45", long 82°35'25", on right bank 1.4 miles downstream from confluence of North and South Forks, 2.2 miles upstream from village of Mills River, Henderson County, and 4.2 miles northwest of Horseshoe.

Drainage area.--66.7 sq mi.

Records available.--September 1924 to September 1926, October 1933 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,088.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1926, staff gage at site 500 ft upstream at datum 2.97 ft higher.

Average discharge.--27 years, 157 cfs.

Extremes.--Maximum discharge during year, 1,680 cfs Nov. 19 (gage height, 5.04 ft); minimum, 44 cfs Sept. 28, 29, 30 (gage height, 1.65 ft); minimum daily, 45 cfs Sept. 29, 1924-26, 1933-58; Maximum discharge, 13,400 cfs Aug. 30, 1940 (gage height, 13.62 ft), from rating curve extended above 5,500 cfs on basis of slope-area measurement of peak flow; minimum, 16 cfs Dec. 24, 1943 (gage height, 1.33 ft), result of freezeup; minimum daily, 18 cfs Sept. 30, 1954.

Remarks.--Records excellent except those for periods of ice effect, which are good. City of Hendersonville diverted from North Fork and Bradley Creek about 4 cfs for water supply.

Revisions (water years).--WSP 823: Drainage area. WSP 923: 1935, 1937, 1939. WSP 1003: 1938, 1940-42. WSP 1143: 1940(P). WSP 1276: 1926.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

2.0	100	3.5	705	1.6	38	2.5	243
2.5	234	4.0	1,050	1.8	65	3.0	447
3.0	444	4.5	1,360	2.0	102	3.3	590

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	227	118	278	247	318	322	334	380	220	102	*84	64
2	*214	113	*263	230	265	283	*298	*363	204	98	127	*60
3	294	111	252	b215	b235	261	279	338	191	96	145	60
4	416	*109	248	b205	b225	*240	283	314	194	94	116	59
5	302	107	227	b195	226	226	268	298	188	111	90	56
6	234	104	218	b195	230	220	539	380	188	120	84	54
7	198	102	227	201	251	217	398	470	179	107	92	54
8	172	141	314	b180	243	223	343	380	173	222	130	53
9	156	136	263	b175	b215	257	310	343	165	188	111	50
10	141	115	238	*b180	*b205	250	359	318	162	165	100	50
11	134	111	224	179	b200	230	355	347	157	141	88	50
12	144	109	b195	168	b185	217	318	452	*154	138	96	98
13	132	107	b195	229	b170	243	298	368	151	125	109	64
14	122	430	201	306	b165	226	279	330	146	116	104	58
15	115	319	186	240	b170	213	314	306	148	116	98	56
16	113	294	181	217	b150	204	380	291	151	114	94	60
17	162	278	178	204	b150	198	326	393	138	107	98	59
18	164	444	172	194	b160	233	302	347	133	98	86	58
19	136	110	181	179	b175	220	283	302	128	94	77	52
20	127	565	671	182	b180	210	272	291	128	104	74	50
21	120	412	512	257	b165	198	261	268	125	128	74	86
22	115	362	372	261	171	191	265	254	133	143	77	72
23	113	468	318	226	168	185	247	247	138	107	104	59
24	224	384	291	302	168	188	236	243	128	137	94	58
25	175	635	283	334	165	265	268	263	118	128	138	53
26	156	545	424	291	384	247	243	261	128	102	94	50
27	149	435	347	265	507	322	247	236	128	100	84	49
28	136	380	318	247	420	298	565	226	114	130	77	46
29	132	344	291	236	-	268	507	213	109	104	72	45
30	127	310	272	223	-----	287	434	204	107	92	68	48
31	122	-----	257	223	-----	406	-----	213	-----	88	65	-----
Total	5,272	9,198	8,597	6,986	6,276	7,548	9,811	9,659	4,526	3,715	2,950	1,729
Mean	170	307	277	225	224	243	327	312	151	120	95.2	57.6
Cfsm	2.55	4.60	4.15	3.37	3.36	3.64	4.90	4.68	2.26	1.80	1.43	0.864
In.	2.94	5.13	4.79	3.90	3.50	4.21	5.47	5.39	2.52	2.07	1.64	0.96

Calendar year 1957: Max 2,780

Min 46

Mean 208

Cfsm 3.12

In. 42.35

Water year 1957-58: Max 1,110

Min 45

Mean 209

Cfsm 3.13

In. 42.52

Peak discharge (base, 1,000 cfs).--Nov. 19 (7:30 a.m.) 1,680 cfs (5.04 ft); Dec. 20 (3:30 p.m.) 1,350 cfs (4.49 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4475. Cane Creek at Fletcher, N. C.

Location.--Lat 35°26'08", long 82°29'23", on right bank at downstream side of highway bridge, 0.5 mile upstream from Hooper Creek, 0.5 mile northeast of Fletcher, Henderson County, and 0.8 mile downstream from county line.

Drainage area.--63.1 sq mi.

Records available.--October 1942 to September 1958 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 2,072.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 73.7 cfs.

Extremes.--Maximum discharge during year, 1,610 cfs Apr. 28 (gage height, 6.95 ft); minimum, 25 cfs Sept. 11.
1942-58: Maximum discharge, 3,340 cfs Apr. 4, 1957 (gage height, 8.73 ft); minimum, 9.4 cfs Sept. 21, 1956.
Floods of July 1916 and Aug. 30, 1940, reached stages of 14.8 and 9.4 ft, respectively, from high-water marks and flood profiles by Tennessee Valley Authority.

Remarks.--Records good except those for periods of ice effect, which are fabr.

Revisions (water years).--WSP 1276: 1943(M), 1946(M), 1949(P), 1951-52(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 25				Nov. 26 to Jan. 13, Feb. 28 to Mar. 30, Apr. 29 to Sept. 30				Jan. 14 to Feb. 27, Mar. 31 to Apr. 28			
0.3	26	2.0	259	0.1	22	1.5	200	0.4	50	3.0	498
.7	62	3.0	498	.5	62	2.0	290	1.0	117	4.0	745
1.0	94	3.4	595	1.0	125	2.6	411	2.0	285	5.0	1,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	34	78	79	170	151	173	226	96	44	80	28
2	*57	33	*71	b68	113	126	137	226	103	42	48	27
3	58	33	66	b60	b95	111	*118	194	80	40	46	*27
4	66	33	65	b57	b90	99	109	169	77	42	44	28
5	52	*32	61	b57	86	92	102	*162	75	50	*42	27
6	46	32	58	b60	103	89	236	224	71	46	42	27
7	43	32	70	*64	109	*92	144	245	70	42	42	27
8	40	61	190	b57	b90	103	121	187	69	145	47	26
9	38	47	119	b57	b80	114	108	164	75	*116	44	26
10	36	39	95	b60	b80	106	112	148	74	86	40	26
11	35	38	83	59	*b75	97	104	186	72	77	52	26
12	42	37	b65	56	b65	92	94	157	75	87	46	36
13	36	37	b65	118	b60	105	88	145	*64	101	40	29
14	35	71	65	*124	b60	94	84	128	61	74	38	28
15	35	59	64	93	b65	85	175	118	60	62	36	28
16	33	69	62	83	b65	83	323	112	58	58	34	28
17	53	67	61	74	b55	81	185	108	56	52	34	27
18	47	*135	60	70	b50	101	147	110	55	55	32	27
19	39	*416	63	b65	b60	86	127	104	54	50	31	26
20	37	113	328	64	b65	81	114	107	57	54	30	26
21	36	73	195	88	b70	79	107	98	54	90	30	48
22	35	73	132	86	77	77	209	93	56	69	36	34
23	36	256	107	74	73	74	152	90	56	54	34	30
24	56	111	103	221	72	75	125	112	54	57	38	30
25	40	*579	105	227	72	92	212	115	50	53	40	29
26	39	241	196	153	315	86	150	106	68	46	36	28
27	38	152	131	125	*330	99	191	94	58	55	34	28
28	36	119	112	104	208	99	*954	89	50	54	30	27
29	35	104	99	94	-	97	400	83	48	44	29	27
30	36	90	89	88	-----	134	277	79	46	40	29	28
31	35	-----	83	89	-----	324	-----	78	-----	58	29	-----
Total	1,311	3,216	3,131	2,772	2,853	3,222	5,578	4,237	1,940	1,939	1,195	859
Mean	42.3	107	101	89.4	102	104	186	137	64.7	62.6	38.6	28.6
Cfsm	0.670	1.70	1.60	1.42	1.62	1.65	2.95	2.17	1.03	0.992	0.612	0.453
In.	0.77	1.90	1.85	1.63	1.68	1.90	3.29	2.50	1.14	1.14	0.70	0.51

Calendar year 1957: Max 1,850 Min 19 Mean 82.8 Cfsm 1.31 In. 17.82
Water year 1957-58: Max 954 Min 26 Mean 88.4 Cfsm 1.40 In. 19.01

Peak discharge (base, 800 cfs).--Nov. 19 (6 a.m.) 943 cfs (4.78 ft); Nov. 25 (8 a.m.) 1,080 cfs (5.30 ft); Dec. 20 (2 p.m.) 855 cfs (4.44 ft); Apr. 28 (7 a.m.) 1,610 cfs (6.95 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4480. French Broad River at Bent Creek, N. C.

Location.--Lat 35°30'07", long 82°35'35", on left bank 50 ft downstream from Bent Creek, 6.2 miles upstream from Hominy Creek, 6.7 miles south of Asheville, Buncombe County, and at mile 157.7.

Drainage area.--676 sq mi.

Records available.--October 1933 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,995.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 1,590 cfs.

Extremes.--Maximum discharge during year, 7,410 cfs Apr. 29 (gage height, 6.87 ft); minimum, 572 cfs Sept. 29 (gage height, 2.59 ft).

1933-58: Maximum discharge, 23,600 cfs Aug. 14, 1940 (gage height, 12.6 ft); minimum, 230 cfs Oct. 4, 5, 10, 11, 12, 1954 (gage height, 2.05 ft).

Maximum stage known, about 27.3 ft July 15, 1916, from floodmarks. Flood in August 1928 reached a stage of about 16.1 ft, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect, which are good. Some diurnal fluctuation caused by powerplant above station. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions.--WSP 823: Drainage area.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 7-15)

Oct. 1 to Feb. 20, June 16 to Sept. 30				Feb. 21 to June 15			
2.5	500	5.0	3,880	3.0	1,160	5.0	3,900
3.0	980	6.0	5,690	3.5	1,760	6.0	5,690
3.5	1,600	7.0	7,680	4.0	2,410	7.0	7,680
4.0	2,300						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,400	1,070	2,350	2,050	2,880	3,270	3,600	4,210	1,810	925	1,020	700
2	1,980	1,040	2,160	1,950	2,660	2,620	2,850	3,850	1,820	903	1,040	700
3	1,940	1,010	2,030	1,820	2,240	2,360	2,540	3,980	1,720	860	1,210	690
4	3,090	991	1,980	1,750	2,020	2,190	2,440	3,340	1,630	850	1,290	690
5	2,930	969	1,870	1,660	1,960	2,060	2,400	3,040	1,530	947	1,040	670
6	2,150	958	1,730	1,600	2,020	1,980	4,450	3,320	1,540	1,200	958	661
7	1,750	925	1,710	1,600	2,300	1,970	4,920	4,690	1,590	1,170	991	645
8	1,510	1,050	2,740	1,560	2,340	2,010	5,420	4,290	1,480	1,830	1,140	598
9	1,350	1,520	2,760	b1,420	2,050	2,100	2,830	3,450	1,400	3,090	1,290	607
10	1,240	1,170	2,300	b1,400	1,890	2,320	2,820	3,080	1,410	2,260	1,100	616
11	1,160	1,140	1,980	1,430	1,820	2,100	3,320	2,960	1,360	1,950	980	625
12	1,190	1,080	1,670	1,380	1,740	*1,970	2,860	3,140	1,340	1,820	1,050	1,020
13	1,250	1,020	1,610	1,670	1,670	1,990	2,560	2,860	1,280	2,130	1,090	1,010
14	1,130	1,730	1,680	3,620	1,590	2,030	2,410	2,620	1,220	2,060	1,290	700
15	1,070	3,480	1,640	2,780	1,610	1,890	2,470	2,470	1,210	1,570	1,090	616
16	1,050	3,060	1,600	2,200	b1,600	1,820	3,980	2,340	*1,220	1,630	1,110	661
17	1,160	2,860	*1,550	1,950	b1,380	1,760	3,330	2,420	1,160	1,540	1,190	680
18	*1,700	*3,880	1,540	1,810	b1,350	1,970	2,830	2,480	1,130	1,280	1,040	*670
19	1,350	6,470	1,520	1,670	b1,400	2,060	2,230	2,230	*1,090	1,170	925	652
20	1,200	6,210	3,340	1,600	b1,510	1,900	2,470	2,200	1,080	1,210	870	634
21	1,110	5,590	5,770	1,900	*b1,500	1,820	2,320	2,120	1,060	*1,640	840	892
22	1,080	3,710	4,890	*3,270	1,640	1,750	2,440	*2,010	1,080	2,360	881	1,090
23	1,060	4,510	3,160	2,510	1,700	1,700	*2,550	1,920	1,090	1,670	892	840
24	1,350	3,710	2,640	3,000	1,680	1,690	2,280	1,920	1,110	1,550	947	760
25	1,880	5,460	2,500	5,050	1,660	2,230	2,400	2,150	1,040	1,850	1,190	710
26	1,500	5,650	3,680	3,880	2,930	2,360	2,250	2,540	1,020	1,400	*1,220	670
27	1,340	3,860	3,480	2,950	2,630	2,230	2,070	1,220	1,280	1,280	1,020	652
28	1,220	2,190	2,810	2,560	4,940	2,560	6,130	1,890	1,070	1,350	925	616
29	1,160	2,860	2,520	2,300	-	2,370	7,170	1,790	1,010	1,560	840	572
30	1,130	2,600	2,290	2,150	-----	2,310	6,030	1,700	936	1,200	810	616
31	1,100	-----	2,150	2,030	-----	4,240	-----	1,660	-----	1,050	750	-----
Total	46,530	82,473	75,650	68,570	59,220	68,020	96,900	84,640	38,656	47,305	32,029	21,061
Mean	1,501	2,749	2,440	2,212	2,115	2,194	3,250	2,730	1,289	1,526	1,033	702
Cfsm	2.22	4.07	3.61	3.27	3.13	3.25	4.78	4.04	.91	2.26	1.53	1.04
In.	2.56	4.54	4.16	3.77	3.26	3.74	5.33	4.66	2.13	2.60	1.76	1.16

Calendar year 1957: Max 17,000 Min 485 Mean 1,889 Cfsm 2.79 In. 37.94
Water year 1957-58: Max 7,170 Min 572 Mean 1,975 Cfsm 2.92 In. 39.67

Peak discharge (base, 6,000 cfs).--Nov. 19 (12:30 p.m.) 6,970 cfs (6.65 ft); Nov. 25 (3 p.m.) 6,650 cfs (6.49 ft); Apr. 29 (7:30 a.m.) 7,410 cfs (6.87 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4485. Hominy Creek at Candler, N. C.

Location.--35°32'28", long 82°40'35", on left bank 0.1 mile downstream from Pole Creek and 1.0 mile east of Candler, Buncombe County.

Drainage area.--79.8 sq mi.

Records available.--October 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,065.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 87.3 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs Nov. 19 (gage height, 3.87 ft); minimum, 36 cfs Sept. 9, 10 (gage height, 1.09 ft).
1942-58: Maximum discharge, 6,800 cfs June 16, 1949 (gage height, 13.25 ft); minimum, 13 cfs Sept. 2, 1953 (gage height, 0.80 ft).
Flood of Aug. 30, 1940, reached a stage of 18.0 ft, from floodmarks (discharge, 13,100 cfs by conveyance method).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Numerous small diversions for irrigation above station.

Revisions.--WSP 1113: Drainage area.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19, June 22 to Sept. 30				Nov. 20 to June 21			
1.1	37	2.3	357	1.3	74	2.2	320
1.4	88	2.6	475	1.5	117	2.5	434
1.7	160	2.9	615	1.7	167	2.8	566
2.0	250			1.9	223		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a110	56	134	122	191	208	184	223	124	80	60	47
2	a100	53	127	115	151	180	154	226	124	80	60	45
3	a120	53	117	b110	b135	164	149	197	115	*60	66	45
4	a190	51	115	b105	b125	149	*146	183	113	61	61	*43
5	a140	*51	108	b100	129	141	141	178	110	82	53	41
6	a120	51	*104	b105	136	*136	175	395	*106	82	50	41
7	a100	51	122	106	146	136	154	*411	102	68	72	40
8	a88	61	200	b95	b135	144	144	280	102	135	*66	40
9	a75	56	151	b80	b120	151	136	*238	99	115	61	37
10	*65	51	134	b105	b115	144	172	217	97	86	54	37
11	63	51	124	93	b105	136	167	229	95	82	54	46
12	98	51	b110	91	b100	131	151	229	93	78	92	58
13	68	51	b105	161	b95	149	146	200	91	117	76	45
14	63	216	110	154	b95	136	139	183	89	82	61	41
15	60	137	106	129	b105	131	180	172	93	74	61	43
16	58	142	102	*119	b95	127	223	162	91	76	61	*46
17	66	122	99	113	b90	124	194	167	87	74	54	41
18	63	*203	97	106	b110	131	178	162	84	66	51	41
19	58	608	97	99	b115	124	167	162	84	65	47	40
20	56	257	432	99	b115	119	157	157	91	93	47	41
21	54	180	267	119	*b110	117	149	146	84	110	59	85
22	54	162	197	113	106	115	159	136	90	95	58	53
23	54	283	167	106	104	110	144	136	84	74	114	47
24	80	197	151	201	102	117	136	144	76	82	86	44
25	65	560	144	214	104	154	224	236	70	74	76	41
26	63	327	200	175	321	141	162	164	74	63	65	41
27	65	238	159	159	333	189	154	144	74	85	58	41
28	60	197	151	144	267	172	*367	136	66	84	53	38
29	58	*172	139	134	-	162	293	127	65	65	51	37
30	58	154	129	127	-	159	248	122	63	58	50	38
31	56	-----	124	129	-	186	-----	122	-----	60	48	-----
Total	2,418	4,842	4,522	3,838	3,915	4,483	5,273	5,984	2,736	2,464	1,925	1,323
Mean	78.0	161	146	124	140	145	176	193	91.2	79.5	62.1	44.1
Cfs/m	0.977	2.02	1.83	1.55	1.75	1.82	2.21	2.42	1.14	0.996	0.778	0.553
In.	1.13	2.26	2.11	1.79	1.82	2.09	2.46	2.79	1.28	1.15	0.90	0.62

Calendar year 1957: Max 1,960 Min 26 Mean 115 Cfs/m 1.44 In. 19.60
Water year 1957-58: Max 608 Min 37 Mean 120 Cfs/m 1.50 In. 20.40

Peak discharge (base, 900 cfs).--Nov. 19 (4 a.m.) 1,140 cfs (3.87 ft); Nov. 25 (6:30 a.m.) 913 cfs (3.46 ft); Dec. 20 (1:30 p.m.) 1,080 cfs (3.77 ft); May 6 (8 p.m.) 990 cfs (3.60 ft).

* Discharge measurement made on this day.

† Doubtful or no gage-height record; discharge estimated on basis of weather records and records for Mills River near Mills River.

b Stage-discharge relation affected by ice.

4490. North Fork Swannanoa River near Black Mountain, N. C.

Location.--Lat 35°39'11", long 82°21'04", on left bank 0.1 mile downstream from Walker Branch, 0.8 mile downstream from Burnett Dam, 1.9 miles downstream from Sugar Fork, 3.0 miles northwest of town of Black Mountain, Buncombe County, and 3.4 miles downstream from Right Fork.

Drainage area.--23.8 sq mi.

Records available.--January 1926 to May 1958 (discontinued).

Gage.--Water-stage recorder and concrete control. Datum of gage is 2,428.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--31 years (1926-57), 47.5 cfs (unadjusted).

Extremes.--Maximum discharge during period October 1957 to May 1958, 576 cfs Dec. 20 (gage height, 8.30 ft); minimum, 12 cfs Nov. 7, 8 (gage height, 1.45 ft).

1926-58: Maximum discharge, 16,500 cfs June 16, 1949 (gage height, 9.10 ft), from rating curve extended above 2,600 cfs on basis of slope-area measurements at gage heights 8.55 and 9.10 ft; minimum, 0.6 cfs Sept. 17, 1953 (gage height, 0.83 ft).

Remarks.--Records excellent except those for period of ice effect, which are good. City of Asheville diverted part of its water supply by gravity from four main tributaries with a combined drainage area of 16.4 sq mi at points 1.9 to 4.0 miles upstream. No regulation after Mar. 26, 1954, when water in lake first reached spillway elevation.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1926. WSP 1143: 1927-28, 1929(M), 1930, 1931-32(M), 1933-34, 1935(M), 1940(P), 1941-45(M), 1946-47(P). WSP 1336: 1927.

Rating tables, Oct. 1, 1957, to May 16, 1958, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to May 16

1.4	10	2.1	67	1.6	18	2.3	124
1.5	14	2.3	119	1.7	24	2.6	234
1.7	24	2.6	233	1.9	40	2.9	369
1.9	38	2.9	369	2.1	70		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	22	60	62	63	106	151	135				
2	54	21	52	53	60	82	115	189				
3	*46	19	48	49	55	72	94	165				
4	46	17	46	45	49	65	*97	144				
5	41	16	41	43	46	60	92	127				
6	34	*14	*38	40	53	55	138	*134				
7	29	13	44	39	80	55	131	173				
8	23	18	162	36	89	70	100	151				
9	20	29	144	32	72	80	84	131				
10	17	24	102	31	62	100	77	112				
11	14	21	83	30	56	89	77	112				
12	16	19	67	28	*53	80	70	118				
13	16	18	59	35	48	77	63	115				
14	15	30	54	*52	44	75	58	103				
15	14	62	50	49	44	65	76	89				
16	13	60	46	44	41	58	263	80				
17	29	65	48	38	b30	55	203	-				
18	65	90	50	36	b20	55	148	-				
19	52	254	59	32	b25	50	115	-				
20	41	177	322	31	b50	46	97	-				
21	32	107	335	38	36	44	87	-				
22	27	81	178	63	33	41	97	-				
23	23	144	124	53	30	40	148	-				
24	46	140	100	65	30	40	121	-				
25	62	259	87	89	33	43	176	-				
26	49	229	124	75	122	46	162	-				
27	41	147	118	65	218	60	138	-				
28	35	107	97	56	156	68	313	-				
29	30	85	84	50	-	65	326	-				
30	29	72	75	46	-----	68	251	-				
31	26	-----	67	45	-----	199	-----	-				
Total	1,049	2,340	2,964	1,448	1,680	2,108	4,068	-				
Mean	33.8	78.0	96.6	46.7	80.0	88.0	136	-				
(†)	+291.0	+356.7	+301.2	+295.3	+325.3	+282.3	+358.0	-				

Adjusted for diversion, evaporation, and change in reservoir contents

	Observed	Adjusted
Calendar year 1957: Max 927	Min 2.5	Mean 64.6
Water year 1957-58: Max -	Min -	Mean -
		Mean 76.2
		Cfsm 3.20
		In. 43.45
		-

* Discharge measurement made on this day.

† Diversion by city of Asheville and evaporation and change in contents in Burnett Lake, equivalent in cfs-days. Records of diversion and change in contents in Burnett Lake furnished by city of Asheville, Division of Watersheds. Records of evaporation furnished by Tennessee Valley Authority.

b Stage-discharge relation affected by ice.

4500. Beetree Creek near Swannanoa, N. C.

Location.--Lat 35°39'11", long 82°24'20", on left bank 1,000 ft upstream from Beetree Reservoir and 3.8 miles north of Swannanoa, Buncombe County.

Drainage area.--5.46 sq mi.

Records available.--February 1926 to September 1958.

Gage.--Water-stage recorder and modified Parshall flume set in masonry control. Datum of gage is 2,728.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--32 years, 10.3 cfs.

Extremes.--Maximum discharge during year, 158 cfs Dec. 20 (gage height, 3.43 ft); minimum, 0.6 cfs Sept. 11 (gage height, 0.34 ft).
1926-58: Maximum discharge, 1,370 cfs Aug. 13, 1940 (gage height, 6.20 ft), from rating curve extended above 240 cfs on basis of computation of peak flow over weir; minimum, 0.3 cfs Sept. 29, 30, Oct. 1, 1954 (gage height, 0.26 ft).

Remarks.--Records excellent except those for periods of ice effect, which are good.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1928, 1936-37(M). WSP 953: 1929(M). WSP 1276: 1932.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 30

July 1 to Sept. 30

0.5	1.8	1.5	15	0.3	0.5	0.8	4.2
.6	2.4	2.0	26	.4	.9	1.0	6.8
.8	4.5	2.5	40	.6	2.2		
1.0	7.1	3.0	82				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	3.8	12	12	15	23	24	37	8.2	*2.2	2.3	1.3
2	2.9	3.6	11	11	13	20	20	36	8.3	2.2	1.9	1.1
3	*2.9	3.4	9.8	10	b11	17	18	34	7.1	2.1	1.8	*1.0
4	3.5	3.5	*8.4	b9.5	b11	15	*17	29	6.7	2.0	1.6	1.0
5	2.9	3.2	8.7	b9.0	b11		16	26	6.4	2.4	1.4	.9
6	2.6	*3.0	8.6	*b8.7	14	13	21	*34	6.0	2.5	1.4	.9
7	2.4	2.9	12	8.4	24	14	17	47	5.5	2.3	1.4	.8
8	2.3	4.8	28	b7.4	b19	16	16	39	5.1	8.6	*1.3	.8
9	2.2	4.3	21	b7.0	b16	18	15	33	*5.0	6.5	1.3	.7
10	2.0	3.7	17	b7.0	b14	20	14	28	4.9	4.3	1.2	.7
11	1.9	3.5	14	7.1	b13	18	13	30	5.0	3.8	1.4	1.0
12	2.8	3.5	12	6.7	*b12	17	12	34	4.9	4.7	4.0	1.6
13	2.4	3.4	b11	8.9	b11	18	12	29	4.3	4.9	2.9	1.1
14	2.2	8.6	12	10	b11	16	11	25	4.0	4.3	1.8	.9
15	2.0	8.6	11	9.2	11	15	15	22	4.2	3.8	1.5	.9
16	2.0	9.8	10	8.4	b9.0	14	25	19	4.0	3.2	1.4	.9
17	6.9	10	11	7.8	b8.5	13	21	17	3.4	3.0	1.9	.9
18	6.2	18	10	b7.2	b7.5	13	18	15	3.2	2.8	1.5	.8
19	4.5	41	12	b7.2	b8.0	12	16	14	3.1	3.0	1.3	.7
20	4.0	22	71	7.2	b7.5	11	15	14	5.2	3.3	1.2	.8
21	3.5	15	43	10	b7.5	11	14	12	3.8	3.0	1.1	5.4
22	3.3	14	30	11	8.2	11	21	11	4.6	*2.9	1.1	1.7
23	3.1	32	23	9.7	8.2	10	25	10	4.4	2.6	1.2	1.2
24	6.7	22	19	15	8.7	10	21	9.8	3.5	3.0	4.1	1.1
25	5.5	52	17	16	9.4	11	46	11	3.1	3.0	3.7	1.0
26	5.2	36	23	14	37	12	35	9.8	3.7	2.5	2.2	1.0
27	4.9	25	19	12	40	16	30	9.2	3.5	5.0	1.8	.9
28	4.4	19	18	11	32	15	25	8.6	2.9	2.3	1.6	.8
29	4.3	16	15	10	-	15	60	8.0	2.6	2.1	1.4	.8
30	4.2	13	14	10	-	17	44	7.5	2.5	1.9	1.3	.9
31	4.0	-----	13	11	-----	30	-----	7.1	-----	2.2	1.3	-----
Total	110.9	408.4	545.5	299.4	397.5	475	707	666.0	139.1	98.4	55.3	33.6
Mean	3.58	13.6	17.6	9.66	14.2	15.3	23.6	21.5	4.64	3.17	1.78	1.12
Cfsm	0.656	2.49	3.22	1.77	2.60	2.80	4.32	3.94	0.850	0.581	0.326	0.205
In.	0.76	2.78	3.72	2.04	2.71	3.24	4.82	4.54	0.95	0.67	0.38	0.23

Calendar year 1957: Max 208 Min 0.8 Mean 12.3 Cfsm 2.25 In. 30.49
Water year 1957-58: Max 75 Min 0.7 Mean 10.8 Cfsm 1.98 In. 26.84

Peak discharge (base, 150 cfs).--Dec. 20 (11:30 a.m.) 158 cfs (3.43 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

4510. Swannanoa River at Biltmore, N. C.

Location.--Lat 35°34'06", long 82°32'42", on left bank at Biltmore, Buncombe County, 100 ft downstream from Biltmore Avenue Bridge, 200 ft upstream from Southern Railway bridge, and 1.6 miles upstream from mouth.

Drainage area.--130 sq mi.

Records available.--October 1920 to September 1926, May 1934 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,976.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Dec. 1, 1920, to Sept. 30, 1926, staff gage at site 100 ft upstream at same datum.

Average discharge.--31 years (1920-26, 1933-58), 153 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,770 cfs Apr. 28 (gage height, 5.20 ft); minimum, 14 cfs Sept. 9 (gage height, 1.23 ft); minimum daily, 18 cfs Sept. 10.
1920-26, 1933-58: Maximum discharge, 18,400 cfs Aug. 13, 1940 (gage height, 19.00 ft), from rating curve extended above 8,400 cfs on basis of computation of peak flow over dam 3.6 miles above station; minimum, 1.1 cfs Oct. 9, 14, 15, 1941; minimum daily, 1.2 cfs Oct. 14, 1941; minimum gage height, 0.65 ft July 17, 1936.
Maximum stage known, 21.5 ft in July 1916, from floodmarks. Flood of Aug. 16, 1928, reached a stage of 18.74 ft, from floodmarks. Extremely high stages subject to backwater from French Broad River.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. No regulation from Lake Craig 3.6 miles above station after 1950 (reservoir silted). City of Asheville diverts its water supply above station from Beetree Reservoir (capacity, 843 cfs-days), North Fork Swannanoa River, and from Burnett Lake on North Fork (see p. 329). Textile mills 2.0 miles above gage divert for industrial use about 5.0 mgd, of which about 3 mgd, equivalent to a mean discharge of 4½ cfs, is discharged into French Broad River.

Revisions (water years).--WSP 803: 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 28

Apr. 29 to Sept. 30

1.5	45	3.0	540	1.2	11	3.0	540
1.8	102	3.5	810	1.6	65	3.5	810
2.1	182	4.0	1,080	2.0	157	4.0	1,080
2.5	318	4.5	1,360	2.5	320		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	65	185	185	a220	354	432	596	160	*60	45	29
2	*140	63	165	168	a200	288	338	530	124	58	42	23
3	140	65	150	153	a180	246	*292	430	154	56	45	*23
4	134	61	148	b140	a170	223	274	422	144	56	37	23
5	116	55	129	b115	a150	198	264	368	141	75	*34	22
6	102	*53	*126	b100	a200	182	366	510	136	67	34	26
7	87	48	134	b100	a300	179	326	678	126	63	41	26
8	76	72	392	b95	a320	223	281	*535	119	119	45	22
9	63	87	346	b85	a260	243	253	450	*114	149	38	19
10	59	72	274	b95	a220	274	246	388	126	107	38	18
11	56	63	230	109	*a185	253	239	414	107	105	34	20
12	69	58	b185	104	b165	*230	216	458	119	114	109	35
13	63	56	b170	149	b140	239	201	414	103	119	84	29
14	56	104	168	*223	b125	223	185	355	98	100	48	27
15	51	137	156	170	b140	204	250	313	94	85	44	24
16	50	162	140	153	b135	188	618	283	92	77	44	24
17	80	173	142	151	b85	173	481	262	81	71	45	22
18	116	256	148	b120	b70	198	371	290	79	67	37	22
19	104	617	150	b110	b90	176	318	266	75	71	33	19
20	91	392	761	a110	b105	165	285	252	69	71	32	22
21	76	256	804	a150	b115	159	256	228	85	73	30	83
22	67	216	458	a250	134	150	344	203	94	83	32	45
23	67	490	358	a190	134	148	379	194	92	65	37	30
24	98	358	285	a220	131	145	326	134	92	65	33	26
25	121	*920	256	a300	119	173	550	255	75	62	60	24
26	109	*596	358	a260	448	182	458	245	75	58	41	24
27	102	392	311	a220	700	207	409	197	89	69	34	24
28	84	300	278	a200	490	216	1,320	182	75	56	30	29
29	74	260	250	a180	-	210	1,080	163	71	48	28	24
30	70	220	220	a160	-----	223	794	152	65	45	30	26
31	70	-----	201	a150	-----	550	-----	149	-----	45	32	-----
Total	2,753	6,667	8,058	4,895	5,721	6,802	12,152	10,456	3,164	2,352	1,316	810
Mean	88.8	222	260	158	204	219	405	337	105	75.9	42.5	27.0
Cfs/m	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 4,370

Min 16

Mean 195

Cfs/m -

In. -

water year 1957-58: Max 1,320

Min 18

Mean 178

Cfs/m -

In. -

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for North Fork Swannanoa River near Black Mountain and Beetree Creek near Swannanoa.

b Stage-discharge relation affected by ice.

4515. French Broad River at Asheville, N. C.

Location.--Lat 35°36'32", long 82°34'41", on right bank at downstream side of Pearson Bridge at Asheville, Buncombe County, 2.3 miles downstream from Southern Railway station, 3.1 miles downstream from Swannanoa River, and at mile 145.8.

Drainage area.--945 sq mi.

Records available.--September 1895 to September 1958. Monthly discharge only for some periods, but complete in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,950.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Sept. 17, 1895, to Dec. 31, 1901, wire-weight gage at present site at different datum. Mar. 19, 1903, to July 15, 1916, and Jan. 1, 1917, to Sept. 30, 1922, staff gage at Smith Bridge 1.5 miles upstream at datum 11.52 ft higher. Oct. 1, 1922, to Aug. 9, 1930, chain gage at present site and datum.

Average discharge.--63 years (1895-1958), 2,058 cfs.

Extremes.--Maximum discharge during year, 9,050 cfs Apr. 28 (gage height, 5.69 ft); minimum, 579 cfs Sept. 29 (gage height, 0.76 ft).

1895-1958: Maximum discharge, 110,000 cfs July 16, 1916 (gage height, 23.1 ft, present site and datum, from floodmarks), from rating curve extended above 43,000 cfs; minimum, 239 cfs at times in August and September 1925 (gage height, 0.16 ft).

Flood in June 1876 reached a stage of 18 ft, from survey by Tennessee Valley Authority.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Small diversions from tributaries for water supply. Slight diurnal fluctuation and occasional slight regulation at low flow caused by powerplants and small reservoirs above station. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1895-1909, 1901(M), 1914-15(M), 1917(M), 1920-22(M), 1927(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 27

Feb. 28 to Sept. 30

1.2	1,000	3.0	3,590	0.7	510	3.0	3,620
1.5	1,370	4.0	5,390	1.0	875	4.0	5,390
2.0	2,060	5.1	7,690	1.5	1,500	5.0	7,470
2.5	2,800			2.0	2,140	5.6	8,840
				2.5	2,840		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,920	1,220	2,770	2,440	3,500	4,200	4,520	5,280	2,090	1,060	1,240	775
2	2,460	1,190	2,590	2,320	3,270	3,540	4,600	2,230	1,050	1,160		750
3	2,280	1,170	2,420	2,170	2,770	2,900	3,110	4,700	2,080	1,000	1,310	750
4	3,350	1,130	2,320	2,070	2,470	2,660	2,940	4,100	1,940	962	1,550	750
5	3,430	1,110	2,240	1,980	2,400	2,450	2,880	3,680	1,840	1,060	1,190	750
6	2,580	1,080	2,060	1,910	2,440	2,350	4,630	4,050	1,790	1,360	1,100	712
7	2,100	1,060	2,000	1,930	2,770	2,340	5,640	5,820	1,890	1,410	1,100	698
8	1,810	1,140	3,110	1,890	2,900	2,440	4,190	5,220	1,780	1,860	1,320	625
9	1,810	1,150	3,490	bl, 650	2,540	2,490	3,450	4,260	1,660	2,440	1,440	625
10	1,460	1,400	2,860	bl, 700	2,350	2,840	3,280	3,750	1,690	2,320	1,290	638
11	1,360	1,280	2,500	1,740	2,260	*2,550	3,900	3,640	1,610	2,500	1,120	662
12	1,400	1,240	a2,100	1,640	2,160	2,370	3,460	3,880	1,580	2,110	1,260	1,100
13	1,470	1,160	a1,980	1,810	2,060	2,410	3,100	3,570	1,620	2,400	1,350	962
14	1,330	1,790	a2,050	3,930	1,960	2,480	2,900	3,200	1,460	2,450	1,480	788
15	1,240	3,640	a1,960	3,350	1,990	2,500	2,920	3,000	1,450	1,870	1,290	688
16	1,200	3,490	a1,920	2,620	2,000	2,190	4,760	2,820	1,450	1,890	1,320	725
17	1,300	3,330	a1,880	2,290	bl, 820	2,110	4,290	2,750	*1,360	1,830	1,390	782
18	*1,950	4,190	*1,840	2,130	bl, 780	2,300	3,590	3,000	1,320	1,510	1,080	*750
19	1,640	7,640	1,820	1,990	bl, 780	2,440	3,250	2,650	1,300	1,450	*1,090	725
20	1,410	6,900	4,120	1,930	bl, 900	2,270	3,050	2,620	1,320	1,410	1,040	700
21	1,290	5,880	6,850	2,190	*bl, 800	2,150	2,880	2,510	1,290	*1,800	988	1,050
22	1,240	4,370	5,620	*3,590	1,850	2,060	2,980	*2,330	1,310	2,650	1,060	1,340
23	1,200	*5,070	3,830	2,980	1,920	1,980	*3,250	2,260	1,340	2,020	1,080	1,010
24	1,460	4,500	3,110	3,270	1,880	1,960	2,860	2,260	1,350	1,710	1,200	875
25	2,170	6,830	2,900	5,720	1,850	2,490	3,250	2,580	1,260	2,140	1,350	812
26	1,770	6,770	3,980	4,530	3,500	2,740	2,980	3,050	1,210	1,680	1,420	738
27	1,580	4,900	4,140	3,530	6,390	3,100	2,820	2,520	1,420	1,510	1,200	712
28	1,440	3,640	3,370	3,050	6,100	3,050	*7,230	2,300	1,310	1,560	1,100	662
29	1,330	3,400	3,000	2,740	-	2,840	8,660	2,140	1,210	1,830	975	590
30	1,290	3,080	2,740	3,580	-	2,700	7,180	2,040	1,110	1,410	925	614
31	1,270	-	2,540	2,440	-	4,880	-	1,960	-	1,260	850	-
Total	54,320	95,750	90,090	80,110	72,010	81,310	117,470	102,540	46,170	54,612	37,588	23,328
Mean	1,752	3,192	2,906	2,584	2,372	2,623	3,916	3,308	1,539	1,762	1,206	778
Cfsm	1.85	3.38	3.08	2.73	2.72	2.78	4.14	3.50	1.63	1.86	1.28	0.823
In.	2.14	3.77	3.55	3.15	2.83	3.20	4.62	4.04	1.82	2.15	1.47	0.92

Calendar year 1957: Max 22,300 Min 589 Mean 2,261 Cfsm 2.39 In. 32.46

Water year 1957-58: Max 8,660 Min 590 Mean 2,343 Cfsm 2.48 In. 33.66

Peak discharge (base, 9,000 cfs).--Apr. 28 (5 p.m.) 9,050 cfs (5.69 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for station at Bent Creek.

b Stage-discharge relation affected by ice.

TENNESSEE RIVER BASIN

4530. Ivy River near Marshall, N. C.

Location.--Lat 35°46'10", long 82°37'16", on right bank 0.2 mile downstream from highway bridge, 1.9 miles upstream from mouth, and 4.0 miles southeast of Marshall, Madison County.

Drainage area.--158 sq mi.

Records available.--October 1933 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,700.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 147 cfs.

Extremes.--Maximum discharge during year, 3,780 cfs Dec. 20 (gage height, 8.57 ft); minimum, 25 cfs Sept. 3, 4 (gage height, 1.79 ft).

1933-58: Maximum discharge, 8,880 cfs Aug. 30, 1940 (gage height, 12.67 ft), from rating curve extended above 5,400 cfs on basis of slope-area measurement of peak flow; minimum, 3 cfs Jan. 20, 1940, result of freezeup; minimum gage height, 1.51 ft Aug. 30, Sept. 2, 1953; minimum daily discharge, 8.5 cfs Sept. 2, 18, 1953.

Remarks.--Records excellent except those for periods of ice effect, which are good.

Revisions (water years).--WSP 803: 1934(M), 1935.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

1.9	31	4.0	450	1.8	26	3.5	302
2.2	63	5.0	875	2.1	52	4.0	450
3.0	186	6.0	1,420	2.5	106	5.0	875
3.5	296			3.0	189	6.0	1,420

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	57	148	175	381	464	366	474	224	63	78	36
2	52	55	133	156	342	354	308	414	236	59	64	32
3	50	53	121	b125	284	292	271	363	140	68	63	31
4	59	52	130	b115	b230	247	259	299	116	67	56	30
5	55	50	114	b105	b240	223	225	274	106	82	49	30
6	47	48	108	b110	520	204	262	473	102	88	46	29
7	44	46	130	b100	632	197	227	1,330	92	112	45	28
8	42	47	777	b90	520	274	200	717	88	179	44	30
9	38	71	447	b80	b350	257	184	496	88	187	42	29
10	36	53	296	b110	b280	*292	185	393	88	137	42	28
11	37	50	235	b105	b245	262	*189	372	102	126	40	28
12	86	49	177	b95	*b205	238	173	479	121	307	40	43
13	66	49	156	108	b180	276	161	450	87	256	54	39
14	52	79	163	169	b160	259	152	354	77	161	46	34
15	*47	116	149	156	b165	236	157	297	84	*118	59	31
16	43	141	*140	152	b140	214	266	254	87	102	44	*30
17	63	153	168	139	b110	198	221	229	70	115	80	31
18	110	356	193	129	b110	206	195	216	*65	92	*60	32
19	72	768	188	b110	b125	187	180	197	63	116	45	28
20	61	318	1,360	*b115	b130	178	171	*182	169	124	40	28
21	56	*206	862	131	b135	176	161	162	97	106	39	105
22	51	168	460	164	b140	169	219	147	112	132	38	71
23	50	708	330	135	b145	168	294	137	135	103	57	43
24	140	370	264	268	154	162	247	137	98	103	91	38
25	107	1,090	225	432	159	168	653	160	81	104	78	36
26	84	610	428	313	939	169	499	166	100	80	59	35
27	83	351	348	264	1,070	197	411	127	98	72	47	34
28	71	251	286	218	714	202	695	120	77	67	42	33
29	64	206	243	193		221	616	119	69	90	40	32
30	62	175	212	176		221	632	103	65	65	37	32
31	61		189	166		434		98		67	36	
Total	1,941	6,748	9,182	4,924	8,805	7,345	8,978	9,730	3,197	3,548	1,601	1,086
Mean	62.6	225	296	159	314	237	299	314	107	114	51.6	36.2
Cfsm	0.396	1.42	1.87	1.01	1.99	1.50	1.89	1.99	0.877	0.722	0.327	0.229
In.	0.46	1.59	2.16	1.16	2.07	1.73	2.11	2.29	0.75	0.84	0.38	0.26

Calendar year 1957: Max 5,140 Min 19 Mean 218 Cfsm 1.38 In. 18.71
 Water year 1957-58: Max 1,360 Min 28 Mean 184 Cfsm 1.16 In. 15.80

Peak discharge (base, 2,700 cfs).--Dec. 20 (3 p.m.) 3,780 cfs (8.57 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4535. French Broad River at Marshall, N. C.

Location.--Lat 35°47'16", long 82°39'47", on right bank 0.4 mile upstream from Hayes Creek, 1.0 mile downstream from Ivy River, 1.5 miles southeast of Marshall, Madison County, and at mile 126.5.

Drainage area.--1,332 sq mi.

Records available.--October 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,646.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 2,245 cfs.

Extremes.--Maximum discharge during year, 12,100 cfs Nov. 25 (gage height, 5.85 ft); minimum, 665 cfs Sept. 29 (gage height, 1.05 ft); minimum daily, 740 cfs Sept. 30.

1942-58: Maximum discharge, 33,100 cfs Apr. 5, 1957 (gage height, 10.48 ft); minimum, 193 cfs Sept. 13, 14, 1954 (gage height, 0.36 ft); minimum daily, 292 cfs Sept. 27, 28, 1954.

Floods in July 1916 and Aug. 30, 1940, reached stages of 18½ and 13½ ft, respectively, from high-water marks and flood profiles by Tennessee Valley Authority.

Remarks.--Records excellent except those for periods of ice effect, which are good. Diurnal fluctuation at low flow caused by powerplants above station. Records of chemical analyses and water temperatures for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 1436: 1954(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 9

July 10 to Sept. 30

1.5	1,190	4.0	6,000	1.0	620	2.0	1,810
2.0	1,880	5.0	9,030	1.5	1,150	3.0	3,540
3.0	3,600	6.0	12,700				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,120	1,460	3,210	2,880	4,020	5,570	5,680	6,870	2,600	1,310	1,480	942
2	2,640	1,420	2,970	2,720	4,110	4,170	4,400	5,950	2,970	1,310	1,350	898
3	2,420	1,400	2,790	2,550	3,420	3,620	3,810	5,920	2,500	1,260	1,440	920
4	3,210	1,370	2,700	2,420	3,080	3,290	3,540	5,080	2,370	1,230	1,660	909
5	3,640	1,330	2,600	2,310	2,980	3,040	3,460	4,490	2,210	1,290	1,410	898
6	2,790	1,290	2,420	2,260	3,300	2,880	4,710	5,250	2,140	1,560	1,280	876
7	2,310	1,280	2,390	2,310	3,810	2,860	6,490	8,980	2,230	1,740	1,310	854
8	1,980	1,280	4,400	2,230	3,890	3,080	5,010	7,100	2,120	2,000	1,450	832
9	1,800	1,850	4,490	b1,970	3,320	3,080	3,920	5,650	2,030	2,020	1,500	770
10	1,660	1,700	3,580	b2,000	3,000	3,560	3,660	4,760	2,030	3,110	1,530	810
11	1,560	1,480	3,150	2,090	2,880	*3,230	*4,360	4,570	2,000	2,850	1,360	990
12	1,700	1,460	2,570	1,980	*2,690	2,980	3,940	4,980	1,960	2,690	1,640	1,260
13	1,720	1,400	2,440	2,100	2,550	3,100	3,480	4,660	1,860	2,760	1,670	1,210
14	1,580	1,660	2,500	4,170	2,420	3,170	3,230	4,040	1,780	3,040	1,640	997
15	*1,450	3,960	2,440	3,940	2,450	2,950	3,190	3,700	1,740	*2,250	1,530	854
16	1,410	3,830	*2,360	3,130	b2,400	2,770	5,180	3,460	1,780	2,140	1,530	*854
17	1,480	3,750	2,340	2,740	b2,100	2,650	5,040	3,300	1,690	2,190	1,670	920
18	2,080	4,810	2,310	2,550	b1,800	2,770	4,090	3,620	*1,580	1,820	*1,450	887
19	1,960	9,200	2,290	2,370	b1,800	2,930	3,680	3,210	1,530	1,740	1,260	854
20	1,650	8,020	6,740	*2,320	b2,000	2,810	3,440	*3,130	1,740	1,750	1,210	821
21	1,530	*6,640	8,730	2,400	b2,200	2,670	3,250	2,980	1,590	2,080	1,110	1,190
22	1,460	5,210	8,960	3,790	2,370	2,550	3,290	2,790	1,630	2,890	1,110	1,530
23	1,420	6,700	4,880	3,440	2,390	2,450	3,870	2,670	1,700	2,450	1,270	1,200
24	1,720	5,570	3,770	3,610	2,370	2,400	3,380	2,670	1,630	2,050	1,430	1,010
25	2,360	9,420	3,460	6,910	2,320	2,760	4,490	2,930	1,510	2,290	1,460	942
26	2,080	8,630	4,880	5,600	5,220	3,300	3,960	3,600	1,450	1,960	1,670	898
27	1,860	5,940	4,240	5,260	4,580	3,580	4,560	3,020	1,620	1,710	1,390	876
28	1,690	4,610	4,090	3,640	8,150	3,750	8,280	2,720	1,590	1,770	1,270	843
29	1,590	4,000	3,600	3,250	-	3,540	10,900	2,530	1,420	1,980	1,160	760
30	1,530	3,580	3,250	3,040	-----	3,270	9,200	2,420	1,370	1,640	1,070	740
31	1,520	-----	3,020	2,880	-----	5,470	-----	2,340	-----	1,490	1,030	-----
Total	60,900	114,500	112,370	93,740	92,300	100,250	138,490	129,290	56,370	64,370	43,340	28,345
Mean	1,965	3,817	3,622	3,024	3,296	3,234	4,616	4,171	1,879	2,076	1,398	945
Cfsm	1.48	2.87	2.72	2.27	2.47	2.43	3.47	3.13	1.41	1.56	1.05	0.709
In.	1.70	3.20	3.14	2.62	2.58	2.80	3.87	3.61	1.57	1.80	1.21	0.79

Calendar year 1957: Max 30,000 Min 626 Mean 2,762 Cfsm 2.07 In. 28.16
 Water year 1957-58: Max 10,900 Min 740 Mean 2,834 Cfsm 2.13 In. 28.69

Peak discharge (base, 10,000 cfs).--Nov. 19 (12:30 p.m.) 10,500 cfs (5.43 ft); Nov. 25 (4 p.m.) 12,100 cfs (5.85 ft); Dec. 20 (2 p.m.) 11,600 cfs (5.73 ft); Feb. 27 (12:30 p.m.) 10,600 cfs (5.44 ft); Apr. 29 (12 m.) 11,600 cfs (5.72 ft).

* Discharge measurement made on this day.
 b Stage-discharge relation affected by ice.

4540. Big Laurel Creek near Stackhouse, N. C.

Location.--Lat 35°55'11", long 82°45'42", on left bank 50 ft west of State Highway 208, 0.2 mile downstream from Big Hurricane Creek, 0.6 mile upstream from Little Hurricane Creek, 2.8 miles north of Stackhouse, Madison County, and 4.2 miles upstream from mouth.

Drainage area.--126 sq mi.

Records available.--October 1933 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,595.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 180 cfs.

Extremes.--Maximum discharge during year, 2,460 cfs May 7 (gage height, 5.05 ft); minimum, 42 cfs Sept. 30 (gage height, 1.34 ft).
1933-58: Maximum discharge, 7,700 cfs Jan. 31, 1957 (gage height, 8.15 ft); minimum, 11 cfs Jan. 6, 1942 (gage height, 0.92 ft), result of freezeup; minimum daily, 19 cfs Sept. 2, 16-18, 1953.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good.

Revisions.--WSP 833: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	38	2.5	325
1.6	72	3.0	580
1.9	131	4.0	1,310
2.2	215	5.0	2,390

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a90	82	185	200	465	547	352	476	157	98	126	68
2	a70	78	163	b170	476	400	309	476	212	92	110	62
3	a65	77	164	b145	561	321	289	564	147	86	106	59
4	a80	75	246	b135	297	274	313	435	136	90	120	58
5	a75	72	226	b125	337	243	285	366	126	108	94	56
6	a65	68	203	b130	1,130	222	325	915	122	117	85	55
7	a58	66	292	b125	1,390	218	317	2,000	115	108	80	55
8	a56	69	1,010	b110	960	278	293	1,070	108	239	80	57
9	a52	77	658	b100	569	271	268	676	124	206	78	52
10	a50	64	430	b120	410	*309	260	508	126	177	74	50
11	a52	59	343	b115	330	293	*278	460	135	182	71	50
12	a110	60	254	b115	*274	268	250	450	163	179	71	57
13	a85	60	222	b125	b220	309	232	390	113	171	72	56
14	a70	75	243	179	b200	293	218	321	102	139	82	50
15	*57	85	274	171	b200	274	229	*285	120	*120	122	47
16	56	153	*293	206	b175	254	226	257	117	134	100	*48
17	104	213	313	188	b130	236	197	250	98	136	200	47
18	136	999	330	168	b130	257	185	257	*90	120	*120	52
19	96	851	321	b140	b150	236	179	222	86	136	90	45
20	83	486	828	*b145	b175	229	174	215	441	209	78	44
21	75	*285	945	168	b180	222	179	194	218	250	72	122
22	72	236	525	203	b180	212	264	179	222	278	69	71
23	69	847	370	188	b180	206	338	174	285	274	86	54
24	231	564	293	262	b190	203	293	182	209	257	176	50
25	154	1,110	254	536	232	215	717	174	157	226	243	47
26	129	830	356	395	1,070	222	610	197	184	185	157	46
27	122	470	343	321	1,310	271	481	163	160	154	120	47
28	106	325	313	257	879	297	530	157	126	134	104	48
29	96	260	274	218	-	309	676	144	113	126	83	44
30	90	218	236	203	-----	301	628	134	104	108	77	43
31	88	-----	212	194	-----	390	-----	131	-----	100	72	-----
Total	2,742	8,912	11,109	5,857	12,600	8,580	9,895	12,422	4,616	4,939	3,210	1,640
Mean	88.5	297	358	189	450	277	330	401	154	159	104	54.7
Cfsm	0.702	2.36	2.84	1.50	3.57	2.20	2.62	3.18	1.22	1.26	0.96	0.434
In.	0.81	2.53	3.28	1.73	5.72	2.53	2.92	3.67	1.36	1.46	0.95	0.48

Calendar year 1957: Max 4,150 Min 36 Mean 265 Cfsm 2.10 In. 28.56
Water year 1957-58: Max 2,000 Min 43 Mean 237 Cfsm 1.88 In. 25.54

Peak discharge (base, 1,500 cfs).--Dec. 20 (6:30 p.m.) 1,530 cfs (4.23 ft); Feb. 26 (5 p.m.) 1,960 cfs (4.64 ft); May 7 (5:30 a.m.) 2,460 cfs (5.05 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Ivy River near Marshall.

b Stage-discharge relation affected by ice.

4550. French Broad River near Newport, Tenn.

Location.--Lat 35°58'54", long 83°09'40", on left bank 15 ft downstream from bridge on State Highway 35 at Oldtown, 1 mile northeast of Newport city limits, Cocke County, 3.7 miles upstream from Pigeon River, and at mile 77.5.

Drainage area.--1,858 sq mi.

Records available.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to September 1958. Monthly discharge only October 1920, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,011.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. September 1900 to November 1901 wire-weight gage at bridge at datum 1.3 ft higher. November 1902 to December 1905 wire-weight gage and August to December 1907 chain gage, at datum approximately 0.9 ft higher. November 1920 to Sept. 13, 1926, chain gage and Sept. 14, 1926, to Mar. 30, 1934, water-stage recorder, at left pier at present datum.

Average discharge.--40 years (1903-5, 1920-58), 2,801 cfs.

Extremes.--Maximum discharge during year, 16,900 cfs Nov. 25 (gage height, 7.92 ft); minimum, 670 cfs Sept. 30 (gage height, 1.40 ft); minimum daily, 836 cfs Sept. 30.

1900-1901, 1902-5, 1907, 1920-58: Maximum discharge, 76,300 cfs Aug. 30, 1940 (gage height, 19.25 ft); minimum, 208 cfs Oct. 23, 1952 (gage height, 0.97 ft); minimum daily, 240 cfs Sept. 9, 1925.

Floods of Feb. 28, 1902, and July 17, 1916, reached stages of about 23 ft (discharge, 101,000 cfs) and 22.5 ft (discharge, 97,000 cfs), respectively, present datum, from floodmarks.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Diurnal fluctuation during low flow caused by powerplants above station.

Revisions (water years).--WSP 793: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M).

WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1306: 1900-1908.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 25 to Nov. 15)

Oct. 1 to May 8

May 9 to Sept. 30

1.9	1,220	3.0	3,180	1.5	770	3.0	3,430
2.0	1,340	7.0	14,100	2.0	1,420	5.0	8,600
2.5	2,100						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83,950	1,530	4,090	3,600	4,710	8,640	7,740	9,840	2,850	1,500	1,860	1,200
2	3,440	1,460	3,620	3,360	6,070	8,070	6,220	7,460	4,360	1,450	1,770	1,080
3	2,940	1,430	3,360	3,010	5,130	5,060	*5,340	8,440	3,290	1,400	1,660	1,050
4	2,870	1,420	3,470	2,830	4,300	4,430	5,130	7,100	2,960	1,480	2,530	*1,050
5	84,100	*1,380	*3,390	2,650	4,140	3,960	4,710	6,120	*2,720	1,500	*2,160	1,030
6	83,400	1,340	3,110	2,610	6,380	*3,620	5,030	*8,600	2,550	1,730	1,700	988
7	*2,760	1,300	2,390	*2,680	7,770	3,470	7,740	all, 000	2,510	*1,910	1,580	988
8	2,360	1,290	6,430	2,610	7,160	3,800	6,740	8,000	2,490	2,140	1,630	964
9	2,050	1,440	7,410	2,380	5,600	3,800	5,180	8,700	2,380	4,360	1,750	940
10	1,890	1,870	5,860	2,200	4,560	4,380	4,640	7,200	2,340	4,470	1,840	880
11	1,730	1,550	4,820	2,480	*4,120	4,350	5,210	6,440	2,300	3,780	1,660	916
12	1,790	1,470	3,780	2,560	3,650	3,880	5,160	6,520	2,380	3,560	1,610	1,190
13	1,360	1,440	3,010	2,240	3,360	3,880	4,480	6,440	2,180	3,800	2,240	1,420
14	1,840	1,400	3,210	3,620	3,040	4,090	4,060	5,580	2,060	3,700	2,080	1,230
15	1,660	3,280	3,390	5,130	3,040	3,880	3,910	5,040	1,970	3,100	2,580	1,050
16	1,570	4,740	3,380	4,090	3,010	3,540	5,050	4,650	2,060	2,550	1,890	928
17	1,580	4,970	3,280	3,440	2,610	3,340	86,100	4,390	1,950	2,860	2,470	964
18	2,010	7,630	3,340	3,060	2,100	3,310	5,080	4,700	1,790	2,420	2,240	1,000
19	2,440	10,900	3,210	2,790	2,180	3,570	4,510	4,360	1,730	2,140	1,730	964
20	1,970	10,600	5,060	2,720	2,610	3,470	4,170	4,180	2,360	2,510	1,470	916
21	1,780	8,300	12,800	2,630	2,760	3,280	3,910	3,930	2,300	3,100	1,420	1,040
22	1,660	6,880	9,730	3,620	2,920	3,080	3,860	3,660	2,240	4,130	1,240	1,680
23	1,610	8,610	7,180	4,560	2,900	2,940	4,900	3,410	2,320	4,030	1,530	1,600
24	1,810	8,390	5,260	3,750	3,010	2,830	4,480	3,330	2,140	3,460	2,040	1,190
25	2,280	*11,400	4,560	7,580	2,900	2,920	7,160	3,430	1,930	3,660	2,240	1,080
26	2,540	13,100	5,160	7,550	5,460	3,860	6,740	4,620	1,820	3,190	2,120	988
27	2,140	8,950	6,530	5,830	13,800	4,140	5,470	4,130	2,040	2,780	1,970	964
28	1,890	6,350	5,600	4,820	12,500	4,710	7,350	3,600	1,970	2,320	1,630	1,000
29	1,720	5,260	4,840	4,220	-	4,660	13,100	3,240	1,750	2,570	1,470	916
30	1,620	4,640	4,300	3,630	-	4,350	12,500	2,980	1,630	2,550	1,320	836
31	1,610	-----	3,880	3,570	-	5,650	-----	2,850	-----	1,970	2,230	-----
Total	68,970	144,320	150,030	111,700	131,790	126,980	175,670	174,040	69,370	85,820	56,460	32,042
Mean	2,225	4,811	4,840	3,603	4,707	4,096	5,856	5,614	2,312	2,768	1,821	1,068
Cfm	1.20	2.59	2.60	1.94	2.53	2.20	3.15	3.02	1.24	1.49	0.980	0.575
In.	1.38	2.89	3.00	2.24	2.64	2.54	3.52	3.48	1.39	1.72	1.13	0.64

Calendar year 1957: Max 45,800 Min 691 Mean 3,662 Cfm 1.97 In. 26.76
Water year 1957-58: Max 13,800 Min 836 Mean 3,636 Cfm 1.95 In. 28.57

Peak discharge (base, 16,000 cfs).--Nov. 25 (10 p.m.) 16,900 cfs (7.92 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for station at Marshall, N. C.

4555. West Fork Pigeon River above Lake Logan, near Hazelwood, N. C.

Location.--Lat 35°23'48", long 82°56'17", on right bank at upstream side of county bridge, 600 ft upstream from Big Creek, 1.1 miles upstream from Lake Logan, and 6.7 miles southeast of Hazelwood, Haywood County.

Drainage area.--27.6 sq mi.

Records available.--February 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,976.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 3,920 cfs Dec. 20 (gage height, 6.19 ft), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum, 18 cfs Sept. 10, 11 (gage height, 1.22 ft).

1954-58: Maximum discharge, 4,550 cfs Apr. 15, 1956 (gage height, 6.62 ft), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum, 9.4 cfs Sept. 29, 30, 1954.

Remarks.--Records excellent except those for periods of ice effect, which are good.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 6				May 7 to Sept. 30			
1.4	35	2.5	590	1.2	16	2.0	186
1.6	72	3.0	680	1.3	26	2.3	300
1.8	122	3.6	1,100	1.5	57	2.6	440
2.0	186			1.7	100		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	*52	134	138	166	117	150	236	69	*27	32	24
2	108	50	42	b110	b95	106	131	232	69	26	35	22
3	232	49	*125	b102	b90	98	*125	200	65	26	50	*21
4	230	47	131	b90	b100	*90	141	179	61	27	36	21
5	131	45	106	b90	130	88	119	163	*59	103	*29	21
6	108	44	100	b95	300	106	283	*289	59	61	29	21
7	98	42	243	93	263	106	138	293	57	42	37	20
8	*64	105	347	b85	b150	119	117	204	54	424	34	20
9	77	62	196	b90	b125	160	108	180	52	154	46	19
10	72	49	163	b80	b115	117	193	164	48	95	37	18
11	66	45	141	79	*b110	103	141	207	48	88	32	*121
12	79	45	b125	74	b95	95	117	193	47	77	42	68
13	64	47	b120	169	b85	128	106	167	45	84	43	32
14	56	691	117	*163	b85	103	100	148	42	75	37	25
15	52	153	111	108	86	88	271	140	54	67	36	24
16	50	186	108	93	b90	84	318	131	45	59	42	25
17	140	150	103	86	b80	84	170	131	40	55	40	24
18	79	382	98	b80	b75	88	147	120	39	47	32	22
19	64	672	144	b75	b70	84	134	110	36	43	27	21
20	58	232	1,040	79	b80	77	122	118	39	42	26	22
21	54	183	300	204	b85	72	117	105	36	69	25	114
22	52	186	229	111	74	72	185	95	36	65	24	42
23	54	327	200	93	68	72	144	91	39	47	32	32
24	215	204	179	179	68	93	122	95	32	67	100	27
25	81	*541	183	153	72	156	183	120	32	54	107	26
26	79	267	340	125	400	160	141	98	48	50	45	25
27	72	214	196	111	378	186	192	84	40	48	37	24
28	64	193	176	100	147	138	809	84	33	40	32	24
29	62	186	163	95	-	117	415	77	30	37	29	22
30	60	153	147	b90	-----	181	280	71	29	36	27	26
31	56	-----	141	108	-----	234	-----	71	-----	33	26	-----
Total	2,928	5,602	6,031	3,336	3,672	3,522	5,719	4,598	1,381	2,166	1,206	953
Mean	91.2	187	195	108	131	114	181	143	45.0	69.9	38.9	31.8
Cfsm	3.30	6.78	7.07	3.91	4.75	4.13	6.92	5.36	1.67	2.53	1.41	1.15
In.	3.81	7.55	8.13	4.50	4.95	4.75	7.71	6.19	1.86	2.92	1.63	1.28

Calendar year 1957: Max 1,600 Min 19 Mean 143 Cfsm 5.18 In. 70.57
 Water year 1957-58: Max 1,040 Min 18 Mean 112 Cfsm 4.06 In. 55.28

Peak discharge (base, 1,500 cfs).--Nov. 14 (9:30 a.m.) 2,440 cfs (5.05 ft); Nov. 19 (3 a.m.) 2,010 cfs (4.65 ft); Dec. 20 (9 a.m.) 3,920 cfs (6.19 ft); Feb. 27 (8 a.m.) 1,820 cfs (4.45 ft); Apr. 27 (11:30 p.m.) 2,220 cfs (4.85 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4560. West Fork Pigeon River below Lake Logan, near Waynesville, N. C.

Location.--Lat 35°26'38", long 82°54'46", on right bank at downstream side of county bridge at Riverside Church, 2.6 miles downstream from Little East Fork Pigeon River, 3.4 miles downstream from Lake Logan, 3.8 miles upstream from confluence with East Fork Pigeon River, and 5.3 miles southeast of Waynesville, Haywood County.

Drainage area.--55.3 sq mi.

Records available.--March 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,725.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 4,150 cfs Dec. 20 (gage height, 7.09 ft), from rating curve extended above 3,300 cfs by logarithmic plotting; minimum, 26 cfs Sept. 10 (gage height, 0.56 ft).
1954-58: Maximum discharge, 5,180 cfs Apr. 15, 1956 (gage height, 7.80 ft), from rating curve extended above 3,300 cfs by logarithmic plotting; minimum, 7.6 cfs Sept. 7, 1954 (gage height, 0.16 ft).

Remarks.--Records excellent except those for period of ice effect, which are good. Considerable regulation at times caused by Lake Logan (capacity, 1,050 cfs-days).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	22	2.5	317
.7	35	3.0	487
1.0	59	3.5	700
1.5	120	4.0	970
2.0	204	4.5	1,300

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	183	*99	254	231	285	219	290	413	126	*52	50	36
2	166	87	231	265	191	200	233	393	123	51	47	32
3	341	81	197	223	172	186	190	344	113	50	68	*32
4	340	80	*199	169	166	*171	*138	309	110	53	53	32
5	210	80	191	166	191	162	92	285	107	135	*44	31
6	176	79	188	164	382	176	370	*418	*105	92	43	30
7	159	76	223	162	360	181	219	508	103	63	56	31
8	136	92	479	159	245	199	195	360	96	476	55	31
9	*120	81	476	155	208	229	184	326	91	208	55	28
10	112	79	386	154	199	193	278	295	86	138	63	27
11	106	78	301	152	188	172	229	341	86	117	54	126
12	125	78	254	147	174	162	195	338	90	116	65	114
13	105	79	227	171	*162	199	183	295	82	113	68	47
14	95	553	178	*178	154	174	174	270	73	107	54	38
15	88	413	172	162	157	177	347	252	86	95	50	36
16	87	219	169	157	b135	326	495	235	79	80	48	38
17	179	227	167	152	b115	285	304	231	72	79	59	35
18	130	363	164	149	b110	198	261	214	69	71	45	33
19	105	1,080	171	146	b110	144	239	200	69	65	40	31
20	96	572	1,210	144	b120	142	223	208	71	63	38	30
21	90	301	515	218	130	141	212	184	66	83	38	139
22	181	290	389	186	130	123	275	172	68	103	36	60
23	275	373	389	155	125	109	243	166	71	69	38	44
24	295	410	360	279	122	119	210	169	61	90	83	41
25	178	664	295	256	126	141	313	204	57	81	156	38
26	107	495	413	214	497	179	252	176	76	67	61	36
27	106	438	424	195	550	275	239	150	74	74	51	36
28	106	413	347	179	270	261	1,090	147	59	63	44	35
29	106	396	290	171	-	204	655	138	55	57	41	33
30	106	278	243	159	-----	206	487	130	54	54	39	35
31	103	-----	169	167	-----	263	-----	125	-----	51	38	-----
Total	4,712	8,524	9,671	5,585	5,774	5,896	8,815	7,996	2,478	3,016	1,680	1,335
Mean	152	284	312	180	206	190	294	258	82.6	97.3	54.2	44.5
(†)	-344	+64	+149	+137	-4	-140	+146	-9	-3	0	-2	+3

Adjusted for change in contents in Lake Logan

	Mean	Cfsm	In.
Observed	141	2.55	2.94
Adjusted	286	5.17	5.78
	317	5.73	6.60
	185	3.35	3.85
	206	3.73	3.88
	186	3.36	3.87
	299	5.41	6.03
	258	4.87	5.37
	82.5	1.49	1.66
	97.3	1.76	2.03
	54.1	0.978	1.13
	44.6	0.807	0.90

	Observed	Adjusted
Calendar year 1957:	Max 2,370	Mean 230
Water year 1957-58:	Max 1,210	Mean 179
	Min 30	Min 27
	Mean 230	Mean 179
	Cfsm 4.16	Cfsm 3.24
	In. 56.37	In. 44.04

* Discharge measurement made on this day.

† Change in contents, in cfs-days, in Lake Logan.

b Stage-discharge relation affected by ice.

4565. East Fork Pigeon River near Canton, N. C.

Location.--Lat 35°27'42", long 82°52'12", on right bank 800 ft upstream from U. S. Highway 276, 0.4 mile downstream from Dix Creek, 1.7 miles upstream from confluence with West Fork Pigeon River, and 5.2 miles southwest of Canton, Haywood County.

Drainage area.--51.5 sq mi.

Records available.--March 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,674.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 3,690 cfs Dec. 20 (gage height, 6.09 ft); minimum, 24 cfs Sept. 10, 11 (gage height, 0.92 ft).
1954-58: Maximum discharge, 6,640 cfs Apr. 4, 1957 (gage height, 7.78 ft), from rating curve extended above 3,600 cfs by logarithmic plotting; minimum, 12 cfs Jan. 9, 1956 (gage height, 0.84 ft), result of freezeup.

Remarks.--Records excellent except those for periods of ice effect, which are good.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 21, July 9 to Sept. 30				Feb. 22 to July 8			
0.9	22	2.0	251	1.1	48	2.0	256
1.0	31	2.5	440	1.3	81	2.5	440
1.1	43	3.0	680	1.5	125	3.0	680
1.3	75	3.5	970				
1.5	117	4.0	1,330				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	223	*98	236	200	236	265	250	328	125	*51	37	28
2	214	97	214	184	179	227	224	301	123	50	36	26
3	460	93	*203	b165	b150	205	*214	268	111	48	46	*26
4	489	91	200	b155	b150	*190	222	244	109	51	39	27
5	324	87	176	b150	158	179	205	224	104	72	*35	27
6	251	83	166	b145	212	177	374	*297	*100	72	32	27
7	214	81	200	146	232	177	256	394	98	56	*37	27
8	*179	125	339	b125	b190	182	227	304	94	175	43	27
9	161	102	245	b115	b165	205	214	272	89	121	36	26
10	144	89	220	b120	b160	192	290	244	87	89	36	26
11	131	87	203	122	*b150	179	265	259	83	68	41	55
12	136	85	b170	115	b140	169	250	284	81	68	64	86
13	119	85	b170	197	b120	184	219	247	77	61	49	37
14	108	792	169	*212	b120	177	203	227	74	61	44	31
15	102	*366	158	171	129	164	287	211	81	56	39	29
16	97	302	154	156	b105	154	471	195	77	61	44	31
17	152	261	146	146	b100	152	343	192	70	55	42	29
18	131	394	241	b130	b95	159	294	179	68	49	36	27
19	110	*1,280	154	b120	b90	149	262	166	65	48	32	26
20	104	583	*1,200	129	b95	142	233	169	65	50	31	26
21	97	427	578	214	b100	135	216	154	62	50	30	61
22	95	358	411	176	b105	130	230	144	62	55	31	43
23	91	480	331	154	111	130	205	139	65	46	35	33
24	259	362	286	212	107	139	190	169	60	49	49	31
25	154	*645	271	200	109	195	253	218	56	50	71	30
26	141	530	440	182	453	214	205	177	57	43	41	29
27	131	423	313	171	552	284	203	154	63	44	37	29
28	119	358	281	158	358	250	*598	144	56	46	33	28
29	115	316	261	151	-	222	465	139	52	39	51	27
30	110	271	226	144	-----	230	382	127	52	37	50	27
31	104	---	212	151	-----	321	-----	127	-----	36	29	---
Total	5,265	9,352	8,466	4,916	4,871	5,878	8,251	6,697	2,566	1,859	1,214	982
Mean	170	312	273	159	174	190	275	216	78.9	60.0	39.2	32.7
Cfs/m	3.30	6.06	5.30	3.09	3.38	3.69	5.34	4.19	1.53	1.17	0.761	0.635
In.	3.80	6.75	6.11	3.55	3.52	4.24	5.96	4.84	1.71	1.34	0.88	0.71

Calendar year 1957: Max 2,530 Min 26 Mean 195 Cfs/m 3.79 In. 51.29

Water year 1957-58: Max 1,280 Min 26 Mean 165 Cfs/m 3.20 In. 43.41

Peak discharge (base, 1,200 cfs).--Nov. 14 (12 m.) 2,440 cfs (5.14 ft); Nov. 19 (5 a.m.) 2,470 cfs (5.17 ft); Dec. 20 (2 p.m.) 3,690 cfs (6.09 ft); Feb. 27 (11 a.m.) 1,230 cfs (3.87 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4570. Pigeon River at Canton, N. C.

Location.--Lat 35°31'30", long 82°50'28", on left bank 100 ft upstream from small tributary, 0.5 mile upstream from U. S. Highways 19 and 23 at Canton, Haywood County, and at mile 63.9. Records include flow of small tributary.

Drainage area.--133 sq mi, includes that of small tributary below gage.

Records available.--May 1907 to June 1909, October 1928 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,572.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 1909, staff gage at bridge 0.4 mile downstream at different datum. Dec. 6, 1928, to Jan. 3, 1929, staff gage at present site and datum.

Average discharge.--31 years (1907-8, 1928-58), 310 cfs.

Extremes.--Maximum discharge during year, 7,220 cfs Dec. 20 (gage height, 9.05 ft); minimum, 57 cfs Sept. 11 (gage height, 0.66 ft); minimum daily, 59 cfs Sept. 10. 1907-9, 1928-58: Maximum discharge, 31,600 cfs Aug. 30, 1940 (gage height, 20.75 ft, from floodmark in gage well); minimum, 15 cfs Jan. 8, 1956 (gage height, 0.04 ft), result of freezeup; minimum daily, 27 cfs Sept. 7, 1954.

Remarks.--Records excellent except those for periods of ice effect, which are good. Occasional diurnal fluctuation and considerable regulation at low flow caused by gristmill and Lake Logan on West Fork (capacity, 1,050 cfs-days). City of Canton diverted a total of about 92,000,000 gal just above station for supplementary water supply, equivalent to a mean discharge of 0.4 cfs at station. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1908(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	50	3.0	1,020
.9	94	3.5	1,370
1.2	171	4.0	1,760
1.5	267	4.5	2,160
2.0	452	5.0	2,580
2.5	705		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	421	212	531	444	585	531	565	830	281	112	107	74
2	383	193	481	469	413	469	486	772	278	107	103	88
3	790	163	429	429	371	432	425	663	250	*105	134	*66
4	876	174	429	356	b350	398	*402	596	244	109	119	86
5	560	*171	398	345	368	375	316	545	237	218	98	66
6	444	168	*379	334	623	*368	755	754	*228	196	92	62
7	402	162	440	331	628	383	499	*1,060	218	134	*92	64
8	342	220	895	313	490	402	448	747	212	621	134	67
9	*302	208	798	b310	b410	444	417	657	199	420	95	80
10	270	177	645	b310	b380	417	585	596	193	281	121	59
11	254	171	550	298	b370	375	531	657	183	212	103	117
12	295	168	460	284	349	353	456	723	183	224	171	309
13	250	168	b430	373	*327	402	421	612	177	196	145	103
14	224	1,290	375	432	313	379	402	545	162	208	129	83
15	212	830	364	368	320	379	604	508	177	183	105	74
16	199	580	349	*342	b290	490	1,100	473	183	183	107	80
17	318	508	338	324	b250	448	693	460	159	171	121	73
18	292	791	331	313	b230	383	585	436	151	145	96	70
19	231	2,510	345	302	b230	316	526	405	148	137	85	66
20	215	*1,280	2,410	298	b230	306	508	405	154	139	81	64
21	199	778	1,260	430	b240	298	456	379	145	142	80	201
22	257	687	882	413	b250	278	517	353	145	202	83	139
23	383	960	765	334	260	257	494	338	156	139	103	90
24	563	843	705	531	254	270	425	368	137	154	148	83
25	373	1,590	590	531	257	368	628	465	129	171	257	78
26	267	1,180	908	421	1,010	398	494	409	134	134	126	74
27	257	947	791	402	1,230	575	477	342	155	148	103	73
28	241	830	687	371	723	545	1,820	320	129	134	90	73
29	234	765	570	356	-	452	1,280	306	121	119	83	68
30	231	601	517	334	-	456	992	288	116	112	80	67
31	224	-	413	342	-	601	-	281	-	107	78	-
Total	10,509	19,345	19,465	11,440	11,751	12,548	18,307	16,293	5,394	5,663	3,470	2,637
Mean	339	645	628	369	420	405	610	526	180	183	112	87.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	5,180			Min 63		Mean 459		Cfsm 3.45		In. 46.82		
Water year 1957-58: Max	2,510			Min 59		Mean 375		Cfsm 2.82		In. 38.26		

Peak discharge (base, 4,000 cfs).--Nov. 19 (6 a.m.) 4,610 cfs (7.00 ft); Dec. 20 (3 p.m.) 7,220 cfs (9.05 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4575. Allen Creek near Hazelwood, N. C.

Location.--Lat 35°25'49", long 83°00'33", on left bank 180 ft downstream from Rocky Branch, 3.0 miles upstream from mouth, and 3.3 miles south of Hazelwood, Haywood County.

Drainage area.--14.4 sq mi.

Records available.--August 1949 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 3,047.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--9 years, 35.2 cfs (unadjusted).

Extremes.--Maximum discharge during year, 546 cfs Dec. 20 (gage height, 2.81 ft); minimum, 7.1 cfs Sept. 6; minimum daily, 8.2 cfs Sept. 9, 10.

1949-58: Maximum discharge, 1,320 cfs Jan. 31, 1957 (gage height, 3.90 ft, from rating curve extended above 500 cfs by logarithmic plotting; minimum, 1.0 cfs Sept. 9, 1954 (gage height, 0.75 ft); minimum daily, 5.0 cfs Oct. 11-14, 18, 22, 23, 25-27, 1954.

Maximum stage known, 7.0 ft Aug. 30, 1940, from information by local residents.

Remarks.--Records excellent except those for periods of ice effect, which are good. Considerable diurnal fluctuation at low flow caused by intermittent operation of filter plant 0.3 mile upstream since Aug. 29, 1954. Town of Waynesville diverts about 3 cfs for water supply at diversion dam 0.4 mile upstream.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	6.0	1.5	70
1.0	12	1.8	130
1.1	18	2.1	210
1.3	40		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	21	48	52	55	42	48	98	38	15	15	9.8
2	24	20	45	46	38	40	*45	96	36	*15	15	*8.8
3	37	20	46	44	b34	37	44	83	*34	15	15	8.8
4	54	*19	46	b41	b35	36	45	75	31	16	16	8.8
5	31	19	*41	b40	44	*35	42	*70	*30	29	14	8.8
6	28	18	38	40	75	38	57	96	35	20	*14	8.8
7	26	18	95	40	83	41	44	102	27	16	15	9.3
8	26	30	135	37	58	45	40	84	25	115	14	8.8
9	*19	22	88	b33	48	52	38	77	24	51	14	8.2
10	18	20	70	b35	45	44	45	74	23	38	14	8.2
11	18	19	62	34	42	40	44	92	22	35	13	*28
12	29	19	55	34	40	38	40	90	21	36	15	17
13	21	19	51	45	*37	48	37	81	20	29	17	12
14	18	61	49	42	37	41	37	74	20	26	15	10
15	18	34	48	*36	37	37	54	68	29	23	14	10
16	17	54	46	35	b35	36	72	63	22	21	14	9.8
17	36	45	45	34	b32	36	54	62	19	20	14	9.3
18	30	84	42	b31	b27	40	49	58	18	18	13	9.3
19	24	152	54	b29	b25	36	45	55	19	17	12	8.8
20	22	74	201	31	b27	35	42	55	19	17	12	9.3
21	20	55	104	37	29	34	42	52	18	24	11	35
22	19	57	79	34	30	33	65	51	18	22	10	14
23	19	96	68	29	29	33	52	49	19	18	12	12
24	58	68	62	46	26	36	46	52	17	27	22	11
25	31	146	62	41	29	42	81	52	16	21	19	10
26	30	98	102	35	83	46	57	49	20	23	14	10
27	27	77	70	34	84	54	55	45	18	23	12	10
28	24	67	65	31	49	45	167	42	17	19	11	9.8
29	23	63	58	31	-	40	152	41	17	17	10	9.3
30	23	55	54	21	-----	45	119	39	16	16	10	9.3
31	22	-----	52	40	-----	57	-----	37	-----	16	10	-----
Total	816	1,550	2,081	1,146	1,215	1,262	1,758	2,061	688	798	426	342.2
Mean	26.3	51.7	67.1	37.0	43.4	40.7	58.6	66.5	22.9	25.7	13.7	11.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	596			Min 7.5		Mean 53.0	Cfsm 3.68	In. 49.96				
Water year 1957-58: Max	201			Min 8.2		Mean 38.7	Cfsm 2.69	In. 36.53				

Peak discharge (base, 400 cfs).--Dec. 20 (10 a.m.) 546 cfs (2.81 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4590. Jonathan Creek near Cove Creek, N. C.

Location.--Lat 35°37'22", long 83°00'26", on left bank 1,500 ft downstream from ford, 0.7 mile upstream from mouth, and 2 miles downstream from Cove Creek and village of Cove Creek, Haywood County.

Drainage area.--65.3 sq mi.

Records available.--October 1929 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,383.89 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--29 years, 125 cfs.

Extremes.--Maximum discharge during year, 1,660 cfs May 11 (gage height, 5.34 ft); minimum, 37 cfs Sept. 10, 11 (gage height, 0.91 ft).

1929-58: Maximum discharge, 3,200 cfs Aug. 30, 1940 (gage height, 7.51 ft); minimum, 18 cfs Jan. 2, 1940 (gage height, 0.54 ft), result of freezeup; minimum daily, 23 cfs Sept. 17, 18, 23, 1953.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Slight diurnal fluctuation at low flow caused by small gristmill above station.

Revisions.--WSP 823: Drainage area.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	36	2.5	301
1.2	58	3.0	450
1.6	105	3.5	623
2.0	160	4.1	893

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	84	193	202	280	214	184	327	139	69	67	44
2	88	80	178	b170	180	191	*170	343	139	*67	63	*42
3	113	77	184	b160	b150	178	165	288	*128	66	71	42
4	153	*75	209	b145	b140	165	167	254	123	66	67	42
5	95	71	*167	b140	184	*157	159	*232	119	79	56	41
6	81	69	157	b140	313	157	202	305	125	84	*59	41
7	83	68	299	b135	375	161	163	330	115	69	64	41
8	71	128	456	b135	285	180	149	269	110	401	67	44
9	66	94	307	b130	b215	184	141	247	105	167	68	40
10	*62	80	256	b130	b190	170	161	230	101	126	60	39
11	66	76	227	b125	b180	157	159	410	101	108	55	63
12	116	75	b190	118	b175	149	141	534	101	146	146	94
13	81	75	b180	147	b165	207	134	378	94	118	94	51
14	71	124	184	174	*b155	172	128	316	89	102	79	45
15	66	99	176	*139	b155	157	153	279	108	90	66	44
16	63	225	172	137	b130	149	182	254	95	84	68	43
17	105	222	170	134	b115	147	151	239	87	81	60	42
18	98	487	159	128	b110	176	141	223	83	76	54	41
19	79	871	176	123	b105	155	135	211	83	71	51	41
20	72	367	532	118	b105	147	130	209	86	78	50	41
21	68	282	354	163	b110	141	128	187	81	79	48	181
22	66	252	277	132	118	134	191	172	89	79	51	69
23	65	398	247	118	121	132	165	181	95	69	79	53
24	426	274	225	161	123	135	155	242	79	91	77	48
25	176	572	221	159	125	155	260	278	74	74	71	47
26	139	393	417	141	317	159	187	211	112	98	58	45
27	119	313	279	135	396	172	176	184	87	83	52	50
28	102	298	256	126	262	163	408	172	78	86	49	46
29	95	242	235	125	-	155	510	159	74	72	47	43
30	95	216	214	121	-----	155	399	151	72	64	46	43
31	90	-----	202	156	-----	218	-----	145	-----	86	46	-----
Total	3,144	6,707	7,499	4,367	5,279	5,092	5,694	7,960	2,972	3,009	1,989	1,546
Mean	101	224	242	141	189	164	190	257	99.1	97.1	64.2	51.5
Cfsm	1.55	3.43	3.71	2.16	2.89	2.51	2.91	3.94	1.52	1.49	0.983	0.789
In.	1.79	3.82	4.27	2.49	3.01	2.90	3.24	4.53	1.69	1.71	1.13	0.88

Calendar year 1957: Max 1,830 Min 34 Mean 189 Cfsm 2.89 In. 39.27
 Water year 1957-58: Max 871 Min 39 Mean 151 Cfsm 2.31 In. 31.46

Peak discharge (base, 1,100 cfs).--Oct. 24 (7:30 a.m.) 1,100 cfs (4.47 ft); Nov. 19 (3:30 a.m.) 1,480 cfs (5.07 ft); Dec. 20 (12:30 p.m.) 1,170 cfs (4.58 ft); May 11 (9 p.m.) 1,660 cfs (5.34 ft).

* Discharge measurement made on this day.
 b Stage-discharge relation affected by ice.

4595. Pigeon River near Hepco, N. C.

Location.--Lat 35°38'07", long 82°59'22", on left bank 0.8 mile downstream from Jonathan Creek, 2.4 miles upstream from Pines Creek and from Hepco, Haywood County, and at mile 45.0.

Drainage area.--350 sq mi.

Records available.--July 1927 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,335.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--31 years, 651 cfs.

Extremes.--Maximum discharge during year, 9,000 cfs Dec. 20 (gage height, 8.36 ft); minimum, 154 cfs Sept. 11 (gage height, 1.12 ft).

1927-58: Maximum discharge, 32,700 cfs Aug. 30, 1940 (gage height, 15.82 ft, from floodmark in gage house), from rating curve extended above 12,000 cfs on basis of slope-area measurements at gage heights 14.94 and 15.82 ft; minimum, 81 cfs Sept. 30, 1941; minimum gage height, 0.81 ft Sept. 8, 1954.

Maximum stage known, about 18 ft June 1876 and February 1902, from flood profiles by Tennessee Valley Authority.

Remarks.--Records excellent except those for period of ice effect, which are good. Considerable regulation by Lake Junaluska on Richland Creek and Lake Logan on West Fork Pigeon River for periods of low flow (combined capacity of reservoirs, about 2,200 cfs-days). Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1928-31, 1932(M), 1933-36, 1937-39(M).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	149	4.0	1,890
1.5	263	5.0	3,000
2.0	465	6.0	4,440
3.0	1,020		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	626	420	974	883	1,350	1,110	1,080	1,820	626	280	313	195
2	600	398	895	877	913	968	*974	1,620	*637	*280	270	*181
3	982	581	841	830	802	895	885	1,550	585	274	309	176
4	1,280	*373	901	730	720	796	853	1,220	555	280	328	173
5	835	565	*780	698	813	*752	730	*1,100	545	401	260	171
6	681	356	742	686	1,300	764	1,210	1,520	540	447	*246	168
7	632	544	994	886	1,500	791	949	2,420	535	336	266	168
8	540	434	2,130	659	1,190	871	853	1,500	505	1,230	298	176
9	480	480	1,670	595	962	883	796	1,260	480	1,120	270	166
10	*442	377	1,320	642	889	901	907	1,180	456	642	270	159
11	424	356	1,180	637	847	786	1,170	1,450	442	510	246	193
12	805	356	851	805	780	752	1,120	1,780	452	575	397	212
13	505	352	913	686	730	895	982	1,380	424	510	390	270
14	420	1,290	841	949	*692	835	813	1,180	398	470	328	212
15	590	1,120	796	*764	714	758	907	1,080	429	424	270	192
16	373	1,120	758	698	b630	877	1,760	1,050	456	394	277	195
17	490	998	747	859	b500	853	1,220	981	586	407	270	197
18	595	1,780	720	632	b500	853	1,060	949	369	344	250	188
19	442	4,200	756	595	b500	725	974	901	352	325	224	168
20	403	2,230	3,310	605	b540	692	913	901	390	391	212	168
21	581	1,460	2,420	725	b570	676	865	824	365	390	209	490
22	369	1,200	1,630	813	632	654	937	769	369	420	212	413
23	550	2,050	1,370	848	620	820	937	764	416	356	351	240
24	1,280	1,540	1,270	935	590	815	618	595	352	365	344	212
25	796	5,130	1,090	1,140	595	764	1,360	1,100	325	386	455	205
26	575	2,360	1,850	865	1,700	780	1,080	962	369	372	313	195
27	550	1,800	1,460	796	2,460	1,010	981	786	386	369	256	197
28	490	1,520	1,300	730	1,600	1,000	2,670	742	325	356	230	195
29	465	1,360	1,110	692	-	877	2,820	698	306	328	215	181
30	456	1,120	1,030	664	-----	847	2,420	859	294	277	206	176
31	442	-----	883	698	-----	1,150	-----	637	-----	306	203	-----
Total	18,059	35,268	37,572	22,822	25,639	25,750	35,004	35,648	13,069	13,545	8,672	6,828
Mean	583	1,176	1,212	736	916	831	1,167	1,150	436	437	280	221
Cfs/m	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 11,000 Min 163 Mean 929 Cfs/m 2.65 In. 36.05
 Water year 1957-58: Max 4,200 Min 159 Mean 761 Cfs/m 2.17 In. 29.51

Peak discharge (base, 6,000 cfs).--Nov. 19 (9:30 a.m.) 6,400 cfs (7.11 ft); Dec. 20 (6 p.m.) 9,000 cfs (8.36 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4615. Pigeon River at Newport, Tenn.

Location.--Lat 35°57'36", long 83°10'26", on left bank 100 ft upstream from bridge on U. S. Highway 70 at Newport, Cocke County, 0.6 mile downstream from Morell Branch, and at mile 6.8.

Drainage area.--666 sq mi.

Records available.--September 1900 to September 1929, October 1944 to September 1946, August 1948 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Published as "near Newport" 1945-46.

Gage.--Water-stage recorder. Datum of gage is 1,040.76 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to September 1929, staff or chain gage at same site and datum. May 1945 to July 1946, water-stage recorder at site 4.8 miles downstream at datum 37.85 ft lower.

Average discharge.--41 years, 1,224 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Nov. 19 (gage height, 7.27 ft); minimum, 88 cfs Sept. 21 (gage height, 0.03 ft); minimum daily, 232 cfs Sept. 1, 1900-1929, 1944-46, 1948-58: Maximum discharge, 34,900 cfs Apr. 2, 1920 (gage height, 17.0 ft); minimum, 38 cfs Oct. 5, 1952, Sept. 13, 1954; minimum daily, 48 cfs Sept. 21, 28, 1953; minimum gage height, -0.32 ft Sept. 13, 1954.
Flood of Feb. 28, 1902, reached a stage of 21.4 ft. Flood of Aug. 30, 1940, reached a stage of 17.3 ft (discharge, 36,000 cfs), determined by Tennessee Valley Authority.

Remarks.--Records good. Considerable regulation by Lakes Junaluska, Logan, and Walters for periods of low flow (combined usable capacity of reservoirs, about 12,500 cfs-days). The largest of these, Lake Walters (usable capacity, 10,300 cfs-days), was completed in 1929.

Revisions (water years).--WSP 1143: Drainage area. WSP 1306: 1901, 1904-5, 1906-10, 1945-46 (monthly runoff). WSP 1336: 1903, 1917(M), 1919-20(M), 1921, 1924(M), 1927-29(M), 1948-52 (monthly runoff).

Rating table, water year 1957-58 (gage height, in feet and discharge, in cubic feet per second)

0.5	215	2.0	1,330
1.0	360	3.0	2,580
1.5	860	6.0	7,900

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	880	704	2,150	2,120	1,320	2,710	2,640	3,860	526	464	722	232
2	996	586	2,170	2,150	1,430	2,000	2,290	3,140	740	361	534	376
3	1,290	458	1,990	2,150	1,840	2,290	*2,100	3,200	864	351	550	398
4	1,800	623	1,900	1,620	1,850	2,340	2,080	2,730	835	280	694	*402
5	1,730	*747	*1,360	1,050	1,750	2,230	1,730	2,800	*838	300	*750	404
6	1,190	731	1,320	1,350	2,790	*2,150	1,650	*4,250	938	434	706	306
7	*1,120	770	1,520	*1,480	3,080	2,160	1,890	5,280	736	*408	640	368
8	958	777	3,820	1,290	2,730	1,670	1,960	3,930	449	1,250	634	303
9	794	634	3,490	1,140	2,190	1,280	1,840	3,360	712	2,610	432	402
10	760	383	3,020	940	2,520	1,720	1,840	3,060	862	1,890	328	380
11	759	638	2,750	724	*2,120	1,780	1,930	2,750	862	1,310	460	386
12	933	742	2,540	469	1,990	1,740	1,800	2,960	810	959	816	421
13	565	752	2,390	308	1,830	1,710	1,460	2,890	779	890	300	266
14	666	758	2,110	1,790	1,730	1,330	1,660	2,750	630	1,110	836	244
15	779	1,000	1,630	1,500	1,120	1,290	1,780	2,680	460	1,140	672	280
16	770	1,610	2,260	1,350	832	796	2,180	2,170	730	1,040	638	378
17	755	1,870	2,440	1,150	940	1,360	2,160	1,550	798	1,040	533	387
18	766	4,540	2,310	755	1,050	1,780	2,080	1,210	781	930	572	404
19	626	7,310	2,090	549	1,030	1,760	1,680	1,460	777	914	550	361
20	404	4,270	2,620	835	1,030	1,560	1,200	1,770	1,100	1,410	547	248
21	541	2,960	3,520	1,290	1,080	1,100	1,480	1,710	744	1,910	522	300
22	730	2,620	2,880	1,440	1,020	886	1,730	1,650	556	1,790	521	326
23	752	3,010	2,680	1,390	790	635	1,760	1,600	823	1,140	657	452
24	1,010	2,760	2,290	1,520	958	1,230	1,680	1,080	872	1,460	592	516
25	1,590	*5,380	2,080	1,690	1,120	1,600	3,620	838	794	1,470	638	496
26	1,362	4,960	2,830	1,290	2,230	1,770	2,760	1,760	932	1,000	828	522
27	970	3,450	2,870	1,720	3,790	1,910	1,700	1,930	946	917	701	476
28	748	2,820	2,720	1,800	3,460	1,950	2,370	1,570	699	807	609	516
29	823	2,650	2,010	1,760	-	1,640	3,570	1,500	437	828	472	370
30	819	2,580	2,180	1,240	-----	1,240	4,100	1,270	510	776	362	458
31	768	-----	2,220	962	-----	1,890	-----	992	-----	728	288	-----
Total	28,652	63,093	74,140	41,422	49,320	51,497	62,730	73,690	22,549	31,917	18,704	11,268
Mean	924	2,103	2,392	1,336	1,761	1,661	2,091	2,377	752	1,030	603	376
Cfm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	23,000			Min	83	Mean	1,680	Cfm	2.52	In.	34.23	
Water year 1957-58: Max	7,310			Min	252	Mean	1,449	Cfm	2.18	In.	29.54	

Peak discharge (base, 7,500 cfs).--Nov. 19 (1 p.m.) 10,900 cfs (7.27 ft); Nov. 25 (4 p.m.) 8,120 cfs (6.10 ft).

* Discharge measurement made on this day.

TENNESSEE RIVER BASIN

4633. South Toe River near Celo, N. C.

Location.--Lat 35°49'52", long 82°11'04", on right bank 800 ft upstream from county road bridge, 0.3 mile downstream from Whiteoak Creek, 1.9 miles southeast of Celo, Yancey County, and at mile 20.1.

Drainage area.--43.4 sq mi.

Records available.--July 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,658 ft above mean sea level, datum of 1929.

Extremes.--1957: Maximum discharge during period July to September, 1,370 cfs Sept. 29 (gage height, 2.73 ft); minimum, 21 cfs Sept. 5, 6 (gage height, 0.53 ft).

1957-58: Maximum discharge during water year, 4,200 cfs Dec. 20 (gage height, 4.20 ft); minimum, 15 cfs Sept. 8, 9 (gage height, 0.44 ft).

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, July 19, 1957, to Sept. 30, 1958, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

July 19 to Nov. 25, 1957,

Nov. 26, 1957, to May 17, 1958

0.4	10	1.5	300	0.8	65	2.0	645
.6	28	2.0	635	1.0	115	2.5	1,100
.8	59	2.5	1,100	1.5	325		
1.0	105						

Discharge, in cubic feet per second, 1957

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	47	23	9	-	38	*190	17	-	34	*520
2	-	47	24	10	-	38	*193	18	-	38	254
3	-	44	24	11	-	35	74	19	108	49	190
4	-	47	24	12	-	35	50	20	78	*39	142
5	-	57	23	13	-	34	44	21	67	35	114
6	-	42	23	14	-	38	39	22	63	34	102
7	-	*39	32	15	-	49	36	23	63	32	92
8	-	39	32	16	-	59	233	24	67	31	80
Total											
Mean											
Cubic feet per second per square mile											
Runoff in inches											

Peak discharge (base, 2,800 cfs).--No peak above base.

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	350	90	173	159	192	192	286	308	102	47	31	21
2	250	85	159	b140	b135	170	235	292	125	45	31	19
3	330	90	152	b135	b120	159	225	270	98	44	31	19
4	278	78	156	b130	b115	145	265	235	100	52	28	18
5	210	74	139	b125	130	136	230	220	92	59	28	18
6	178	72	133	b120	180	130	432	265	85	52	28	17
7	152	70	208	115	240	136	255	*385	80	50	29	17
8	132	139	464	b105	b175	188	208	255	80	57	28	16
9	120	105	255	b110	b145	220	188	230	76	92	27	16
10	*108	85	204	b95	b140	204	235	208	74	57	26	16
11	102	80	176	b90	b115	176	225	212	74	80	25	17
12	135	76	b140	b90	b105	159	188	220	74	74	36	24
13	111	76	b145	155	b100	166	170	220	65	76	35	22
14	100	385	145	204	b100	148	156	188	63	67	28	19
15	92	210	136	*148	b90	156	305	173	74	*78	28	19
16	88	214	*133	130	b80	127	553	159	70	63	27	*20
17	160	198	139	118	b75	*121	308	181	*61	61	31	19
18	152	273	139	b105	b75	133	255	163	59	56	26	18
19	117	659	159	b110	b75	124	230	142	57	52	24	16
20	105	*305	1,040	104	b80	118	208	142	67	52	23	16
21	98	242	385	159	b90	112	192	126	63	50	*23	72
22	92	219	265	156	b100	107	281	117	78	49	23	35
23	88	424	220	118	b105	104	*276	114	80	44	27	25
24	247	282	200	136	b100	110	212	117	65	47	47	22
25	152	*525	192	136	*b95	148	389	160	57	47	42	20
26	132	367	426	121	480	204	250	146	61	39	34	19
27	120	281	255	118	409	292	235	120	63	39	28	20
28	108	245	216	112	255	212	635	114	54	39	28	20
29	102	216	196	110	-	180	497	102	52	36	24	19
30	100	196	173	104	-----	226	379	98	49	34	23	19
31	95	-----	162	112	-----	520	-----	95	-----	32	22	-----
Total	4,604	6,353	7,085	3,870	4,081	5,303	8,503	5,777	2,199	1,670	889	638
Mean	149	212	229	125	146	171	285	186	73.3	53.9	28.7	21.3
Cfs/m	3.43	4.88	5.28	2.88	3.36	3.94	6.52	4.29	1.69	1.24	0.661	0.491
In.	3.95	5.44	6.07	3.32	3.50	4.54	7.29	4.95	1.88	1.43	0.76	0.55

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
 Water year 1957-58: Max 1,040 Min 16 Mean 140 Cfs/m 3.23 In. 43.68

Peak discharge (base, 2,800 cfs).--Dec. 20 (1 p.m.) 4,200 cfs (4.20 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4640. Cane River near Sioux, N. C.

Location.--Lat 36°00'52", long 82°19'40", on right bank on State Highway 26, 1.3 miles upstream from confluence with North Toe River, 1.5 miles east of Sioux, Yancey County, and at mile 1.3.

Drainage area.--157 sq mi.

Records available.--October 1933 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,045.24 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 241 cfs.

Extremes.--Maximum discharge during year, 3,580 cfs Dec. 20 (gage height, 7.52 ft); minimum, 62 cfs Sept. 20 (gage height, 1.99 ft).
1933-58: Maximum discharge, 31,800 cfs Aug. 13, 1940 (gage height, 17.8 ft); from rating curve extended above 8,000 cfs on basis of slope-area measurement at gage height 15.65 ft; minimum, 18 cfs Jan. 6, 1940 (gage height, 1.14 ft), result of freezeup; minimum daily, 27 cfs Sept. 14, 1953.

Remarks.--Records excellent except those for periods of ice effect, which are good. No regulation at Burnsville Powerplant since October 1955. Slight diurnal fluctuation at low flow caused by small mills above gage.

Revisions (water years).--WSP 893: 1934(M). WSP 1143: 1940(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

2.2	83	3.5	485	2.0	63	4.0	725
2.5	146	4.0	720	2.2	95	5.0	1,320
3.0	296	5.1	1,390	2.5	158	6.0	2,080
				3.0	310		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	279	119	272	314	523	544	475	660	314	137	135	78
2	189	115	245	275	598	451	408	598	444	133	131	72
3	172	110	227	b230	b310	401	401	607	296	131	124	70
4	183	106	276	b205	b265	359	459	515	262	135	120	70
5	144	104	221	b175	b330	324	415	475	242	146	114	69
6	125	98	209	b205	665	303	546	719	233	151	112	68
7	121	96	202	b185	715	300	455	*1,750	218	285	114	66
8	110	102	1,170	b185	630	408	376	970	206	279	110	69
9	102	159	710	b435	b387	338	725	204	278	108	106	66
10	*96	117	517	b185	b345	435	348	596	204	221	104	64
11	94	106	430	b180	b300	380	384	571	201	181	101	64
12	134	104	b310	b160	b270	356	331	701	218	284	144	104
13	128	102	b295	b175	b240	394	300	755	181	296	137	86
14	104	155	b295	342	b230	390	276	569	171	218	114	75
15	98	286	279	262	b240	345	305	515	179	179	142	69
16	94	252	259	*233	b210	317	979	459	190	*161	116	69
17	137	303	*272	215	b165	*300	598	455	*163	166	135	*69
18	203	734	269	201	b160	324	475	439	153	151	116	72
19	137	1,200	269	b175	b150	300	423	384	149	166	103	64
20	119	595	1,330	b180	b150	286	387	370	279	209	159	63
21	108	*399	1,160	198	b155	275	359	334	187	187	90	155
22	104	332	665	265	b170	258	*465	303	236	221	*85	144
23	102	861	515	206	b200	252	665	298	258	158	100	88
24	330	595	435	264	b190	242	487	611	192	151	163	76
25	246	1,290	387	451	*b220	255	975	561	166	161	184	72
26	183	890	698	348	836	272	735	558	187	142	131	70
27	172	570	558	314	1,080	334	612	390	192	135	106	78
28	146	446	471	275	780	317	1,000	348	158	131	92	86
29	134	369	415	252	-	306	1,040	310	146	131	90	72
30	130	314	362	236	-	296	824	278	142	127	63	70
31	128	-	331	236	-	572	-	265	-	122	80	-
Total	4,552	11,053	14,132	7,282	10,362	10,883	15,841	17,111	6,371	5,573	3,643	2,338
Mean	147	368	456	235	336	345	528	552	212	180	118	77.9
Cfsm	0.936	2.34	2.90	1.50	2.30	2.20	3.36	3.52	1.35	1.15	0.752	0.496
In.	1.08	2.62	3.35	1.72	2.45	2.53	3.75	4.05	1.51	1.32	0.86	0.55

Calendar year 1957: Max 5,780 Min 64 Mean 349 Cfsm 2.22 In. 30.18
Water year 1957-58: Max 1,750 Min 63 Mean 298 Cfsm 1.90 In. 25.79

Peak discharge (base, 2,600 cfs).--Dec. 20 (8 p.m.) 3,580 cfs (7.52 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

TENNESSEE RIVER BASIN

4655. Nolichucky River at Embreeville, Tenn.

Location.--Lat 36°10'35", long 82°27'27", on left bank 2,000 ft upstream from bridge on State Highway 81 at Embreeville, Washington County, 3 miles northwest of Erwin, 5.2 miles downstream from North Indian Creek, and at mile 89.0.

Drainage area.--805 sq mi.

Records available.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to September 1958. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,519.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. September 1900 to May 1901, chain gage at site 3 miles downstream at different datum. July 1920 to October 1931, chain gage at bridge 2,000 ft downstream at datum 6.33 ft lower.

Average discharge.--39 years (1919-58), 1,311 cfs.

Extremes.--Maximum discharge during year, 15,600 cfs Dec. 20 (gage height, 6.61 ft); minimum, 328 cfs Sept. 30 (gage height, 1.07 ft).

1900-1901, 1919-58: Maximum discharge, 82,500 cfs Aug. 13, 1940 (gage height, 18.57 ft), from rating curve extended above 48,000 cfs on basis of slope-area measurement of peak flow; minimum, 85 cfs Sept. 8, 9, 1925 (gage height, 1.60 ft, site and datum then in use).

Remarks.--Records good. Slight diurnal fluctuation at low flow caused by small mill above station.

Revisions (water years).--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.0	280	3.0	3,390
1.3	480	5.0	9,240
1.6	750	6.0	13,000
2.0	1,260		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,300	750	1,780	1,700	2,720	3,560	3,340	3,420	1,260	641	1,540	452
2	*1,420	720	1,560	1,530	2,840	2,750	2,730	3,130	2,360	623	2,410	424
3	1,130	690	*1,400	1,320	2,120	2,340	*2,560	3,660	1,660	596	1,550	*397
4	1,360	*660	1,600	1,250	*1,660	*2,080	3,080	3,030	1,340	605	1,080	390
5	1,110	641	1,510	1,150	1,760	1,820	2,840	2,730	1,250	690	*827	384
6	912	614	1,340	1,150	4,310	1,660	3,170	*4,870	1,180	750	710	378
7	816	596	1,460	1,250	5,060	1,600	3,390	*9,930	1,120	1,080	650	364
8	730	556	5,670	1,150	4,490	2,080	2,730	6,270	1,070	*1,180	650	371
9	670	886	4,680	1,000	3,080	2,120	2,560	4,380	1,040	1,310	632	352
10	623	783	3,220	977	2,410	2,500	2,210	3,520	*1,070	1,180	578	345
11	596	660	2,590	1,220	2,120	2,190	2,560	3,100	1,060	964	536	340
12	641	632	2,030	1,080	1,840	1,990	2,160	3,150	1,200	925	552	390
13	750	623	1,560	1,040	1,620	2,050	1,880	3,320	1,000	1,550	816	445
14	632	650	1,780	2,320	1,420	2,190	1,740	2,730	899	1,130	951	397
15	569	2,070	1,800	2,080	1,470	1,950	1,700	2,380	873	958	925	358
16	544	1,510	1,700	1,620	1,340	1,780	3,460	2,140	938	838	805	345
17	605	1,840	1,720	1,400	1,250	1,660	2,910	2,100	838	805	816	352
18	1,040	4,650	1,860	1,290	1,200	1,760	2,320	2,250	772	761	783	390
19	699	6,270	1,820	1,130	1,250	1,740	2,080	1,970	750	772	650	384
20	720	4,440	5,330	1,160	1,300	1,640	1,930	1,990	1,080	1,030	623	352
21	660	2,730	8,110	1,150	1,320	1,560	1,800	1,740	990	1,110	536	438
22	623	2,050	4,180	1,580	1,360	1,470	1,950	1,550	977	1,260	520	740
23	596	4,360	3,050	1,360	1,390	1,420	3,390	1,420	1,220	977	626	536
24	1,140	4,100	2,540	1,390	1,390	1,590	2,610	2,230	1,030	990	1,020	397
25	1,600	6,160	2,210	3,200	1,470	1,530	4,530	1,970	838	990	1,440	364
26	1,150	6,240	3,150	2,410	3,710	1,740	4,180	2,590	794	838	1,040	345
27	1,070	3,840	3,250	2,050	7,250	2,140	3,370	1,860	951	730	761	345
28	938	2,860	2,630	1,740	5,430	2,270	3,990	1,600	783	710	623	397
29	849	2,380	2,360	1,530	-	2,140	4,840	1,440	700	838	552	345
30	805	2,050	2,050	1,400	-----	1,970	4,200	1,230	660	783	512	354
31	783	-----	1,840	1,340	-----	3,350	-----	1,230	-----	680	456	-----
Total	28,281	67,051	81,800	45,967	68,580	62,440	86,010	88,990	31,703	28,274	26,180	11,851
Mean	912	2,235	2,639	1,483	2,449	2,014	2,867	2,871	1,057	912	845	395
Cfsm	1.13	2.78	3.28	1.84	3.04	2.50	3.56	3.57	1.31	1.13	1.05	0.491
In.	1.31	3.10	3.78	2.12	3.17	2.88	3.97	4.11	1.46	1.31	1.21	0.55

Calendar year 1957: Max 29,100 Min 318 Mean 1,917 Cfsm 2.38 In. 32.34
 Water year 1957-58: Max 9,930 Min 334 Mean 1,718 Cfsm 2.13 In. 28.97

Peak discharge (base, 9,500 cfs)--Dec. 20 (10 p.m.) 15,600 cfs (6.61 ft); May 7 (10 a.m.) 12,400 cfs (5.85 ft).

* Discharge measurement made on this day.

4665. Nolichucky River below Nolichucky Dam, Tenn.

Location.--Lat 36°03'59", long 82°52'18", on right bank 0.30 mile downstream from Nolichucky Dam, Greene County, 2.2 miles upstream from Cove Creek, 7.0 miles south of Greenville, and at mile 45.7.

Drainage area.--1,184 sq mi.

Records available.--October 1902 to September 1909, October 1918 to October 1925, October 1945 to September 1958. Published as "near Greenville" 1903-9, 1919-25. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,173.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 1903 to December 1908 and April 1919 to October 1925, at bridge 8.4 miles upstream at different datums.

Average discharge.--27 years, 1,854 cfs.

Extremes.--Maximum discharge during year, 18,300 cfs May 7 (gage height, 11.45 ft); minimum, 27 cfs Sept. 29 (gage height, 0.98 ft); minimum daily, 329 cfs Sept. 13, 1902-9, 1918-25, 1945-58; Maximum discharge observed, 73,500 cfs Jan. 23, 1906 (gage height, 19.3 ft), site and datum then in use, from rating curve extended above 9,200 cfs; minimum, 20 cfs Sept. 20, 1956 (gage height, 0.84 ft); minimum daily, 22 cfs Oct. 20, 1954.
Flood of Aug. 14, 1940, reached a discharge of 73,500 cfs, by computation of flow over dam.

Remarks.--Records good. Low flow regulated by Lake Davy Crockett since 1913 (controlled storage, 4,060 cfs-days).

Revisions.--WSP 1306: Drainage area at site used 1903-9, 1919-25.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

2.8	280	4.0	1,540
3.1	460	7.0	7,200
3.5	840	11.0	17,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,500	1,330	2,640	2,660	1,920	5,290	3,400	4,280	1,530	908	1,210	520
2	*2,410	716	2,590	2,620	2,750	4,030	3,360	3,740	1,960	1,100	2,060	514
3	2,060	699	*1,920	2,180	2,890	3,380	*3,040	3,970	2,620	1,090	2,620	*742
4	1,720	*656	1,850	1,790	*2,700	*2,930	3,250	3,880	2,340	766	1,930	734
5	1,850	770	1,960	1,700	2,620	2,710	3,490	3,580	1,950	892	*1,120	760
6	1,110	948	2,570	1,700	2,860	2,640	3,270	*9,340	1,760	678	1,210	666
7	960	896	1,520	1,390	6,010	2,590	3,990	16,400	1,460	1,570	1,190	512
8	876	886	3,560	1,400	6,150	2,570	3,540	11,200	1,410	*1,880	1,100	446
9	930	888	6,700	*1,780	4,620	2,590	3,020	7,030	1,430	1,270	788	564
10	1,070	950	4,640	1,390	3,470	2,620	2,770	5,590	*1,640	1,680	689	592
11	1,290	896	3,720	1,360	2,910	2,750	2,820	5,370	1,620	1,950	756	680
12	755	908	3,020	1,360	2,710	2,710	2,860	4,770	1,410	1,120	869	548
13	699	549	2,640	1,270	2,660	2,660	2,700	4,500	2,170	1,120	840	329
14	714	620	2,620	1,820	2,570	2,750	2,660	4,100	1,280	1,930	978	343
15	892	990	2,090	2,610	2,000	2,730	2,570	3,560	979	1,350	1,400	552
16	1,140	1,890	2,620	2,570	1,780	2,640	2,080	3,180	1,110	1,250	1,140	642
17	1,020	1,890	2,610	1,790	1,600	2,610	5,490	2,930	1,300	1,330	1,060	671
18	606	3,300	1,940	1,170	1,580	2,590	2,980	3,020	1,210	1,100	943	555
19	1,000	5,590	2,550	1,300	1,100	2,570	2,710	2,930	1,090	938	1,340	777
20	976	6,440	2,570	1,750	1,100	2,250	2,640	2,770	1,600	1,120	1,050	460
21	884	3,790	9,250	1,840	1,660	1,820	2,620	2,660	1,820	1,340	936	670
22	924	2,780	6,010	1,390	2,060	1,940	2,610	2,570	1,110	1,540	948	420
23	1,230	3,350	4,240	1,850	2,140	2,040	2,590	2,550	1,350	2,160	777	520
24	964	5,410	3,490	1,830	2,030	2,030	2,860	2,520	1,600	1,720	708	913
25	1,980	5,060	2,930	1,920	1,860	1,980	4,730	2,550	1,400	1,100	1,480	719
26	707	8,410	3,150	3,040	1,980	1,930	5,930	2,610	1,640	995	1,020	668
27	589	5,250	4,370	2,700	8,280	2,550	4,450	2,680	1,100	1,120	2,120	347
28	1,430	3,810	3,650	2,620	7,660	2,570	3,960	2,620	1,510	1,110	1,430	359
29	1,220	3,050	3,090	2,570	7,660	2,590	5,590	2,580	893	1,120	710	334
30	1,080	2,710	2,800	2,020	-----	2,590	5,070	1,980	890	1,110	466	800
31	1,040	-----	2,680	1,580	-----	2,610	-----	1,540	-----	1,210	466	-----
Total	36,526	75,452	101,970	58,930	83,670	82,260	100,850	133,010	45,182	39,419	35,354	17,457
Mean	1,178	2,515	3,289	1,901	2,988	2,654	3,362	4,291	1,506	1,272	1,140	582
Cfsm	0.995	2.12	2.78	1.61	2.52	2.24	2.84	3.62	1.27	1.07	0.963	0.492
In.	1.15	2.37	3.20	1.85	2.63	2.58	3.17	4.18	1.42	1.24	1.11	0.55

Calendar year 1957: Max 27,700 Min 410 Mean 2,519 Cfsm 2.13 In. 28.89
Water year 1957-58: Max 16,400 Min 329 Mean 2,219 Cfsm 1.87 In. 25.45

Peak discharge (base, 11,500 cfs).--Dec. 21 (10 a.m.) 12,400 cfs (9.24 ft); May 7 (4 p.m.) 18,300 cfs (11.45 ft).

* Discharge measurement made on this day.

4670. Lick Creek at Mohawk, Tenn.

Location.--Lat 36°12'09", long 83°02'53", on right bank 0.25 mile east of Mohawk, Greene County, 0.6 mile upstream from Riley Creek, and 17.5 miles upstream from mouth.

Drainage area.--220 sq mi.

Records available.--July 1946 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,060.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--12 years, 242 cfs.

Extremes.--Maximum discharge during year, 8,540 cfs May 7 (gage height, 16.25 ft); minimum, 18 cfs Nov. 7, 8; minimum gage height, 1.75 ft Oct. 16.

1946-58: Maximum discharge, 10,700 cfs Jan. 31, 1950 (gage height, 16.24 ft), from rating curve extended above 5,000 cfs; maximum gage height, that of May 7, 1958; minimum discharge, 8.4 cfs Sept. 12, 1954 (gage height, 1.56 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 24 to Nov. 16)

1.7	17	11.0	1,000
2.0	34	12.0	1,440
2.5	66	13.0	2,380
3.0	106	14.0	4,220
7.0	505	16.0	8,020
10.0	815		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	21	111	222	337	857	485	418	116	75	60	50
2	35	21	92	221	584	314	287	580	124	70	100	48
3	33	21	*86	159	304	254	*294	338	117	*65	200	*45
4	32	*21	260	137	*187	*218	685	290	104	62	250	44
5	28	20	284	122	188	193	599	727	96	62	*150	43
6	26	20	142	115	551	180	580	*2,910	94	62	91	42
7	25	20	700	116	872	172	455	*7,850	89	66	75	42
8	*24	19	2,440	114	949	258	309	4,435	85	190	73	42
9	24	20	2,410	*97	614	337	264	2,000	82	239	137	41
10	23	23	1,170	90	273	658	241	1,180	*79	290	216	39
11	23	22	353	91	227	351	323	891	76	125	83	38
12	22	20	220	89	197	235	304	998	74	73	68	38
13	22	20	166	90	173	426	218	617	72	65	90	38
14	21	20	154	173	154	655	189	400	68	60	87	37
15	21	22	156	264	156	360	216	350	65	55	81	35
16	21	318	151	215	156	253	384	310	65	50	71	35
17	22	589	143	162	135	217	269	290	62	150	300	35
18	24	888	148	127	140	289	198	280	59	130	345	36
19	29	1,160	187	105	140	360	177	260	58	500	102	40
20	26	851	582	95	140	258	163	250	734	600	72	36
21	23	176	893	99	136	211	159	234	308	500	63	43
22	22	105	575	135	165	188	245	207	95	1,000	58	60
23	22	496	220	115	243	170	366	192	130	1,400	63	41
24	24	505	170	242	270	163	230	180	88	800	88	33
25	24	657	163	453	240	199	1,160	223	70	250	535	32
26	24	921	591	272	752	244	1,890	325	726	150	398	50
27	23	536	902	196	1,950	375	1,410	198	1,100	100	99	30
28	22	177	731	174	1,900	324	745	175	284	70	72	30
29	20	158	298	144	-	323	684	162	103	60	62	29
30	20	145	226	131	-----	273	731	133	83	55	56	29
31	20	-----	189	121	-----	625	-----	124	-----	50	52	-----
Total	762	7,992	14,863	4,886	12,133	9,940	14,260	27,322	5,506	7,224	4,187	1,161
Mean	24.6	266	479	153	433	321	475	881	177	233	135	38.7
Cfsm	0.112	1.21	2.18	0.718	1.97	1.46	2.16	4.00	0.805	1.06	0.614	0.176
In.	0.13	1.35	2.51	0.83	2.05	1.68	2.41	4.62	0.90	1.22	0.71	0.20

Calendar year 1957: Max 6,820 Min 18 Mean 335 Cfsm 1.52 In. 20.66
Water year 1957-58: Max 7,850 Min 19 Mean 301 Cfsm 1.37 In. 18.61

Peak discharge (base, 3,000 cfs).--Dec. 8 (10 p.m.) 3,500 cfs (13.62 ft); May 7 (8 a.m.) 8,540 cfs (16.25 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Feb. 19, 20, May 14-20, July 13 to Aug. 5; discharge estimated on basis of weather records, recorded range in stage, and records for Big Creek near Rogersville.

4690. French Broad River below Douglas Dam, Tenn.

Location.--Lat 35°57'06", long 83°33'05", on right bank 1.0 mile downstream from Douglas Dam, 1.7 miles upstream from Millican Creek, 5.8 miles north of Sevierville, Sevier County, and at mile 31.3.

Drainage area.--4,543 sq mi.

Records available.--October 1918 to September 1958. Published as "at Dandridge" 1918-42. Records published for both sites March to December 1942. Gage-height records collected at Dandridge 1904-42 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 865.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct. 1, 1918, to Oct. 7, 1923, staff gage at Dandridge 13 miles upstream at datum 37.67 ft higher. Oct. 8, 1923, to June 18, 1931, staff gage and June 19, 1931, to Sept. 30, 1942, water-stage recorder, at Dandridge at datum 37.63 ft higher.

Average discharge.--40 years, 6,535 cfs (unadjusted).

Extremes.--Maximum discharge during year, 23,300 cfs Dec. 26, 27 (gage height, 10.20 ft); minimum, 18 cfs Mar. 20, Sept. 23 (gage height, 1.46 ft); minimum daily, 25 cfs Mar. 19, Apr. 26, May 1, 3, 4.

1918-58: Maximum discharge, 95,600 cfs Aug. 31, 1940 (gage height, 20.93 ft), site and datum then in use; minimum, 4.7 cfs Mar. 10, 1943 (gage height, 1.16 ft); minimum daily, 5.5 cfs Mar. 9, 10, 1943.

Flood of May 21, 1901, reached a stage of 28.0 ft at Dandridge. Stages of 40 ft in March 1867 and 32 ft in May 1875 or 1876 are reported.

Remarks.--Records good except those for period of no gage-height record, which are fair.

Flow completely regulated by Douglas Lake (see p. 224).

Revisions (water years).--WSP 1306: 1920(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.5	21	2.5	440
1.6	31	3.0	900
1.7	46	4.0	2,150
1.8	68	5.0	3,940
2.0	132	7.0	9,720
2.2	230	11.0	27,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,810	*7,870	17,000	16,100	12,300	2,870	*7,700	25	11,900	*8,230	7,440	9,760
2	7,960	7,900	*16,900	*12,600	12,300	597	7,920	27	12,600	8,550	605	*12,500
3	6,740	7,580	16,800	12,400	*11,800	12,000	7,830	25	12,500	8,530	42	13,700
4	1,140	11,800	16,600	11,500	11,800	*14,900	7,800	25	9,690	6,670	4,530	10,600
5	928	4,840	16,500	10,800	10,800	14,300	7,710	941	*11,600	7,560	4,400	10,700
6	1,900	5,760	16,000	7,860	244	14,200	5,300	5,320	3,820	3,930	4,800	5,450
7	*2,950	*6,070	15,800	7,320	200	11,200	7,650	2,040	7,900	6,890	4,360	3,250
8	3,220	5,590	15,800	8,310	5,850	2,830	8,370	6,640	10,900	4,770	5,540	9,150
9	4,340	3,500	15,900	7,720	10,700	10,300	7,650	14,200	11,100	4,910	5,010	7,140
10	6,470	5,000	16,100	5,770	12,800	9,920	8,520	17,300	10,900	3,230	2,900	8,480
11	6,180	7,000	16,300	5,880	13,400	4,960	9,210	17,500	11,000	2,390	12,100	9,340
12	6,450	6,000	12,800	5,920	13,400	9,270	7,430	17,800	11,700	1,950	7,520	9,560
13	6,420	6,000	14,900	6,710	13,400	7,930	5,400	*17,700	11,700	1,000	9,790	6,150
14	11,800	5,500	15,900	7,170	13,200	10,200	7,280	17,900	11,000	2,200	12,200	9,120
15	12,300	1,500	15,600	4,830	13,000	2,840	5,580	11,600	11,400	4,080	11,700	7,510
16	13,800	30	15,400	5,710	12,600	1,770	1,640	15,900	12,100	2,790	7,410	7,040
17	13,800	50	15,300	7,340	12,500	8,340	4,300	17,500	6,960	3,850	7,110	7,920
18	13,900	40	15,200	7,250	12,300	2,960	2,530	17,500	6,880	5,860	11,300	8,330
19	8,270	7,000	14,900	7,160	5,490	25	2,630	17,000	9,350	6,080	*8,340	6,400
20	5,820	9,500	14,700	7,160	3,670	6,130	1,450	17,700	7,580	2,030	8,920	5,430
21	12,500	8,500	14,700	5,070	6,420	6,420	2,050	14,600	9,080	6,860	8,780	4,670
22	12,600	9,500	15,000	7,100	8,350	4,410	1,580	15,200	9,760	7,140	10,500	157
23	13,100	8,500	16,300	7,160	13,200	1,710	1,380	17,400	10,400	4,690	7,170	6,720
24	13,100	8,500	18,700	4,980	12,300	6,310	1,620	17,400	5,740	3,350	5,260	5,960
25	14,300	12,000	19,200	73	12,500	1,050	83	17,500	11,300	1,390	10,500	5,260
26	15,000	16,000	20,600	682	11,200	891	25	14,500	6,770	2,120	11,000	6,100
27	3,080	16,000	23,100	1,690	4,140	1,420	26	12,400	6,820	1,470	10,800	6,500
28	6,400	16,000	22,600	2,280	3,360	721	26	12,000	3,000	6,020	10,800	9,730
29	6,420	14,000	22,200	8,980	-	693	29	12,500	2,620	8,290	7,690	12,400
30	9,510	17,000	20,800	12,600	-	720	28	17,900	9,630	8,360	4,770	11,200
31	7,530	-	18,700	-	-	3,160	-	12,100	-	9,180	4,810	-
Total	251,738	234,330	526,300	228,435	272,804	174,847	130,745	372,343	277,700	154,280	228,097	236,207
Mean	8,121	7,811	16,980	7,369	9,743	5,640	4,358	12,010	9,257	4,977	7,358	7,874

Observed

Adjusted†

Calendar year 1957:	Max	32,800	Min	29	Mean	8,970	Mean	9,031	Cfsm	1.99	In.	26.98
Water year 1957-58:	Max	23,100	Min	25	Mean	8,460	Mean	8,333	Cfsm	1.83	In.	24.90

* Discharge measurement made on this day.

† Adjusted for change in contents in Douglas Lake.

Note.--No gage-height record Nov. 9 to Dec. 1; discharge estimated on basis of records for French Broad River near Knoxville, Little Pigeon River at Sevierville, and Douglas powerplant records.

TENNESSEE RIVER BASIN

4700. Little Pigeon River at Sevierville, Tenn.

Location.--Lat 35°52'34", long 83°34'36", on left bank at Eckel farmhouse, 0.5 mile downstream from city limits of Sevierville, Sevier County, and 0.5 mile downstream from West Fork Little Pigeon River.

Drainage area.--353 sq mi.

Records available.--October 1920 to September 1958. Prior to November 1920 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 881.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 14, 1928, staff gage at same site and datum.

Average discharge.--38 years, 552 cfs.

Extremes.--Maximum discharge during year, 9,660 cfs Nov. 18 (gage height, 10.46 ft); minimum, 68 cfs Sept. 6 (gage height, 0.70 ft); minimum daily, 78 cfs Sept. 20. 1920-58: Maximum discharge, 32,000 cfs June 29, 1928 (gage height, 15.4 ft), from rating curve extended above 20,000 cfs; minimum, 2.8 cfs Sept. 21, 1925 (gage height, 0.33 ft); minimum daily, 8.4 cfs Sept. 9, 1925.

Remarks.--Records good. Some regulation at low flow caused by powerplants on forks. Discharge measurements generally made twice a month.

Revisions (water years).--WSP 783: 1921-34. WSP 1336: 1921(M), 1922, 1923(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 24 to Nov. 25)

Oct. 1 to Sept. 6				Sept. 6-30	
0.8	80	2.0	615	0.7	68
1.0	130	3.0	1,300	1.0	141
1.3	235	6.0	4,380	1.3	260
1.6	385	9.0	8,020		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	248	266	579	609	1,140	1,110	1,600	1,570	295	170	295	113
2	235	240	513	525	1,120	852	1,240	1,220	356	157	265	98
3	244	223	495	473	898	723	1,040	1,080	290	148	295	90
4	275	203	781	429	742		1,050	898	266	145	478	87
5	495	188	657	390	1,140	549	904	846	248	164	325	87
6	363	174	567	380	4,090	501	1,620	2,900	235	178	266	82
7	490	160	1,920	385	3,210	501	1,080	6,900	223	157	240	90
8	358	178	4,020	368	2,160	717	826	3,260	211	463	244	107
9	276	363	2,770	290	1,380	826	705	1,900	195	620	219	95
10	231	235	2,170	285	1,050	904	752	1,460	188	663	211	82
11	195	195	1,380	285	865	705	1,200	1,260	178	519	181	82
12	219	181	965	280	729	621	891	1,740	192	443	195	148
13	235	170	806	280	645	699	748	1,120	170	723	294	129
14	195	506	800	555	567	820	651	884	157	780	336	95
15	174	585	944	495	573	657	651	748	349	462	280	86
16	157	1,330	1,140	484	513	573	687	657	542	374	315	80
17	177	2,080	1,310	440	451	525	615	884	266	669	253	84
18	549	6,140	1,060	418	434	645	567	681	211	412	215	86
19	402	3,790	972	374	446	627	519	561	181	424	181	80
20	280	1,610	3,430	368	424	585	507	579	248	1,440	164	78
21	231	937	2,590	490	365	537	507	501	195	1,900	151	172
22	199	735	1,390	657	478	484	681	456	227	1,760	145	252
23	174	2,040	1,010	537	525	446	846	424	374	858	145	129
24	479	1,270	820	693	513	451	669	402	271	1,500	320	102
25	555	4,660	717	1,190	519	711	5,220	501	195	1,430	295	90
26	537	3,320	1,740	924	1,190	768	2,140	446	636	852	248	86
27	591	1,470	1,220	787	2,410	1,140	1,590	590	603	651	181	84
28	446	993	1,240	645	1,790	1,240	1,850	368	320	490	151	84
29	358	800	813	573	-	1,080	3,030	341	235	398	139	86
30	315	687	675	519	-----	951	2,720	310	195	356	124	84
31	500	-----	603	464	-----	1,140	-----	300	-----	280	119	-----
Total	10,383	35,729	39,795	15,612	30,387	22,715	36,906	35,587	8,234	19,784	7,290	3,051
Mean	335	1,191	1,284	504	1,065	733	1,230	1,148	274	638	235	102
Cfsm	0.949	3.937	3.664	1.43	3.07	2.08	3.48	3.25	0.776	1.81	0.665	0.289
In.	1.09	3.76	4.19	1.64	3.20	2.39	3.88	3.75	0.776	2.08	0.77	0.32
Calendar year 1957: Max	18,700			Min	68	Mean	841	Cfsm	2.38	In.	32.31	
Water year 1957-58: Max	6,900			Min	78	Mean	727	Cfsm	2.06	In.	27.95	

Peak discharge (base, 7,000 cfs).--Nov. 18 (7 a.m.) 9,660 cfs (10.46 ft); Dec. 20 (4:30 p.m.) 7,040 cfs (8.28 ft); Apr. 25 (8 a.m.) 7,940 cfs (8.94 ft); May 7 (8 a.m.) 8,550 cfs (9.35 ft).

4705. French Broad River near Knoxville, Tenn.

Location.--Lat 35°57'30", long 83°46'26", on left bank 45 ft upstream from Riverdale Ferry, 0.7 mile downstream from Johnson Hollow, 7.5 miles upstream from confluence with Holston River, and 8 miles east of Knoxville, Knox County. Prior to Oct. 1, 1957, at site 200 ft upstream.

Drainage area.--5,101 sq mi.

Records available.--October 1945 to September 1958. Prior to December 1945 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. December 1945 to September 1957 at site 200 ft upstream at same datum.

Average discharge.--13 years, 7,464 cfs (unadjusted).

Extremes.--Maximum discharge during year, 25,400 cfs Dec. 27 (elevation, 823.80 ft); minimum, 364 cfs Sept. 23 (elevation, 814.41 ft); minimum daily, 780 cfs Aug. 3. 1945-58: Maximum discharge, 47,500 cfs Feb. 1, 1957 (elevation, 828.82 ft), from rating curve extended above 33,000 cfs; minimum, 67 cfs Oct. 25, 1953 (elevation, 813.38 ft); minimum daily, 68 cfs Oct. 23-26, 1953.

Remarks.--Records good. Flow regulated by Douglas Lake (see p. 224), 24.6 miles upstream.

Rating table, water year 1957-58 (elevation, in feet,
and discharge, in cubic feet per second)

815.1	760	817.0	3,240
815.5	1,070	819.0	8,500
816.0	1,600	824.0	26,200
816.5	2,280		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,630	8,160	17,500	17,600	13,500	4,640	8,900	2,600	12,200	8,490	7,810	8,300
2	7,480	8,270	17,300	13,300	13,700	1,460	9,800	1,950	12,500	8,930	3,130	12,500
3	7,600	7,680	*17,100	13,000	12,900	9,990	9,410	1,710	12,600	8,620	780	13,400
4	4,300	11,900	17,300	12,200	12,500	12,000	9,350	1,450	10,600	7,310	3,050	11,100
5	1,580	5,950	17,000	11,500	12,600	*14,800	9,110	1,710	11,000	7,680	5,370	11,600
6	1,550	5,450	16,600	9,380	6,140	14,600	7,210	9,450	7,720	5,320	4,840	6,160
7	3,180	6,160	18,700	*7,490	4,190	13,400	9,170	13,500	5,610	5,910	4,650	4,060
8	3,640	5,800	21,800	8,570	5,960	4,860	*9,350	9,960	10,700	7,060	5,860	8,350
9	4,690	5,650	19,200	8,690	13,100	9,120	9,080	15,300	11,000	6,180	4,890	7,760
10	6,210	3,500	18,700	6,360	13,400	10,700	8,930	19,600	10,700	*4,470	3,540	8,140
11	5,600	7,040	17,800	6,410	14,400	8,220	11,100	19,600	11,500	4,180	9,970	8,890
12	6,620	*7,100	14,200	6,360	*14,400	7,190	9,110	20,100	11,800	1,990	8,550	9,460
13	6,960	5,830	15,800	6,760	14,200	10,700	6,570	*19,300	11,200	1,650	9,270	7,110
14	10,300	5,700	16,500	8,570	14,000	10,100	8,220	19,200	11,000	3,220	11,800	7,940
15	*12,400	4,360	16,400	5,260	13,900	6,340	6,600	14,400	10,500	3,420	12,600	*8,630
16	13,500	1,680	16,300	5,670	13,400	2,520	4,660	15,300	12,900	4,500	8,780	6,940
17	14,000	3,340	16,500	8,160	13,200	6,680	3,540	18,400	8,870	3,530	6,440	8,220
18	15,000	9,500	16,200	7,910	13,000	6,090	3,600	18,600	7,400	5,320	11,200	8,230
19	10,100	10,200	15,800	7,800	9,000	1,230	4,130	17,700	8,500	7,190	9,370	7,880
20	7,210	10,800	18,400	7,770	5,000	5,560	2,000	18,700	8,660	5,010	9,210	5,520
21	10,600	9,160	18,400	5,480	6,500	5,820	3,190	15,300	8,860	7,730	8,570	5,080
22	12,400	10,800	16,500	8,100	8,240	6,370	1,950	14,200	9,830	9,300	10,200	2,400
23	12,300	11,100	16,700	7,910	11,500	4,150	3,030	17,900	10,400	6,750	8,540	3,740
24	13,600	10,200	19,100	7,010	12,700	5,470	2,120	18,000	7,010	4,610	6,260	7,070
25	14,800	15,500	19,700	2,380	13,200	3,180	6,760	18,100	11,000	3,900	9,410	5,540
26	15,800	20,900	21,800	1,820	13,600	1,860	3,770	15,700	8,700	2,300	10,800	6,160
27	6,410	16,200	*24,900	2,730	8,110	2,590	2,460	12,800	7,410	2,690	10,600	6,730
28	6,540	18,000	23,900	2,550	6,200	2,230	2,090	11,700	4,200	5,740	11,000	9,440
29	7,010	14,600	23,200	6,590	-	2,100	4,190	12,700	3,310	7,440	8,170	*11,300
30	8,450	17,700	22,000	13,200	-	2,000	4,740	12,500	7,520	8,740	6,270	12,500
31	8,550	-	19,200	13,000	-	3,990	-	12,200	-	9,620	4,120	-
Total	260,990	280,230	570,500	249,530	312,540	199,980	184,140	419,830	285,200	178,800	235,050	240,170
Mean	8,419	9,341	18,400	8,049	11,160	6,451	6,138	13,540	9,507	5,768	7,582	8,006

	Observed				Adjusted †			
Calendar year 1957:	Max	44,500	Min	903	Mean	10,340	Mean	10,410
Water year 1957-58:	Max	24,900	Min	780	Mean	9,362	Mean	9,255
							Cfsm	2.04
							Cfsm	1.81
							In.	27.69
							In.	24.58

* Discharge measurement made on this day.

† Adjusted for change in contents in Douglas Lake.

TENNESSEE RIVER BASIN

4715. South Fork Holston River at Riverside, near Chilhowie, Va.

Location.--Lat 36°45'37", long 81°37'53", on right bank 400 ft upstream from highway bridge at Riverside, Smyth County, 900 ft upstream from Spring Branch, 3.2 miles downstream from Redstone Branch, and 4 miles southeast of Chilhowie.

Drainage area.--76.1 sq mi.

Records available.--October 1920 to December 1931, July 1942 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Prior to October 1924, published as "near Chilhowie." June 1907 to December 1909 at site 4½ mile downstream also published as "near Chilhowie," records not equivalent.

Gage.--Water-stage recorder. Datum of gage is 2,106.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Nov. 1, 1920, to Nov. 14, 1931, chain gage at site 400 ft downstream at same datum.

Average discharge.--27 years, 109 cfs.

Extremes.--Maximum discharge during year, 3,670 cfs Aug. 1 (gage height, 8.18 ft); minimum, 27 cfs Oct. 16, 22, 23 (gage height, 1.30 ft).

1920-31, 1942-58: Maximum discharge, 6,000 cfs June 12, 1923 (gage height, 9.0 ft, from graph based on gage readings, site and datum then in use); from rating curve extended above 1,100 cfs by logarithmic plotting; minimum recorded, 2 cfs Aug. 26, Oct. 15, 1943, Aug. 9, 11, 1944, Oct. 19, 1945; minimum daily, 8 cfs July 19, 1926.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1033: 1943-44(m). WSP 1306: 1921-31(M). WSP 1386: Drainage area.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

1.3	27	2.5	273	1.3	27	3.0	445
1.5	48	3.0	445	1.6	61	4.0	850
1.7	76	4.0	850	2.0	146	5.0	1,360
2.0	134						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*54	34	97	143	240	334	347	268	120	44	140	52
2	48	33	86	122	293	260	*282	254	*130	41	150	50
3	45	33	79	*108	232	222	246	276	117	40	1,000	47
4	41	35	91	90	189	195	219	268	101	40	500	45
5	39	31	*86	81	176	170	203	414	92	42	368	44
6	37	31	83	b75	271	157	271	685	86	47	254	43
7	35	30	97	b70	665	143	364	805	79	56	*195	41
8	34	31	361	b72	645	141	328	685	72	51	160	40
9	33	34	340	b68	378	143	274	457	71	49	130	38
10	31	33	235	b64	276	*141	246	354	75	*53	100	37
11	31	32	184	b62	230	132	251	296	64	51	85	36
12	31	31	139	61	195	124	240	260	64	50	95	35
13	31	31	116	63	168	138	219	232	60	50	140	36
14	30	*35	106	282	143	157	195	*205	60	48	230	36
15	28	54	99	304	141	143	181	184	74	52	160	35
16	28	76	90	243	119	132	178	168	71	50	140	33
17	31	106	84	195	b115	122	160	151	63	110	120	38
18	34	209	81	165	*b110	117	151	141	58	90	110	45
19	33	664	79	135	b100	112	143	143	56	85	90	37
20	30	375	210	122	92	110	135	141	63	110	80	35
21	29	201	493	154	85	103	124	130	56	130	75	62
22	27	134	282	222	83	96	135	117	53	120	70	42
23	27	139	211	195	83	90	249	108	53	100	80	36
24	30	139	170	197	86	101	246	103	52	110	110	34
25	34	266	146	296	98	173	331	94	49	100	160	34
26	33	372	443	254	211	260	325	94	53	90	120	34
27	34	235	461	232	434	445	276	100	57	120	80	35
28	33	170	302	200	453	403	319	140	51	95	80	35
29	32	134	238	173	-	347	358	120	47	110	65	34
30	33	112	192	154	-----	334	299	110	45	95	60	33
31	34	-----	160	143	-----	400	-----	100	-----	80	55	-----
Total	1,050	3,858	5,841	4,745	6,311	5,945	7,295	7,603	2,092	2,309	5,212	1,170
Mean	33.9	128	188	153	225	192	243	245	69.7	74.5	168	39.0
Cfsm	0.445	1.68	2.47	2.01	2.96	2.52	3.19	3.22	0.916	0.979	2.21	0.512
In.	0.51	1.87	2.85	2.32	3.08	2.90	3.56	3.71	1.02	1.33	2.55	0.57

Calendar year 1957: Max 2,530 Min 20 Mean 155 Cfsm 2.04 In. 27.59
Water year 1957-58: Max 1,000 Min 27 Mean 146 Cfsm 1.92 In. 26.07

Peak discharge (base, 500 cfs).--Nov 19 (1 p.m.) 1,040 cfs (4.37 ft); Dec. 21 (12:30 p.m.) 661 cfs (5.54 ft); Dec. 26 (5 to 8 p.m.) 625 cfs (3.45 ft); Feb. 7 (9:30 p.m.) 865 cfs (4.03 ft); Mar. 27 (3 p.m.) 509 cfs (3.16 ft); May 7 (7 p.m.) 880 cfs (4.06 ft); Aug. 1 (time unknown) 3,670 cfs (8.18 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record May 27 to June 2, July 12 to Aug. 4, Aug. 9 to Sept. 30; discharge estimated on basis of recorded range in stage, weather records, records for South Fork Holston River at Vestal and Middle Fork Holston River at Severnville Ford.

4725. Beaverdam Creek at Damascus, Va.

Location.--Lat 36°37'40", long 81°47'28", on right bank in pumphouse of American Cyanamid Co. at Damascus, Washington County, 0.65 mile upstream from mouth.

Drainage area.--56.0 sq mi.

Records available.--August 1947 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,946.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--11 years, 103 cfs.

Extremes.--Maximum discharge during year, 1,060 cfs Dec. 8 (gage height, 3.24 ft); minimum, 11 cfs Sept. 30; minimum gage height, 0.33 ft Oct. 15.
1947-58: Maximum discharge, 5,280 cfs Mar. 18, 1955 (gage height, 5.75 ft); minimum, 2.0 cfs Sept. 8, 1954 (gage height, 0.15 ft).

Remarks.--Records good except those for periods of ice effect, which are fair. Plant dis-verts about 0.5 cfs 800 ft above station.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.3	10	1.5	240
.6	42	2.0	415
.8	72	3.0	685
1.0	112	3.5	1,280

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*28	28	80	114	238	316	225	246	58	27	38	36
2	22	24	67	95	316	222	188	252	61	27	55	32
3	21	23	66	b80	228	178	170	261	50	27	102	30
4	20	22	180	b70	170	150	152	225	45	27	117	27
5	20	22	*148	b64	148	124	142	240	41	28	72	26
6	18	21	130	62	443	114	182	620	41	30	55	26
7	18	21	216	64	715	108	222	642	39	30	*45	24
8	16	21	960	b55	598	108	202	665	38	32	41	23
9	15	27	598	b50	344	106	175	415	38	40	43	22
10	14	23	347	b45	225	*121	162	280	42	*38	40	22
11	15	21	234	36	175	112	165	237	34	36	34	20
12	15	19	b150	b56	142	106	150	208	34	36	40	19
13	18	19	b150	52	119	130	140	180	32	38	67	21
14	16	*23	112	95	102	188	124	*152	30	31	66	21
15	14	28	110	106	95	178	119	128	35	27	52	19
16	15	98	102	112	91	152	106	114	41	27	104	16
17	20	133	102	104	b84	133	93	102	33	85	72	23
18	46	312	106	95	b70	130	83	87	32	49	55	27
19	31	527	106	85	b70	119	78	85	31	68	50	22
20	26	353	288	76	b75	110	72	83	45	62	36	19
21	22	160	507	108	b76	106	72	74	35	62	32	41
22	20	104	294	152	b80	99	124	66	33	87	33	28
23	20	172	190	130	b85	93	358	61	33	59	72	19
24	34	182	150	189	97	91	255	59	30	117	106	17
25	36	264	130	535	126	130	590	66	27	152	225	16
26	31	347	453	322	360	158	447	70	46	114	155	16
27	31	210	435	225	642	228	322	53	56	78	99	15
28	28	145	280	170	467	249	277	99	36	56	69	14
29	24	112	195	140	-	205	258	89	31	50	55	14
30	26	93	150	121	-----	185	249	69	30	41	48	12
31	27	-----	121	112	-----	231	-----	61	-----	56	42	-----
Total	707	3,534	7,117	3,698	6,381	4,680	5,902	5,989	1,157	1,615	2,118	667
Mean	22.8	118	230	119	228	151	197	193	38.6	52.1	68.3	22.2
Cfsm	0.407	2.11	4.11	2.12	4.07	2.70	3.52	3.45	0.689	0.930	1.22	0.396
In.	0.47	2.35	4.74	2.44	4.24	3.11	3.93	3.98	0.77	1.07	1.41	0.44

Calendar year 1957: Max 3,400 Min 8.0 Mean 153 Cfsm 2.73 In. 37.02
Water year 1957-58: Max 960 Min 12 Mean 119 Cfsm 2.12 In. 28.95
Peak discharge (base, 600 cfs).--Nov. 19 (12 m.) 670 cfs (2.61 ft); Dec. 8 (10:30 a.m.) 1,060 cfs (3.24 ft); Dec. 21 (1 a.m.) 624 cfs (2.51 ft); Dec. 26 (5 p.m.) 606 cfs (2.47 ft); Jan. 25 (5 a.m.) 638 cfs (2.54 ft); Feb. 7 (11 p.m.) 788 cfs (2.83 ft); Feb. 26 (12 p.m.) 794 cfs (2.84 ft); Apr. 25 (2 p.m.) 715 cfs (2.70 ft); May 7 (10 p.m.) 770 cfs (2.80 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

TENNESSEE RIVER BASIN

4730. South Fork Holston River at Vestal, Va.

Location--Lat 36°39'06", long 81°50'39", on right bank 500 ft upstream from bridge on U. S. Highway 58 at Vestal, Washington County, 0.7 mile downstream from Laurel Creek, 3.2 miles northwest of Damascus, and 4.9 miles upstream from Middle Fork Holston River.

Drainage area--301 sq mi.

Records available--October 1931 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage--Water-stage recorder. Datum of gage is 1,792.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--27 years, 461 cfs.

Extremes--Maximum discharge during year, 5,990 cfs Aug. 2 (gage height, 9.85 ft); minimum, 102 cfs Sept. 29 (gage height, 2.55 ft); minimum daily, 110 cfs Oct. 16.
1931-58: Maximum discharge, 15,100 cfs Jan. 29, 1957 (gage height, 15.35 ft), from rating curve extended above 10,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 30 cfs Oct. 14, 1941, Dec. 24, 1943 (gage height, 2.16 ft); minimum, daily, 60 cfs Sept. 18, 1954.

Remarks--Records good except those for periods of no gage-height record, which are fair. Some diurnal fluctuation caused by powerplant above station.

Revisions (water years)--WSP 823: Drainage area. WSP 1306: 1932-33(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 6-8, 10-12, Feb. 18-21)

Oct. 1 to Feb. 28				Mar. 1 to Sept. 30			
2.6	110	5.0	1,030	2.6	110	5.0	1,050
3.0	200	6.0	1,770	3.0	200	6.0	1,770
4.0	540	8.0	3,630	4.0	545	8.0	3,630

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*200	158	418	560	830	1,380	1,230	1,080	500	180	660	215
2	175	146	369	484	1,150	1,050	*990	1,110	550	180	2,660	200
3	168	144	338	*418	880	865	865	1,230	476	170	3,520	192
4	160	144	520	372	728	740	790	1,110	400	160	2,400	182
5	146	138	*480	358	640	640	740	1,420	360	170	1,140	180
6	138	134	442	320	1,200	590	915	2,850	350	210	765	178
7	134	132	687	350	2,670	545	1,170	3,330	330	220	*568	168
8	128	132	2,760	300	2,760	568	1,100	3,030	300	220	476	165
9	124	155	2,080	285	1,540	568	1,000	2,000	300	240	439	155
10	120	140	1,210	270	1,060	*590	900	1,420	310	*246	372	150
11	118	130	880	250	825	545	1,000	1,200	280	252	334	148
12	122	130	610	260	682	518	900	1,050	270	246	355	146
13	120	128	560	267	600	568	850	890	250	243	590	148
14	118	*142	500	595	520	740	800	*790	250	231	890	146
15	112	178	472	750	520	690	740	690	280	264	590	140
16	110	365	428	682	453	615	700	640	300	243	568	136
17	130	484	418	800	404	545	650	568	270	514	522	152
18	200	1,060	408	540	350	527	600	536	250	341	436	175
19	158	2,180	414	442	330	488	575	522	230	418	376	150
20	136	1,470	1,060	428	310	460	540	500	250	532	350	142
21	130	775	2,000	500	320	453	500	450	230	640	296	202
22	126	560	1,150	705	355	425	600	422	225	590	288	180
23	124	682	800	640	352	404	1,000	410	220	496	334	150
24	172	705	660	705	390	400	1,100	400	210	536	330	138
25	175	1,090	580	1,820	464	545	2,040	360	200	496	640	132
26	152	1,500	1,700	1,210	1,200	790	1,680	400	210	470	484	132
27	158	970	1,860	940	2,310	1,140	1,260	450	230	615	372	132
28	150	682	1,210	750	2,040	1,230	1,230	560	210	464	313	136
29	142	560	880	640	-	1,080	1,290	500	200	555	273	130
30	142	480	705	580	-----	1,020	1,170	450	190	246	484	126
31	160	-----	600	540	-----	1,290	-----	400	-----	376	228	-----
Total	4,448	15,694	27,229	17,521	25,883	22,009	28,925	30,788	8,631	11,002	21,855	4,726
Mean	143	523	878	565	924	710	964	993	288	355	705	158
Cfsm	0.475	1.74	2.92	1.88	3.07	2.36	3.20	3.30	0.957	1.18	2.34	0.525
In.	0.55	1.94	3.37	2.17	3.20	2.72	3.57	3.80	1.07	1.36	2.70	0.59

Calendar year 1957: Max 11,200 Min 89 Mean 683 Cfsm 2.27 In. 29.59
Water year 1957-58: Max 3,520 Min 110 Mean 599 Cfsm 1.99 In. 27.04

Peak discharge (base, 3,000 cfs)--Dec. 8 (12 m.) 3,000 cfs (7.37 ft); Feb. 8 (12:30 a.m.) 3,320 cfs (7.69 ft); May 7 (9:30 p.m.) 3,710 cfs (8.07 ft); Aug. 2 (12:30 a.m.) 5,990 cfs (9.85 ft); Aug. 3 (7:30 p.m.) 5,640 cfs (9.60 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Apr. 8-24, May 23 to June 2, June 5 to July 7; discharge estimated on basis of recorded range in stage, weather records, records for South Fork Holston River at Riverside, Beaverdam Creek at Damascus and Middle Fork Holston River at Sevenmile Ford.

4740. Middle Fork Holston River at Sevenmile Ford, Va.

Location.--Lat 36°48'26", long 81°37'20", on right bank at downstream side of bridge on U. S. Highway 11 at Sevenmile Ford, Smyth County, 0.3 mile upstream from Meade Creek and 3.3 miles downstream from Walker Creek.

Drainage area.--132 sq mi.

Records available.--July 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,960.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 162 cfs.

Extremes.--Maximum discharge during year, 1,820 cfs May 6 (gage height, 5.67 ft); minimum, 17 cfs Nov. 5 (gage height, 2.08 ft); minimum daily, 30 cfs Oct. 13, Nov. 2, 6.

1942-58: Maximum discharge, 7,680 cfs Jan. 29, 1957 (gage height, 10.75 ft); minimum, 9 cfs Sept. 26, 1944 (gage height, 1.32 ft); minimum daily, 20 cfs Sept. 26, 1944.

Remarks.--Records good. Some diurnal fluctuation at low flow caused by mill 9 miles above station.

Revisions (water years).--WSP 973: 1942(m). WSP 1306: 1947(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

2.1	19	3.0	275
2.3	50	4.0	790
2.5	102	6.0	2,050
2.7	162		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*132	45	99	144	451	450	630	385	99	50	64	47
2	62	30	88	126	470	311	*415	495	*126	50	117	45
3	50	35	79	*111	306	252	340	581	93	48	509	45
4	45	42	150	102	226	207	280	430	85	48	380	45
5	38	33	*150	90	196	177	257	1,280	79	55	177	43
6	35	30	126	85	280	162	385	1,600	79	52	123	43
7	40	35	258	89	872	153	555	1,520	78	62	93	43
8	33	42	1,220	85	845	144	460	1,070	73	66	*82	42
9	33	33	585	73	440	147	345	647	79	64	76	38
10	33	36	335	68	298	*141	302	540	96	*79	66	43
11	33	36	230	66	230	129	420	790	76	90	62	42
12	33	36	162	84	189	123	390	576	82	71	55	38
13	30	36	141	84	165	135	311	*415	73	71	87	40
14	38	*38	126	588	141	174	252	325	71	71	82	40
15	33	36	117	470	144	159	222	270	76	64	57	38
16	33	59	105	316	a150	147	222	239	73	76	64	38
17	38	102	96	226	a130	141	192	211	66	108	105	38
18	42	380	90	180	a125	147	177	189	64	79	71	40
19	36	465	90	144	a120	147	168	183	64	73	64	38
20	32	244	295	135	*a110	153	156	171	82	68	57	36
21	40	135	550	135	a100	150	153	153	66	79	55	45
22	33	99	298	147	93	141	162	144	64	93	50	40
23	33	120	203	135	98	139	410	138	64	73	59	38
24	47	129	168	147	138	162	335	135	62	141	57	36
25	47	661	147	257	183	239	470	129	50	108	102	36
26	38	455	682	219	478	345	420	129	66	85	73	35
27	42	230	586	234	818	647	325	114	88	90	62	36
28	40	174	345	200	680	535	495	120	64	71	55	36
29	38	144	239	171	-	555	495	111	59	82	52	35
30	40	120	183	153	-----	636	415	99	57	68	48	40
31	42	-----	156	150	-----	1,340	-----	96	-----	62	48	-----
Total	1,289	4,061	8,100	5,173	8,474	8,487	10,159	13,285	2,252	2,297	3,022	1,199
Mean	41.6	135	261	167	303	274	339	429	75.1	74.1	97.5	40.0
Cfsm	0.315	1.02	1.98	1.27	2.30	2.08	2.57	3.25	0.569	0.561	0.739	0.303
In.	0.36	1.14	2.28	1.46	2.40	2.40	2.87	3.75	0.63	0.65	0.85	0.34

Calendar year 1957: Max 5,020 Min 29 Mean 244 Cfsm 1.85 In. 25.04
 Water year 1957-58: Max 1,600 Min 30 Mean 186 Cfsm 1.41 In. 19.13

Peak discharge (base, 2,000 cfs).--No peak above base.

* Discharge measurement made on this day.
 a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby stations.

4765. South Fork Holston River below South Holston Dam, Tenn.

Location.--Lat 36°31'25", long 82°05'50", on right bank 1,900 ft downstream from South Holston Dam powerhouse, 1.0 mile upstream from bridge at Bristol waterworks, 1.0 mile upstream from Thomas Creek, 6.7 miles southeast of Bristol, Sullivan County, and at mile 49.4.

Drainage area.--703 sq mi.

Records available.--July 1951 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,450.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years, 919 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,300 cfs Feb. 1 (gage height, 37.39 ft); minimum, 3.4 cfs Apr. 16 (gage height, 32.32 ft); minimum daily, 4.0 cfs Apr. 15.
1951-58: Maximum discharge, 8,270 cfs Feb. 12, 1957 (gage height, 40.45 ft); no flow for part of Oct. 27, 1954; minimum daily, 0.5 cfs Oct. 26, 1954.

Remarks.--Records good except those below 50 cfs, which are fair. Flow completely regulated by South Holston Lake (see p. 224).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

32.3	3.0	33.4	113
32.4	5.1	34.0	295
32.5	7.9	35.0	770
32.7	16	36.0	1,620
32.9	30	37.0	2,790
33.1	53		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,630	2,070	129	126	1,770	2,260	11	1,380	548	1,490	1,450	1,790
2	1,640	9.5	22	7.6	1,530	270	1,000	1,590	1,710	1,590	581	1,850
3	*1,600	562	792	7.1	2,500	729	11	al,350	1,660	1,400	359	1,690
4	1,720	2,640	579	7.1	1,890	1,590	*1,580	11	1,710	558	2,060	*2,270
5	2,000	*893	102	7.1	1,120	*1,540	1,190	al,550	1,790	294	2,100	2,510
6	743	1,110	6.5	7.1	*440	1,660	12	a550	1,830	9.7	*2,080	2,060
7	2,130	473	8.3	7.1	1,310	1,670	1,600	all	23	1,690	2,080	1,840
8	874	1,170	9.7	7.1	1,690	1,900	839	*all	10	1,300	2,140	1,830
9	1,660	1,890	214	1,480	263	9.0	632	444	1,100	*1,640	1,720	2,130
10	7.3	966	6.8	1,570	1,270	1,510	1,580	1,450	1,490	1,200	1,580	2,080
11	6.8	1,920	556	1,500	1,710	1,270	1,570	1,450	*805	11	1,730	2,050
12	6.5	1,840	1,050	912	1,630	1,490	1,020	1,640	276	1,520	1,590	1,450
13	6.5	1,110	284	2,440	1,590	1,720	1,400	2,340	1,110	921	2,030	1,360
14	6.5	746	35	2,040	1,710	1,900	11	446	1,440	1,900	1,990	1,460
15	6.8	1,730	6.5	1,450	1,760	500	4.0	9.3	1,430	1,900	1,830	2,460
16	56	11	6.5	1,510	526	9.0	6.5	11	518	2,070	1,310	2,140
17	14	9.3	6.5	1,380	2,100	1,800	8.0	9.7	416	1,990	880	2,120
18	740	1,710	161	1,320	1,690	1,810	26	9.0	1,480	2,100	740	2,530
19	7.3	1,450	7.6	1,590	1,850	1,580	9.3	1,570	2,250	1,330	1,880	2,120
20	6.8	1,070	80	1,850	1,440	1,850	784	768	1,340	1,030	2,030	828
21	39	55	8.6	187	*1,040	1,890	488	1,370	153	1,120	1,960	10
22	7.1	600	9.3	1,390	805	2,090	1,080	1,340	9.7	1,860	1,510	2,050
23	85	10	9.3	1,940	853	1,640	710	1,570	10	1,430	1,850	2,090
24	1,230	12	9.7	2,030	450	2,430	634	1,650	245	1,920	1,270	2,790
25	7.3	400	9.7	650	1,880	694	116	1,630	2,270	1,340	1,090	2,790
26	1,730	231	11	8.6	2,630	988	12	1,460	581	1,810	1,030	2,760
27	2,030	220	7.6	958	2,570	1,680	11	1,340	869	2,010	1,420	2,220
28	1,930	12	7.6	1,790	2,060	1,250	74	1,250	1,140	1,840	2,040	1,020
29	2,220	198	7.9	870	-	698	380	1,660	9.7	1,960	1,960	2,250
30	1,330	774	8.6	375	-----	-----	10	1,630	1,760	1,990	2,570	2,690
31	1,970	-----	8.6	553	-----	732	-----	1,630	-----	2,100	2,600	-----
Total	27,439.9	25,891.8	4,160.0	29,969.8	42,077	41,369.0	18,428.8	33,260.0	29,943.4	45,323.7	51,280	59,238
Mean	885	863	134	967	1,503	1,534	614	1,073	998	1,462	1,654	1,975

Observed

Adjusted †

Calendar year 1957:	Max	7,990	Min	4.0	Mean	1,234	Mean	1,389	Cfsm	1.98	In.	26.83
Water year 1957-58:	Max	2,790	Min	4.5	Mean	1,119	Mean	1,218	Cfsm	1.73	In.	23.52

* Discharge measurement made on this day.

† Adjusted for change in contents in South Holston Lake.

a No gage-height record; discharge estimated on basis of South Holston powerplant records.

4784. Beaver Creek near Bristol, Va.

Location.--Lat 36°37'54", long 82°08'02", on right bank 50 ft upstream from bridge entering Kerns Bakery on U. S. Highway 11, 75 ft downstream from Goose Creek, 0.9 mile downstream from Clear Creek, and 2.1 miles northeast of Bristol, Va., Washington County.

Drainage area.--27.7 sq mi.

Records available.--July 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,780.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1957: Maximum discharge during period July to September, 204 cfs Sept. 14 (gage height, 4.19 ft); minimum, 11 cfs Sept. 6, 7 (gage height, 2.70 ft).

1957-58: Maximum discharge during water year, 795 cfs May 6, 1958 (gage height, 6.98 ft); minimum, 12 cfs several days in October and November.

Flood in 1936 reached a stage about 5 ft higher than that of May 6, 1958.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table, July 27, 1957, to Sept. 30, 1958 (gage height, in feet, and discharge, in cubic feet per second)

(Shifting-control method used Aug. 14-19, Aug. 26 to Sept. 30)

2.7	11	4.0	174
2.8	16	5.0	360
3.0	34	6.0	568
3.5	95		

Discharge, in cubic feet per second, 1957

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	12	12	9	-	14	12	17	-	16	22
2	-	12	12	10	-	14	14	18	-	15	20
3	-	12	12	11	*16.3	19	12	19	-	14	18
4	-	a15	12	12	-	16	12	20	-	13	18
5	-	*15	*12	13	-	15	20	21	-	13	18
6	-	15	11	14	-	13	57	22	-	13	16
7	-	14	11	15	-	44	30	23	-	13	16
8	-	14	12	16	-	18	22	24	-	13	15
Total											
Mean											
Cubic feet per second per square mile											
Runoff in inches											

Peak discharge (base, 300 cfs).--No peak above base.

* Discharge measurement made on this day.

† Result of discharge measurement.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, records for Middle Fork Holston River at Sevenmile Ford and Beaverdam Creek at Damascus.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	13	27	52	52	72	74	60	80	29	44	24
2	15	12	25	47	50	67	*66	60	*69	28	45	22
3	*15	12	26	*44	47	63	63	58	60	*27	52	22
4	15	12	*35	42	46	58	63	56	54	26	45	22
5	15	12	30	40	46	56	58	*145	53	28	41	21
6	14	12	28	38	50	54	62	*530	49	27	38	21
7	13	12	58	38	74	52	60	470	48	33	*36	22
8	13	13	91	36	72	52	56	250	47	54	36	22
9	13	13	64	35	63	53	53	174	46	34	35	23
10	13	13	55	33	58	50	56	182	44	47	34	23
11	13	12	49	33	56	48	56	214	44	36	a33	23
12	13	12	43	31	52	45	54	166	45	58	a32	23
13	13	12	40	31	*50	*54	50	139	43	45	a45	24
14	13	13	38	42	48	57	49	118	42	40	72	23
15	13	13	37	37	48	53	49	107	43	36	37	22
16	12	26	36	35	47	50	48	100	42	34	35	23
17	13	21	36	33	44	48	46	112	41	42	34	24
18	13	49	34	32	43	53	44	95	40	38	31	24
19	13	47	33	30	41	48	43	87	38	42	29	22
20	13	*31	72	30	40	48	42	81	45	41	a28	22
21	13	25	64	31	37	47	43	74	38	52	a27	23
22	13	22	55	21	37	47	42	71	37	60	a30	22
23	12	31	53	29	40	45	45	71	37	49	a35	20
24	14	26	46	49	42	45	42	67	36	77	a50	18
25	13	66	44	69	42	46	56	68	34	60	a35	18
26	13	47	110	55	118	46	52	63	44	52	28	18
27	13	38	78	52	106	49	54	58	35	48	26	18
28	13	35	68	47	84	50	*62	133	33	44	25	18
29	12	32	61	45	-	50	61	72	31	43	25	18
30	12	29	56	43	-	61	56	64	31	41	24	17
31	13	-	55	42	-	89	-	60	-	38	23	-
Total	414	709	1,543	1,232	1,533	1,656	1,605	4,005	1,329	1,309	1,110	642
Mean	13.4	23.6	49.8	39.7	54.8	53.4	53.5	129	44.3	42.2	35.8	21.4
Cfs/m	0.484	0.852	1.80	1.43	1.98	1.93	1.93	4.66	1.60	1.52	1.29	0.773
In.	0.56	0.95	2.08	1.65	2.06	2.22	2.15	5.37	1.78	1.75	1.49	0.86

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
Water year 1957-58: Max 530 Min 12 Mean 46.8 Cfs/m 1.69 In. 22.92

Peak discharge (base, 300 cfs).--May 6 (10:30 p.m.) 795 cfs (6.98 ft); May 10 (12 m.) 344 cfs (4.92 ft); May 28 (2 p.m.) 350 cfs (4.95 ft); July 24 (8:30 p.m.) 310 cfs (4.75 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, records for Middle Fork Holston River at Sevenmile Ford and Beaverdam Creek at Damascus.

TENNESSEE RIVER BASIN

4790. Watauga River near Sugar Grove, N. C.

Location.--Lat 36°14'18", long 81°49'22", on right bank 300 ft downstream from Cove Creek, 2.3 miles southwest of Sugar Grove, Watauga County, and at mile 64.4.

Drainage area.--90.8 sq mi.

Records available.--October 1939 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,607.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--19 years, 161 cfs.

Extremes.--Maximum discharge during year, 7,270 cfs Dec. 20 (gage height, 11.30 ft), from rating curve extended above 2,100 cfs as explained below; minimum, 28 cfs Sept. 15 (gage height, 1.49 ft).

1939-58: Maximum discharge, 50,800 cfs Aug. 13, 1940 (gage height, 29.6 ft, from profile based on floodmarks), from rating curve extended above 2,100 cfs on basis of slope-area measurement of peak flow; minimum, 6.5 cfs Jan. 1, 1954 (gage height, 1.13 ft), result of freezeup; minimum daily, 13 cfs Sept. 19, 30, 1954.

Flood in July 1916 reached a stage of 22.1 ft, from floodmarks on barn a quarter of a mile above station as witnessed by local resident (discharge, 28,000 cfs, from rating curve extended above 2,100 cfs as explained above).

Remarks.--Records excellent except those for periods of ice effect, which are good. Slight diurnal fluctuation at low flow caused by small mills above station.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

1.7	53	4.0	760	1.4	20	2.5	230
2.1	124	5.0	1,260	1.6	39	3.0	407
2.5	226	6.0	1,880	1.9	82	4.0	800
3.0	380	7.0	2,650	2.2	146	5.0	1,260

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	82	204	200	449	407	437	300	183	55	68	43
2	204	79	183	b170	314	318	365	314	178	55	67	39
3	166	76	170	b165	b270	272	347	358	141	52	86	38
4	146	72	191	b165	b250	236	377	325	129	54	65	37
5	122	69	160	b170	b300	203	332	355	120	82	54	36
6	105	66	150	b160	b500	189	591	880	114	82	51	35
7	94	65	189	136	213	183	507	1,160	109	99	49	34
8	84	133	580	b130	461	236	392	764	101	90	51	33
9	79	124	415	b120	b310	252	321	546	105	128	52	31
10	74	90	298	b110	b280	272	392	434	136	203	47	31
11	72	79	248	b115	b220	240	403	369	129	188	44	30
12	124	77	b200	b120	b200	221	328	339	114	175	82	33
13	90	76	b175	b305	b170	252	279	289	97	132	70	34
14	77	648	b200	636	b185	236	256	246	88	101	82	30
15	69	415	178	*407	b150	209	314	221	101	*86	109	28
16	67	280	*163	296	b145	192	507	194	93	82	72	31
17	*94	240	163	230	b140	180	373	209	77	82	182	*43
18	138	560	156	b200	b140	186	310	218	*77	75	97	61
19	97	1,630	166	b185	b135	175	276	282	75	88	70	39
20	86	*616	2,400	172	b135	164	246	269	99	82	61	36
21	79	373	1,160	249	b145	164	224	*209	80	101	55	75
22	76	286	566	269	b150	156	*370	180	84	99	*62	52
23	74	580	407	203	b160	151	515	159	109	97	58	41
24	183	418	328	282	b155	156	373	162	80	99	75	38
25	131	886	279	407	*b190	272	657	230	70	82	118	35
26	111	700	492	293	780	362	488	256	74	70	80	34
27	109	443	380	276	*860	*407	384	180	75	65	64	33
28	95	335	332	230	609	351	430	159	64	61	55	31
29	92	277	279	197	-	300	380	141	62	92	50	30
30	90	240	240	180	-----	289	332	129	58	86	46	31
31	86	-----	215	200	-----	585	-----	134	-----	61	44	-----
Total	3,418	10,013	11,267	6,976	8,416	7,816	11,506	10,011	3,022	2,886	2,146	1,122
Mean	110	334	363	225	301	252	364	323	101	93.1	69.2	37.4
Cfs/m	1.21	3.68	4.00	2.48	3.31	2.78	4.23	3.56	1.11	1.03	0.762	0.412
In.	1.40	4.10	4.61	2.86	3.45	3.20	4.71	4.10	1.24	1.18	0.88	0.46

Calendar year 1957: Max 5,100 Min 24 Mean 230 Cfs/m 2.53 In. 34.43
 Water year 1957-58: Max 2,400 Min 28 Mean 215 Cfs/m 2.37 In. 32.19

Peak discharge (base, 2,000 cfs).--Nov. 14 (4:30 p.m.) 2,030 cfs (6.21 ft); Nov. 19 (8 a.m.) 2,880 cfs (7.25 ft); Dec. 20 (4:30 p.m.) 7,270 cfs (11.30 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4840. Watauga River below Wilbur Dam, Tenn.

Location.--Lat 36°20'39", long 82°07'46", 1,800 ft downstream from Wilbur Dam, 0.7 mile downstream from Big Laurel Branch, 2.7 miles downstream from Watauga Dam, and 5 miles east of Elizabethton, Carter County.

Drainage area.--471 sq mi.

Records available.--October 1902 to December 1908 (published as "near Elizabethton"), January 1948 to September 1958. Prior to May 1903 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,550.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 11, 1903, to Dec. 31, 1908, chain gage at railroad bridge 2 miles downstream at different datum.

Average discharge.--16 years, 707 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,090 cfs Feb. 18 (gage height, 35.53 ft); minimum, 45 cfs Dec. 20 (gage height, 31.49 ft); minimum daily, 46 cfs Dec. 21-23. 1902-8, 1948-58: Maximum discharge observed, 21,500 cfs Jan. 22, 1906 (gage height, 13.6 ft, site and datum then in use), from rating curve extended above 2,500 cfs; minimum, 2.3 cfs July 11, 1953; minimum daily, 2.4 cfs Aug. 14, 1949; minimum gage height at present site, 30.73 ft July 11, 1953.

Remarks.--Records good. Flow completely regulated by Watauga Lake (see p. 224).

Revisions (water years).--WSP 1276: 1906(M). WSP 1306: 1905(M). WSP 1386: 1950.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

31.5	46	33.0	475
31.7	73	33.5	820
32.0	132	34.0	1,280
32.5	265	35.5	3,050

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,840	2,350	60	970	1,200	153	67	1,450	320	1,080	1,220	842
2	1,930	308	136	964	228	111	66	1,740	1,030	1,660	1,050	938
3	*1,940	72	1,060	946	1,780	404	66	1,510	1,450	1,000	498	1,160
4	1,850	1,500	477	231	1,520	*270	*61	72	1,640	438	1,310	*2,340
5	1,640	*1,140	99	146	*542	434	58	1,720	1,670	114	2,260	2,390
6	562	1,490	82	484	346	405	57	832	1,140	70	*943	1,980
7	2,100	1,090	66	560	1,640	1,890	367	108	68	1,320	899	172
8	2,220	1,280	66	684	1,670	886	310	90	87	1,090	532	996
9	1,880	2,370	148	1,720	228	58	58	73	614	*1,300	898	864
10	542	1,290	64	*1,600	600	1,180	738	72	*1,240	1,910	801	456
11	67	2,440	710	1,600	1,220	1,130	751	72	356	478	1,070	90
12	65	2,340	1,360	1,340	742	1,000	392	364	174	1,310	598	553
13	64	1,210	274	2,550	605	1,540	551	400	923	930	1,590	252
14	64	56	62	2,780	209	1,150	1,290	72	958	1,080	1,490	422
15	110	53	61	1,620	734	130	1,110	72	223	1,990	242	1,250
16	61	51	60	1,530	213	226	73	70	73	1,970	76	177
17	60	50	58	1,380	1,500	66	70	70	220	1,980	244	821
18	366	1,790	203	1,760	1,350	892	64	70	710	2,150	267	1,460
19	58	1,750	47	2,010	1,470	858	62	204	1,870	1,720	766	188
20	57	1,670	112	2,260	986	1,990	468	72	535	1,750	773	70
21	58	218	46	417	958	1,510	371	70	158	1,360	719	70
22	122	352	46	1,370	1,280	1,400	674	70	73	818	1,260	1,470
23	166	56	46	2,070	1,180	1,140	825	250	72	678	1,340	1,610
24	1,250	54	1,440	1,390	1,290	2,490	634	2,080	72	1,410	890	2,150
25	58	396	1,000	686	1,210	768	175	1,150	1,750	639	904	2,830
26	2,020	1,540	804	233	1,000	70	61	1,220	318	1,230	269	2,970
27	1,880	1,210	955	1,740	1,600	156	57	900	72	1,440	334	1,100
28	2,070	81	1,020	1,510	818	68	78	1,210	72	1,640	1,230	732
29	2,690	192	962	924	-	68	396	1,160	70	1,420	1,530	668
30	1,270	710	1,120	144	-	68	1,880	1,060	512	1,360	876	1,230
31	2,260	-----	1,090	245	-	66	-----	912	-----	1,030	1,460	-----
Total	31,319	29,079	13,734	37,824	28,109	24,049	11,816	19,215	18,450	38,561	28,339	32,451
Mean	1,010	969	443	1,220	1,004	776	394	620	615	1,244	914	1,082

Observed				Adjusted†			
Calendar year 1957:	Max	2,870	Min	23	Mean	794	
Water year 1957-58:	Max	2,970	Min	46	Mean	857	
					Mean	964	Cfsm 2.05 In. 27.78
					Mean	861	Cfsm 1.83 In. 24.80

* Discharge measurement made on this day.

† Adjusted for change in contents in Watauga Lake.

TENNESSEE RIVER BASIN

4855, Doe River at Elizabethton, Tenn.

Location.--Lat 36°20'40", long 82°12'37", on left bank 1,500 ft upstream from bridge on State Highway 91 at Elizabethton, Carter County, and 1 mile upstream from mouth.

Drainage area.--137 sq mi.

Records available.--June 1907 to June 1908 (gage heights only), October 1911 to September 1916, October 1920 to September 1958. Published as "at Valley Forge" 1911-16, 1920-31. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,524.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. June 1907 to June 1908 and September to December 1912, staff gage a quarter of a mile upstream at different datum. Dec. 11, 1911, to Sept. 30, 1916, and Nov. 5, 1920, to Sept. 30, 1931, chain gage 3 miles upstream at altitude 1,610 ft (from topographic map). June 19 to Sept. 20, 1932, staff gage at present site at datum 0.50 ft higher. Sept. 20, 1932, to Jan. 31, 1934, staff gage at present site and datum.

Average discharge.--43 years (1911-16, 1920-58), 218 cfs.

Extremes.--Maximum discharge during year, 3,740 cfs Aug. 1 (gage height, 4.93 ft); minimum, 75 cfs Nov. 11; minimum gage height, 0.72 ft Sept. 30. 1911-16, 1920-58: Maximum discharge, 7,300 cfs July 30, 1940 (gage height, 6.75 ft). from rating curve extended above 4,000 cfs on basis of slope-area measurement at gage height 6.25 ft; minimum, 17 cfs Aug. 31, Sept. 7, 1925 (gage height, 0.60 ft, site and datum then in use).

Remarks.--Records good. Records of water temperatures for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1913(M), 1915(M), 1929(M), 1931(M). WSP 1336: 1933(M), 1938.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.7	75	2.0	510
1.0	140	3.0	1,140
1.5	299	4.0	2,150

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	105	250	268	369	540	373	407	185	109	1,150	154
2	128	98	223	240	317	428	343	513	278	105	803	138
3	*121	98	210	207	288	373	*362	724	204	103	545	128
4	121	86	*285	191	274	335	424	530	179	118	505	*123
5	109	*94	240	179	*303	*296	386	442	170	143	*394	116
6	101	92	230	194	822	282	470	615	182	147	282	116
7	96	88	290	214	1,010	274	433	*1,590	204	233	237	112
8	94	90	969	182	796	385	381	1,110	164	176	223	112
9	88	118	748	156	550	346	346	766	162	*191	237	105
10	86	96	540	*167	428	385	343	610	*179	268	191	103
11	86	86	442	182	373	339	343	535	227	194	173	101
12	116	90	355	182	324	317	310	480	210	223	234	105
13	101	90	303	185	292	354	285	458	170	220	307	105
14	90	98	313	362	264	339	268	381	154	167	321	98
15	84	135	310	292	274	313	271	346	173	143	292	92
16	81	176	292	278	237	239	321	324	179	133	261	92
17	103	207	310	250	204	285	274	339	151	140	485	101
18	167	685	317	230	197	285	257	385	140	162	365	116
19	130	872	317	200	204	268	247	373	130	316	276	101
20	112	540	931	210	217	257	244	402	173	317	223	94
21	103	354	1,000	244	197	254	230	335	156	411	204	145
22	98	282	604	285	220	247	344	292	176	424	223	128
23	86	669	445	254	217	244	268	214	268	200	103	
24	199	525	369	317	237	240	438	250	159	535	262	92
25	167	920	328	736	271	288	1,200	271	138	373	442	86
26	143	881	475	451	622	303	778	285	140	271	321	88
27	145	535	433	377	914	350	593	237	170	210	254	90
28	123	390	381	317	748	355	540	237	153	182	214	88
29	116	324	343	292	-	324	500	214	123	461	185	88
30	114	282	306	284	-	310	446	194	116	285	167	81
31	112	-----	278	250	-----	420	-----	185	-----	220	159	-----
Total	3,578	9,116	12,818	8,126	11,169	9,975	12,326	14,068	5,139	7,268	10,237	3,216
Mean	115	304	413	262	399	322	411	453	171	234	330	107
Cfsm	0.839	2.22	3.01	1.91	2.91	2.35	3.00	3.51	1.25	1.71	2.41	0.781
In.	0.97	2.47	3.48	2.21	3.03	2.71	3.35	3.82	1.40	1.97	2.78	0.87
Calendar year 1957: Max			4,090	Min	56	Mean	319	Cfsm	2.33	In.	31.59	
Water year 1957-58: Max			1,590	Min	81	Mean	293	Cfsm	2.14	In.	29.06	

Peak discharge (base, 1,700 cfs).--Dec. 20 (6 p.m.), 2,320 cfs (4.09 ft); Apr. 25 (7 a.m.), 1,790 cfs (3.67 ft); May 7 (11:30 a.m.), 1,950 cfs (3.81 ft); Aug. 1 (5 p.m.), 3,740 cfs (4.93 ft).

* Discharge measurement made on this day.

4860. Watauga River at Elizabethton, Tenn.

Location.--Lat 36°21'21", long 82°13'26", on left bank 25 ft upstream from bridge on U. S. Highway 19E at Elizabethton, Carter County, 0.6 mile downstream from Doe River, and at mile 25.9.

Drainage area.--692 sq mi.

Records available.--October 1925 to July 1949, July 1953 to September 1958. Monthly discharge only October 1925 to January 1926, published in WSP 1306. Gage-height records collected in this vicinity December 1909 to July 1949 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 1,486.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Dec. 1, 1909, to Feb. 20, 1926, U. S. Weather Bureau stage gage and Feb. 21 to Oct. 4, 1926, staff gage, on Southern Railway bridge 10 ft upstream at same datum.

Average discharge.--28 years (1925-48, 1953-58), 1,053 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,000 cfs Feb. 7 (gage height, 7.19 ft); minimum, 150 cfs Oct. 16, 17 (gage height, 2.13 ft); minimum daily, 155 cfs Oct. 16.
1925-49, 1953-58: Maximum discharge, 75,100 cfs Aug. 14, 1940 (gage height, 20.87 ft), from rating curve extended above 29,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 42 cfs Sept. 20, 1932; minimum daily, 85 cfs Dec. 3, 1953; minimum gage height, 1.54 ft Sept. 20, 1932.
Maximum stage known, about 21 ft in May 1901 (discharge, 75,900 cfs), from high-water profile by Tennessee Valley Authority.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow partly regulated by Watauga Lake, 10 miles upstream (see p. 224).

Revisions (water years).--WSP 758: 1932(M). WSP 823: Drainage area. WSP 1336: 1927-28(M), 1930, 1931-32(m).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 8

Feb. 9 to Sept. 30

2.1	143	4.0	1,200	2.3	187	3.5	835
2.5	260	6.0	3,280	2.5	267	4.0	1,260
3.0	480	7.0	4,700	3.0	515	6.0	3,310

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,000	2,460	374	1,390	1,590	1,030	681	2,500	672	1,020	2,310	1,130
2	2,070	768	404	1,300	960	700	605	2,600	1,420	2,080	2,270	1,360
3	*2,060	194	1,240	1,290	2,350	900	*617	2,700	1,660	878	1,230	1,340
4	1,960	1,540	872	508	1,950	800	674	1,000	2,040	871	1,740	*2,410
5	1,710	*1,240	430	397	1,000	*920	623	2,400	1,800	286	*2,640	2,760
6	798	1,460	397	730	*1,610	815	739	2,300	1,660	213	1,610	2,030
7	1,980	1,200	479	780	5,500	1,890	928	*2,800	372	1,580	1,260	566
8	2,480	1,510	1,870	858	3,170	1,730	1,000	2,200	278	1,560	880	1,120
9	2,000	2,330	1,380	*1,890	1,440	563	575	1,500	794	*1,520	1,120	1,150
10	714	1,640	883	1,710	1,390	1,680	1,250	1,220	1,330	2,350	1,300	638
11	170	2,440	1,320	1,810	1,820	1,630	1,340	1,160	*832	894	1,330	217
12	189	2,500	1,810	1,750	1,380	1,520	892	1,300	417	1,380	958	680
13	175	1,450	628	2,700	1,070	1,920	909	1,180	1,070	1,460	1,900	440
14	162	214	480	3,270	960	1,860	1,730	769	1,020	1,240	2,080	570
15	208	206	455	2,100	1,170	735	1,650	661	664	2,220	833	1,150
16	155	253	435	1,930	557	712	570	593	269	2,210	473	570
17	172	298	455	1,770	1,790	2,040	438	587	314	2,240	1,040	858
18	543	2,470	590	2,200	1,600	1,540	406	611	1,010	2,250	846	1,620
19	222	2,780	491	2,180	1,700	1,320	390	756	2,000	2,210	1,190	488
20	178	2,500	1,320	2,680	1,200	2,260	616	635	676	2,400	1,120	194
21	167	762	1,590	670	1,400	1,920	852	539	513	1,880	998	248
22	212	716	947	1,670	1,470	2,000	991	473	260	1,440	1,450	1,580
23	280	891	688	2,350	1,450	1,440	1,930	470	310	1,060	1,820	1,740
24	1,450	716	1,980	2,080	1,700	3,000	1,380	2,390	240	2,140	1,190	2,360
25	291	1,530	1,450	1,860	1,710	1,300	1,800	1,710	1,800	1,500	1,960	2,980
26	1,820	2,360	1,570	971	1,520	521	1,300	1,630	632	1,680	920	3,170
27	2,110	2,040	1,700	2,190	2,940	894	1,000	1,180	274	1,730	787	1,500
28	2,190	583	1,610	2,210	2,430	605	800	1,660	213	2,110	1,630	882
29	3,000	570	1,550	1,410	-	581	1,100	1,420	200	1,840	1,740	807
30	1,410	1,070	1,620	560	-----	545	2,600	1,510	680	1,850	1,060	1,370
31	2,340	-----	1,520	602	-----	706	-----	1,230	-----	1,490	1,830	-----
Total	35,196	40,691	32,536	50,194	46,527	39,877	30,366	43,884	25,520	48,962	43,515	37,926
Mean	1,135	1,356	1,050	1,619	1,662	1,266	1,012	1,416	851	1,579	1,404	1,264

Observed

Adjusted †

Calendar year 1957	Max	6,830	Min	115	Mean	1,281	Mean	1,451	Cfsm	2.10	In.	28.47
Water year 1957-58	Max	3,500	Min	155	Mean	1,302	Mean	1,305	Cfsm	1.69	In.	25.60

* Discharge measurement made on this day.

† Adjusted for change in contents in Watauga Lake.

Note.--No gage-height record Feb. 18-21, Mar. 2-4, Apr. 25 to May 7; discharge estimated on basis of weather records and records for station below Wilbur Dam.

4875. South Fork Holston River at Kingsport, Tenn.

Location.--Lat 36°31'51", long 82°33'29", on left bank 1.000 ft downstream from new bridge on State Highway 81, 1½ miles upstream from Reedy Creek, and 3¼ miles upstream from confluence with North Fork Holston River.

Drainage area.--1,935 sq mi.

Records available.--September 1925 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1.175-84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Dec. 2, 1953, at site 2 miles upstream at datum 8.47 ft higher.

Average discharge.--33 years, 2,522 cfs (unadjusted).

Extremes.--Maximum discharge during year, 11,400 cfs May 6 (gage height, 5.68 ft); minimum, 305 cfs Mar. 30 (gage height 0.48 ft); minimum daily, 536 cfs Apr. 18.

1925-58: Maximum discharge, 68,800 cfs Aug. 14, 1940 (gage height, 18.80 ft, site and datum then in use); minimum, 210 cfs Jan. 28, 1940 (gage height, -0.20 ft, site and datum then in use); minimum daily, 301 cfs June 13, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by South Holston, Watauga, Boone, and Fort Patrick Henry Lakes (see p. 224). Some diversion upstream by the city of Kingsport, Tenn., Eastman Corp., and Holston Ordnance Works.

Revisions (water years).--WSP 823: Drainage area. WSP 1033: 1930(M). WSP 1306: 1933(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.7	490	2.0	2,180
1.0	800	3.0	4,080
1.5	1,400	5.0	9,300

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a3,900	3,910	1,210	2,080	3,550	7,570	830	4,400	1,010	3,340	3,970	1,920
2	a3,500	1,030	2,030	1,800	754	3,320	848	3,880	2,870	3,280	3,970	4,510
3	a4,000	710	3,100	1,820	3,990	5,120	782	2,850	1,540	3,190	4,060	3,660
4	*a3,800	5,120	3,080	892	4,990	1,440	1,610	3,500	4,680	1,220	3,990	5,680
5	2,400	3,570	*3,160	821	4,040	2,020	*3,890	4,680	4,070	909	3,990	*4,800
6	796	2,180	1,210	552	a3,300	848	6,860	5,770	866	*3,930	5,340	
7	4,070	2,810	1,700	1,690	*4,350	a5,400	4,400	9,270	2,410	2,590	3,850	2,700
8	4,320	3,530	1,540	1,720	5,600	a4,400	2,290	*8,050	1,180	2,470	3,050	2,840
9	4,220	4,360	2,120	3,980	5,250	a2,000	2,670	8,550	914	2,720	1,930	2,770
10	2,660	3,050	3,260	3,750	6,200	a2,300	4,050	8,610	2,500	*3,510	2,460	3,270
11	1,440	5,260	4,780	4,270	4,290	a3,300	3,660	5,910	918	3,760	4,660	2,780
12	778	5,550	5,400	3,940	3,270	a3,000	3,180	5,320	902	3,900	2,790	1,710
13	794	3,410	4,420	5,600	3,960	a3,800	1,840	6,790	2,240	3,950	4,420	2,760
14	810	1,540	1,590	4,330	3,640	a2,800	3,140	5,160	4,200	3,900	4,110	1,680
15	798	2,180	791	3,880	658	1,480	2,790	1,850	1,130	3,900	2,890	3,110
16	778	918	1,260	4,590	1,330	942	670	1,740	1,060	3,930	2,990	3,060
17	1,030	978	1,210	3,120	3,440	4,020	803	850	1,050	3,250	4,050	4,430
18	1,030	5,210	1,840	3,220	3,980	2,980	536	864	2,510	3,960	2,660	4,630
19	1,120	5,650	1,450	3,080	3,590	3,440	726	2,070	5,020	3,900	3,120	4,460
20	1,010	4,670	2,130	4,750	2,340	*5,160	1,110	3,660	2,830	3,930	2,930	2,160
21	1,050	1,160	2,200	1,450	3,040	4,750	1,550	3,770	1,160	4,080	2,460	669
22	1,520	2,490	2,350	2,790	2,660	3,920	1,920	3,000	753	3,950	2,690	2,960
23	724	1,870	1,910	3,400	2,220	3,000	2,320	3,350	1,020	3,950	3,210	5,050
24	4,240	912	2,870	3,670	2,030	5,670	1,190	5,130	732	3,900	3,260	5,450
25	1,080	3,340	2,460	2,300	3,080	3,160	2,170	3,650	4,550	3,860	3,430	4,800
26	4,840	3,190	2,190	3,340	1,500	1,070	4,010	4,580	3,820	3,900	6,300	7,170
27	4,310	2,780	3,980	5,360	5,570	764	4,150	3,820	1,770	3,930	4,350	6,120
28	5,210	822	2,640	4,130	7,860	1,550	4,560	3,600	946	3,900	3,860	2,300
29	4,560	1,080	2,980	3,740	-	1,970	3,660	2,100	861	3,880	4,390	1,790
30	1,720	3,760	3,780	1,710	-----	-----	4,520	2,460	1,590	3,860	4,430	2,240
31	3,140	-----	3,990	1,090	-----	-----	936	2,440	-----	3,900	2,510	-----
Total	75,448	88,720	79,621	94,123	97,534	95,361	70,723	132,744	65,806	105,085	110,510	106,819
Mean	2,434	2,957	2,568	3,036	3,476	3,076	2,357	4,282	2,194	3,390	3,565	3,561

Observed

Adjusted†

Calendar year 1957:	Max 15,600	Min 676	Mean 3,287	Mean 3,608	Cfsm 1.86	In. 25.31
Water year 1957-58:	Max 9,270	Min 536	Mean 3,075	Mean 3,184	Cfsm 1.85	In. 22.34

* Discharge measurement made on this day.

† Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.

a No gage-height record; discharge estimated on basis of recorded range in stage, records for station at Surgoinsville, and Fort Patrick Henry powerplant records.

4880. North Fork Holston River near Saltville, Va.

Location.--Lat 36°53'48", long 81°44'47", on right bank 0.5 mile upstream from Cedar Branch bridge, 1.5 miles northeast of Saltville, Smyth County, and 7.8 miles downstream from Laurel Creek.

Drainage area.--222 sq mi.

Records available.--June 1907 to December 1908 (published as "at Saltville"), October 1920 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,703.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. June 11, 1907, to Nov. 12, 1908, chain gage on highway bridge 2.1 miles downstream at different datum. Nov. 2, 1920, to May 23, 1934, chain gage on highway bridge 0.5 mile downstream at datum 7.74 ft lower.

Average discharge.--39 years, 296 cfs.

Extremes.--Maximum discharge during year, 5,000 cfs Mar. 31 (gage height, 6.28 ft); minimum, 32 cfs Sept. 28-30 (gage height, 0.54 ft).
1907-8, 1920-58: Maximum discharge, 16,500 cfs Jan. 29, 1957 (gage height, 13.20 ft), from rating curve extended above 7,200 cfs on basis of slope-area measurement of peak flow; minimum, 1 cfs Oct. 15, 16, 1947 (gage height, 0.13 ft), flow retarded by mine cave-in; minimum daily, 2 cfs Oct. 15, 1947.

Remarks.--Records good.

Revisions (water years).--WSP 758: Drainage area. WSP 1113: 1944-47. WSP 1306: Drainage area (at site used 1907-8), 1907(M), 1921-22(M), 1924-30(M), 1932-34(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 28-30; stage-discharge relation affected by ice Jan. 10-12, Feb. 18-21)

Oct. 1 to May 5				May 6 to Sept. 30			
0.7	42	3.0	1,200	0.5	28		
1.0	97	5.0	3,340	.7	51		
1.5	272	6.0	4,640	1.0	108		
2.0	500						

Note.--Same as preceding table above 1.2 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	784	89	280	360	508	1,050	1,840	630	138	78	182	62
2	382	87	236	308	749	749	1,090	658	157	72	228	61
3	248	83	210	248	565	584	840	910	126	69	1,130	57
4	185	81	280	221	450	475	679	798	130	65	1,200	54
5	138	77	296	189	374	396	578	2,160	122	69	500	53
6	110	75	260	203	378	352	826	3,730	120	69	288	51
7	95	71	405	203	980	321	1,320	2,610	118	65	189	51
8	87	71	2,610	185	1,640	300	1,090	1,900	113	78	157	50
9	79	61	1,730	174	910	296	833	1,200	113	82	138	47
10	71	83	1,020	150	630	300	693	945	132	61	113	47
11	67	79	721	130	480	272	777	2,220	118	78	99	46
12	69	71	485	135	387	252	742	1,690	118	78	87	44
13	65	69	410	138	334	264	630	1,090	118	76	94	44
14	59	75	334	349	280	391	520	784	110	74	94	44
15	56	89	300	598	280	352	455	598	115	71	92	44
16	54	131	272	480	240	312	435	485	125	64	113	38
17	59	280	256	391	196	288	369	420	115	74	228	36
18	69	1,200	244	338	180	300	330	365	99	83	189	37
19	85	1,370	232	268	160	312	304	321	96	83	115	38
20	75	1,050	784	260	150	316	288	300	122	80	92	38
21	67	578	2,000	268	180	321	275	268	152	96	80	43
22	61	382	945	369	167	300	312	236	118	108	74	44
23	57	360	624	360	185	280	945	221	103	108	74	43
24	71	400	465	360	240	308	875	232	94	113	61	38
25	97	2,000	391	591	338	460	784	218	87	127	178	36
26	102	1,690	2,040	546	*945	833	679	210	90	120	160	35
27	85	875	1,900	538	2,280	1,640	591	162	120	101	110	33
28	89	558	1,020	460	1,550	*1,460	758	*167	120	96	87	32
29	*85	*425	714	*382	-	1,240	*875	171	94	101	*78	32
30	85	343	*513	338	-----	1,420	672	154	*85	110	71	*33
31	87	-----	410	312	-----	4,020	-----	143	-----	*103	85	-----
Total	3,733	12,823	22,387	9,653	15,736	20,184	21,404	26,016	3,488	2,682	6,386	1,311
Mean	120	427	722	318	562	650	713	839	116	86.5	200	43.7
Cfs/m	0.541	1.92	3.25	1.43	2.53	2.93	3.21	3.78	0.523	0.390	0.928	0.197
In.	0.62	2.14	3.75	1.65	2.64	3.38	3.58	4.36	0.58	0.45	1.07	0.22

Calendar year 1957: Max 10,300 Min 28 Mean 467 Cfs/m 2.19 In. 29.80
Water year 1957-58: Max 4,020 Min 32 Mean 400 Cfs/m 1.80 In. 24.44

Peak discharge (base, 3,000 cfs).--Nov. 25 (6 p.m.) 3,380 cfs (5.03 ft); Dec. 8 (1 p.m.) 3,240 cfs (4.92 ft); Dec. 21 (1 a.m.) 3,250 cfs (4.93 ft); Dec. 26 (7 p.m.) 3,430 cfs (5.07 ft); Mar. 31 (9:30 a.m.) 5,000 cfs (6.28 ft); May 6 (11:30 a.m.) 4,410 cfs (5.82 ft).

* Discharge measurement made on this day.

TENNESSEE RIVER BASIN

4885. North Fork Holston River at Holston, Va.

Location.--Lat 36°46'29", long 82°04'22", on left bank at downstream side of bridge on U. S. Highway 19, 100 ft downstream from Greendale Creek, 0.4 mile upstream from Garrett Creek, 0.5 mile east of Holston, Washington County, and 0.6 mile upstream from Little Moccasin Creek.

Drainage area.--402 sq mi.

Records available.--June 1951 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,437.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years, 546 cfs.

Extremes.--Maximum discharge during year, 9,410 cfs May 6 (gage height, 10.56 ft); minimum, 80 cfs Sept. 30 (gage height, 2.10 ft).
1951-58: Maximum discharge, 24,300 cfs Jan. 29, 1957 (gage height, 16.50 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of peak flow; minimum, 41 cfs Sept. 8, 1954, Dec. 1, 1955; minimum gage height, 1.97 ft Sept. 8, 1957.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 5-13)

Oct. 1 to Mar. 31

Apr. 1 to Sept. 30

2.1	74	4.0	1,000	2.1	80	4.0	1,000
2.3	130	6.0	2,580	2.3	145	5.0	1,840
2.6	238	9.0	6,250	2.6	260	7.0	4,200
3.0	450			3.0	450	10.0	8,400

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1,380	134	480	654	873	1,780	3,420	1,300	293	*166	440	176
2	688	130	*400	556	1,300	1,260	1,890	1,340	365	152	770	166
3	450	124	355	b350	1,000	972	1,590	1,520	292	142	2,150	156
4	322	121	470	b320	798	825	1,100	1,390	248	131	2,240	142
5	245	115	520	b300	715	715	940	3,280	224	131	972	142
6	192	112	465	b300	798	622	1,180	8,220	224	134	588	128
7	162	109	1,020	b210	1,869	566	2,140	5,890	208	138	*415	128
8	142	112	4,560	b280	2,670	530	1,890	3,940	192	296	341	124
9	127	162	2,970	b260	1,660	540	1,390	2,390	184	248	341	114
10	115	162	1,820	b240	*1,070	*566	1,140	1,890	228	228	260	110
11	109	146	1,220	b230	880	505	1,260	4,480	216	200	216	107
12	109	150	852	236	715	470	1,220	*3,550	196	208	216	104
13	103	121	649	236	605	525	1,040	2,140	192	269	371	101
14	97	124	594	395	500	825	880	1,440	188	274	415	98
15	92	134	535	825	515	770	798	1,070	204	216	314	95
16	90	214	500	742	450	649	770	880	220	525	360	98
17	92	390	490	632	b350	566	660	770	196	1,310	550	101
18	121	1,740	495	545	b320	627	594	660	170	742	505	107
19	134	2,180	480	450	b300	660	540	605	162	715	370	104
20	130	1,780	1,530	415	b280	632	505	535	220	742	305	98
21	115	972	3,290	430	b280	605	485	475	240	981	260	110
22	103	688	1,700	588	b290	556	638	425	200	1,100	232	124
23	100	638	1,070	588	299	505	1,570	425	176	688	224	114
24	112	688	825	688	425	510	1,570	410	162	660	240	107
25	130	2,540	715	1,380	561	688	1,570	415	146	660	440	98
26	158	2,630	3,160	1,100	2,030	1,100	1,590	400	233	515	460	92
27	158	1,460	3,180	940	3,840	2,020	1,220	332	505	420	346	89
28	146	940	1,820	825	2,500	2,180	*2,040	360	346	370	269	86
29	138	742	1,220	688	---	1,860	2,090	336	256	742	236	83
30	130	600	910	605	---	2,100	1,570	287	188	515	208	83
31	130	---	742	540	---	5,650	---	260	---	380	188	---
Total	6,320	20,338	39,037	16,648	27,864	32,379	38,890	51,395	6,856	13,998	15,242	3,385
Mean	204	678	1,259	537	996	1,044	1,296	1,658	229	452	492	113
Cfsm	0.507	1.69	3.13	1.34	2.48	2.60	3.22	4.12	0.570	1.12	1.22	0.281
In.	0.58	1.89	3.61	1.54	2.58	3.00	3.59	4.75	0.84	1.29	1.41	0.31

Calendar year 1957: Max 15,900

Min 45

Mean 828

Cfsm 2.08

In. 27.95

Water year 1957-58: Max 8,220

Min 83

Mean 746

Cfsm 1.86

In. 25.19

Peak discharge (base, 4,000 cfs).--Nov. 25 (11:30 p.m.) 4,130 cfs (7.44 ft); Dec. 8 (3 p.m.) 4,950 cfs (8.11 ft); Dec. 21 (7 a.m.) 4,260 cfs (7.55 ft); Dec. 26 (10 p.m.) 4,810 cfs (8.01 ft); Feb. 27 (4 a.m.) 4,540 cfs (7.78 ft); Mar. 31 (1 p.m.) 6,490 cfs (9.16 ft); May 6 (11 a.m.) 9,410 cfs (10.56 ft); May 11 (5 p.m.) 5,100 cfs (7.69 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4899. Big Moccasin Creek near Gate City, Va.

Location--Lat 36°38'47", long 82°33'12", on left bank at downstream side of bridge on State Highway 71, 0.2 mile downstream from Franklin Branch, 0.9 mile upstream from Pike Branch, 1.6 miles upstream from Little Moccasin Creek, and 1.6 miles east of Gate City, Scott County.

Drainage area--79.6 sq mi.

Records available--October 1952 to September 1958.

Gage--Water-stage recorder. Datum of gage is 1.267.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--6 years, 112 cfs.

Extremes--Maximum discharge during year, 3,570 cfs May 6 (gage height, 8.84 ft); minimum, 14 cfs Oct. 14, 15 (gage height, 1.22 ft).

1952-58: Maximum discharge, that of May 6, 1958; minimum, 3.0 cfs Sept. 11, 1954 (gage height, 1.04 ft).

Remarks--Records good.

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 9-17, 23-25)

Oct. 1 to May 5				May 5 to Sept. 30			
1.1	5.0	2.5	225	4.0	700		
1.2	11	3.0	360	6.0	1,550		
1.4	26	4.0	710	8.0	2,900		
1.7	62	6.0	1,700				
2.0	113						

Note.--Same as preceding table below 3.8 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	22	88	125	164	290	472	405	65	33	68	48
2	41	22	73	109	282	205	306	348	212	29	96	43
3	*33	21	67	93	202	166	242	300	121	*27	405	38
4	28	21	*85	81	162	137	232	255	86	25	386	36
5	26	20	108	68	137	117	210	*1,500	70	25	200	35
6	24	19	93	70	144	104	270	2,820	64	24	137	33
7	20	18	359	64	426	93	327	2,250	59	27	106	30
8	18	21	1,400	*65	630	92	255	1,060	54	49	90	30
9	18	28	630	54	366	108	205	612	51	81	95	28
10	18	37	327	48	265	148	*184	472	52	67	85	27
11	18	37	225	55	212	133	182	490	*59	47	70	26
12	17	31	182	52	*173	115	166	390	55	49	135	24
13	16	25	119	48	148	*127	144	306	47	52	*106	25
14	15	26	106	85	125	215	129	248	44	54	80	25
15	15	29	93	119	119	188	125	205	42	44	70	23
16	16	70	85	113	113	151	133	184	43	34	65	23
17	23	111	78	102	86	129	137	162	42	219	133	25
18	29	455	75	85	b50	205	119	140	38	355	102	29
19	29	405	73	75	b70	242	109	127	36	155	76	31
20	22	*255	250	67	b70	184	100	119	67	191	62	31
21	19	133	595	67	b70	155	100	106	55	390	54	30
22	18	90	275	75	b74	133	113	92	44	215	49	30
23	20	100	188	76	85	113	208	86	40	168	43	26
24	27	123	151	136	90	100	182	100	37	127	48	24
25	42	500	133	525	97	102	245	86	35	121	264	34
26	40	508	682	336	223	106	292	76	36	106	205	21
27	34	325	671	232	710	162	333	68	82	88	113	22
28	28	146	339	173	490	205	1,400	70	80	95	85	22
29	25	123	238	140	-	182	890	92	46	93	70	24
30	24	108	177	119	-	193	578	70	37	117	58	24
31	22	-	142	106	-	690	-	59	-	80	54	-
Total	770	3,729	8,087	3,563	5,811	5,290	8,388	13,298	1,799	3,187	3,610	857
Mean	24.8	124	261	115	208	171	280	429	60.0	103	116	28.6
Cfsm	0.312	1.56	3.28	1.44	2.61	2.15	3.52	5.39	0.754	1.29	1.46	0.359
In.	0.36	1.74	3.78	1.66	2.72	2.48	3.93	6.21	0.84	1.49	1.68	0.40

Calendar year 1957: Max 2,850 Min 8.0 Mean 151 Cfsm 1.90 In. 25.83
Water year 1957-58: Max 2,820 Min 15 Mean 160 Cfsm 2.01 In. 27.29

Peak discharge (base, 1,200 cfs)--Dec. 8 (11:30 a.m.) 1,640 cfs (5.90 ft); Apr. 28 (6:30 p.m.) 1,630 cfs (5.88 ft); May 6 (7 p.m.) 3,570 cfs (8.84 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

4900. North Fork Holston River near Gate City, Va.

Location.--Lat 36°36'31", long 82°34'05", on left bank 100 ft upstream from bridge on U. S. Highway 23, 1.6 miles downstream from Big Moccasin Creek, and 2.1 miles south-east of Gate City, Scott County.

Drainage area.--672 sq mi.

Records available.--October 1931 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,197.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--27 years, 861 cfs.

Extremes.--Maximum discharge during year. 21,600 cfs May 7 (gage height, 13.95 ft); minimum, 102 cfs Sept. 29 (gage height, 1.44 ft).

1931-58: Maximum discharge. 28,700 cfs Jan. 30, 1957 (gage height, 16.73 ft); minimum, 37 cfs Dec. 24, 1943, result of freezeup; minimum gage height, 1.00 ft Jan. 6, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diurnal fluctuation at low flow caused by small dam above station.

Revisions (water years).--WSP 783: 1932(M). WSP 823: Drainage area. WSP 1276: 1932-34.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 26

Nov. 27 to Sept. 30

1.5	100	4.0	1,760	1.4	90	5.0	2,900
1.7	170	6.0	4,240	1.6	155	6.0	4,240
2.0	310	7.0	6,060	2.0	310	10.0	12,310
3.0	910			3.0	1,020	12.0	16,800
				4.0	1,880		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	182	868	1,220	1,340	3,370	7,270	a2,000	490	288	609	249
2	1,130	182	708	1,060	2,280	2,380	3,370	a2,500	1,100	249	940	225
3	718	178	623	908	2,080	1,830	2,480	2,530	772	*225	2,080	208
4	514	174	*724	764	1,590	1,460	2,230	2,480	588	214	3,370	200
5	395	166	908	865	1,340	1,260	1,930	6,100	483	204	2,130	190
6	325	151	868	630	1,340	1,100	1,980	16,300	420	197	1,300	180
7	270	147	1,640	630	2,850	980	2,790	16,800	396	214	932	172
8	230	151	7,690	*616	5,290	932	2,900	8,320	366	629	724	166
9	202	170	7,060	b600	3,500	980	2,380	4,920	340	756	679	162
10	182	215	3,500	497	2,230	1,140	*a2,000	3,370	335	525	623	155
11	166	230	2,330	476	1,730	1,060	a2,300	4,570	*402	462	476	144
12	151	206	1,690	476	*1,420	932	a2,100	6,060	396	372	574	144
13	147	182	1,220	455	1,180	*980	a1,800	3,640	325	490	*602	141
14	143	186	1,060	609	1,020	1,630	a1,600	2,630	315	511	940	134
15	136	190	940	980	916	1,730	a1,400	2,030	306	441	658	134
16	126	400	860	1,340	916	1,380	a1,300	1,680	315	366	504	130
17	132	718	796	1,180	651	1,180	a1,100	a1,420	315	1,590	828	141
18	155	1,970	804	1,020	b520	1,300	a1,000	a1,260	292	2,080	876	158
19	159	3,370	804	876	b520	1,540	a920	a1,140	285	1,340	700	152
20	182	*3,000	1,470	732	b530	1,380	a900	a1,020	420	1,380	490	152
21	174	1,810	5,480	708	b570	1,260	a860	a916	345	1,680	378	166
22	162	1,090	3,620	796	b600	1,140	a900	a836	345	1,980	335	166
23	145	980	2,180	940	630	1,020	a2,500	756	320	1,500	310	166
24	190	1,050	1,590	1,140	658	924	a2,400	860	274	1,140	315	155
25	202	2,600	1,340	3,120	796	980	a2,300	756	241	1,140	772	141
26	198	5,480	3,770	2,580	1,620	1,300	a2,100	796	390	1,020	908	134
27	225	2,900	7,270	1,930	7,270	2,180	a1,800	672	908	844	658	120
28	220	1,730	3,640	1,640	5,480	3,370	a2,500	630	780	724	476	111
29	198	1,500	2,430	1,340	-	2,790	a3,000	836	504	772	366	105
30	186	1,060	1,850	1,180	-	2,680	a2,300	623	355	1,020	310	108
31	186	1,380	1,020	1,020	-	6,860	-	525	716	274	137	-
Total	9,567	32,168	71,083	32,128	50,867	53,248	64,410	98,976	13,103	25,069	25,137	4,709
Cfsm	309	1,072	2,293	1,036	1,817	1,718	2,147	3,193	437	809	811	157
In.	0.460	1.60	3.41	1.54	2.70	2.56	3.19	4.75	0.650	1.20	1.21	0.234
In.	0.53	1.78	3.93	1.78	2.81	2.95	3.56	5.48	0.73	1.38	1.40	0.26

Calendar year 1957: Max 26,200 Min 63 Mean 1,401 Cfsm 2.08 In. 28.30
 Water year 1957-58: Max 16,800 Min 105 Mean 1,316 Cfsm 1.96 In. 26.59

Peak discharge (base, 6,000 cfs).--Nov. 26 (11:30 a.m.) 6,200 cfs (7.07 ft); Dec. 8 (7 p.m.) 9,330 cfs (8.58 ft); Dec. 21 (7:30 p.m.) 6,300 cfs (7.12 ft); Dec. 27 (6:30 a.m.) 8,090 cfs (7.99 ft); Feb. 27 (6:30 p.m.) 8,150 cfs (8.02 ft); Mar. 31 (11:30 p.m.) 9,920 cfs (8.86 ft); May 7 (4 a.m.) 21,600 cfs (13.95 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for North Fork Holston River at Holston and near Saltville.

b Stage-discharge relation affected by ice.

4905. Holston River at Surgoinsville, Tenn.

Location.--Lat 36°28'19", long 82°50'50", on right bank 1,500 ft upstream from Surgoinsville Creek and county bridge at Surgoinsville, Hawkins County, 9.8 miles upstream from Big Creek, and at mile 118.4. Records include flow of Surgoinsville Creek.

Drainage area.--2,874 sq mi. includes that of Surgoinsville Creek.

Records available.--October 1940 to September 1958. Prior to April 1941 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,088.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--18 years, 3,503 cfs (unadjusted).

Extremes.--Maximum discharge during year, 41,100 cfs May 7 (gage height, 13.47 ft); minimum, 690 cfs Oct. 19 (gage height, 1.46 ft).

1940-58: Maximum discharge, 59,600 cfs Feb. 18, 1944 (gage height, 17.48 ft); minimum, 470 cfs Oct. 21, 1941 (gage height, 1.16 ft).

Remarks.--Records good. Flow partly regulated by South Holston, Watauga, Boone, and Port Patrick Henry Lakes (see p. 224).

Rating table, water year 1957-58 (gage height, in feet,
and discharge, in cubic feet per second)

1.6	840	5.0	8,440
2.0	1,390	10.0	26,000
3.0	3,220	13.0	39,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,760	4,140	3,040	4,170	2,950	12,400	9,260	7,770	2,580	2,070	4,780	2,500
2	4,700	2,500	2,710	2,950	5,490	7,340	5,410	7,260	2,680	4,490	4,750	3,490
3	5,020	1,060	3,450	3,900	5,370	6,300	3,840	6,240	2,950	2,730	5,780	4,150
4	*4,100	2,970	3,770	2,310	5,930	5,340	*3,960	6,080	3,790	3,320	7,720	5,140
5	3,540	4,750	*4,070	1,600	5,960	2,900	6,130	11,500	4,640	1,010	7,000	*6,520
6	1,900	*3,880	3,300	1,770	3,560	3,400	4,030	22,500	6,660	1,200	5,570	4,120
7	2,740	3,010	3,780	2,070	*5,520	5,420	5,410	37,500	3,930	1,320	*5,100	4,700
8	4,580	3,140	10,400	2,340	11,100	6,520	7,340	20,700	2,160	4,360	3,590	2,450
9	4,500	4,850	10,700	3,720	9,920	4,040	5,310	*15,700	1,540	2,740	3,550	2,940
10	3,840	3,680	7,420	4,440	9,690	4,290	5,240	15,600	2,450	*4,050	3,160	3,370
11	1,680	4,040	6,920	*4,340	6,180	4,240	5,840	11,700	*1,550	4,430	3,950	2,900
12	1,110	6,470	7,540	4,740	5,210	4,450	5,840	13,400	1,400	4,380	4,370	2,220
13	924	4,260	5,810	5,220	5,330	3,310	3,440	11,800	2,270	4,480	3,940	2,350
14	986	2,440	4,540	6,440	4,910	*6,380	3,660	9,620	2,590	4,820	5,250	2,570
15	924	1,760	2,240	4,440	3,450	4,220	5,130	4,310	3,960	4,550	4,540	2,120
16	924	2,220	2,250	6,750	2,060	3,030	3,210	3,960	1,280	4,580	3,710	3,180
17	1,060	1,900	2,040	4,780	3,180	3,580	2,080	3,010	1,430	4,190	4,600	3,590
18	1,150	5,830	2,150	4,050	4,180	5,310	2,040	2,360	2,220	6,500	4,530	4,780
19	1,240	*9,560	2,660	4,230	4,320	5,440	1,650	3,200	3,820	5,540	3,220	5,250
20	1,070	9,170	3,000	4,880	3,330	5,670	1,800	3,910	4,410	5,700	4,130	3,020
21	1,120	4,680	7,200	3,240	4,310	6,270	2,740	4,920	2,540	5,840	3,690	1,610
22	1,520	3,530	7,310	3,030	2,350	6,750	2,240	3,940	1,340	6,550	3,220	1,680
23	1,350	2,660	4,800	4,360	4,180	3,640	4,240	3,910	1,400	6,240	3,410	4,050
24	2,810	3,010	4,440	4,290	3,330	5,810	3,350	5,340	1,130	5,390	3,550	6,240
25	2,360	4,390	4,480	6,550	3,180	5,670	5,260	5,650	2,750	*5,130	4,640	4,580
26	2,690	9,200	5,330	5,540	3,940	2,970	6,830	5,570	5,240	5,100	5,110	6,630
27	5,320	7,860	10,800	7,490	10,500	2,460	8,000	5,140	3,730	5,000	6,780	6,690
28	5,540	3,050	7,830	6,630	15,500	4,220	10,700	4,030	1,870	4,800	4,620	3,760
29	5,090	2,240	6,080	5,490	-----	4,800	11,000	3,920	1,560	4,720	3,950	2,440
30	3,130	4,060	5,890	3,480	-----	4,650	9,980	3,370	1,630	4,950	4,640	1,660
31	2,580	-----	5,570	2,860	-----	6,110	-----	2,230	-----	4,780	4,130	-----
Total	85,758	126,490	161,520	131,090	155,130	156,930	154,980	266,160	81,500	134,960	140,960	110,900
Mean	2,766	4,216	5,210	4,229	5,340	5,062	5,166	8,586	2,717	4,354	4,547	3,697

	Observed				Adjusted†			
Calendar year 1957:	Max	42,600	Min	730	Mean	5,020	Mean	5,340
Water year 1957-58:	Max	37,500	Min	924	Mean	4,675	Mean	4,784
							Cfam	1.86
							Cfam	1.66
							In.	25.22
							In.	22.60

* Discharge measurement made on this day.

† Adjusted for change in contents in South Holston, Watauga, Boone, and Port Patrick Henry Lakes.

4910. Big Creek near Rogersville, Tenn.

Location--Lat 36°25'34", long 82°57'07", on left bank 300 ft upstream from county bridge, 8.0 miles upstream from mouth, and 3.0 miles northeast of Rogersville, Hawkins County.

Drainage area--47.3 sq mi.

Records available--April 1941 to June 1949, December 1954 to September 1957 (annual maximum only), October 1957 to September 1958.

Gage--Water-stage recorder. Datum of gage is 1,128.9 ft above mean sea level (city of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

Average discharge--8 years (1941-48, 1957-58), 58.1 cfs.

Extremes--1954-57: The annual maximum discharge for the water years 1955-57 is given in the following table:

Water year	Date	Discharge (cfs)	Gage height (feet)
1955	Mar. 19, 1955	3,280	6.83
1956	Apr. 16, 1956	2,530	6.06
1957	Jan. 31, 1957	3,180	6.73

1957-58: Maximum discharge during water year, 2,850 cfs Apr. 28 (gage height, 6.38 ft); minimum, 4.8 cfs Sept. 16, 28 (gage height, 1.44 ft).

1941-49, 1954-58: Maximum discharge, 3,280 cfs Mar. 19, 1955 (gage height, 6.83 ft).

1941-49, 1957-58: Minimum discharge, 2.6 cfs Sept. 25, 26, Oct. 9, 1941; minimum gage height, 1.32 ft Sept. 19, Oct. 2, 1941.

Maximum stage known, 7.14 ft Jan. 31, 1950 (date determined by comparison with other stations), from silt line in gage well.

Remarks--Records good.

Revisions (water years)--WSP 1436: 1945.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.4	3.6	2.7	123
1.5	6.7	3.0	196
1.6	11	3.5	412
1.9	28	4.0	735
2.3	64	5.0	1,570

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*17	7.5	48	72	96	145	143	252	26	11	13	6.4
2	12	7.5	42	65	129	107	109	200	25	10	18	6.1
3	10	7.1	38	53	87	87	96	162	24	9.6	16	5.8
4	10	7.1	48	48	67	72	*96	135	23	9.6	27	5.8
5	9.2	6.7	*48	43	61	62	87	609	21	8.8	19	*5.5
6	7.9	*6.4	42	42	74	56	159	1,280	21	8.8	13	5.8
7	7.1	6.1	690	41	258	52	155	*1,220	20	12	*11	5.5
8	6.7	7.5	906	40	228	53	107	444	18	74	10	5.8
9	6.7	16	304	34	129	90	86	*286	18	88	20	5.5
10	6.4	16	182	30	96	160	84	220	17	*33	20	5.5
11	6.1	11	129	*30	81	102	98	260	*16	21	13	5.5
12	5.8	9.6	93	29	67	80	84	190	18	17	12	5.5
13	5.8	8.8	74	29	58	113	73	148	18	18	10	5.8
14	5.8	9.6	65	39	49	*193	64	119	16	16	9.6	5.5
15	5.8	17	58	42	50	123	65	102	15	13	8.8	5.5
16	6.1	172	51	42	45	96	105	89	16	13	11	5.2
17	7.5	107	48	38	81	90	80	80	14	52	20	5.5
18	8.8	457	45	35	40	124	74	70	13	24	11	6.1
19	11	374	42	32	36	148	65	62	12	29	9.6	6.4
20	9.6	119	312	30	34	112	56	58	26	75	7.9	6.4
21	7.9	69	244	30	*33	92	54	51	21	66	7.5	9.6
22	7.5	50	131	36	34	77	61	47	15	39	7.5	10
23	7.1	70	100	33	34	67	84	43	15	30	7.5	5.8
24	12	73	65	55	34	61	132	41	14	24	7.1	6.7
25	23	311	74	182	34	61	677	38	12	21	16	6.1
26	14	203	110	105	238	56	275	40	18	18	17	5.8
27	11	104	371	80	442	65	454	34	30	15	10	5.8
28	9.6	73	165	62	274	67	1,370	33	17	15	8.3	5.2
29	7.9	70	123	55	-	62	564	30	13	12	7.5	5.2
30	7.5	62	94	48	-	68	368	28	12	12	6.7	5.5
31	7.5	-	78	45	-	214	-	27	-	11	6.7	-
Total	280.3	2,457.9	4,840	1,543	2,846	2,946	5,935	6,398	544	803.8	381.7	183.8
Mean	9.04	81.9	156	49.8	102	95.0	198	206	18.1	25.9	12.3	6.13
Cfsm	0.191	1.73	3.30	1.05	2.16	2.01	4.19	4.36	0.383	0.548	0.260	0.130
In.	0.22	1.93	3.61	1.21	2.24	2.32	4.67	5.03	0.43	0.63	0.30	0.14

Calendar year 1957: Max - Min - Mean - Cfsm - In. -
 Water year 1957-58: Max 1,370 Min 5.2 Mean 79.9 Cfsm 1.69 In. 22.93

Peak discharge (base, 1,500 cfs).--Dec. 8 (1:30 a.m.) 1,740 cfs (5.19 ft); Apr. 28 (6:30 a.m.) 2,850 cfs (6.38 ft); May 6 (10 p.m.) 2,640 cfs (6.17 ft).

* Discharge measurement made on this day.

4925. Mossy Spring near Jefferson City, Tenn.

Location.--Lat 36°07'17", long 83°28'22", in spring pool, 15 ft upstream from water plant intake, 300 ft south of city water plant, tributary to unnamed branch at point 500 ft upstream from confluence of Buffalo Wallows Branch and unnamed branch, 1.1 miles east of Jefferson City Post Office, Jefferson County.

Records available.--September 1950 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,092.3 ft above mean sea level (Tennessee Valley Authority construction plans for waterworks).

Average discharge.--8 years, 44.9 cfs.

Extremes.--Maximum discharge during year, 144 cfs Nov. 17 (gage height, 1.84 ft); minimum daily, 12 cfs Oct. 3, 14-23, Oct. 31 to Nov. 5, 10-15.

1950-58: Maximum discharge, 316 cfs Feb. 1, 1957 (gage height, 3.00 ft), from rating curve extended above 120 cfs; minimum daily, 7.4 cfs Jan. 8, 9, 1954.

Remarks.--Records good. Records do not include diversion averaging about three-quarters of a cubic foot per second for the water supply of Jefferson City.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 16		Nov. 17 to Sept. 30	
0.6	10	0.7	18
.7	16	1.0	42
1.0	39	1.5	98
1.5	98	2.0	166

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	77	83	52	71	79	118	60	45	39	25
2	*13	12	72	80	52	66	*78	*112	79	43	38	24
3	12	12	69	78	51	64	74	110	77	42	38	24
4	16	12	*65	75	50	61	73	107	75	41	37	24
5	15	*12	62	74	49	59	72	104	74	41	*36	*22
6	15	13	59	*72	52	57	73	119	73	40	34	23
7	16	13	69	71	63	55	74	134	71	*38	33	23
8	15	13	124	69	65	56	72	137	70	52	33	23
9	14	13	120	68	64	59	70	132	69	56	32	22
10	14	12	115	65	60	64	68	127	68	52	32	22
11	13	12	108	64	*58	*61	68	123	*65	51	33	22
12	13	12	103	62	57	59	66	120	64	48	31	22
13	13	12	97	61	55	62	65	116	62	47	31	22
14	12	12	92	60	54	66	63	114	59	45	31	21
15	12	12	88	60	52	65	62	110	59	44	31	21
16	12	65	85	58	51	63	68	107	58	43	31	21
17	12	92	81	57	50	62	65	104	57	49	30	21
18	12	130	79	55	49	62	63	102	54	50	29	21
19	12	120	77	54	47	64	62	99	53	50	28	21
20	12	107	101	53	46	63	59	97	53	55	27	20
21	12	97	111	52	45	62	59	94	52	63	27	22
22	12	89	103	51	44	60	64	93	52	57	27	22
23	12	90	98	50	44	59	72	90	51	53	28	20
24	14	88	94	52	44	57	69	89	49	50	29	20
25	14	99	90	65	43	55	118	86	48	48	35	19
26	13	106	101	62	56	54	116	85	51	47	31	19
27	13	97	101	58	74	58	118	83	55	45	27	19
28	13	90	95	57	77	56	115	81	50	43	27	19
29	13	85	93	54	-	58	118	85	48	42	26	19
30	13	81	88	54	-----	58	123	83	46	41	26	19
31	12	-----	85	52	-----	79	61	61	-----	39	25	-----
Total	410	1,620	2,622	1,926	1,504	1,697	2,346	3,242	1,622	1,460	962	642
Mean	13.2	54.0	91.0	62.1	53.7	61.2	78.2	105	60.7	47.1	31.0	21.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max 261 Min 12 Mean 60.6 Cfsm - In. -												
Water year 1957-58: Max 137 Min 12 Mean 56.6 Cfsm - In. -												

* Discharge measurement made on this day.

4940. Holston River near Jefferson City, Tenn.

Location.--Lat 36°10'03", long 83°30'10", on left bank 250 ft upstream from bridge on State Highway 92, 0.2 mile downstream from Cherokee Dam, 2.5 miles upstream from Mill Spring Creek, and 3 miles north of Jefferson City, Jefferson County.

Drainage area.--3,429 sq mi.

Records available.--October 1936 to September 1958. Prior to April 1937 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 900.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 30, 1941, at datum 20.02 ft higher.

Average discharge.--22 years, 4,099 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,800 cfs Dec. 4 (gage height, 29.42 ft); minimum, 50 cfs Jan. 26 (gage height, 20.30 ft); minimum daily, 53 cfs Jan. 25, 26.
1936-58: Maximum discharge, 58,700 cfs Aug. 15, 1940 (gage height, 41.82 ft, present datum); minimum, 2.2 cfs Dec. 8, 1941, discharge measurement; minimum daily, 2.6 cfs Dec. 25, 1941; minimum gage height recorded, 19.75 ft Dec. 25, 1941.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes (see pp. 224,225).

Revisions (water years).--WSP 923: 1939-40(m).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 20, 21, 24, 31, Apr. 1-7)

20.3	50	22.0	1,340
20.4	80	23.0	2,740
20.7	210	25.0	6,580
21.0	410	29.0	16,600
21.5	830		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,270	7,140	7,970	8,250	4,550	200	1,640	112	5,660	10,700	4,950	7,220
2	*4,430	6,390	10,500	5,410	624	70	*2,410	120	7,010	10,700	2,320	9,540
3	5,240	6,740	10,100	11,200	2,130	1,200	1,480	124	6,780	10,100	2,090	11,200
4	293	11,300	*12,100	12,800	242	2,300	1,160	144	4,680	7,850	6,160	10,800
5	108	*4,700	12,100	4,230	65	4,500	2,460	156	7,520	7,490	*5,470	*11,200
6	96	8,040	11,200	*14,700	65	1,700	1,270	708	2,300	4,670	5,810	4,610
7	2,530	5,840	3,380	15,200	71	700	4,590	1,700	1,720	*7,940	3,770	9,150
8	2,590	5,650	193	14,900	71	70	5,940	4,060	7,280	5,690	4,830	10,000
9	2,990	2,820	10,500	12,900	68	70	4,200	6,370	8,600	6,050	5,100	10,200
10	4,890	5,100	10,400	11,500	68	9,500	4,660	4,880	8,540	2,120	7,190	10,000
11	4,860	11,200	10,700	11,800	4,480	700	5,640	3,230	*9,160	575	10,700	9,500
12	5,140	11,600	9,060	11,900	5,440	639	2,870	5,280	10,500	65	5,580	7,350
13	4,640	6,250	9,440	11,900	838	1,200	1,690	8,110	9,280	68	7,920	7,650
14	8,100	4,800	11,000	6,410	888	2,860	4,120	8,190	9,320	1,830	10,200	9,730
15	8,480	3,180	7,840	59	5,660	562	104	*8,620	8,680	4,720	8,540	11,900
16	9,920	80	8,800	2,830	8,360	74	112	8,060	9,280	3,420	4,920	10,000
17	8,000	84	10,900	1,350	8,440	5,470	*112	8,490	9,170	3,360	8,510	8,760
18	8,400	92	12,000	2,070	7,510	2,080	141	7,330	9,440	5,360	8,100	11,400
19	3,960	2,780	11,300	8,720	9,290	80	116	8,590	8,250	5,670	7,710	10,000
20	2,350	1,880	7,740	3,050	*6,040	922	120	6,540	7,420	2,410	7,590	7,600
21	8,860	3,680	2,200	7,880	8,770	*2,510	738	5,060	8,750	9,300	9,940	5,570
22	9,940	7,570	2,960	10,500	7,000	114	96	7,440	8,480	6,940	9,470	6,380
23	10,100	1,480	7,640	6,800	7,000	80	100	9,830	8,480	5,320	5,170	8,670
24	10,300	77	6,900	4,220	11,500	3,330	112	9,980	8,410	2,960	6,780	9,480
25	10,000	6,590	7,500	52	10,500	74	176	5,970	8,410	1,420	9,210	4,280
26	6,790	6,370	9,980	53	2,300	77	152	7,690	9,600	1,140	9,890	7,640
27	2,910	7,680	15,200	59	1,200	80	152	5,340	9,440	2,310	9,480	5,230
28	8,190	2,790	15,400	65	2,000	88	128	5,600	5,200	5,590	3,660	3,970
29	6,540	4,720	15,400	62	-	100	112	7,920	5,280	7,770	9,230	9,730
30	6,980	8,650	15,800	62	-	108	112	8,140	9,520	7,300	5,180	10,600
31	7,660	-	15,400	7,120	-	210	-	7,940	-	9,030	6,180	-
Total	177,537	155,253	301,593	208,053	113,170	41,668	46,713	172,324	231,940	160,068	217,650	259,260
Mean	5,727	5,175	9,729	6,711	4,042	1,344	1,557	5,559	7,731	5,163	7,021	8,642

Observed

Adjusted

Calendar year 1957:	Max	25,800	Min	62	Mean	5,868	Mean	6,362	Cfsm	1.88	In.	25.19
Water year 1957-58:	Max	15,800	Min	53	Mean	5,713	Mean	5,726	Cfsm	1.67	In.	22.67

* Discharge measurement made on this day.

† Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

Note.--No gage-height record, Feb. 22 to Mar. 11; discharge estimated on basis of records for station near Knoxville and Cherokee powerplant records.

4945. Mill Spring near Jefferson City, Tenn.

Location.--Lat 36°09'08", long 83°31'35", in spring pool at Tennessee Valley Authority pumping station, 300 ft northwest of State Highway 92, half a mile upstream from mouth, and 3 miles northwest of Jefferson City, Jefferson County.

Records available.--August 1951 to September 1958 in reports of Geological Survey. October 1940 to September 1948 in files of Tennessee Valley Authority.

Gage.--Water-stage recorder and concrete weir. Datum of gage is 962.3 ft above mean sea level (Tennessee Valley Authority construction plans for waterworks).

Average discharge.--7 years, 5.23 cfs.

Extremes.--Maximum discharge during year, 20 cfs May 8 (gage height, 1.39 ft); minimum daily, 2.1 cfs Oct. 26 to Nov. 15.
1951-58: Maximum discharge, 26 cfs Feb. 1, 1957 (gage height, 1.70 ft); minimum daily, 1.7 cfs Nov. 18-20, 1954.

Remarks.--Records good. Records do not include diversion averaging one-twentieth of a cubic foot per second for the domestic water supply of Cherokee Dam.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17		Nov. 18 to Sept. 30	
0.2	1.3	0.3	2.2
.3	2.4	.6	6.0
.5	4.8	1.4	20
1.1	14		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.1	6.4	9.7	5.4	6.4	6.7	14	10	6.0	4.5	3.2
2	*2.4	2.1	6.1	9.3	5.4	6.4	6.7	*14	10	5.9	4.3	3.2
3	2.4	2.1	6.0	9.0	5.3	6.4	6.9	14	10	5.9	4.5	3.2
4	2.5	2.1	*5.9	8.7	5.3	6.3	6.9	13	9.8	5.7	4.4	3.2
5	2.4	*2.1	5.6	8.4	5.2	6.3	8.7	13	9.7	5.6	*4.2	*3.2
6	2.4	2.1	5.4	*8.2	5.3	6.1	7.0	15	9.5	5.6	4.0	3.2
7	2.3	2.1	7.6	8.2	5.7	6.1	7.0	19	9.3	*5.6	4.0	3.2
8	2.3	2.1	10	7.9	5.9	6.0	6.9	19	9.2	5.7	3.8	3.2
9	2.3	2.1	10	7.6	6.0	6.1	6.9	18	9.2	5.4	3.8	3.2
10	2.3	2.1	10	7.6	6.1	6.3	*6.9	18	9.0	5.4	3.8	3.1
11	2.3	2.1	10	7.4	*6.1	*6.3	6.7	17	*8.5	5.3	3.8	3.1
12	2.3	2.1	9.5	7.2	6.0	6.3	6.6	16	8.2	5.2	3.7	3.0
13	2.3	2.1	9.2	7.0	6.0	6.3	6.4	16	8.2	5.2	3.7	3.0
14	2.2	2.1	8.8	6.9	6.1	6.4	6.4	15	8.1	5.0	3.7	3.0
15	2.2	2.1	8.5	6.7	6.0	6.4	6.4	15	7.9	4.9	3.7	3.0
16	2.2	3.9	8.4	6.6	5.9	6.3	6.4	14	7.6	4.7	3.7	3.0
17	2.2	13	8.2	6.4	5.7	6.3	6.3	14	7.4	4.7	3.7	3.0
18	2.2	10	7.9	6.3	5.7	6.4	6.3	13	7.3	4.6	3.7	3.0
19	2.2	9.2	7.6	6.0	5.6	6.4	6.3	13	7.2	4.6	3.6	3.0
20	2.2	7.9	9.2	6.0	5.4	6.4	6.3	13	7.2	4.6	3.6	3.0
21	2.2	7.2	10	5.9	5.3	6.6	6.3	12	7.0	*4.6	3.6	3.0
22	2.2	6.6	10	5.7	5.3	6.4	6.4	12	6.9	4.6	3.5	3.0
23	2.2	6.4	9.8	5.6	5.2	6.4	6.6	12	6.7	4.5	3.5	2.9
24	2.2	6.4	9.7	5.6	5.2	6.4	6.6	12	6.7	4.5	3.5	2.9
25	2.2	7.2	9.5	5.7	5.0	6.4	11	12	6.6	4.4	3.5	2.9
26	2.1	8.1	10	5.9	5.3	6.3	12	12	6.4	4.5	3.5	2.9
27	2.1	7.8	11	5.7	6.1	6.3	13	11	6.3	5.0	3.4	2.9
28	2.1	7.4	11	5.6	6.4	6.3	13	11	6.3	4.7	3.4	2.9
29	2.1	7.0	10	5.6	-	6.1	13	11	6.1	4.6	3.4	2.8
30	2.1	6.7	10	5.6	-	6.1	14	11	6.0	4.6	3.4	2.8
31	2.1	-	9.8	5.4	-	6.6	-	10	-	4.5	3.2	-
Total	69.6	146.3	271.1	213.6	157.9	195.8	234.6	429	238.3	156.1	116.3	91.0
Mean	2.25	4.88	8.75	6.89	5.64	6.32	7.82	13.8	7.94	5.04	3.75	3.03
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 25 Min 2.1 Mean 6.26 Cfsm - In. -
 Water year 1957-58: Max 19 Min 2.1 Mean 6.36 Cfsm - In. -

* Discharge measurement made on this day.

4955. Holston River near Knoxville, Tenn.

Location.--Lat 36°00'56", long 83°49'54", on left bank 300 ft upstream from bridge on U. S. Highway 70, 1.8 miles northeast of Knoxville city limits, Knox County, and 5.5 miles upstream from confluence with French Broad River.

Drainage area.--3,747 sq mi.

Records available.--October 1930 to September 1958. Published as "at Strawberry Plains" 1930-48. Records published for both sites June 1945 to September 1948.

Gage.--Water-stage recorder at present site and datum since June 19, 1945. Datum of gage is 815.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct. 1, 1930, to June 8, 1931, staff gage and June 9, 1931, to Sept. 30, 1948, water-stage recorder, at site 12 miles upstream at datum 22.55 ft higher.

Average discharge.--28 years, 4,469 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,800 cfs Dec. 5 (gage height, 7.88 ft); minimum, 353 cfs July 14 (gage height, 1.49 ft); minimum daily, 432 cfs July 14. 1930-58: Maximum discharge, 62,900 cfs Mar. 28, 1935 (gage height, 20.20 ft, site and datum then in use); minimum, 44 cfs Dec. 12, 21, 22, 1941 (gage height, -0.58 ft, site and datum then in use); minimum daily, 44 cfs Dec. 21, 22, 1941.

Floods in 1867 and 1901 reached gage heights of about 41 ft and 32 ft, respectively, from profile by Tennessee Valley Authority. Flood in 1867 exceeded all other known floods, including that in 1791, from reports of the Tennessee Valley Authority.

Remarks.--Records good. Flow regulated by South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes (see pp 224,225).

Revisions (water years).--WSP 893: 1935(M). WSP 1336: 1939.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 23 to Mar. 16)

Oct. 1 to Dec. 31

Jan. 1 to Sept. 30

1.6	475	3.0	2,670	1.5	360	3.0	2,580
2.0	940	5.0	7,850	1.7	540	4.0	4,920
2.5	1,710	8.0	18,200	2.0	890	8.0	18,200
				2.5	1,640		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,080	7,280	8,210	11,600	8,080	1,860	1,160	1,440	6,650	11,000	7,580	6,960
2	3,580	6,760	9,410	8,190	3,400	686	2,810	1,260	6,090	10,800	5,070	8,190
3	4,920	6,760	11,200	6,560	2,150	639	3,390	1,090	7,630	9,520	2,120	9,660
4	5,340	9,990	11,400	13,800	1,680	1,880	2,440	955	6,190	9,620	3,290	12,500
5	1,230	6,980	12,900	6,710	662	*3,510	2,060	994	5,490	7,200	5,740	10,300
6	702	6,520	12,400	10,400	628	4,550	3,440	2,690	5,870	6,280	6,080	8,340
7	538	6,400	13,000	*16,000	794	*1,870	2,550	3,750	1,980	5,640	5,510	7,630
8	2,980	5,860	4,600	15,500	806	1,360	6,180	5,620	3,100	7,670	4,620	9,770
9	3,700	4,940	5,990	15,000	722	794	5,680	6,810	8,350	6,340	4,500	10,400
10	3,170	5,930	11,200	11,900	628	4,010	4,890	7,420	7,460	*3,980	6,160	10,200
11	5,120	8,380	11,400	12,000	573	7,670	5,400	5,150	8,890	2,220	9,110	9,980
12	4,960	*11,600	11,500	12,200	6,430	1,420	5,020	4,110	*10,000	997	8,780	8,270
13	5,280	8,290	9,960	12,500	4,660	1,430	3,290	6,810	8,890	480	6,100	7,670
14	6,870	6,110	10,000	12,100	1,390	2,410	3,140	6,760	9,110	432	8,520	8,870
15	*8,390	5,890	8,830	2,220	1,660	3,350	2,940	9,020	8,090	1,960	10,000	11,200
16	8,580	5,050	12,300	*639	5,850	1,420	830	*9,970	8,890	4,790	7,000	11,000
17	9,470	3,440	7,510	3,080	9,000	2,120	*595	8,730	8,920	3,330	6,250	9,650
18	9,060	7,100	13,400	1,620	9,000	6,160	562	9,150	9,210	4,890	8,620	10,900
19	5,560	4,550	12,300	4,560	8,000	2,380	540	9,240	8,150	4,990	7,750	10,600
20	3,460	4,780	12,600	8,490	9,050	916	530	7,260	7,700	6,000	8,940	9,560
21	5,340	3,670	7,270	2,280	6,330	1,660	540	5,600	8,860	5,170	8,100	7,280
22	9,270	5,480	12,560	10,200	8,600	3,600	1,230	7,330	8,440	8,610	9,450	6,010
23	10,100	6,340	6,560	11,300	7,780	1,010	734	7,650	7,960	5,480	9,160	7,640
24	10,300	2,390	7,350	5,710	8,770	2,360	638	10,100	8,220	5,260	6,230	9,160
25	10,200	3,700	7,760	3,120	12,100	2,700	3,270	8,240	8,220	2,430	6,470	7,060
26	8,760	8,410	8,880	782	8,530	806	1,820	6,880	9,560	1,680	10,300	6,020
27	4,980	7,370	*16,500	617	2,300	794	2,060	6,190	9,370	1,660	*9,680	7,090
28	5,140	6,560	16,000	540	3,070	770	2,640	6,080	7,990	4,000	9,730	5,950
29	7,790	4,440	16,300	500	-----	734	2,720	6,070	4,310	5,890	8,990	*6,300
30	6,580	7,100	16,300	470	-----	746	1,950	7,580	7,190	7,870	8,750	9,580
31	7,730	-----	16,300	1,450	-----	1,300	-----	8,430	-----	7,980	5,260	-----
Total	181,180	186,070	331,890	224,038	132,643	66,915	75,049	189,979	226,740	164,189	223,870	263,740
Mean	5,845	6,202	10,710	7,227	4,737	2,159	2,502	6,128	7,558	5,296	7,222	8,792

Observed

Adjusted†

Calendar year 1957:	Max	28,400	Min	310	Mean	6,482	Mean	6,977	Cfsm	1.86	In.	25.27
Water year 1957-58:	Max	16,500	Min	432	Mean	6,209	Mean	6,222	Cfsm	1.66	In.	22.54

* Discharge measurement made on this day.

† Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

Peak discharge (base, 300 cfs).--Nov. 18 (2 a.m.) 1,310 cfs (8.88 ft).

4965. First Creek at Fifth Avenue, at Knoxville, Tenn.

Location.--Lat 35°58'40", long 83°54'51", on left bank at "Fifth Avenue Bridge in Knoxville, Knox County, 1.8 miles upstream from mouth and 4.1 miles downstream from gage at Mineral Springs Avenue in Knoxville.

Drainage area.--21.1 sq mi, includes 4.5 sq mi without surface drainage.

Records available.--June 1932 to March 1934, April 1945 to December 1958 (discontinued).

Published as "at Knoxville" 1932-34.

Gage.--Water-stage recorder. Datum of gage is 883.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. June 23, 1932, to Mar. 31, 1934, staff gage at McCalla Avenue Bridge a quarter of a mile downstream at different datum.

Average discharge.--14 years (1932-33, 1945-58), 28.7 cfs.

Extremes.--1957-58: Maximum discharge during water year, 1,060 cfs Nov. 18 (gage height, 7.44 ft); minimum, 2.7 cfs Sept. 14; minimum gage height, 0.83 ft Sept. 29.
1958: Maximum discharge during period October to December, 78 cfs Dec. 28; maximum gage height, 2.32 ft Nov. 1; minimum discharge, 2.5 cfs Dec. 26; minimum gage height, -0.42 ft Dec. 31.

1932-34, 1945-58: Maximum discharge, 1,230 cfs Feb. 13, 1948 (gage height, 8.92 ft); minimum, 2.1 cfs Sept. 8, 1955, Sept. 7, 1957; minimum gage height, that of Dec. 31, 1958.

Floods of June 29, 1928, and Sept. 30, 1944, reached stages of 11.9 and 11.8 ft, respectively, from report by Tennessee Valley Authority.

Remarks.--Records fair. Discharge measurements generally made twice each month.

Revisions (water years).--WSP 1276: Drainage area. WSP 1336: 1933.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	7.7	37	46	24	24	29	66	25	9.0	9.2	4.7
2	20	7.5	35	39	21	23	27	66	19	10	9.0	5.1
3	77	7.5	35	34	20	21	26	56	16	9.2	14	4.3
4	112	6.9	35	32	19	21	26	52	15	10	8.6	4.3
5	53	6.7	33	31	22	20	25	54	15	8.8	6.9	4.3
6	39	8.6	31	30	34	19	29	153	15	8.9	6.0	4.2
7	35	8.2	234	30	38	24	25	210	14	17	6.0	6.8
8	30	22	192	29	29	32	23	113	14	20	6.0	4.5
9	22	13	78	28	26	45	22	95	13	11	9.8	3.9
10	18	8.4	64	28	25	35	26	88	13	12	7.7	3.7
11	16	7.3	58	27	22	32	23	72	13	9.2	34	3.4
12	13	6.9	50	26	21	30	22	62	13	12	12	3.6
13	12	6.9	42	32	20	36	20	50	12	16	7.5	3.6
14	12	27	40	38	18	32	20	44	12	12	6.9	3.2
15	11	18	38	30	19	30	24	41	12	9.7	6.9	3.3
16	10	250	38	27	17	26	23	40	12	11	6.0	3.6
17	18	239	36	24	17	27	20	39	11	12	5.8	6.9
18	12	710	35	22	15	38	19	39	11	9.0	5.8	3.3
19	12	191	47	19	15	31	19	54	11	12	5.8	3.0
20	11	92	174	18	15	29	18	43	15	12	5.7	4.2
21	9.5	72	90	20	14	28	33	35	12	11	5.3	97
22	9.2	68	54	19	15	26	41	32	12	10	14	7.1
23	12	90	49	18	14	26	33	29	12	32	8.6	5.8
24	20	63	46	35	14	27	36	27	10	13	11	4.7
25	10	130	49	33	14	27	213	26	10	11	6.7	4.3
26	10	83	164	28	26	27	96	24	22	31	5.5	4.2
27	9.2	58	74	27	44	27	98	23	10	28	7.7	3.3
28	8.4	50	64	24	29	26	78	21	9.5	13	5.1	3.7
29	8.2	45	57	22	-	25	120	21	9.2	11	5.0	3.7
30	8.2	41	51	21	-----	34	95	20	9.2	11	4.7	5.0
31	7.7	-----	50	22	-----	37	-----	20	-----	8.6	4.2	-----
Total	669.4	2,344.6	2,080	859	607	888	1,309	1,713	396.9	407.4	257.4	225.1
Mean	21.6	78.2	67.1	27.7	21.7	28.6	43.6	55.3	13.2	13.1	8.30	7.44
Cfsm	1.02	3.71	3.18	1.31	1.03	1.36	2.07	2.62	0.426	0.621	0.393	0.353
In.	1.18	4.13	3.67	1.51	1.07	1.57	2.31	3.02	0.70	0.72	0.45	0.39

Calendar year 1957: Max 710 Min 2.4 Mean 37.9 Cfsm 1.80 In. 24.39

Water year 1957-58: Max 710 Min 3.0 Mean 32.2 Cfsm 1.53 In. 20.72

Peak discharge (base, 400 cfs).--Nov. 18 (5 a.m.) 1,060 cfs (7.44 ft).

Discharge, in cubic feet per second, 1958

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	13	13	4.8	9	3.4	3.2	3.4	17	3.6	3.2	3.2
2	4.3	3.9	5.1	10	3.7	3.2	3.2	18	3.7	3.2	3.4
3	4.3	3.6	12	11	3.7	3.2	3.2	19	4.0	8.6	3.2
4	4.2	3.4	12	12	3.6	3.2	3.4	20	3.9	4.7	3.2
5	3.9	3.4	4.7	13	3.6	3.2	3.2	21	3.7	4.0	3.2
6	3.7	3.2	3.4	14	3.6	3.2	3.2	22	3.6	3.9	2.9
7	3.7	3.3	3.4	15	3.6	3.2	3.2	23	3.7	3.9	3.4
8	3.8	3.6	3.2	16	3.7	3.2	3.2	24	3.6	3.7	3.2
Total	123.7	150.4	224.3								
Mean	3.99	5.01	7.24								
Cubic feet per second per square mile	0.189	0.237	0.343								
Runoff in inches	0.22	0.27	0.40								

Calendar year 1958: Max 213 Min 2.7 Mean 19.6 Cfsm 0.929 In. 12.63

Peak discharge (base, 400 cfs).--No peak above base.

4970. Tennessee River at Knoxville, Tenn.

Location.--Lat 35°57'17", long 83°51'42", on left bank 0.7 mile downstream from confluence of French Broad and Holston Rivers, 3.5 miles upstream from First Creek, 3.6 miles upstream from Gay Street Bridge at Knoxville, Knox County, and at mile 651.4.

Drainage area.--8,934 sq mi, includes that of First Creek.

Records available.--October 1899 to September 1958. Gage-height records collected in this vicinity since 1883 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 797.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 1, 1943, staff or recording gages at several sites within 4 miles of present site at various datums. Since Sept. 1, 1943, auxiliary water-stage recorder 6.3 miles downstream.

Average discharge.--59 years (1899-1958), 12,800 cfs (unadjusted).

Extremes.--Maximum discharge during year, 43,700 cfs Dec. 27; maximum gage height, 17.85 ft May 7; minimum daily discharge, 1,280 cfs Mar. 26; minimum gage height, 9.55 ft Mar. 17.

1899-1958: Maximum discharge observed, 195,000 Mar. 1, 1902 (gage height, 36.4 ft, site and datum then in use), from rating curve extended above 130,000 cfs; minimum daily, 1,010 cfs Mar. 28, 1954; minimum gage height, -1.7 ft Sept. 11, 1925, site and datum then in use.

Maximum stage known, 45.8 ft Mar. 10, 1867, site and datum of gage at old city pumping plant, 3.2 miles downstream from base gage (discharge, 270,000 cfs, from rating curve extended above 130,000 cfs), from high-water profile by Corps of Engineers and Tennessee Valley Authority.

Remarks.--Records good except those below 10,000 cfs and those for periods of no gage-height record, which are fair. Flow regulated by Douglas, South Holston, Boone, Fort Patrick Henry, Cherokee, and Watauga Lakes (see pp. 224,225).

Revisions (water years).--WSP 583: 1902(M). WSP 823: Drainage area.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,810	16,400	28,200	31,800	22,600	7,820	10,800	4,210	20,700	20,000	17,500	16,500
2	11,200	16,300	28,000	23,100	18,700	2,040	13,100	3,580	20,900	21,800	9,740	21,600
3	12,400	15,600	30,300	20,600	16,100	12,400	13,300	2,860	22,800	20,100	3,510	24,100
4	9,680	22,800	30,500	27,700	15,800	18,200	12,700	1,440	19,500	19,600	8,730	24,900
5	1,500	16,300	31,500	22,100	14,400	19,200	11,800	3,600	20,200	17,000	11,600	23,300
6	1,460	13,700	30,800	21,300	8,120	20,300	11,800	13,300	15,300	14,000	12,000	17,900
7	2,160	14,000	34,200	25,100	4,820	17,100	12,400	19,100	8,430	13,100	12,000	14,000
8	5,520	14,600	30,000	25,300	7,570	6,940	15,700	17,100	16,700	16,900	12,000	19,600
9	7,120	12,900	25,700	25,300	12,800	11,500	15,500	22,600	21,400	14,700	9,700	20,100
10	8,150	7,480	32,200	19,400	15,100	15,600	14,200	20,400	20,000	10,300	9,940	20,600
11	10,300	16,400	31,700	19,100	16,300	17,900	*16,900	25,500	22,000	6,680	19,800	20,700
12	11,100	20,000	28,200	19,300	22,000	10,100	15,000	25,000	23,300	3,890	19,600	20,000
13	11,900	16,200	28,300	20,200	19,500	13,900	10,400	26,900	22,300	2,090	17,500	17,000
14	18,200	13,700	28,600	21,800	16,400	13,600	10,500	28,800	22,200	4,720	21,600	18,300
15	21,400	12,300	28,200	11,000	16,600	12,100	9,950	24,500	21,000	5,850	23,900	21,800
16	23,000	7,350	29,700	7,200	20,000	4,320	4,420	25,500	23,900	10,100	18,600	20,400
17	23,200	8,910	25,700	12,000	24,500	10,600	3,750	28,100	20,200	7,680	13,500	20,700
18	24,400	18,300	31,500	10,500	23,500	13,600	3,780	28,900	*18,800	10,900	21,300	21,100
19	16,900	16,400	29,800	12,400	19,000	3,490	3,880	27,800	18,800	15,500	19,100	20,800
20	10,900	16,800	32,900	17,700	14,800	7,280	2,100	27,200	18,700	11,500	19,800	16,900
21	18,000	15,100	28,500	10,000	13,800	8,900	3,580	22,500	19,800	15,100	18,700	14,000
22	*23,000	17,800	21,400	19,000	18,000	11,100	3,720	23,000	20,200	19,200	*21,100	9,000
23	23,600	19,700	24,000	20,000	20,400	4,730	2,350	*25,000	20,600	15,000	20,100	13,000
24	25,800	15,000	28,900	14,500	22,100	10,700	1,620	28,900	18,500	10,800	13,600	18,200
25	25,900	21,900	29,500	7,640	26,600	7,160	10,200	28,200	21,000	6,500	17,700	15,100
26	25,700	31,100	32,900	1,790	*23,900	1,280	2,410	24,200	21,000	2,770	22,600	13,300
27	13,800	27,200	42,300	4,320	13,500	2,870	3,670	20,800	19,200	2,150	22,100	15,300
28	13,000	26,700	41,200	3,900	10,700	1,710	5,500	20,200	14,900	11,600	22,500	17,100
29	16,000	*21,000	41,100	8,790	-	1,890	7,910	21,300	8,050	14,700	19,600	19,800
30	17,200	26,400	*40,000	*14,900	-----	1,720	5,650	22,200	16,200	*17,600	17,600	*23,700
31	18,000	-----	37,100	14,800	-----	5,010	-----	22,700	-----	19,000	9,480	-----
Total	453,300	517,840	962,900	512,540	477,410	294,860	258,570	642,390	576,580	378,830	506,500	558,600
Mean	14,620	17,260	31,060	16,530	17,050	9,512	8,619	20,720	19,220	12,220	16,340	18,620
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	66,100	Min	1,130	Mean	17,300	Cfsm	1.94	In.	26.28			
Water year 1957-58: Max	42,300	Min	1,280	Mean	16,820	Cfsm	1.88	In.	25.56			

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 13-16, 20-24, Feb. 9, 12-14, 17-21; discharge estimated on basis of records for Holston River near Knoxville and French Broad River near Knoxville.

4985. Little River near Maryville, Tenn.

Location--Lat 35°47'10", long 83°53'04", on right bank on downstream side of bridge on U. S. Highway 411, 0.8 mile downstream from Crooked Creek, 5.0 miles east of Maryville, Blount County, and at mile 17.3.

Drainage area--269 sq mi.

Records available--July 1951 to September 1958.

Gage--Water-stage recorder. Datum of gage is 850.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--7 years, 510 cfs.

Extremes--Maximum discharge during year, 10,000 cfs Nov. 18 (gage height, 16.80 ft); minimum, 59 cfs Sept. 20 (gage height, 7.10 ft).

1951-58: Maximum discharge, 19,600 cfs Feb. 1, 1957 (gage height, 21.18 ft); minimum, 32 cfs Aug. 27, 1956 (gage height, 6.85 ft); minimum gage height, 6.72 ft Sept. 16, 18, Oct. 7, 1954.

Floods in March 1875 and April 1920 reached stages of 31.0 and 24.0 ft, respectively, present datum. Flood of Mar. 29, 1951, reached a stage of 21.05 ft (discharge, 19,200 cfs) present datum, from floodmarks.

Remarks--Records good except those for periods of no gage-height record, which are fair. Diurnal fluctuation at low flow caused by small mills above station. The town of Maryville diverted an average of about 1.6 cfs for municipal supply, 300 ft above gage.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 16

Nov. 17 to Sept. 30

7.3	126	7.1	59	8.5	740
7.5	195	7.3	114	9.0	1,180
8.0	430	7.6	210	12.0	4,200
10.0	2,150	8.0	380	15.0	7,700

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	206	*220	559	844	1,220	1,130	1,180	1,830	273	148	281	111
2	*184	209	*489	*531	1,090	856	*1,000	*1,380	*312	*139	242	*102
3	311	198	440	468	874	*708	856	1,120	273	133	312	97
4	778	192	612	422	700	596	780	910	253	139	*365	94
5	430	178	503	386	1,060	510	676	838	245	167	285	94
6	293	170	461	370	3,460	468	982	2,500	238	155	234	88
7	345	160	1,720	370	3,180	454	764	*5,060	231	151	214	91
8	266	181	5,890	345	2,280	566	2,930	217	570	210	100	100
9	212	311	2,510	326	1,480	620	552	1,940	210	692	210	94
10	184	220	1,870	316	1,130	684	636	1,710	203	524	253	85
11	160	198	1,360	308	901	545	1,110	1,620	200	316	207	82
12	160	192	946	281	*740	496	829	2,100	200	330	210	151
13	178	184	780	285	636	652	692	1,280	187	531	220	130
14	150	264	724	612	545	636	596	982	177	700	167	100
15	136	412	790	482	538	531	596	796	200	365	171	88
16	126	1,500	919	454	a490	475	644	684	290	475	177	80
17	133	2,350	1,020	410	a420	447	524	604	197	564	200	82
18	220	*6,580	883	380	a380	724	482	680	177	294	177	91
19	206	3,570	829	345	a360	844	447	569	164	308	161	85
20	174	1,940	2,460	340	a360	566	416	596	164	522	148	77
21	157	1,140	2,440	398	a380	517	440	496	171	742	139	168
22	146	847	1,430	510	410	461	517	447	194	660	136	210
23	140	1,740	1,040	428	428	428	588	410	228	434	158	123
24	354	1,260	820	652	410	422	482	380	184	892	200	102
25	376	3,660	708	1,140	440	566	2,750	454	158	1,020	214	91
26	345	2,840	1,590	919	865	844	1,800	392	307	628	194	88
27	388	1,500	1,300	772	2,010	1,270	1,370	355	330	447	155	94
28	306	1,050	1,040	620	1,850	1,200	1,810	335	200	345	139	111
29	266	838	865	531	-	1,010	3,440	321	171	294	130	100
30	244	684	708	475	-----	919	3,200	298	158	265	123	91
31	234	-----	612	440	-----	1,340	-----	285	-----	245	117	-----
Total	7,808	34,788	36,308	14,960	28,647	21,085	30,795	34,272	6,512	13,195	6,149	3,100
Mean	252	1,160	1,171	483	1,023	680	1,026	1,106	217	426	198	103
Cfsm	0.937	4.31	4.35	1.80	3.80	2.53	3.81	4.11	0.807	1.58	0.736	0.383
In.	1.08	4.81	5.02	2.07	3.96	2.92	4.26	4.74	0.90	1.82	0.85	0.43

Calendar year 1957: Max 13,500 Min 53 Mean 723 Cfsm 2.69 In. 36.49
 Water year 1957-58: Max 6,580 Min 77 Mean 651 Cfsm 2.42 In. 32.86

Peak discharge (base, 4,800 cfs)--Nov. 18 (7 a.m.) 10,000 cfs (16.80 ft); Nov. 25 (4:30 p.m.) 5,350 cfs (13.04 ft); Dec. 8 (4 a.m.) 4,850 cfs (12.57 ft); May 7 (7 a.m.) 6,060 cfs (13.63 ft).

* Discharge measurement made on this day.
 a No gage-height record; discharge estimated on basis of weather records and records for Tellico River at Tellico Plains.

5000. Little Tennessee River near Prentiss, N. C.

Location.--Lat 35°08'57", long 83°22'46", on left bank 600 ft upstream from Owenby Branch, 0.5 mile upstream from Cartoogechaye Creek, 2 miles north of Prentiss, Macon County, and at mile 119.5.

Drainage area.--140 sq mi.

Records available.--October 1943 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 2,008.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--15 years, 371 cfs.

Extremes.--Maximum discharge during year, 2,310 cfs Nov. 19; maximum gage height, 6.55 ft Nov. 19 (backwater from Cartoogechaye Creek); minimum discharge, 126 cfs Sept. 30 (gage height, 1.67 ft).

1943-58: Maximum discharge, 5,900 cfs June 16, 1949 (gage height, 12.85 ft); minimum, 65 cfs Oct. 16, 17, 1954 (gage height, 1.21 ft).

Flood in October 1898 reached a stage of about 15 ft, from profiles by Tennessee Valley Authority.

Remarks.--Records excellent except those for periods of ice effect or backwater from Cartoogechaye Creek, which are good.

Revisions (water years).--WSP 1236: 1949(M).

Rating tables, water year 1957-58, except periods of ice effect or backwater from Cartoogechaye Creek (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 20				Nov. 21 to Apr. 28				Apr. 29 to Sept. 30			
1.9	189	4.0	1,200	2.4	357	3.5	870	1.6	113	3.5	860
2.2	267	5.0	1,750	2.7	475	4.0	1,200	2.0	198	4.0	1,200
3.0	585	5.6	2,050	3.0	610	5.0	1,750	2.5	350	4.8	1,650
3.5	860							3.0	570		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	267	234	542	520	640	620	615	914	315	196	240	182
2	245	223	516	484	542	556	570	*969	346	191	234	175
3	408	218	498	463	488	520	*538	854	308	186	237	173
4	848	213	*552	447	455	488	534	745	298	184	229	168
5	526	208	484	431	459	463	511	686	295	251	213	164
6	380	*196	459	423	k938	455	770	770	289	326	*257	160
7	317	189	502	*423	1,040	447	675	776	282	279	276	157
8	*276	272	906	403	828	447	596	680	279	818	251	155
9	250	279	745	380	695	488	560	626	273	1,180	251	*149
10	234	229	630	376	620	*475	583	595	270	*662	243	145
11	218	216	570	376	583	443	615	662	266	721	218	142
12	239	208	511	368	547	427	560	680	263	936	248	149
13	226	203	475	441	520	451	524	680	254	565	312	160
14	211	k790	467	685	493	439	506	595	248	502	365	147
15	203	979	455	529	493	415	529	550	245	434	298	145
16	201	723	443	475	b450	403	665	511	251	369	260	155
17	344	657	427	443	b410	403	565	488	237	329	260	147
18	354	kl,250	411	415	b400	534	534	470	234	302	240	145
19	279	*k2,010	427	395	b400	502	506	448	231	289	218	134
20	250	*kl,700	kl,120	387	b425	463	488	462	248	279	210	132
21	231	900	kl,330	569	411	439	475	439	240	348	203	267
22	221	750	790	680	415	423	538	409	243	377	200	218
23	216	906	680	524	411	407	542	392	*254	315	208	164
24	520	755	610	681	*399	427	484	384	228	405	266	153
25	399	1,150	578	790	395	705	488	384	216	430	350	145
26	334	1,020	795	650	638	630	463	388	223	332	245	140
27	304	785	670	583	930	685	475	361	257	315	234	136
28	276	695	610	534	788	720	*kl,310	350	216	308	216	132
29	261	670	574	502	-	655	kl,640	340	206	282	200	128
30	253	601	539	480	-	610	kl,240	326	202	257	193	128
31	245	-	516	467	-	690	-	318	-	243	184	-
Total	9,536	19,229	18,831	15,304	15,813	15,840	19,099	17,253	7,713	12,611	7,559	4,695
Mean	308	641	607	494	565	511	637	557	257	407	244	156
Cfsm	2.20	4.58	4.34	3.53	4.04	3.65	4.55	3.98	1.84	2.91	1.74	1.11
In.	2.53	5.11	5.00	4.07	4.20	4.21	5.07	4.58	2.05	3.35	2.01	1.25

Calendar year 1957: Max 3,300

Min 92

Mean 436

Cfsm 3.11

In. 42.25

Water year 1957-58: Max 2,010

Min 128

Mean 448

Cfsm 3.20

In. 43.43

Peak discharge (base, 1,500 cfs).--Nov. 19 (11 p.m.) 2,310 cfs (6.45 ft); Dec. 20 (7 p.m.) 1,720 cfs (5.60 ft); Apr. 29 (3 a.m.) 1,700 cfs (5.12 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

k Backwater from Cartoogechaye Creek.

5005. Cullasaja River at Highlands, N. C.

Location.--Lat 35°04'14", long 83°13'57", on right bank 0.6 mile downstream from Highlands municipal dam, 1.0 mile downstream from Big Creek, and 2.3 miles northwest of Highlands, Macon County.

Drainage area.--14.9 sq mi.

Records available.--December 1927 to September 1958. Prior to October 1949, published as Cullasaja Creek at Highlands. Except for figures of momentary maximum discharge, records prior to Aug. 29, 1931, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 3,373.63 ft above mean sea level. Prior to Aug. 29, 1931, water-stage recorder on crest of Highlands municipal dam 0.6 mile upstream at datum 230.22 ft higher.

Average discharge.--27 years (1931-58), 58.7 cfs.

Extremes.--Maximum discharge during year, 860 cfs Nov. 19 (gage height, 3.27 ft); minimum, 6.7 cfs Sept. 9, 10 (gage height, 0.39 ft); minimum daily, 9.4 cfs Sept. 10.
1927-58: Maximum discharge, 5,100 cfs Aug. 30, 1940 (gage height, 9.35 ft), from rating curve extended above 800 cfs on basis of computation of peak flow over dam; minimum, 0.2 cfs Oct. 13, 14, 1947; minimum daily, 0.2 cfs Oct. 13, 1947.

Remarks.--Records excellent except those for period of ice effect, which are good. Some diurnal fluctuation caused by powerplant at Highlands municipal dam.

Revisions (water years).--WSP 728: 1931. WSP 823: Drainage area. WSP 953: 1941(M). WSP 1206: 1950(m). See also Records available.

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	7.0	1.4	86
.6	16	1.7	140
.8	28	2.0	212
1.0	42	2.5	394
1.2	61	3.0	687

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	46	92	83	106	89	99	134	44	17	35	20
2	51	42	88	72	73	79	88	*162	59	16	39	20
3	131	42	86	70	64	72	*80	125	36	16	44	19
4	167	41	*89	65	60	65	83	113	35	18	38	21
5	104	40	78	62	66	62	79	107	34	110	31	20
6	82	*42	72	60	138	61	201	144	34	90	*48	20
7	*68	46	94	*60	*140	61	118	153	32	61	44	19
8	60	80	153	54	99	62	104	115	32	375	34	*19
9	56	55	104	50	85	85	94	106	30	191	28	14
10	45	44	89	51	78	*72	124	99	28	132	28	9.4
11	44	42	83	49	72	63	115	106	28	182	31	15
12	54	40	71	48	69	57	97	102	*28	128	33	16
13	47	40	70	83	62	70	86	94	24	96	51	15
14	42	361	68	92	58	61	79	86	24	86	63	15
15	40	162	64	66	63	54	121	79	25	*70	41	15
16	40	142	62	57	52	51	126	75	24	65	37	15
17	136	140	59	53	b47	51	96	70	22	63	32	14
18	83	329	56	49	b46	66	65	66	21	54	30	14
19	59	565	89	48	b45	82	79	85	19	47	28	13
20	49	248	581	47	b44	58	73	76	25	53	25	14
21	47	186	189	173	b44	55	72	64	21	81	25	34
22	45	160	132	115	47	49	109	55	22	78	27	21
23	50	191	113	83	45	48	89	50	25	59	24	15
24	192	144	102	124	45	65	76	51	21	104	32	15
25	92	226	102	116	46	115	75	66	20	86	44	15
26	79	167	189	94	144	96	69	54	34	64	31	14
27	65	138	122	83	200	106	70	48	27	56	28	14
28	57	122	107	75	113	111	*269	46	20	51	26	13
29	56	113	96	71	-	89	226	44	18	49	23	13
30	53	102	89	66	-----	100	155	40	18	46	22	13
31	50	-----	85	69	-----	140	-----	32	-----	40	16	-----
Total	2,204	4,094	3,254	2,288	2,150	2,276	3,235	2,635	830	2,584	1,040	494.4
Mean	71.1	136	105	73.8	76.8	73.4	108	85.0	27.7	83.4	33.5	16.5
Cfsm	4.77	9.13	7.05	4.95	5.15	4.93	7.25	5.70	1.86	5.60	2.25	1.11
In.	5.50	10.22	8.12	5.71	5.37	5.68	8.07	6.58	2.07	6.45	2.60	1.23

Calendar year 1957: Max 565 Min 11 Mean 78.8 Cfsm 5.29 In. 71.77
water year 1957-58: Max 565 Min 9.4 Mean 74.2 Cfsm 4.98 In. 67.60

Peak discharge (base, 550 cfs).--Nov. 14 (11 a.m.) 649 cfs (2.94 ft); Nov. 19 (4 a.m.) 860 cfs (3.27 ft); Dec. 20 (1:30 p.m.) 687 cfs (3.00 ft); July 8 (1:30 p.m.) 649 cfs (2.94 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5010. Cullasaja River at Cullasaja, N. C.

Location.--Lat 35°09'59", long 83°19'25", on right bank at Cullasaja, Macon County, 1.4 miles downstream from Ellijay Creek and 4.1 miles upstream from mouth.

Drainage area.--86.5 sq mi.

Records available.--June 1907 to December 1909, October 1920 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Prior to October 1949, published as Cullasaja Creek at Cullasaja.

Gage.--Water-stage recorder. Datum of gage is 2,023.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 23, 1934, staff gages at same site and datum.

Average discharge.--40 years, 222 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs Nov. 19 (gage height, 9.01 ft); minimum, 48 cfs Sept. 10 (gage height, 0.79 ft).

1907-9, 1920-58: Maximum discharge, 16,500 cfs Aug. 30, 1940 (gage height, 20.83 ft), from rating curve extended above 8,100 cfs on basis of slope-area measurement of peak flow; minimum, 19 cfs Sept. 18-22, 1925, Jan. 2, 1940.

Maximum stage known, that of Aug. 30, 1940. A stage of 17.2 ft, from floodmarks, occurred in July 1916, but has been exceeded at other times, according to information by State Highway Commission.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Slight regulation at low flow by Sequoyah Lake and mill on Buck Creek.

Revisions (water years).--WSP 823: Drainage area. WSP 1143: 1907-10, 1921-31, 1932(M), 1933-38, 1939(M), 1940-43, 1944(M), 1946, 1947(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 6				May 7 to Sept. 30			
1.3	107	4.0	780	0.8	49	2.0	226
1.5	136	5.0	1,080	1.0	68	3.0	487
2.0	229	7.0	1,780	1.5	133	4.0	780
3.0	490						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	158	324	288	415	377	366	574	170	87	124	72
2	152	128	301	259	309	327	330	*591	211	85	118	68
3	288	122	288	247	b270	298	*306	501	186	84	128	77
4	482	120	308	236	b270	276	301	448	156	85	115	80
5	322	118	264	225	274	259	281	420	154	205	107	69
6	225	*115	250	218	522	257	519	551	149	223	*107	66
7	*197	117	288	*218	*549	252	372	588	144	156	128	66
8	*166	202	546	b200	434	254	327	478	143	756	108	*65
9	157	171	407	b190	b360	294	306	432	138	510	100	63
10	138	134	345	b195	b325	*269	358	398	133	308	95	53
11	126	127	309	189	304	247	372	441	132	360	117	57
12	157	124	b265	182	281	236	319	415	130	341	124	61
13	136	121	b270	a275	264	262	296	379	*120	255	136	63
14	122	997	254	a355	247	243	281	346	118	228	161	58
15	115	566	240	a265	254	225	352	323	124	*194	118	57
16	114	507	231	a255	b220	214	415	308	120	179	111	60
17	256	426	220	220	b200	218	335	290	111	171	105	58
18	214	869	211	209	b190	276	309	276	107	151	98	55
19	155	1,660	227	199	b180	252	288	266	104	138	91	53
20	139	795	1,090	197	b180	238	274	281	127	139	86	54
21	132	588	716	433	b185	225	284	257	110	215	85	135
22	126	504	498	583	201	214	336	237	112	228	87	81
23	649	649	423	291	197	207	306	224	115	170	64	63
24	419	504	377	476	195	246	271	219	103	253	120	80
25	240	853	356	484	197	436	276	237	96	257	135	58
26	207	661	550	385	463	366	257	215	119	208	101	58
27	187	518	412	340	698	410	285	202	128	186	91	57
28	168	448	369	301	490	415	1,180	194	99	166	86	54
29	180	415	337	284	-	364	364	164	92	154	81	54
30	155	364	*311	266	-----	353	705	177	89	138	76	55
31	147	-----	294	272	-----	462	-----	170	-----	133	75	-----
Total	5,661	13,061	11,279	8,517	8,672	8,972	11,551	10,622	3,820	6,741	3,300	1,930
Mean	189	435	364	275	310	289	385	343	127	217	106	64.3
Cfsm	2.18	5.03	4.21	3.18	3.58	3.34	4.45	3.97	1.47	2.51	1.23	0.743
In.	2.52	5.62	4.85	3.66	3.73	3.86	4.97	4.57	1.64	2.90	1.42	0.83

Calendar year 1957: Max 2,320 Min 51

Water year 1957-58: Max 1,660 Min 53

Mean 276 Cfsm 3.19 In. 43.58

Mean 298 Cfsm 2.98 In. 40.57

Peak discharge (base, 2,000 cfs).--Nov. 14 (1 p.m.) 2,030 cfs (7.72 ft); Nov. 19 (6:30 a.m.) 2,500 cfs (9.01 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station at Highlands.

b Stage-discharge relation affected by ice.

5030. Little Tennessee River at Needmore, N. C.

Location.--Lat 35°20'11", long 83°31'39", on left bank 0.8 mile downstream from DeHart Creek, 0.8 mile north of Needmore, Swain County, 2.4 miles downstream from Brush Creek, 6.3 miles downstream from Tellico Creek, and at mile 92.9.

Drainage area.--436 sq mi.

Records available.--October 1943 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,761.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--15 years, 1,021 cfs.

Extremes.--Maximum discharge during year, 7,160 cfs Nov. 19 (gage height, 6.59 ft); minimum, 190 cfs June 24 (gage height, 1.68 ft); minimum daily, 318 cfs Sept. 30.

1943-58: Maximum discharge, 20,200 cfs June 16, 1949 (gage height, 11.10 ft), from rating curve extended above 12,000 cfs by logarithmic plotting; minimum, 52 cfs Nov. 7, 8, 1954 (gage height, 1.16 ft); minimum daily, 71 cfs Nov. 7, 1954.

Floods of October 1898 and Aug. 30, 1940, reached stages of about 13 and 11.5 ft, respectively, from flood profiles by Tennessee Valley Authority.

Remarks.--Records excellent except those for periods of ice effect, which are good. Considerable diurnal fluctuation caused by Porters Bend powerplant at Lake Emory.

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	290	5.0	3,960
2.5	695	6.0	5,880
3.0	1,110	6.2	6,300
4.0	2,340		

Discharge, in cubic feet per second, water year October 1957 to September 1948

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	798	660	1,470	1,400	2,070	1,950	1,720	2,890	937	536	698	426
2	703	655	1,360	1,330	1,740	1,660	1,590	2,600	995	508	674	419
3	938	618	1,310	1,240	b1,460	1,530	1,490	2,400	954	508	739	406
4	2,300	615	1,400	1,180	b1,300	1,400	1,440	2,070	904	543	647	413
5	1,620	596	1,260	1,140	1,340	1,320	1,410	*1,940	874	646	592	406
6	1,140	572	1,180	1,060	2,810	1,310	1,830	2,240	849	933	580	388
7	375	568	1,340	1,100	3,270	1,290	1,810	2,430	820	714	728	368
8	842	640	2,720	1,060	2,750	1,300	1,550	2,070	804	2,030	678	376
9	738	914	2,370	b995	2,150	1,350	1,430	1,890	805	3,020	609	363
10	658	659	1,890	*b980	1,860	1,390	1,490	1,790	761	1,710	600	345
11	624	626	1,610	987	1,690	1,240	1,740	1,960	773	1,280	543	351
12	684	612	1,410	922	1,560	1,190	1,490	2,200	758	1,910	644	369
13	689	586	1,320	1,020	1,460	1,320	1,410	2,000	720	1,310	770	398
14	564	*1,690	1,220	1,860	1,340	1,290	1,330	1,770	689	1,180	812	376
15	580	2,820	1,220	1,390	1,380	1,170	1,320	1,620	690	1,090	729	369
16	535	1,970	1,170	1,230	1,300	1,150	1,720	1,500	682	987	628	363
17	750	2,040	*1,110	1,140	b1,020	1,130	1,450	1,440	678	896	804	*363
18	*1,100	3,340	1,080	1,080	b990	1,420	1,380	1,360	635	797	586	369
19	800	6,270	1,080	1,040	b1,040	1,430	1,290	1,310	594	743	515	334
20	694	4,780	3,120	1,010	b1,100	1,320	1,260	1,320	776	744	508	334
21	634	2,780	4,400	1,190	b1,100	1,230	1,210	1,260	680	898	479	605
22	618	2,180	2,500	1,760	1,120	1,180	1,310	1,200	638	1,280	465	720
23	583	2,750	2,010	1,320	1,110	1,140	*1,540	1,140	890	*929	510	446
24	1,400	2,310	1,750	1,690	1,080	1,140	1,280	1,150	390	988	811	394
25	1,300	3,320	1,610	2,360	1,060	1,610	1,360	1,130	596	1,330	813	376
26	1,010	3,410	2,370	1,880	1,800	1,710	1,280	1,140	646	995	642	357
27	938	2,490	2,060	1,630	*2,990	*1,940	1,220	1,070	745	953	559	357
28	781	2,050	1,800	1,440	2,750	1,970	3,880	1,040	618	834	532	340
29	746	1,880	1,660	1,340	-	1,850	*5,010	1,000	566	858	*515	323
30	736	1,670	1,500	1,250	-----	1,680	4,030	970	*543	707	479	318
31	672	-----	1,420	1,240	-----	1,960	-----	945	-----	715	452	-----
Total	27,148	56,071	55,720	40,304	46,640	44,770	52,270	50,845	22,008	32,552	19,143	11,782
Cfs/m	876	1,669	1,733	1,300	1,666	1,444	1,742	1,640	734	1,050	618	393
In.	2.01	4.29	3.97	2.98	3.82	3.31	4.00	3.76	1.68	2.41	1.42	0.901
	2.32	4.78	4.58	3.44	3.98	3.82	4.46	4.34	1.88	2.78	1.63	1.00

Calendar year 1957: Max 11,600 Min 271 Mean 1,303 Cfs/m 2.99 In. 40.60

Water year 1957-58: Max 6,270 Min 318 Mean 1,253 Cfs/m 2.87 In. 39.01

Peak discharge (base, 5,000 cfs).--Nov. 19 (4 p.m.) 7,160 cfs (6.59 ft); Dec. 21 (12:30 a.m.) 5,880 cfs (6.00 ft); Apr. 29 (4:30 p.m.) 5,250 cfs (5.69 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5040. Nantahala River near Rainbow Springs, N. C.

Location.--Lat 35°07'35", long 83°37'11", on right bank on Nantahala Forest Service road 300 ft upstream from Roaring Fork, 0.2 mile downstream from Buck Creek, 5 miles downstream from town of Rainbow Springs, Macon County, and at mile 34.3.

Drainage area.--51.9 sq mi.

Records available.--October 1940 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 3,072.97 ft above mean sea level, datum of 1929.

Average discharge.--18 years, 196 cfs.

Extremes.--Maximum discharge during year, 2,190 cfs Dec. 20 (gage height, 4.92 ft); minimum, 48 cfs Sept. 20 (gage height, 0.70 ft).

1940-58: Maximum discharge, 6,300 cfs June 16, 1949 (gage height, 9.70 ft), from rating curve extended above 3,000 cfs on basis of slope-area measurement of peak flow; minimum, 33 cfs Nov. 18, 19, 1953 (gage height, 0.60 ft).

Remarks.--Records excellent except those for periods of ice effect, which are good. Occasional regulation caused by fish trap.

Revisions (water years).--WSP 973: 1941(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 6

Feb. 7 to Sept. 30

0.9	88	2.0	424	0.7	48	2.0	424
1.0	108	2.5	642	1.0	100	2.5	642
1.2	152	3.1	970	1.4	203	3.0	910
1.5	239						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	147	129	267	299	306	246	225	436	152	73	115	70
2	143	127	253	260	b220	229	216	400	158	72	111	66
3	284	123	256	246	b200	216	206	349	*142	70	120	66
4	306	118	281	233	b190	206	219	318	137	70	104	65
5	233	116	239	223	330	200	203	300	132	94	98	63
6	190	112	226	220	930	200	276	404	127	102	103	62
7	165	110	361	217	696	200	222	361	122	98	132	62
8	147	180	577	b190	507	200	213	*318	120	456	102	58
9	134	134	404	b180	420	222	203	303	118	235	100	*58
10	125	123	347	b180	368	197	235	281	113	*191	100	57
11	*118	118	321	187	337	191	229	357	111	252	98	57
12	140	116	b280	178	307	*186	206	349	107	213	142	62
13	118	114	b275	264	281	216	200	311	102	186	115	62
14	112	451	267	264	266	191	194	285	98	177	122	57
15	106	*274	253	213	266	183	252	266	100	147	109	57
16	106	321	250	201	b230	177	252	256	96	134	136	60
17	210	291	236	192	b210	180	222	246	90	122	132	57
18	147	582	226	184	b200	229	213	232	68	113	102	54
19	127	910	*267	178	b190	203	203	225	86	111	94	51
20	121	533	938	173	b180	191	197	235	120	102	*88	52
21	116	404	564	256	b170	183	194	213	90	193	84	190
22	112	362	436	207	b190	177	242	200	102	158	82	72
23	116	412	381	*190	188	174	206	187	100	134	90	62
24	409	343	347	296	*186	209	*197	200	84	267	122	58
25	207	490	336	274	186	270	216	200	80	200	113	56
26	190	401	457	242	352	260	203	186	129	188	90	54
27	168	355	355	226	381	263	221	177	92	174	84	54
28	155	325	343	213	281	260	794	169	80	147	78	52
29	147	328	314	204	-	242	695	160	78	134	77	51
30	143	292	292	193	-	242	537	158	77	124	75	52
31	136	-	278	207	-	248	-	132	-	124	73	-
Total	5,078	8,694	10,627	6,792	8,568	6,592	7,891	8,244	3,231	4,861	3,191	1,697
Mean	164	290	343	219	306	213	263	266	108	157	103	63.2
Cfs/m	3.16	5.59	6.61	4.22	5.90	4.10	5.07	5.13	2.08	3.03	1.98	1.22
In.	3.64	6.23	7.61	4.87	6.14	4.72	5.65	5.91	2.32	3.48	2.29	1.36

Calendar year 1957: Max 2,420 Min 49 Mean 258 Cfs/m 4.97 In. 67.36
 Water year 1957-58: Max 938 Min 51 Mean 207 Cfs/m 3.99 In. 54.22

Peak discharge (base, 1,500 cfs).--Dec. 20 (11 a.m.) 2,190 cfs (4.92 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5055. Nantahala River at Nantahala, N. C.

Location.--Lat 35°17'55", long 83°39'22", on left bank on U. S. Highway 19, 1.0 mile north-east of Nantahala, Swain County, 2.3 miles downstream from Rowlin Creek, 2.6 miles downstream from Nantahala Dam powerhouse, and at mile 10.8.

Drainage area.--144 sq mi.

Records available.--May 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,894.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 486 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,560 cfs Nov. 19 (gage height, 4.33 ft); minimum, 29 cfs Sept. 28, 29 (gage height, 1.39 ft); minimum daily, 36 cfs Oct. 20.
1942-58: Maximum discharge, 7,510 cfs Feb. 10, 1946 (gage height, 8.15 ft); minimum, 16 cfs Nov. 9, 1953 (gage height, 1.19 ft); minimum daily, 17 cfs Nov. 8, 16, 1952, Oct. 25, 1953.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Flow regulated by Nantahala Lake (see p. 225) and Queens Creek Lake (capacity, about 300 cfs-days).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	30	3.0	535
1.7	70	3.5	865
2.0	134	4.0	1,260
2.5	293		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	186	609	155	122	667	753	522	681	718	250	568	37
2	52	138	272	484	302	748	620	606	725	582	536	482
3	72	72	*400	459	640	739	592	550	a720	130	840	468
4	420	364	293	102	686	725	588	174	a720	341	614	596
5	a470	474	246	83	718	718	706	599	a700	62	647	627
6	a60	567	290	298	1,010	725	528	844	a680	54	634	494
7	a470	590	192	326	955	732	692	880	a680	356	634	339
8	a520	498	263	278	910	739	718	851	a680	594	634	404
9	a500	528	530	328	925	732	532	830	a680	528	628	408
10	a250	570	518	*305	837	725	725	809	a680	699	74	462
11	a270	542	484	172	*788	725	712	829	a660	550	*60	460
12	a75	614	483	70	774	718	718	834	a500	678	70	402
13	a70	614	466	287	760	732	653	792	a660	673	62	358
14	a110	*587	449	348	753	725	528	752	a680	666	57	260
15	a370	448	414	406	746	718	632	781	a660	654	54	520
16	a640	175	495	472	732	198	286	774	a350	647	49	340
17	a370	162	360	445	b700	550	640	767	478	617	51	336
18	*a400	771	441	349	b700	753	559	746	578	628	56	456
19	143	1,140	474	359	b700	713	252	760	620	634	57	506
20	36	678	741	355	b680	706	362	760	572	640	194	278
21	118	312	389	486	712	732	662	760	183	628	433	120
22	361	448	186	608	699	725	702	753	57	660	426	455
23	99	221	347	640	699	533	*522	746	300	*647	449	486
24	*433	155	280	699	712	623	552	739	211	692	332	614
25	288	366	129	486	712	666	206	739	591	686	424	614
26	414	294	576	273	781	706	108	739	573	673	449	*608
27	478	312	285	686	809	744	100	739	493	666	429	403
28	621	152	147	666	781	511	460	739	286	660	586	92
29	614	139	137	666	-	346	810	739	*49	660	411	436
30	327	408	127	654	-----	108	671	725	202	654	527	428
31	456	-----	120	666	-----	377	-----	725	-----	630	363	-----
Total	9,893	12,738	10,689	12,578	20,888	19,943	16,356	22,762	15,666	17,219	11,148	12,487
Cfsm	319	425	345	406	746	643	545	734	522	555	429	436
(†)	+899	+7,686	+13,587	+3,495	+993	-2,492	+3,719	-918	-6,164	-3,394	-3,087	-6,897

Adjusted for change in contents in Nantahala and Queens Creek Lakes

Mean	348	681	783	518	781	563	669	705	317	446	260	186
Cfsm	2.42	4.73	5.44	3.60	5.42	3.91	4.65	4.90	2.20	3.10	1.81	1.29
In.	2.79	5.27	6.27	4.15	5.65	4.51	5.18	5.64	2.45	3.57	2.08	1.44

Observed

Adjusted

Calendar year 1957:	Max	2,390	Min	30	Mean	558	Mean	628	Cfsm	4.36	In.	59.13
Water year 1957-58:	Max	1,140	Min	36	Mean	500	Mean	520	Cfsm	3.61	In.	49.00

* Discharge measurement made on this day.

† Change in contents, in cfs-days, in Nantahala and Queens Creek Lakes; furnished by Tennessee Valley Authority and Nantahala Power and Light Co.

a No gage-height record; discharge estimated on basis of recorded range in stage and powerplant records of release.

b Stage-discharge relation affected by ice.

5080. Tuckasegee River at Tuckasegee, N. C.

Location.--Lat 35°16'55", long 83°07'37", on right bank 0.9 mile north of Tuckasegee, Jackson County, 1.0 mile downstream from West Fork Tuckasegee River, and at mile 48.5.

Drainage area.--143 sq mi.

Records available.--June 1934 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,125.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years, 389 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 3,800 cfs Nov. 19 (gage height, 6.38 ft); minimum, 9.5 cfs Sept. 30 (gage height, 0.65 ft); minimum daily, 10 cfs Sept. 1, 1934-58: Maximum discharge, 40,800 cfs Aug. 30, 1940 (gage height, 21.1 ft, from floodmarks), from rating curve extended above 7,000 cfs on basis of slope-area measurements at gage heights 14.3 and 21.1 ft; minimum, 5.2 cfs Sept. 3, 1956 (gage height, 0.54 ft); minimum daily, 6.4 cfs Oct. 7, 1956.

Remarks.--Records excellent except those for period of ice effect, which are good. Flow regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see pp. 225,230).

Revisions (water years).--WSP 823: Drainage area. WSP 1053: 1943.

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 4				Feb. 5 to Sept. 30			
0.8	21	2.5	605	0.6	7.0	2.0	317
1.1	58	3.0	940	.8	21	2.5	585
1.4	118	4.0	1,710	1.0	44	3.0	920
1.7	213	5.0	2,550	1.3	95	3.5	1,310
2.0	340			1.6	175		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*560	265	382	366	692	750	510	949	316	242	269	10
2	324	65	506	568	510	468	544	943	668	404	265	276
3	54	49	590	647	390	593	393	916	586	288	265	208
4	81	96	414	324	604	*633	582	664	430	386	246	272
5	498	*222	*640	368	*467	*579	582	853	630	400	321	262
6	304	242	514	*645	746	471	338	972	588	384	258	190
7	275	252	419	430	677	543	866	*1,030	340	124	259	41
8	540	284	682	420	626	521	980	296	500	*380	204	250
9	320	347	782	466	604	108	455	968	560	536	230	250
10	514	266	644	554	612	583	579	909	497	388	120	198
11	374	472	578	432	578	416	820	868	291	472	285	182
12	118	413	741	396	603	545	655	801	511	559	400	247
13	31	424	527	540	290	566	444	858	666	637	347	94
14	308	716	550	670	660	605	466	891	270	747	314	50
15	402	866	407	569	460	350	586	750	270	552	380	244
16	378	682	556	544	250	109	447	702	372	608	58	216
17	527	448	506	476	619	431	527	608	*382	584	58	223
18	506	964	532	456	b470	372	588	436	358	461	314	260
19	82	1,980	555	208	b350	555	404	638	362	550	186	280
20	27	1,100	1,020	500	426	537	336	678	395	268	236	104
21	186	804	884	479	570	501	586	643	151	630	120	36
22	382	809	665	660	536	410	*512	620	41	590	146	312
23	252	783	772	550	278	76	531	658	288	558	94	290
24	567	748	722	652	520	562	442	667	204	615	51	351
25	648	1,110	634	788	604	757	469	666	216	574	329	348
26	682	925	924	602	918	692	478	799	350	569	201	580
27	708	813	707	694	997	702	112	520	513	612	220	674
28	272	748	586	676	861	726	990	476	150	784	322	563
29	604	733	587	560	-	482	1,030	638	30	588	390	354
30	468	834	576	559	-----	374	956	654	202	*261	13	72
31	188	-----	518	472	-----	599	-----	653	-----	258	11	-----
Total	11,180	18,460	19,080	16,269	15,918	15,783	16,549	23,408	10,933	15,129	7,088	7,391
Cfs/m	361	615	615	525	568	509	552	755	364	488	229	246
(t)	-537	+5,599	+3,176	+603	-249	+80	+5,117	-3,052	-3,696	-3,043	-1,125	-4,116

Adjusted for change in lake contents

Mean	343	802	718	544	560	512	722	657	241	390	192	109
Cfs/m	2.40	5.61	5.02	3.80	3.92	3.58	5.05	4.59	1.89	2.73	1.34	0.762
In.	2.77	6.26	5.79	4.59	4.08	4.13	5.63	5.29	1.88	3.14	1.55	0.85

	Observed					Adjusted						
Calendar year 1957:	Max	3,790	Min	18	Mean	488	Mean	533	Cfs/m	3.73	In.	50.59
Water year 1957-58:	Max	1,980	Min	10	Mean	485	Mean	482	Cfs/m	3.37	In.	45.76

* Discharge measurement made on this day.

† Change in contents, in cfs-days, in Thorpe, Cedar Cliff, Bear Creek, and Tennessee Creek project lakes; furnished by Tennessee Valley Authority and Nantahala Power and Light Co.

b Stage-discharge relation affected by ice.

TENNESSEE RIVER BASIN

5090. Scott Creek above Sylva, N. C.

Location.--Lat 35°23'02", long 83°12'51", on right bank 800 ft downstream from Allens Branch, 3,500 ft upstream from Cope Creek, and 0.8 mile upstream from Sylva, Jackson County.

Drainage area.--50.7 sq mi.

Records available.--June 1941 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 2,056.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--17 years, 105 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs July 8 (gage height, 5.36 ft); minimum, 84 cfs Sept. 19, 20 (gage height, 2.04 ft).
1941-58: Maximum discharge, 2,320 cfs Jan. 31, 1957 (gage height, 7.39 ft); minimum, 8.0 cfs Sept. 22, 23, 1941 (gage height, 1.30 ft); minimum daily, 22 cfs Sept. 19, 29, 30, Oct. 4, 1954.
Maximum stage known, 8.6 ft Aug. 30, 1940, from floodmarks (discharge, 3,200 cfs, from rating curve extended above 1,800 cfs by logarithmic plotting).

Remarks.--Records excellent except those for periods of ice effect, which are good.

Revisions (water years).--WSP 1053: 1942-44(M).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 8				July 9 to Sept. 30			
2.1	47	3.0	231	2.0	30	2.7	145
2.2	60	3.5	396	2.2	54	3.0	226
2.4	91	3.8	519	2.4	84		
2.7	151						

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*59	68	129	140	164	138	136	261	107	55	68	46
2	64	64	123	125	111	127	*127	267	111	54	65	44
3	75	63	121	b115	b95	121	125	231	102	52	79	*42
4	105	62	127	b110	b95	117	129	211	100	52	68	42
5	70	*60	*111	b105	*129	*113	121	198	98	66	61	40
6	64	59	107	*b105	237	117	156	240	96	75	64	40
7	68	57	186	111	280	119	127	*246	91	68	98	40
8	59	85	267	104	209	129	119	211	91	480	68	41
9	56	69	190	b90	b170	142	115	200	88	200	62	38
10	51	62	164	b100	b145	129	129	190	*85	162	60	*38
11	52	60	147	98	b135	121	123	263	81	*152	62	65
12	100	68	127	95	b125	115	113	264	81	135	61	65
13	68	60	b120	113	b115	142	107	223	77	131	*82	46
14	60	102	151	119	b110	123	105	203	75	116	73	40
15	57	78	123	102	b115	117	115	192	104	104	71	40
16	56	148	123	96	b105	113	127	181	78	104	64	40
17	104	124	119	93	b90	117	109	171	72	98	61	39
18	83	273	113	b87	b85	138	105	161	69	88	55	38
19	69	*439	129	b85	b90	121	104	154	72	86	51	36
20	63	217	334	88	b95	115	104	154	77	84	51	37
21	60	161	231	98	b95	113	104	142	69	102	50	136
22	59	161	187	91	102	109	136	136	72	88	49	58
23	62	240	166	86	98	109	121	131	75	81	71	48
24	253	174	154	117	96	111	111	140	64	112	102	45
25	115	328	144	107	98	121	196	144	62	86	93	41
26	102	237	246	96	216	127	142	129	74	114	64	40
27	89	195	184	93	229	136	138	119	69	102	57	40
28	80	171	168	89	161	138	349	119	62	82	53	38
29	75	156	161	88	-	127	422	115	57	78	51	37
30	75	142	147	86	-----	131	513	109	56	73	50	39
31	72	-----	140	103	-----	154	-----	107	-----	70	49	-----
Total	2,431	4,181	4,919	3,135	3,805	4,428	5,612	2,415	3,370	2,013	1,379	
Mean	78.4	139	159	101	136	124	148	80.5	109	64.9	46.0	
Cfs/m	1.55	2.74	3.14	1.99	2.68	2.45	2.92	3.57	1.59	2.15	1.28	0.907
In.	1.78	3.07	3.61	2.30	2.79	2.82	3.25	4.12	1.77	2.47	1.48	1.01

Calendar year 1957: Max 1,370 Min 42 Mean 155 Cfs/m 3.06 In. 41.59
Water year 1957-58: Max 480 Min 36 Mean 114 Cfs/m 2.25 In. 30.47

Peak discharge (base, 900 cfs).-- Dec. 20 (3 p.m.) 900 cfs (4.58 ft); July 8 (5 p.m.) 1,260 cfs (5.36 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

5105. Tuckasegee River at Dillsboro, N. C.

Location.--Lat 35°21'59", long 83°15'38", on left bank 0.4 mile downstream from Scott Creek, 0.5 mile downstream from U. S. Highway 23 at Dillsboro, Jackson County, and at mile 31.1.

Drainage area.--347 sq mi.

Records available.--June 1928 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Daily records for June 1928 to September 1933, published in WSP 663, 683, 698, 713, 728, 743, have been found unreliable and should not be used.

Gage.--Water-stage recorder. Datum of gage is 1,950.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 24, 1934, staff gage at site below Scott Creek 0.4 mile upstream at datum 7.27 ft higher.

Average discharge.--30 years, 755 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,170 cfs Nov. 19 (gage height, 7.56 ft); minimum, 121 cfs Sept. 17 (gage height, 2.06 ft); minimum daily, 202 cfs Sept. 1. 1928-58: Maximum discharge, 52,600 cfs Aug. 30, 1940 (gage height, 21.96 ft, from floodmarks), from rating curve extended above 8,400 cfs on basis of slope-area measurement and computation of peak flow over dam; minimum, 35 cfs Sept. 17, 1953 (gage height, 1.60 ft); minimum daily, 107 cfs Sept. 19, 1954.

Remarks.--Records excellent except those for periods of ice effect, which are good. Considerable diurnal fluctuation caused by Dillsboro powerplant 0.7 mile above station. Flow partly regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see pp. 225,230). Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 823: Drainage area. WSP 923: 1940(M). WSP 1306: 1929-33.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 27				Feb. 28 to Sept. 30			
2.5	253	4.0	1,140	2.3	180	3.5	759
2.7	333	5.0	2,000	2.4	209	4.0	1,130
3.0	478	6.0	3,050	2.7	321	5.0	2,000
3.5	780	6.3	3,410	3.0	467	6.0	3,050

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	869	500	906	803	1,330	1,340	1,070	1,940	848	426	536	202
2	572	374	892	b850	1,040	1,060	980	1,910	956	636	531	352
3	522	278	975	b1,000	910	1,080	938	1,760	1,050	497	558	480
4	545	301	876	834	966	*1,120	1,020	1,510	838	690	505	564
5	658	*394	*1,020	742	*998	1,080	1,040	1,520	890	728	550	585
6	581	461	990	*939	1,610	1,030	986	1,780	939	722	490	366
7	626	476	854	886	1,600	964	1,120	*1,860	832	462	550	330
8	618	588	1,640	846	1,410	1,210	1,060	1,730	651	1,580	520	340
9	*581	619	1,390	824	1,250	810	851	1,640	837	1,320	563	408
10	675	506	1,310	796	1,190	964	1,040	1,580	*860	872	380	*369
11	689	639	990	826	1,130	844	1,300	1,740	616	*878	498	366
12	532	665	1,170	760	1,020	1,030	1,140	1,700	743	974	664	474
13	287	619	1,080	930	812	1,050	945	1,620	902	978	*638	290
14	366	972	880	1,130	1,090	1,090	836	1,580	696	1,170	625	238
15	665	1,140	886	963	1,060	869	1,030	1,410	610	895	634	311
16	571	1,200	931	905	b650	678	1,130	1,330	630	867	413	416
17	757	976	938	855	b800	736	840	1,230	724	895	283	380
18	747	1,600	920	807	b750	1,000	1,030	1,060	636	754	460	378
19	520	3,360	978	701	b600	928	887	1,140	627	910	440	444
20	276	1,950	2,200	668	b700	1,010	745	1,240	744	596	480	292
21	352	1,400	1,830	858	b800	974	976	1,180	449	840	326	506
22	531	1,280	1,410	1,090	1,050	914	*1,030	1,150	382	975	340	446
23	505	1,660	1,360	785	698	806	1,050	1,100	529	910	311	464
24	982	1,330	1,340	1,120	812	808	836	1,250	460	912	496	519
25	959	2,350	1,170	1,260	983	1,280	1,190	1,200	428	942	606	514
26	958	1,960	1,640	1,070	1,670	1,200	983	1,280	642	966	566	603
27	958	1,550	1,380	1,050	1,590	1,250	668	1,090	674	956	390	891
28	671	1,380	1,180	1,110	1,880	1,320	2,330	818	660	1,060	480	704
29	674	1,300	1,120	857	-	956	2,610	1,110	336	990	707	600
30	773	1,300	1,080	918	-----	960	2,220	1,010	400	531	311	297
31	515	-----	1,050	911	-----	1,190	-----	1,050	-----	520	226	---
Total	19,494	33,128	36,366	28,104	30,499	31,351	33,881	43,518	20,609	26,452	15,077	13,129
Mean	629	1,104	1,173	907	1,089	1,011	1,129	1,404	687	853	486	438
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 8,890 Min 174 Mean 1,021 Cfsm 2.94 In. 39.96
 Water year 1957-58: Max 3,360 Min 202 Mean 909 Cfsm 2.62 In. 35.54

Peak discharge (base, 4,500 cfs).--Nov. 19 (10 a.m.) 5,170 cfs (7.56 ft).

- * Discharge measurement made on this day.
- b Stage-discharge relation affected by ice.

5120. Oconaluftee River at Birdtown, N. C.

Location.--Lat 35°27'42", long 83°21'13", on right bank 200 ft upstream from county bridge, 0.5 mile south of Birdtown, Swain County, 0.6 mile downstream from Adams Creek, 0.6 mile upstream from Goose Creek, 2.2 miles southwest of Cherokee, and at mile 3.1.

Drainage area.--184 sq mi.

Records available.--July 1945 to September 1946, July 1948 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,843.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 10, 1945, to Sept. 30, 1946, staff gage at same site and datum.

Average discharge.--11 years, 505 cfs.

Extremes.--Maximum discharge during year, 5,700 cfs Nov. 19 (gage height, 6.50 ft); minimum, 135 cfs Sept. 19, 20 (gage height, 0.93 ft).
1945-46, 1948-58: Maximum discharge, 15,000 cfs Jan. 7, 1946 (gage height, 12.0 ft, from floodmarks), from rating curve extended above 8,300 cfs on basis of computation of peak flow over dam; minimum, 80 cfs Oct. 19, 1954 (gage height, 0.66 ft).

Remarks.--Records excellent except those for periods of ice effect, which are good.

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

1.0	156	3.0	1,400	0.9	126	2.0	615
1.2	228	4.0	2,400	1.0	156	3.0	1,400
1.5	358	5.0	3,580	1.2	224	4.0	2,400
2.0	639			1.5	349		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	269	266	565	609	643	800	868	1,270	402	224	363	192
2	282	269	517	527	b465	692	762	1,140	432	220	326	186
3	326	257	*500	*b495	b420	629	720	993	387	214	349	179
4	471	244	589	b450	b420	579	727	868	387	251	354	179
5	363	232	477	b430	515	533	664	*785	354	275	296	172
6	308	220	449	b420	1,200	516	1,110	1,090	340	258	279	166
7	353	*213	1,070	437	1,550	521	792	1,290	326	228	320	169
8	286	295	1,790	b390	1,200	629	*657	1,060	318	1,270	326	189
9	*253	299	1,150	b360	b680	755	597	953	308	817	279	159
10	232	240	922	b350	b740	713	622	852	300	758	266	*156
11	217	220	798	b360	b650	*615	678	1,020	296	770	254	185
12	449	217	b650	354	b670	573	573	1,250	308	678	326	262
13	335	217	b620	407	b520	748	538	977	279	615	344	182
14	286	502	596	494	b480	727	510	852	270	516	359	163
15	*261	428	583	402	b490	615	527	770	422	442	326	153
16	248	884	633	373	b450	573	538	699	383	412	349	153
17	397	920	697	349	b400	549	494	650	296	417	336	150
18	483	2,620	627	b330	b400	636	468	685	275	387	287	150
19	363	3,370	723	b310	b420	573	463	591	266	397	258	138
20	312	1,460	2,430	336	b420	538	442	591	*283	575	243	141
21	286	998	1,500	412	b380	521	442	533	258	619	235	518
22	261	819	1,070	427	b360	489	555	499	279	609	228	258
23	253	1,120	875	359	383	478	561	473	287	*494	239	196
24	925	878	770	479	383	453	478	576	251	948	322	176
25	553	1,570	699	544	*387	579	974	753	235	822	359	166
26	477	1,300	1,520	463	1,100	643	685	567	397	636	*283	163
27	428	1,010	1,020	437	1,550	727	629	499	354	561	243	163
28	368	848	890	402	1,060	755	1,220	473	270	468	228	159
29	344	743	778	387	-	692	2,150	447	247	427	214	150
30	330	645	685	373	-----	671	1,680	417	235	387	206	153
31	312	-----	622	378	-----	945	-----	402	-----	359	202	---
Total	11,031	23,324	26,815	12,844	18,456	19,497	22,124	24,025	9,445	16,054	9,000	5,526
Mean	358	777	865	414	659	629	737	775	315	518	290	184
Cfs/m	1.93	4.22	4.70	2.25	3.58	3.42	4.01	4.21	1.71	2.82	1.58	1.00
In.	2.23	4.71	5.42	2.60	3.73	3.94	4.47	4.86	1.91	3.24	1.82	1.12
Calendar year 1957: Max		6,950		Min	113	Mean	624	Cfs/m	3.39	In.	46.05	
Water year 1957-58: Max		3,370		Min	138	Mean	543	Cfs/m	2.95	In.	40.05	

Peak discharge (base, 4,000 cfs).--Nov. 19 (5 a.m.) 5,700 cfs (6.50 ft); Dec. 20 (1 p.m.) 4,950 cfs (6.00 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5130. Tuckasegee River at Bryson City, N. C.

Location.--Lat 35°25'40", long 83°26'50", on left bank 400 ft downstream from bridge on State Highway 288 at Bryson City, Swain County, and 0.6 mile downstream from Deep Creek.

Drainage area.--655 sq mi.

Records available.--October 1897 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,716.54 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Nov. 7, 1897, to Feb. 2, 1914, and May 18, 1920, to June 27, 1927, staff gages at bridge 400 ft upstream at same datum. Feb. 3, 1914, to May 17, 1920, water-stage recorder at site 200 ft upstream at same datum.

Average discharge.--61 years, 1,568 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,860 cfs Nov. 19 (gage height, 5.61 ft); minimum, 295 cfs Sept. 15 (gage height, 0.70 ft); minimum daily, 432 cfs Sept. 15.
1897-1958: Maximum discharge, 61,800 cfs Aug. 30, 1940 (gage height, 15.96 ft), from rating curve extended above 25,000 cfs on basis of logarithmic plotting and slope-area measurement of peak flow; minimum, 27 cfs Sept. 10, 1925; minimum gage height, 0.47 ft Oct. 26, 1952; minimum daily discharge, 31 cfs Sept. 9, 10, 1925, caused by filling reservoir on Oconaluftee River; minimum daily during normal regulation, 186 cfs Oct. 13, 1925.

Flood in May 1840 reached a stage of 21 ft, from survey by Tennessee Valley Authority.

Remarks.--Records excellent except those for period of ice effect, which are good. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see pp. 225,230), and two small reservoirs with combined capacity of about 250 cfs-days. Records of chemical analyses for the water year 1958 are given in WSP 1571.

Revisions (water years).--WSP 523: 1916, 1918-20. WSP 823: Drainage area. WSP 1306: 1898-1913. WSP 1336: 1907, 1915(M), 1916-20, 1921-29(M), 1933-34(M).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	370	3.0	3,590
1.0	550	4.0	5,710
1.5	1,090	5.0	8,180
2.0	1,830		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,290	856	1,860	1,800	2,390	2,640	2,400	3,920	1,600	772	1,070	514
2	940	808	1,640	1,770	1,880	2,260	2,200	3,710	1,550	910	998	495
3	1,090	628	1,750	*1,930	1,690	2,050	2,110	3,380	1,650	850	1,100	752
4	1,220	610	1,870	1,720	1,600	2,090	2,130	2,960	1,530	992	1,040	823
5	1,020	682	1,780	1,430	1,820	1,910	2,110	2,790	1,360	1,180	991	826
6	1,120	751	1,710	1,540	3,580	1,870	2,710	3,450	1,480	1,180	904	712
7	1,050	*738	2,380	1,540	4,020	1,800	2,260	3,850	1,450	933	972	614
8	957	898	4,410	1,500	3,390	2,190	*2,090	3,360	1,140	3,010	1,020	509
9	1,000	992	3,200	1,390	2,750	2,070	1,810	3,100	1,210	2,800	1,020	700
10	692	868	2,790	1,360	2,500	1,950	2,020	2,950	1,370	1,970	780	642
11	1,030	808	2,220	1,450	2,290	*1,910	2,390	3,170	1,150	1,950	742	650
12	1,220	1,010	2,210	1,320	2,100	1,870	2,060	3,630	1,120	2,010	1,080	885
13	816	910	2,110	1,470	1,870	2,220	1,850	3,100	1,540	1,930	1,110	673
14	658	1,560	1,754	2,030	1,820	2,230	1,630	2,890	1,260	2,030	1,120	559
15	924	1,810	1,830	1,620	1,930	1,980	1,680	2,630	1,140	1,610	1,030	432
16	952	2,420	1,810	1,520	1,540	1,660	2,080	2,440	1,190	1,490	1,050	622
17	1,180	2,380	*1,970	1,430	bl,450	1,510	1,610	2,380	1,130	1,550	766	622
18	*1,420	4,880	1,810	1,320	bl,500	2,120	1,810	2,170	1,100	1,410	736	628
19	1,160	7,620	1,990	1,310	bl,400	1,870	1,630	2,060	1,030	1,430	841	671
20	706	4,170	5,230	1,090	bl,500	1,940	1,430	2,180	1,170	1,460	834	627
21	548	2,970	4,190	1,510	1,440	1,860	1,600	2,040	994	1,560	696	1,220
22	862	2,430	3,100	1,760	1,840	1,770	1,870	1,950	814	1,930	660	812
23	824	3,370	2,690	1,340	1,540	1,560	2,000	1,870	812	1,680	684	768
24	2,200	2,740	2,550	1,850	1,320	1,430	1,680	1,910	914	2,170	992	780
25	1,740	4,440	2,270	*1,910	*1,610	2,210	2,580	2,330	845	2,140	1,060	*753
26	1,620	4,050	3,760	1,890	3,180	2,210	1,970	*2,180	1,130	1,850	*1,010	769
27	1,580	3,110	3,040	1,780	4,120	2,390	1,760	1,910	*1,180	1,880	752	1,120
28	1,270	2,670	2,560	1,720	3,510	2,550	3,980	1,620	1,220	1,800	784	950
29	1,030	2,420	2,360	1,480	-	2,080	5,970	1,770	761	1,700	991	920
30	1,330	2,240	2,180	1,520	-----	2,080	4,920	1,680	668	*1,160	750	606
31	944	-----	2,080	1,520	-----	2,660	-----	1,690	-----	1,040	530	-----
Total	34,589	65,817	77,024	49,100	61,180	62,940	68,520	80,950	35,266	50,377	28,113	21,634
Mean	1,116	2,194	2,485	1,584	2,185	2,030	2,284	2,611	1,176	1,625	907	721
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 18,200 Min 368 Mean 1,957 Cfsm 2.99 In. 40.55
Water year 1957-58: Max 7,620 Min 432 Mean 1,741 Cfsm 2.66 In. 36.08

Peak discharge (base, 9,000 cfs).--Nov. 19 (7 a.m.) 9,860 cfs (5.61 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5135. Noland Creek near Bryson City, N. C.

Location.--Lat 35°29'06", long 83°30'15", on right bank in Great Smoky Mountain National Park, 1.1 miles downstream from Mill Creek, 3.6 miles upstream from Fontana Lake, and 5 miles northwest of Bryson City, Swain County.

Drainage area.--13.8 sq mi.

Records available.--October 1935 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 2,280 ft (from topographic map).

Average discharge.--23 years, 44.4 cfs.

Extremes.--Maximum discharge during year, 485 cfs Apr. 29 (gage height, 3.34 ft); minimum, 8.1 cfs Sept. 19, 20 (gage height, 0.88 ft).
1935-58: Maximum discharge, 1,530 cfs Aug. 30, 1940 (gage height, 4.87 ft); from rating curve extended above 540 cfs on basis of critical-depth measurement of peak flow; minimum, 3.5 cfs Oct. 24, 1939 (gage height, 0.66 ft).

Remarks.--Records good except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1936, 1937-29(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	6.0	1.8	68
1.0	12	2.0	93
1.2	20	2.3	143
1.4	31	2.6	210
1.6	47	3.0	337

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	20	51	65	50	65	85	143	32	14	26	11
2	20	20	46	55	39	60	79	119	35	13	26	10
3	27	19	51	51	b34	56	79	101	33	16	27	10
4	38	19	59	47	b34	52	83	89	34	16	28	10
5	26	17	47	44	55	48	76	83	30	16	23	9.5
6	22	16	*44	42	158	48	127	137	28	15	22	9.5
7	25	16	139	42	164	*50	75	149	27	14	22	9.8
8	20	23	186	b37	117	62	65	121	26	113	22	10
9	19	20	130	b33	b90	80	*59	107	25	50	20	9.2
10	16	18	103	b35	b78	65	74	96	24	76	18	8.9
11	16	16	88	34	b68	59	73	114	25	58	20	9.5
12	35	16	b71	33	b60	55	60	100	24	61	18	11
13	22	16	b62	37	b53	78	56	90	22	52	18	10
14	19	50	61	44	b47	68	53	83	20	42	18	9.5
15	18	31	57	*35	b50	61	57	75	21	34	16	8.9
16	16	70	64	34	b45	57	54	69	20	30	16	9.2
17	42	91	61	32	b43	55	50	66	18	29	16	9.2
18	32	220	59	31	b42	66	49	60	18	31	14	9.2
19	25	228	84	30	b40	59	48	56	18	29	14	8.3
20	22	116	204	30	b43	57	45	*57	19	29	14	8.6
21	20	83	134	36	b40	54	49	50	18	46	13	37
22	19	70	103	32	b40	51	67	47	18	46	13	14
23	18	99	89	30	b40	49	57	44	17	38	13	11
24	62	78	78	42	b40	53	53	42	*16	84	16	10
25	34	152	75	44	b40	64	84	43	15	61	*18	9.8
26	31	117	155	39	*90	74	64	40	22	48	14	9.5
27	28	93	100	37	108	83	65	37	20	41	13	9.5
28	*24	78	92	34	76	88	145	37	16	36	12	9.5
29	24	*67	80	34	83	233	34	15	33	12	*9.2	
30	23	58	72	32	-----	83	196	33	14	30	12	9.2
31	22	-----	66	*34	-----	96	-----	32	-----	27	11	-----
Total	786	1,935	2,711	1,185	1,784	1,979	2,420	2,354	670	1,228	545	320.0
Mean	25.4	64.5	87.5	38.2	65.7	63.9	80.7	75.3	22.3	39.6	17.6	10.7
Cfs/m	1.84	4.67	6.34	2.77	4.62	4.62	5.85	5.50	1.62	2.87	1.28	0.775
In.	2.12	5.21	7.31	3.19	4.81	5.33	6.52	6.34	1.81	3.31	1.47	0.86
Calendar year 1957: Max	923			Min 7.7		Mean 58.6		Cfs/m 4.25	In. 57.68			
Water year 1957-58: Max	293			Min 8.3		Mean 49.1		Cfs/m 3.56	In. 48.28			

Peak discharge (base, 600 cfs).--No peak above base.

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5185. Tellico River at Tellico Plains, Tenn.

Location.--Lat 35°21'42", long 84°16'44", on right bank 200 ft upstream from bridge on Tellico Plains-Rafter road, 0.4 mile downstream from Laurel Creek, 0.8 mile east of Tellico Plains, Monroe County, and at mile 28.2.

Drainage area.--118 sq mi.

Records available.--July 1925 to September 1958. Published as "near Tellico Plains" October 1927 to September 1930.

Gage.--Water-stage recorder. Datum of gage is 846.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 20, 1925, to Sept. 30, 1927, staff gage at same site and datum. Oct. 1, 1927, to Sept. 30, 1930, staff gage at site half a mile upstream at datum 8.29 ft higher.

Average discharge.--33 years, 281 cfs.

Extremes.--Maximum discharge during year, 5,720 cfs Nov. 18 (gage height, 9.22 ft); minimum, 54 cfs Sept. 30 (gage height, 1.23 ft).
1925-58: Maximum discharge, 17,500 cfs Jan. 31, 1957 (gage height, 13.60 ft), from rating curve extended above 9,600 cfs; minimum, 13 cfs Sept. 7, 1935 (gage height, 0.25 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1336: 1927-28(M), 1936, 1940, 1944.

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	49	3.0	670
1.5	103	5.0	1,800
2.0	242	7.0	3,050
2.5	430		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	*99	258	359	516	485	596	735	166	89	168	85
2	*89	93	*242	*306	430	408	*359	*630	*286	*83	307	*79
3	221	89	242	289	367	*363	336	520	174	81	386	78
4	201	89	355	272	332	328	325	462	180	81	*328	76
5	142	83	275	258	458	300	296	434	160	119	226	74
6	110	81	255	249	2,370	303	434	634	152	95	195	72
7	95	79	1,190	249	1,800	314	375	1,280	144	91	172	70
8	85	111	1,840	236	1,000	317	328	854	142	456	180	72
9	78	136	930	216	705	328	303	695	134	294	152	69
10	74	99	630	226	*565	317	340	600	126	258	147	65
11	69	93	506	207	488	289	421	570	124	198	131	63
12	74	89	400	198	430	275	355	605	139	525	208	70
13	79	87	359	242	379	317	325	502	119	375	210	83
14	69	304	340	426	347	300	303	439	112	575	172	69
15	65	268	336	332	359	275	336	396	121	296	155	63
16	62	476	413	300	321	265	439	363	142	223	144	60
17	86	922	413	268	a280	265	351	351	110	236	207	62
18	115	2,840	367	252	a250	413	321	336	103	174	152	67
19	81	1,740	371	229	a230	363	303	300	103	163	129	62
20	74	685	1,550	226	b230	347	289	306	121	229	119	57
21	70	430	952	503	b240	317	300	272	117	207	115	174
22	67	355	620	300	b250	292	355	249	172	282	112	105
23	85	735	493	258	b260	282	336	239	117	249	119	74
24	382	511	421	426	268	310	310	258	101	502	129	65
25	180	1,320	387	665	292	413	761	282	95	391	213	60
26	152	825	670	488	498	462	560	236	225	268	126	59
27	169	516	540	404	940	685	452	207	163	486	110	62
28	151	404	480	356	750	535	650	198	110	268	105	69
29	116	347	421	303	-	439	1,650	183	97	220	95	57
30	110	303	371	286	-----	391	1,170	172	93	186	91	54
31	105	---	340	282	-----	404	-----	166	-----	166	89	---
Total	3,517	14,009	16,947	9,391	15,135	11,125	13,479	13,484	4,148	7,884	5,188	2,175
Mean	113	467	547	303	541	359	449	435	138	254	167	72.5
Cfsm	0.958	3.96	4.64	2.67	4.58	3.04	3.81	3.69	1.17	2.15	1.42	0.614
In.	1.11	4.42	5.34	2.96	4.77	3.51	4.25	4.25	1.31	2.48	1.64	0.69

Calendar year 1957: Max 8,690 Min 46 Mean 391 Cfsm 3.31 In. 44.94
Water year 1957-58: Max 2,840 Min 54 Mean 319 Cfsm 2.70 In. 36.73

Peak discharge (base, 2,800 cfs).--Nov. 18 (2:30 a.m.) 5,720 cfs (9.22 ft); Dec. 20 (12 m.) 3,260 cfs (7.28 ft); Feb. 6 (9 a.m.) 3,080 cfs (7.04 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station at Little River near Maryville.

b Stage-discharge relation affected by ice.

5195. Little Tennessee River at McGhee, Tenn.

Location.--Lat 35°36'16", long 84°12'43", on right bank at mouth of Tellico River, 100 ft upstream from bridge on U. S. Highway 411, 0.3 mile upstream from Louisville & Nashville Railroad bridge, and 0.5 mile south of McGhee, Monroe County. Records include flow of Tellico River.

Drainage area.--2,443 sq mi, includes that of Tellico River.

Records available.--October 1904 to September 1958. October 1904 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 760.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 6, 1929, chain or staff gages located at various sites and datums within 0.4 mile of present site.

Average discharge.--54 years (1904-58), 5,633 cfs (unadjusted).

Extremes.--Maximum discharge during year, 25,800 cfs Nov. 18 (gage height, 13.50 ft); minimum, 873 cfs July 20, 21 (gage height, 3.03 ft); minimum daily, 1,950 cfs Oct. 13, 1904-58; Maximum discharge, 104,000 cfs Nov. 19, 1906 (gage height, 30.8 ft, at site used December 1905 to September 1925, to datum used October 1918 to September 1925), from rating curve extended above 66,000 cfs; minimum, 273 cfs Oct. 27, 1941; minimum daily, 500 cfs Sept. 13, 14, 1925.
Maximum stage known, 39.0 ft in March 1867, original site and datum.

Remarks.--Records good. Flow regulated by many reservoirs above station (see p. 224).

Revisions (water years).--WSP 803: 1933-35. WSP 823: Drainage area. WSP 1336: 1905, 1906-10(M), 1911, 1912(M), 1913, 1914(M), 1915-22, 1923-24(M), 1925-29, 1930-41 (monthly runoff).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

3.7	1,810	8.0	11,600
4.0	2,330	12.0	22,000
5.0	4,380		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,150	5,060	9,320	9,660	9,550	7,680	3,670	4,910	6,260	4,980	4,690	7,970
2	4,160	4,520	8,190	9,260	9,990	3,010	3,170	3,520	8,360	6,110	5,140	7,410
3	5,460	5,510	7,950	9,370	9,190	5,180	2,530	3,030	8,140	6,020	5,020	6,240
4	5,190	6,660	8,980	9,040	9,360	5,440	3,540	2,700	8,140	5,540	6,230	*5,010
5	5,990	7,060	*9,920	9,100	8,670	4,520	4,110	2,590	8,290	4,620	5,750	5,030
6	3,930	*6,910	9,300	*9,120	13,200	*4,690	2,590	6,280	7,660	4,720	5,820	8,720
7	4,510	7,520	10,200	7,460	14,400	5,050	5,760	9,500	8,640	5,450	*5,700	8,050
8	*4,720	7,820	15,100	7,920	8,120	5,100	4,540	8,120	5,130	*6,400	5,660	7,930
9	3,910	6,630	14,200	9,320	5,090	4,900	*4,240	4,380	6,180	6,780	5,580	7,470
10	4,350	5,970	8,550	8,610	*8,960	8,820	3,890	3,650	6,040	5,740	5,290	7,850
11	5,010	6,760	10,700	9,090	9,520	5,660	3,580	3,190	5,630	6,040	4,930	7,880
12	3,750	7,050	9,960	8,890	8,840	4,370	3,540	3,860	4,300	4,940	5,300	7,520
13	1,950	6,210	9,420	8,810	9,400	4,930	2,810	3,370	6,240	2,640	5,620	7,470
14	3,290	4,390	9,150	9,300	8,830	6,510	2,190	2,780	4,290	4,580	6,670	7,920
15	4,060	4,740	9,030	8,740	7,660	4,430	2,120	*2,990	2,690	6,420	5,610	7,070
16	3,380	5,860	9,200	9,900	8,390	3,480	2,370	3,690	5,490	6,260	2,090	8,570
17	3,240	7,170	9,320	8,680	9,680	6,470	2,240	2,490	*6,100	5,650	4,180	7,480
18	3,340	21,200	9,680	8,840	7,920	7,140	2,150	2,590	4,380	6,010	5,800	8,180
19	3,880	15,900	9,880	8,310	8,070	6,210	2,100	2,470	6,210	3,840	5,500	7,340
20	2,190	9,700	11,900	8,720	8,000	6,440	2,050	2,350	3,370	2,190	5,640	6,580
21	3,860	5,620	13,800	8,460	8,240	7,080	2,330	2,130	4,780	*3,640	5,450	3,500
22	4,580	6,850	12,200	8,820	5,510	4,140	2,190	4,040	2,930	5,970	5,090	6,400
23	3,060	7,120	10,100	8,510	4,910	5,330	4,010	7,590	6,490	5,960	5,450	7,720
24	4,790	7,380	9,780	8,760	5,160	6,490	2,130	7,060	4,650	7,150	5,310	8,360
25	5,520	11,600	9,600	10,400	5,690	6,300	8,550	6,990	5,050	9,700	5,490	7,330
26	6,140	14,000	10,800	10,200	5,890	2,840	6,510	7,090	5,140	5,340	7,310	6,620
27	5,130	10,300	13,000	9,450	7,960	4,660	3,400	8,000	5,850	3,820	4,300	8,950
28	7,330	9,950	12,200	9,070	10,600	4,210	4,150	7,870	4,970	6,240	4,890	3,800
29	7,010	8,960	10,500	9,180	-----	3,460	7,830	7,970	6,970	6,590	5,560	6,700
30	6,250	8,720	10,100	9,400	-----	2,890	10,400	7,660	3,460	6,460	7,540	8,360
31	5,500	-----	9,900	8,540	-----	3,500	-----	3,840	-----	5,310	7,400	-----
Total	138,630	243,140	321,930	278,930	237,000	160,930	114,690	146,700	167,810	171,110	170,210	215,430
Mean	4,472	8,105	10,380	8,998	8,464	5,191	3,823	4,797	5,594	5,520	5,491	7,181
Observed												
Adjusted†												
Calendar year 1957:	Max	37,400	Min	1,570	Mean	6,869	Mean	7,361	Cfam	3.01	In.	40.90
Water year 1957-58:	Max	21,200	Min	1,950	Mean	6,469	Mean	6,524	Cfam	2.67	In.	36.25

* Discharge measurement made on this day.

† Adjusted for change in contents in Santeetlah, Fontana, Thorpe, Cheoah, Nantahala, Calderwood, and Chilhowee Lakes.

5215. Clinch River at Richlands, Va.

Location.--Lat 37°05'10", long 81°46'52", on right bank 1 mile southeast of Richlands, Tazewell County, 1.6 miles downstream from Middle Creek, and 2.2 miles upstream from Big Creek.

Drainage area.--139 sq mi.

Records available.--October 1945 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,923.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 6, 1950, wire-weight gage at bridge 1.1 miles downstream at datum 6.53 ft lower.

Average discharge.--13 years, 195 cfs.

Extremes.--Maximum discharge during year, 3,750 cfs May 6 (gage height, 10.70 ft); minimum, 16 cfs Sept. 26 (gage height, 0.58 ft); minimum daily, 38 cfs Sept. 26, 29, 30, 1945-58; Maximum discharge, 9,640 cfs Jan. 29, 1957 (gage height, 19.3 ft, from floodmark); from rating curve extended above 4,800 cfs on basis of contracted-opening measurement of peak flow; minimum, 3.2 cfs Sept. 8, 1955; minimum gage height, 0.45 ft July 2, 3, 1951; minimum daily discharge, 9.0 cfs Sept. 5, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diurnal fluctuation at low flow caused by mill above station.

Revisions (water years).--WSP 1306: 1946(M), 1948-50(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 28 to Mar. 13, Apr. 8-22)

0.8	31	5.0	1,150
1.0	60	7.0	2,000
2.0	237	9.0	2,900
3.0	488		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*600	90	204	243	315	544	1,030	586	103	*7	a120	95
2	303	88	178	209	380	380	645	645	110	54	a200	86
3	214	84	171	180	340	303	502	572	103	52	a300	78
4	168	83	241	168	291	247	394	474	33	52	a400	74
5	137	78	279	162	264	211	327	979	88	79	a300	68
6	115	73	249	*b155	416	195	559	2,810	100	63	a200	63
7	103	68	380	148	1,010	178	815	1,730	93	57	a150	62
8	95	76	1,730	142	1,070	162	*645	1,310	81	93	a200	58
9	83	96	920	b130	615	180	474	832	76	88	a300	57
10	78	86	600	b120	434	200	380	675	*78	71	a160	56
11	74	78	448	b110	340	*175	353	1,310	76	60	*a80	51
12	74	73	315	b110	279	168	291	*1,150	74	73	74	51
13	70	73	270	114	b210	184	245	705	71	114	349	50
14	62	76	233	268	b180	353	216	502	76	93	214	48
15	58	84	226	291	b150	340	205	394	114	96	132	45
16	57	124	213	272	b140	291	198	327	168	79	126	46
17	65	226	211	231	b130	251	168	279	93	150	144	44
18	128	630	200	209	b120	241	150	255	76	169	114	52
19	108	615	191	184	b110	228	139	243	71	114	a100	45
20	83	474	758	178	b110	220	130	222	117	115	a95	45
21	71	303	1,430	246	b120	224	132	191	86	110	a80	54
22	68	231	660	407	b130	211	264	175	71	114	a75	50
23	63	291	448	315	160	205	850	169	66	93	a200	58
24	83	407	353	448	224	211	572	175	62	a150	a400	44
25	96	690	291	1,190	272	272	544	155	58	a300	*a1,500	41
26	83	630	842	705	659	394	488	150	86	a180	502	38
27	78	407	885	502	1,390	798	434	132	150	a120	261	39
28	76	303	572	380	798	750	1,030	133	88	a110	186	39
29	71	270	420	303	-	630	765	132	70	a240	146	38
30	71	237	327	264	-----	792	586	115	63	a200	123	38
31	83	-----	268	239	-----	2,000	-----	105	-----	a140	105	-----
Total	3,518	7,044	14,513	8,623	10,657	11,538	13,531	17,632	2,661	3,486	7,386	1,613
Mean	113	235	468	278	381	372	451	569	88.7	112	238	53.8
Cfsm	0.813	1.69	3.37	2.00	2.74	2.68	3.24	4.09	0.638	0.806	1.71	0.387
In.	0.94	1.89	3.88	2.31	2.85	3.09	3.62	4.72	0.71	0.93	1.97	0.43
Calendar year 1957: Max	7,000			Min 15		Mean 292		Cfsm 2.10		In. 28.51		
Water year 1957-58: Max	2,810			Min 38		Mean 280		Cfsm 2.01		In. 27.34		

Peak discharge (base, 1,300 cfs).--Dec. 8 (8:30 a.m.) 2,110 cfs (7.25 ft); Dec. 21 (2 a.m.) 2,040 cfs (7.10 ft); Dec. 26 (8 p.m.) 1,380 cfs (5.58 ft); Jan. 25 (10 a.m.) 1,320 cfs (5.43 ft); Feb. 7 (12 p.m.) 1,370 cfs (5.55 ft); Feb. 27 (3 a.m.) 1,810 cfs (6.58 ft); Mar. 31 (8:30 a.m.) 2,410 cfs (7.91 ft); May 6 (9 a.m.) 3,750 cfs (10.70 ft); May 11 (2:30 p.m.) 1,530 cfs (5.94 ft); Aug. 13 (5 p.m.) 1,330 cfs (5.45 ft); Aug. 25 (time unknown) 3,470 cfs (10.14 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, records for Clinch River at Cleveland and Cedar Creek near Lebanon.

b Stage-discharge relation affected by ice.

5230. Cedar Creek near Lebanon, Va.

Location.--Lat 36°54'29", long 82°02'20", on right bank 800 ft upstream from Roaring Spring Creek, 1.3 miles downstream from Burgess Creek, 1.9 miles upstream from Little Cedar Creek, and 2.3 miles east of Lebanon, Russell County.

Drainage area.--51.5 sq mi.

Records available.--October 1952 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,928.96 ft above mean sea level (Tennessee Valley Authority bench mark).

Average discharge.--6 years, 78.1 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs May 6 (gage height, 3.81 ft); minimum, 10 cfs Nov. 8 (gage height, 1.38 ft).
1952-58: Maximum discharge, 2,740 cfs Jan. 29, 1957 (gage height, 4.48 ft in gage well, 4.7 ft from outside), from rating curve extended above 2,300 cfs on basis of contracted-opening measurement of peak flow; minimum, 3.8 cfs Jan. 15, 1956; minimum gage height, 1.27 ft Oct. 19, 1952, Dec. 26, 1953 (result of freezeup).

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions (water years).--WSP 1506: 1953(P), 1955(P), 1956(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.3	5.7	2.3	265
1.5	18	2.6	470
1.6	26	3.0	1,080
1.7	42	3.5	2,050
2.0	125		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*95	12	60	a60	213	a180	282	185	34	*23	82	34
2	60	12	50	a50	190	a130	190	215	40	21	118	29
3	40	12	44	a47	141	a110	153	210	32	20	411	28
4	31	12	62	a42	115	a90	125	165	29	19	235	25
5	24	12	62	a40	102	a80	108	723	28	18	129	24
6	20	12	57	*39	190	a70	221	1,940	26	18	90	26
7	19	11	226	39	408	a65	255	1,380	26	17	67	24
8	17	12	574	37	304	a60	*195	675	24	37	92	23
9	17	17	265	34	200	a70	149	350	25	32	87	22
10	15	15	200	31	149	a75	137	292	29	32	62	20
11	15	14	145	29	118	*64	149	535	24	24	*52	20
12	15	13	a100	28	99	60	129	*356	24	36	57	20
13	14	13	a70	29	84	87	108	250	24	44	204	20
14	13	13	a64	82	72	145	95	190	24	36	153	19
15	13	14	a60	105	70	105	90	145	28	26	84	18
16	12	19	a56	95	60	87	90	122	28	28	120	17
17	13	43	a54	80	52	77	82	102	23	278	220	17
18	17	265	a53	67	a50	87	74	87	22	108	115	20
19	15	292	a52	54	a45	99	70	82	21	112	82	20
20	14	175	a200	50	a40	90	62	77	31	92	64	18
21	13	108	a400	77	a43	82	60	67	24	92	52	18
22	12	80	a160	108	a45	72	106	60	22	82	47	19
23	12	90	a110	87	a60	72	210	57	20	67	39	17
24	13	102	a90	186	a90	77	125	54	20	77	40	16
25	14	444	a75	407	a150	122	235	57	18	153	161	16
26	13	250	a200	230	a350	149	175	50	49	82	99	15
27	13	153	a200	230	a300	230	145	40	32	62	74	16
28	13	108	a150	129	a250	200	356	40	40	122	60	18
29	13	90	a100	108	-	195	265	39	29	298	50	15
30	12	77	a80	92	-----	280	215	36	24	129	42	15
31	12	-----	a70	84	-----	645	-----	40	-----	84	37	-----
Total	619	2,490	4,119	2,716	4,190	3,955	4,656	8,621	870	2,269	3,225	607
Mean	20.0	83.0	133	87.6	150	128	155	278	29.0	75.2	104	20.2
Cfsm	0.388	1.61	2.58	1.70	2.91	2.49	3.01	5.40	0.563	1.42	2.02	0.392
In.	0.45	1.80	2.97	1.96	3.03	2.87	3.36	6.23	0.63	1.64	2.33	0.44

Calendar year 1957: Max 2,230 Min 6.5 Mean 104 Cfsm 2.02 In. 27.33

Water year 1957-58: Max 1,940 Min 11 Mean 105 Cfsm 2.04 In. 27.71

Peak discharge (base, 700 cfs).--Nov. 25 (10 a.m.) 750 cfs (2.80 ft); Dec. 8 (7 a.m.) 846 cfs (2.86 ft); Dec. 21 (time unknown) 1,590 cfs (3.28 ft); Jan. 24 (11:30 p.m.) 846 cfs (2.86 ft); Feb. 27 (time unknown) 1,180 cfs (3.06 ft); Mar. 31 (1:30 a.m.) 1,220 cfs (3.08 ft); May 6 (6 a.m.) 2,400 cfs (3.81 ft); July 17 (7:30 a.m.) 944 cfs (2.92 ft); Aug. 3 (4 a.m.) 1,300 cfs (3.13 ft); Aug. 13 (3:30 p.m.) 1,870 cfs (3.42 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, records for Clinch River at Cleveland, Richlands, and Guest River at Cosburn.

5240. Clinch River at Cleveland, Va.

Location.--Lat 36°56'41", long 82°09'18", on right bank 500 ft upstream from highway bridge at Cleveland, Russell County, 0.5 mile downstream from Muddy Hollow, 2.3 miles downstream from Weaver Creek, and 4.4 miles downstream from Thompson Creek.

Drainage area.--528 sq mi.

Records available.--October 1920 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,500.24 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 1, 1931, chain gage on highway bridge 500 ft downstream at different datum.

Average discharge.--38 years, 703 cfs.

Extremes.--Maximum discharge during year, 13,900 cfs May 6 (gage height, 15.58 ft); minimum, 112 cfs Sept. 29, 30 (gage height, 1.72 ft).
1920-58: Maximum discharge, 31,000 cfs Jan. 30, 1957 (gage height, 24.40 ft), from rating curve extended above 13,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 36 cfs Nov. 30, 1955; minimum gage height, 0.96 ft Feb. 10, 1934.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1921-23(M), 1926-27(M), 1929-31(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	108	5.0	1,650
2.0	170	8.0	4,350
2.5	310	12.0	8,800
3.0	520	14.0	11,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2,870	a240	a700	900	1,140	2,180	4,550	2,080	423	*185	485	386
2	1,290	a250	*a600	770	1,650	1,550	2,400	2,080	530	170	770	338
3	820	a250	540	645	1,410	1,260	1,760	2,180	402	157	1,140	295
4	610	a240	600	555	1,170	1,050	1,410	1,790	330	150	1,620	265
5	462	a220	745	490	1,020	670	1,230	3,700	295	183	1,350	238
6	374	a210	745	*b400	1,140	795	1,560	*10,800	280	192	820	241
7	314	a200	1,110	b580	2,950	720	2,670	10,300	292	170	590	220
8	280	a230	5,510	b370	4,350	670	*2,490	5,840	274	268	695	202
9	253	a280	4,350	b360	2,490	645	1,930	3,650	253	410	1,140	190
10	226	a250	2,320	b350	*1,650	745	1,560	2,400	*256	286	645	180
11	210	a230	1,680	b370	1,290	*720	1,470	4,150	256	220	*450	175
12	200	a210	a1,200	b400	1,050	645	1,320	4,650	247	190	a370	166
13	192	a210	a900	458	870	670	1,140	2,850	247	238	394	157
14	182	a230	a800	540	720	1,170	990	1,930	232	283	745	155
15	168	a300	a750	990	720	1,320	900	1,440	247	241	812	150
16	159	a500	a700	960	670	1,110	900	1,200	334	241	620	142
17	157	a1,000	695	820	b420	930	795	1,050	330	615	1,230	142
18	178	*a2,200	695	695	b450	870	720	900	238	645	990	152
19	232	a2,000	645	595	b450	870	645	795	208	590	645	150
20	236	a1,400	1,310	540	b430	820	615	770	247	600	450	148
21	195	a1,000	4,550	570	b420	820	590	670	295	720	358	150
22	175	a800	2,740	960	b430	770	695	575	244	595	298	159
23	163	a1,000	1,650	1,050	b500	720	1,990	530	205	500	301	163
24	170	a1,400	1,280	1,060	805	695	2,080	545	185	820	a1,500	150
25	202	a2,200	1,080	3,750	795	845	1,660	520	175	1,080	4,550	a135
26	212	a2,000	2,670	2,650	1,350	1,140	1,860	495	188	695	7,380	127
27	208	a1,500	4,150	1,790	4,750	1,760	1,620	438	422	470	1,910	121
28	198	a1,100	2,320	1,580	3,450	2,490	2,950	422	386	450	1,080	119
29	185	a900	1,620	1,110	-	2,080	3,550	414	256	921	745	116
30	160	a800	1,260	830	-----	1,930	2,490	378	208	795	575	114
31	a210	-----	1,020	820	-----	5,620	-----	346	-----	505	454	-----
Total	11,313	23,350	50,915	27,848	38,340	38,440	50,740	69,668	8,485	13,365	35,112	5,446
Mean	365	778	1,642	698	1,369	1,240	1,691	2,254	283	431	1,133	182
Cfs/m	0.691	1.47	3.11	1.70	2.59	2.35	3.20	4.27	0.536	0.816	2.15	0.345
In.	0.80	1.64	3.58	1.96	2.70	2.71	3.57	4.92	0.60	0.94	2.48	0.38

Calendar year 1957: Max 22,200 Min 48 Mean 1,039 Cfs/m 1.97 In. 26.69
Water year 1957-58: Max 10,800 Min 114 Mean 1,023 Cfs/m 1.94 In. 26.28

Peak discharge (base, 5,000 cfs).--Dec. 8 (6 p.m.) 6,490 cfs (9.99 ft); Dec. 21 (10 a.m.) 5,120 cfs (8.75 ft); Feb. 27 (4 p.m.) 5,170 cfs (8.79 ft); Mar. 31 (7:30 p.m.) 6,880 cfs (10.35 ft); May 6 (12 p.m.) 13,900 cfs (15.58 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, records for Clinch River at Speers Ferry and Richlands.
b Stage-discharge relation affected by ice.

5245. Guest River at Coeburn, Va.

Location.--Lat 36°55'45", long 82°27'23", on right bank at downstream side of bridge on State Highway 72, 1.0 mile southeast of Coeburn, Wise County, 1.4 miles upstream from Jaybird Branch, 1.8 miles downstream from Pine Camp Creek, and 6 miles upstream from mouth.

Drainage area.--87.3 sq mi.

Records available.--September 1949 to September 1958

Gage.--Water-stage recorder. Datum of gage is 1,925.60 ft above mean sea level (Inter-state Railroad bench mark).

Average discharge.--9 years, 145 cfs.

Extremes.--Maximum discharge during year, 2,080 cfs May 7 (gage height, 8.05 ft); minimum, 10 cfs Oct. 17 (gage height, 1.50 ft).
1949-58: Maximum discharge, 6,360 cfs Jan. 29, 1957 (gage height, 14.20 ft), from rating curve extended above 3,500 cfs on basis of slope-area measurement of peak flow; minimum, 1.6 cfs Oct. 21, 22, 25, 26, Nov. 9, 10, 1953; minimum gage height, 1.23 ft Sept. 22, 23, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1436: 1950(P), 1955(P).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	10	3.0	250
1.7	28	5.0	825
2.0	68	8.0	2,060

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	19	89	142	200	350	505	380	60	16	51	55
2	*33	18	78	122	250	250	322	380	185	*15	158	50
3	27	18	*71	91	200	200	252	400	88	14	203	44
4	23	17	88	b90	180	180	244	320	64	15	343	44
5	20	17	91	b85	160	150	228	900	54	16	185	38
6	18	17	86	b80	250	140	505	1,300	48	19	115	35
7	16	16	475	*b75	500	130	610	1,960	43	19	78	34
8	15	21	1,800	b70	700	120	400	1,120	38	58	68	33
9	14	29	760	b66	400	140	*290	550	39	57	88	29
10	13	29	400	b66	300	150	268	349	*46	36	54	28
11	12	27	254	b70	*200	140	295	346	36	27	41	26
12	12	25	174	b80	b130	*130	270	385	36	29	*38	25
13	12	24	143	110	b110	151	220	*310	35	24	73	25
14	12	25	116	190	115	238	190	230	30	22	118	23
15	11	39	109	170	120	228	180	183	38	19	107	22
16	11	43	100	160	110	197	170	156	35	21	222	21
17	12	89	97	150	100	169	150	133	30	196	228	26
18	16	595	95	130	90	172	130	116	26	133	147	25
19	17	*580	95	120	80	179	120	102	25	211	97	22
20	14	346	381	130	75	170	110	102	68	336	71	22
21	14	178	792	200	80	158	110	84	47	505	60	36
22	14	116	370	300	90	145	150	71	33	284	55	36
23	14	138	236	200	110	133	350	65	30	176	55	30
24	25	169	183	350	150	134	380	67	26	142	116	24
25	34	472	158	800	250	199	320	64	23	165	1,360	18
26	26	367	660	400	450	258	350	60	23	115	380	15
27	24	212	655	300	1,000	315	300	53	24	86	192	15
28	22	151	367	200	500	312	550	50	21	84	127	15
29	20	127	244	180		276	700	48	19	93	93	14
30	19	111	185	160	-----	262	450	43	17	74	73	14
31	18	-----	152	150	-----	625	-----	39	-----	57	62	-----
Total	586	4,035	9,504	5,457	6,998	6,401	9,119	10,366	1,285	3,064	5,058	844
Mean	18.9	134	307	176	250	206	304	334	42.8	98.8	163	28.1
Cfs/m	0.216	1.53	3.52	2.02	2.86	2.36	3.48	3.83	0.490	1.13	1.87	0.322
In.	0.25	1.71	4.06	2.33	2.98	2.72	3.88	4.42	0.55	1.30	2.16	0.36

Calendar year 1957: Max 4,000 Min 2.1 Mean 163 Cfs/m 1.87 In. 25.30

Water year 1957-58: Max 1,960 Min 11 Mean 172 Cfs/m 1.97 In. 26.72

Peak discharge (base, 1,500 cfs).--Dec. 8 (6:30 a.m.) 2,020 cfs (7.93 ft); May 7 (3 a.m.) 2,080 cfs (8.05 ft); Aug. 25 (8:30 a.m.) 1,900 cfs (7.69 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 13 to Feb. 11, Feb. 16 to Mar. 12, Apr. 13 to May 6; discharge estimated on basis of recorded range in stage, weather records, records for Powell River at Big Stone Gap and Clinch River at Richlands.

5260. Copper Creek near Gate City, Va.

Location.--Lat 36°40'26", long 82°33'57", on right bank at upstream side of highway bridge, 0.2 mile upstream from Plank Camp Creek, 1.1 miles downstream from Obeyes Creek, and 2.6 miles northeast of Gate City, Scott County.

Drainage area.--106 sq mi.

Records available.--September 1947 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 1,290 ft (from topographic map). Prior to Aug. 30, 1953, wire-weight gage on highway bridge at same site and datum.

Average discharge.--11 years, 149 cfs.

Extremes.--Maximum discharge during year, 4,100 cfs May 6 (gage height, 10.98 ft); minimum, 23 cfs Nov. 8 (gage height, 2.29 ft).

1947-58: Maximum discharge, 6,800 cfs Jan. 30, 1950 (gage height, 13.0 ft, from graph based on gage readings), from rating curve extended above 3,200 cfs by logarithmic plotting; minimum, 3.6 cfs Jan. 15, 1956 (gage height, 1.98 ft), result of freezeup.

Revisions.--The maximum discharge for the water year 1951 has been revised to 1,590 cfs Dec. 8, 1950 (gage height, 8.0 ft, from graph based on gage readings), superseding figure published in WSP 1206.

Remarks.--Records good except those for period of ice effect, which are fair.

Revisions (water years).--WSP 1143: 1948. WSP 1306: 1948-50(M).

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 8		Dec. 9 to June 2		June 3 to Sept. 30	
2.3	24	2.6	82	2.4	30
2.5	47	3.0	126	2.6	49
3.0	118	4.0	332	2.8	74
4.0	305	6.0	810	3.0	114
6.0	785	8.0	1,880	4.0	332
7.0	1,060	10.0	3,220	6.0	810
8.0	1,590				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	28	107	160	236	398	519	519	126	47	76	58
2	61	27	90	139	343	288	376	475	376	46	154	56
3	*50	26	83	121	240	240	310	431	176	*45	465	52
4	42	26	*82	109	192	200	288	365	128	44	486	50
5	37	25	96	104	266	172	266	*1,290	110	44	246	48
6	33	24	84	96	174	154	409	2,870	102	45	167	46
7	31	24	471	95	442	144	464	2,600	94	47	128	46
8	30	26	1,370	*93	692	139	354	1,430	88	96	112	45
9	29	31	720	85	431	148	288	780	82	116	106	43
10	28	42	420	85	321	198	*255	642	86	68	90	42
11	27	33	288	82	259	176	255	692	*82	54	76	42
12	27	30	202	74	*212	154	232	592	78	83	149	41
13	27	29	158	70	184	*170	200	475	70	66	*98	41
14	26	31	131	119	158	266	180	387	67	51	76	40
15	25	32	119	168	b135	236	174	332	68	47	70	38
16	25	76	111	150	b116	202	182	288	66	47	96	38
17	29	170	103	133	b96	180	164	255	61	224	136	43
18	33	610	99	114	b90	210	150	252	59	240	96	45
19	32	560	96	101	b88	244	142	208	58	132	74	41
20	30	*285	288	91	b88	214	135	194	94	187	64	39
21	27	144	701	93	b93	192	133	178	67	431	59	42
22	26	102	321	107	101	170	170	162	58	200	57	42
23	26	120	226	101	103	152	310	152	56	178	56	39
24	32	177	182	420	111	142	230	184	54	167	74	36
25	37	685	164	780	112	148	387	152	51	182	365	36
26	39	548	768	409	364	154	398	142	56	149	253	35
27	33	229	704	288	680	192	464	128	68	141	132	36
28	30	145	409	220	618	240	1,490	168	63	112	98	36
29	29	132	299	176	-	208	860	158	53	104	80	35
30	28	128	220	154	-----	228	668	124	30	100	68	36
31	28	-----	178	140	-----	668	-----	116	-----	78	63	-----
Total	1,040	4,545	9,300	5,077	6,945	6,625	10,453	16,721	2,647	3,569	4,270	1,267
Mean	33.5	152	300	164	248	214	348	539	88.2	115	138	42.2
Cfs/m	0.316	1.43	2.83	1.55	2.34	2.02	3.28	5.08	0.832	1.08	1.30	0.398
In.	0.36	1.60	3.26	1.79	2.44	2.33	3.66	5.86	0.93	1.24	1.50	0.44

Calendar year 1957: Max 2,960 Min 20 Mean 186 Cfs/m 1.75 In. 23.82
 Water year 1957-58: Max 2,870 Min 24 Mean 199 Cfs/m 1.88 In. 25.41

Peak discharge (base, 1,200 cfs).--Dec. 8 (11 a.m.) 1,560 cfs (7.96 ft); Dec. 28 (9 to 10 p.m.) 1,210 cfs (6.89 ft); Apr. 28 (4:30 p.m.) 1,820 cfs (7.90 ft); May 6 (8 p.m.) 4,100 cfs (10.98 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5270. Clinch River at Speers Ferry, Va.

Location.--Lat 36°38'55", long 82°45'02", on right bank 100 ft downstream from highway bridge on U. S. Highway 58, 0.5 mile downstream from Copper Creek, 0.8 mile northwest of Speers Ferry, Scott County, and 1.8 miles downstream from Clinchport.

Drainage area.--1,126 sq mi.

Records available.--October 1920 to September 1958. Gage-height records collected in this vicinity, February 1895 to July 1933, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 1,196.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 23, 1926, staff gage at site 400 ft upstream at datum 1.50 ft higher. Nov. 23, 1926, to Nov. 6, 1931, chain gage at present site and datum.

Average discharge.--38 years, 1,589 cfs.

Extremes.--Maximum discharge during year, 33,100 cfs May 7 (gage height, 23.95 ft); minimum, 210 cfs Sept. 30 (gage height, 1.76 ft).
1920-58: Maximum discharge, 45,300 cfs Jan. 30, 1957 (gage height, 28.92 ft); minimum, 42 cfs Sept. 29, Oct. 23, 1939; minimum daily, 77 cfs Oct. 7, 8, 14, 15, 22, 1930.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions (water years).--WSP 823: Drainage area. WSP 1276: 1925(M), 1927, 1928-31(M), 1932, 1935(M). WSP 1306: 1922(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 8

Dec. 9 to Sept. 30

1.9	240	1.7	195	6.0	3,200
2.4	395	2.0	280	9.0	6,560
3.0	645	2.5	465	13.0	11,600
4.0	1,260	3.0	750	20.0	24,100
6.0	3,100	4.0	1,400	23.0	30,900

Note.--Same as following table above 7.7 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,700	271	1,500	2,000	2,280	4,500	8,980	5,720	780	400	1,110	840
2	2,450	265	1,260	1,800	3,500	5,800	4,790	2,200	358	1,400	720	
3	1,420	271	1,110	1,500	3,200	2,700	3,800	4,890	1,680	*324	2,060	630
4	970	277	1,140	1,300	2,600	2,400	3,400	4,230	1,250	301	3,800	548
5	745	271	1,220	1,100	2,280	2,000	3,100	5,840	960	292	3,100	500
6	572	262	1,340	1,100	2,150	1,700	3,600	16,400	840	295	2,200	447
7	482	257	3,620	1,100	4,010	1,600	5,480	*30,700	750	342	1,560	438
8	420	251	12,000	*900	8,480	1,500	5,000	18,100	702	666	1,220	400
9	378	274	11,000	840	6,320	1,500	*4,010	8,860	672	1,720	1,560	366
10	345	289	6,320	810	4,010	1,600	3,400	5,960	636	1,180	1,640	345
11	320	304	4,010	870	3,000	1,600	3,100	6,080	630	810	1,110	328
12	298	339	2,500	840	*2,420	1,500	2,900	7,680	654	750	1,080	314
13	280	335	1,800	840	2,060	*1,800	2,600	6,440	559	654	*900	304
14	271	307	1,900	1,020	1,700	2,600	2,530	4,450	515	510	1,140	289
15	262	301	1,400	1,440	1,500	3,100	2,150	3,400	537	559	1,560	280
16	246	307	1,400	1,880	1,400	2,700	2,150	2,800	537	559	1,640	271
17	251	1,500	1,350	1,840	1,200	2,330	2,100	2,510	570	1,050	2,240	274
18	268	3,500	1,500	1,640	1,100	2,280	1,920	2,150	624	2,060	2,100	345
19	262	5,000	1,500	1,440	1,000	2,420	1,760	1,920	490	1,560	1,480	324
20	280	*4,500	2,500	1,280	900	2,280	1,640	1,760	762	2,280	1,080	295
21	320	2,800	9,000	1,250	1,000	2,150	1,560	1,640	690	3,600	840	320
22	292	1,880	5,000	1,520	1,100	2,020	1,640	1,440	618	2,600	714	342
23	282	1,620	3,500	1,970	1,200	1,800	2,420	1,320	542	2,060	648	334
24	314	2,060	2,500	2,100	1,400	1,720	3,700	1,480	442	1,800	750	304
25	320	4,090	2,000	5,240	1,700	1,800	4,120	1,320	396	2,100	5,920	292
26	323	6,200	4,000	6,320	3,000	2,100	4,670	1,250	429	2,150	10,600	268
27	332	3,980	8,000	4,120	10,000	2,510	5,120	1,110	570	1,600	3,700	253
28	317	2,600	4,500	3,100	7,000	3,400	9,560	1,140	678	1,320	2,150	241
29	298	2,060	4,000	2,420	-	3,600	9,810	1,140	678	1,250	1,600	220
30	283	1,800	3,000	2,100	-----	3,300	7,760	960	495	1,680	1,250	215
31	274	-----	2,500	1,880	-----	6,200	-----	870	-----	1,360	990	-----
Total	16,555	48,171	107,870	57,560	81,510	76,210	119,360	156,640	21,886	38,188	63,142	11,047
Mean	534	1,806	3,480	1,857	2,911	2,458	3,979	5,053	730	1,232	2,037	368
Cfsm	0.474	1.43	3.09	1.65	2.59	2.18	3.53	4.49	0.648	1.09	1.81	0.327
In.	0.55	1.60	3.56	1.90	2.70	2.51	3.94	5.18	0.72	1.26	2.09	0.36

Calendar year 1957: Max 42,500 Min 108 Mean 2,070 Cfsm 1.84 In. 24.96
Water year 1957-58: Max 30,700 Min 215 Mean 2,187 Cfsm 1.94 In. 26.37

Peak discharge (base, 10,000 cfs).--Dec. 8 (11 a.m.) 13,600 cfs (14.39 ft); Feb. 27 (time unknown) 10,700 cfs (12.38 ft); Apr. 28 (9 p.m.) 10,700 cfs (12.36 ft); May 7 (7:30 a.m.) 33,100 cfs (23.95 ft); Aug. 26 (4 a.m.) 15,400 cfs (14.28 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 17-20, Dec. 12 to Jan. 8, Feb. 14 to Mar. 13; discharge estimated on basis of recorded range in stage, weather records, records for Clinch River at Cleveland and North Fork Holston River near Gate City.

5275. North Fork Clinch River at Duffield, Va.

Location.--Lat 36°42'40", long 82°47'45", on right bank at upstream side of bridge on U. S. Highways 58 and 421, 0.2 mile downstream from Spurlock Branch, 0.5 mile south of Duffield, Scott County, and 1.6 miles upstream from Harris Branch.

Drainage area.--23.1 sq mi.

Records available.--October 1952 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,814.14 ft (corrected) above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--6 years, 36.9 cfs.

Extremes.--Maximum discharge during year, 811 cfs May 6 (gage height, 7.46 ft); minimum, 3.6 cfs Oct. 15-17.

1952-58: Maximum discharge, that of May 6, 1958; minimum, 1.0 cfs Sept. 17-19, 23, 24, 1954.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Nov. 21-25)

Oct. 1 to Feb. 27

Feb. 28 to Sept. 30

1.4	3.3	2.0	42	1.3	3.4	2.0	44
1.5	6.3	3.0	136	1.4	4.9	3.0	142
1.6	12	4.0	275	1.5	8.0	7.0	734
1.8	26	6.0	575	1.7	20		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	4.8	26	40	81	99	97	137	15	5.1	12	6.5
2	*7.1	4.8	23	35	88	79	80	120	18	*4.6	13	6.0
3	5.7	4.8	20	30	70	66	74	117	15	4.4	16	5.5
4	5.4	4.8	*23	25	57	56	85	97	12	4.4	25	5.0
5	4.8	4.5	21	23	52	48	79	*108	12	4.4	17	4.8
6	4.5	4.2	20	21	79	44	153	545	10	5.6	12	4.5
7	4.2	4.2	366	21	200	41	142	654	8.6	6.2	9.2	4.5
8	4.2	5.4	500	*21	160	39	101	312	8.0	26	8.0	4.2
9	3.9	7.1	250	18	98	52	*80	165	9.2	16	11	4.0
10	3.9	6.7	120	17	74	70	77	114	9.2	9.2	7.2	4.0
11	3.9	5.7	77	16	60	67	77	111	*9.2	8.0	6.2	4.0
12	3.9	5.1	56	15	*50	58	75	107	11	14	*5.6	4.0
13	4.2	5.1	44	15	44	*69	68	89	8.0	11	9.2	4.0
14	3.9	7.0	40	17	40	85	61	72	8.0	8.6	16	3.8
15	3.9	12	35	22	36	79	62	59	12	6.8	14	3.8
16	3.9	25	32	24	33	69	76	52	9.8	12	16	4.0
17	4.8	90	30	24	b30	59	74	46	8.0	13	16	4.1
18	5.7	250	28	24	b25	74	67	42	6.5	11	13	4.0
19	5.7	150	30	22	b23	74	61	36	6.6	16	9.2	3.8
20	5.1	*80	221	20	b21	67	55	31	35	42	7.2	5.0
21	4.5	53	186	22	b21	61	56	28	18	51	6.5	10
22	4.5	41	103	26	b22	55	70	26	15	42	6.5	7.0
23	4.5	47	72	25	b22	48	89	26	12	32	6.5	4.5
24	6.0	47	59	52	22	47	87	24	9.2	25	7.2	4.0
25	7.1	109	52	110	22	53	172	25	7.2	19	35	4.0
26	6.3	81	170	84	47	58	165	21	7.2	16	17	4.0
27	5.7	55	140	66	160	62	268	19	7.6	12	12	3.9
28	5.4	41	93	54	153	62	455	22	6.5	10	10	4.0
29	4.8	36	70	46	-	58	282	19	5.9	15	9.0	3.8
30	4.8	32	50	43	-----	64	198	17	5.4	10	8.0	4.0
31	4.8	-	45	38	-----	109	-----	15	-----	9.2	7.0	-----
Total	157.1	1,223.2	2,982	1,014	1,790	1,972	3,486	3,256	325.1	469.5	367.5	138.7
Mean	5.07	40.8	96.2	32.7	63.9	63.6	116	105	10.8	15.1	11.9	4.62
Cfsm	0.219	1.77	4.16	1.42	2.77	2.75	5.02	4.55	0.468	0.654	0.515	0.200
In.	0.25	1.98	4.80	1.64	2.88	3.17	5.60	5.25	0.52	0.75	0.59	0.22

Calendar year 1957: Max 723 Min 1.7 Mean 47.9 Cfsm 2.07 In. 28.16
 Water year 1957-58: Max 654 Min 3.8 Mean 47.1 Cfsm 2.04 In. 27.65

Peak discharge (base, 500 cfs).--Dec. 7 (10 p.m.), 716 cfs (6.89 ft); Apr. 28 (3 to 4 a.m.) 575 cfs (6.00 ft); May 6 (7:30 p.m.) 811 cfs (7.46 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Nov. 14-20, Dec. 30 to Jan. 8, Aug. 25 to Sept. 30; discharge estimated on basis of recorded range in stage, weather records, records for Powell River at Big Stone Gap and Clinch River at Speers Ferry.

5280. Clinch River above Tazewell, Tenn.

Location.--Lat 36°25'30", long 83°23'54", on right bank 0.4 mile upstream from Grissom Island, 4.6 miles downstream from Big War Creek, 10 miles east of Tazewell, Clairborne County, and at mile 159.8.

Drainage area.--1,474 sq mi.

Records available.--October 1918 to September 1958. Published as "near Lone Mountain" October 1918 to September 1927 and as "near Tazewell" August 1927 to December 1936. Records published for sites "near Lone Mountain" and "near Tazewell" August and September 1927; for sites "near Tazewell" and "above Tazewell" July 1935 to December 1936. Prior to April 1919 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder at present site and datum since July 29, 1935. Datum of gage is 1,060.7 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Apr. 1, 1919, to Sept. 30, 1927, chain gage on railroad bridge 23.3 miles downstream at datum 102.7 ft lower. Aug. 8, 1927, to Dec. 31, 1936, water-stage recorder at site 8.0 miles downstream at datum 47.2 ft lower.

Average discharge.--40 years, 2,097 cfs.

Extremes.--Maximum discharge during year, 35,900 cfs May 7 (gage height, 17.70 ft); minimum, 274 cfs Sept. 30 (gage height, 0.89 ft).

1918-58: Maximum discharge, 51,100 cfs Jan. 31, 1957 (gage height, 21.00 ft); minimum observed, 108 cfs Sept. 11, 1925.

Maximum stage known, about 24 ft in 1862, present site and datum, from information by local resident.

Remarks.--Records good.

Revisions (water years).--WSP 1336: 1928.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 28, 29, May 6-9)

0.8	260	5.0	4,800
1.0	350	9.0	12,400
1.5	650	12.0	19,800
2.0	1,050	16.0	32,100
3.0	1,990		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	*356	1,950	2,540	2,440	9,600	8,770	*9,040	954	568	1,470	926
2	3,000	328	*1,650	2,210	3,680	5,960	8,830	7,770	1,050	*496	1,420	*790
3	2,040	328	1,430	*1,910	*4,300	*4,210	5,620	6,160	2,210	449	1,530	699
4	1,360	328	1,330	1,640	3,620	3,240	4,460	5,890	1,500	438	*2,550	636
5	1,010	328	1,370	1,420	2,950	2,630	4,120	5,720	1,150	416	3,600	587
6	798	318	1,420	1,240	2,750	2,240	4,280	11,700	966	388	2,800	544
7	*664	314	4,800	1,190	3,830	1,990	*8,080	28,900	862	422	1,890	508
8	568	318	14,800	1,260	7,860	1,870	8,610	*28,700	790	636	1,400	490
9	502	366	16,400	1,140	9,280	2,040	5,600	14,600	762	1,050	1,320	460
10	454	372	10,500	950	6,280	3,240	4,640	9,060	*755	1,530	1,630	438
11	422	366	6,040	958	4,320	2,950	4,220	7,220	741	1,080	1,440	422
12	388	394	4,080	966	3,300	2,560	3,920	8,130	755	814	1,090	400
13	361	400	2,950	958	2,670	2,410	3,540	8,930	727	769	1,050	388
14	341	388	2,240	1,050	2,230	3,090	3,070	6,430	657	699	942	372
15	332	410	1,950	1,280	1,940	3,740	2,760	4,720	622	580	1,160	356
16	323	950	1,740	1,760	1,790	3,760	3,030	3,710	622	608	1,450	346
17	323	1,420	1,630	2,020	1,620	3,160	2,960	3,100	615	886	1,570	341
18	341	5,030	1,520	1,880	1,090	2,860	2,680	2,670	629	1,230	2,500	341
19	346	7,800	1,490	1,650	1,090	3,130	2,580	2,280	671	1,740	1,780	383
20	332	6,520	3,380	1,470	1,290	3,050	2,120	2,030	1,090	1,760	1,290	400
21	332	4,350	6,680	1,350	1,310	2,770	1,990	1,870	918	2,810	1,010	388
22	366	2,780	8,320	1,400	1,270	2,520	2,080	1,670	769	3,350	830	388
23	361	2,170	6,230	1,690	1,220	2,260	2,600	1,500	720	2,350	727	388
24	350	2,150	3,940	2,350	1,190	2,070	4,000	1,430	636	1,910	692	356
25	410	4,170	3,050	3,840	1,240	2,040	9,420	1,500	550	1,740	1,170	350
26	416	6,940	3,860	7,220	1,760	2,220	7,530	1,380	514	2,110	9,060	336
27	594	6,420	8,220	6,350	4,910	2,720	8,680	1,290	574	1,790	8,630	314
28	334	4,020	8,720	4,340	10,800	3,310	12,000	1,170	636	1,380	2,730	296
29	383	2,820	5,910	3,260	-----	4,320	14,900	1,240	685	1,210	1,770	282
30	361	2,500	4,070	2,630	-----	4,020	12,200	1,140	685	1,210	1,500	278
31	346	-----	3,070	2,260	-----	4,930	-----	1,010	-----	1,470	1,090	-----
Total	19,228	65,134	144,540	66,162	92,030	100,910	168,030	191,860	24,795	37,889	62,941	13,203
Mean	620	2,171	4,663	2,134	3,287	3,255	6,189	5,601	826	1,222	2,030	440
Cfsm	0.421	1.47	3.16	1.45	2.23	2.21	3.80	4.20	0.560	0.829	1.38	0.299
In.	0.49	1.64	3.65	1.67	2.32	2.55	4.24	4.84	0.63	0.96	1.59	0.33

Calendar year 1957: Max 47,300 Min 125 Mean 2,706 Cfsm 1.84 In. 24.91
water year 1957-58: Max 28,900 Min 278 Mean 2,703 Cfsm 1.63 In. 24.91

Peak discharge (base, 14,000 cfs).--Dec. 8 (12 p.m.) 18,400 cfs (11.49 ft); Apr. 28 (8:30 a.m.) 17,000 cfs (10.97 ft); May 7 (10 p.m.) 35,900 cfs (17.70 ft).

* Discharge measurement made on this day.

5295. Powell River at Big Stone Gap, Va.

Location.--Lat 36°52'08", long 82°46'32", on right bank 10 ft upstream from bridge on U. S. Highway 23 at Big Stone Gap, Wise County, 1 mile upstream from South Fork Powell River, and 2.5 miles downstream from Pigeon Creek.

Drainage area.--112 sq mi.

Records available.--October 1944 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,453.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Apr. 27, 1948, staff gage at same site and datum.

Average discharge.--14 years, 208 cfs.

Extremes.--Maximum discharge during year, 3,980 cfs May 6 (gage height, 5.70 ft); minimum, 21 cfs Oct. 13, 14 (gage height, 0.86 ft).
1944-58: Maximum discharge, 16,500 cfs Jan. 7, 1946 (gage height, 9.8 ft, from floodmark); minimum, 4.0 cfs Sept. 16, 17, 19, 1955.

Remarks.--Records good.

Revisions (water years).--WSP 1053: Drainage area. WSP 1276: 1948. WSP 1436: 1949(M), 1950(F), 1951-53(M), 1955(F).

Rating tables, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 6-11, Feb. 17, 18)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
0.8	14	1.5	145	0.8	14	2.0	300
.9	26	2.0	320	1.0	38	3.0	930
1.0	41	2.5	550	1.5	134	4.0	1,850
1.2	80	3.0	850	1.7	179	6.0	4,400

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	30	122	234	378	648	624	790	203	30	86	54
2	*52	28	112	188	462	444	486	552	222	*26	124	48
3	43	28	*110	162	354	324	396	432	134	28	191	44
4	38	25	128	148	230	242	354	330	110	25	214	41
5	32	25	120	134	214	201	290	*360	94	28	164	38
6	30	24	116	b120	242	179	762	*2,050	84	33	126	35
7	28	25	1,580	*b110	882	162	846	3,280	74	40	106	35
8	26	39	2,400	b105	944	154	612	1,450	70	58	116	35
9	25	62	1,500	b100	600	188	*420	846	68	48	162	32
10	25	56	797	b90	420	230	372	588	66	35	102	30
11	22	43	564	b90	*306	214	390	618	*66	43	84	30
12	24	38	390	96	230	*194	384	678	66	52	*86	30
13	22	36	295	102	201	300	300	528	56	41	150	29
14	22	49	255	132	174	312	234	390	54	37	116	28
15	22	64	222	130	169	318	204	275	62	33	124	26
16	22	80	214	130	150	275	198	222	62	34	204	26
17	32	150	214	126	b130	230	166	182	48	298	260	28
18	38	750	207	124	b120	242	152	162	41	130	156	29
19	30	*365	204	110	118	230	140	150	51	399	114	26
20	28	492	830	110	118	230	130	140	158	1,000	92	30
21	25	207	1,080	132	110	218	154	124	72	790	78	82
22	24	142	642	210	112	198	210	110	54	342	74	44
23	22	150	438	194	108	182	432	110	51	188	66	30
24	41	154	330	250	112	188	390	104	44	166	115	28
25	43	504	265	510	122	300	498	104	38	164	528	26
26	45	438	1,070	420	234	432	516	96	37	130	169	25
27	41	242	937	295	994	450	860	88	37	112	118	24
28	36	172	624	210	1,120	408	1,600	84	34	106	92	26
29	32	156	444	172	-	348	1,600	78	32	124	76	24
30	32	138	324	154	-----	366	1,300	70	30	100	66	25
31	30	-----	290	148	-----	654	-----	64	-----	84	58	-----
Total	1,002	5,312	16,624	5,238	9,354	8,971	15,020	15,055	2,198	4,724	4,217	1,008
Mean	32.3	177	536	169	354	283	501	486	73.3	152	136	33.6
Cfsm	0.288	1.58	4.79	1.51	2.38	2.58	4.47	4.34	0.654	1.36	1.21	0.300
In.	0.33	1.76	5.52	1.74	3.10	2.97	4.99	5.00	0.73	1.57	1.40	0.33

Calendar year 1957: Max 6,330 Min 10 Mean 228 Cfsm 2.04 In. 27.64
Water year 1957-58: Max 3,280 Min 22 Mean 243 Cfsm 2.17 In. 29.44

Peak discharge (base, 1,600 cfs).--Dec. 7 (11:30 p.m.) 3,780 cfs (5.56 ft); Dec. 20 (8 p.m.) 1,690 cfs (5.84 ft); Apr. 28 (7 a.m.) 1,980 cfs (4.13 ft); May 6 (11 p.m.) 3,980 cfs (5.70 ft); July 20 (6:30 p.m.) 1,730 cfs (5.88 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

5315. Powell River near Jonesville, Va.

Location.--Lat 36°39'43", long 83°05'42", on right bank 35 ft downstream from highway bridge, 2 miles southeast of Jonesville, Lee County, and 10 miles upstream from Wallen Creek.

Drainage area.--319 sq mi.

Records available.--October 1931 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,259.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--27 years, 511 cfs.

Extremes.--Maximum discharge during year, 10,700 cfs Dec. 8 (gage height, 18.64 ft); minimum, 42 cfs Oct. 16 (gage height, 1.15 ft).
1931-58: Maximum discharge, 30,000 cfs Jan. 8, 1946 (gage height, 30.8 ft), from rating curve extended above 20,000 cfs by logarithmic plotting; minimum, 17 cfs Sept. 19, 20, 1954.

Remarks.--Records good.

Revisions (water years).--WSP 823: Drainage area. WSP 1033: 1932-44. WSP 1436: 1946(M), 1948(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 10-12, Feb. 18-20; shifting-control method used Apr. 8-25)

Oct. 1 to June 2

June 3 to Sept. 30

1.1	37	3.0	540	1.2	52
1.3	61	6.0	2,220	1.6	112
1.6	103	10.0	4,820	2.0	184
2.0	184	16.0	8,970		

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	248	58	378	540	693	1,620	1,200	2,220	159	86	198	132
2	*166	57	318	456	1,170	1,010	952	1,620	799	*80	219	122
3	126	56	*287	382	925	740	790	1,380	540	77	318	109
4	105	53	312	343	692	602	692	1,140	350	76	500	102
5	90	52	329	298	580	500	625	1,120	262	74	428	98
6	77	49	301	284	580	444	1,380	*3,390	219	88	318	93
7	69	48	2,750	*301	1,680	410	2,040	8,750	190	88	225	88
8	64	51	8,870	294	2,680	382	1,440	4,950	172	160	180	83
9	58	66	3,580	215	1,500	452	*1,120	2,220	155	228	460	80
10	54	91	1,800	190	980	842	952	1,410	155	164	336	76
11	51	91	1,170	180	*740	715	1,090	1,380	*153	137	232	73
12	49	80	790	180	602	*625	1,120	1,440	164	192	*198	73
13	47	70	580	187	500	602	1,010	1,170	157	206	416	73
14	46	70	500	256	416	815	842	898	135	164	399	70
15	45	88	444	336	402	790	740	715	155	137	318	67
16	44	166	402	329	368	715	740	602	159	148	343	65
17	48	431	388	312	290	602	692	520	142	219	492	65
18	66	3,460	385	304	250	648	625	460	122	420	440	69
19	73	*3,200	392	270	230	740	560	402	115	413	312	69
20	64	1,800	1,300	256	220	692	520	385	435	1,270	222	67
21	53	815	3,320	262	219	648	500	340	360	2,340	174	106
22	48	520	1,500	371	219	560	625	290	212	1,120	172	160
23	46	448	980	436	219	496	898	262	168	692	159	114
24	54	520	715	555	215	464	1,040	273	148	520	150	85
25	70	1,160	602	1,440	222	540	1,770	306	128	440	939	74
26	81	1,440	1,740	1,140	318	692	1,680	284	117	374	670	69
27	71	842	2,420	842	1,260	765	2,740	235	112	304	413	65
28	70	580	1,580	848	3,060	740	1,620	235	109	252	294	62
29	65	500	952	520	-	670	4,100	232	99	270	212	59
30	65	444	692	452	-----	625	4,240	192	93	287	170	62
31	58	---	580	406	-----	1,090	-----	172	-----	204	148	---
Total	2,271	17,306	40,137	12,965	21,230	21,236	41,343	38,975	6,284	11,230	10,055	2,530
Mean	73.3	577	1,295	418	758	685	1,378	1,257	209	362	324	84.3
Cfsm	0.230	1.81	4.06	1.31	2.38	2.15	4.32	3.94	0.655	1.13	1.02	0.264
In.	0.27	2.02	4.88	1.51	2.48	2.48	4.82	4.54	0.73	1.30	1.18	0.29

Calendar year 1957: Max 13,200 Min 25 Mean 631 Cfsm 1.98 In. 26.85
Water year 1957-58: Max 8,870 Min 44 Mean 618 Cfsm 1.94 In. 26.30

Peak discharge (base, 5,000 cfs).--Dec. 8 (7 a.m.) 10,700 cfs (18.64 ft); Apr. 28 (4 p.m.) 5,330 cfs (10.79 ft); May 7 (1 p.m.) 9,910 cfs (17.48 ft).

* Discharge measurement made on this day.

5320. Powell River near Arthur, Tenn.

Location.--Lat 36°32'30", long 83°37'49", on left bank 500 ft upstream from bridge on U. S. Highway 25E, 2.3 miles east of Arthur, Claiborne County, and 2.4 miles downstream from Indian Creek.

Drainage area.--685 sq mi.

Records available.--October 1919 to September 1958. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are contained in reports of U. S. Weather Bureau (published as "near Tazewell").

Gage.--Water-stage recorder. Datum of gage is 1,045.84 ft above mean sea level (Tennessee River Survey datum). Prior to July 23, 1927, chain gage at same site and datum.

Average discharge.--39 years, 1,142 cfs.

Extremes.--Maximum discharge during year, 15,800 cfs Dec. 9 (gage height, 17.05 ft); minimum, 127 cfs Sept. 30; minimum gage height, -0.07 Nov. 7.
1919-58: Maximum discharge, 33,000 cfs Jan. 9, 1946 (gage height, 27.15 ft from floodmark), from rating curve extended above 23,000 cfs on basis of slope-area measurement of peak flow; minimum, 47 cfs Jan. 6, 1940, result of freezeup; minimum gage height, -0.38 ft Sept. 8, 9, 1957; minimum daily discharge, 60 cfs Sept. 23, 1955. Maximum stage known, 27.2 ft Jan. 29, 1918 (discharge, 33,000 cfs).

Remarks.--Records good.

Revisions (water years).--WSP 1336: 1920, 1921(M), 1923.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)											
Oct. 1 to May 8						May 9 to Sept. 30					
-0.1	145	4.0	2,210	0.3	120	2.0	865				
0.0	173	10.0	7,600	.5	169	4.0	2,210				
1.0	485	16.0	14,300	1.0	350	12.0	9,600				
2.0	930										
Discharge, in cubic feet per second, water year October 1957 to September 1958											
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1	800	*188	985	1,380	1,350	4,590	1,710	*6,960	470	228	416
2	608	176	*830	1,220	1,880	2,820	1,910	4,580	452	*213	485
3	584	173	726	*1,070	*2,180	*1,930	1,650	3,460	848	205	*465
4	956	173	690	930	1,800	1,520	1,440	2,900	901	199	*402
5	651	170	662	835	1,470	1,260	1,300	2,950	631	196	532
6	478	162	662	770	1,400	1,080	2,530	5,100	532	191	564
7	*398	156	3,540	740	1,950	980	*3,240	9,190	460	191	452
8	343	170	10,900	740	3,600	966	3,430	*14,000	420	216	375
9	297	185	*14,100	716	4,440	1,190	2,380	8,830	402	264	348
10	270	188	6,980	654	2,880	2,130	1,910	4,770	*384	334	429
11	246	179	3,950	591	2,050	2,110	1,770	3,450	366	339	537
12	228	199	2,570	585	1,610	1,740	1,810	3,170	388	281	429
13	214	211	1,790	587	1,330	1,640	1,730	2,920	366	267	357
14	202	211	1,370	676	1,130	1,870	1,530	2,380	357	330	429
15	196	252	1,190	745	996	1,940	1,350	1,920	330	309	510
16	188	392	1,050	800	920	1,800	1,270	1,590	334	284	470
17	205	912	963	765	840	1,580	1,250	1,380	330	312	592
18	225	4,370	956	730	735	1,480	1,150	1,210	316	302	586
19	222	7,540	1,020	684	644	1,550	1,040	1,100	295	515	620
20	211	6,150	2,630	667	685	1,600	958	992	625	554	465
21	208	3,600	4,560	644	649	1,510	1,080	901	576	1,220	375
22	202	1,840	5,360	667	608	1,380	1,500	805	673	2,710	312
23	188	1,350	3,160	703	591	1,230	2,150	739	460	1,580	284
24	246	1,230	2,100	925	591	1,120	2,060	751	380	1,010	312
25	225	1,920	1,700	1,650	579	1,140	5,410	775	326	775	411
26	211	3,000	3,310	2,500	716	1,200	4,860	823	298	614	799
27	205	2,830	4,390	2,100	1,700	1,340	5,480	709	281	542	951
28	211	1,840	4,480	1,610	3,570	1,400	8,450	625	264	442	566
29	208	1,370	2,950	1,300	-	1,340	9,510	598	253	384	438
30	202	1,140	2,090	1,110	-----	1,260	8,110	570	242	344	352
31	196	-----	1,620	990	-----	1,240	-----	510	-----	384	298
Total	9,784	42,277	93,264	30,104	42,894	49,936	83,948	90,658	12,960	15,735	14,591
Mean	316	1,409	3,009	971	1,532	1,611	2,798	2,924	432	508	471
Cfsm	0.461	2.06	4.39	1.42	2.24	2.35	4.08	4.27	0.631	0.742	0.688
In.	0.53	2.30	5.06	1.63	2.33	2.71	4.56	4.92	0.70	0.85	0.79

Calendar year 1957: Max 23,100 Min 80 Mean 1,404 Cfsm 2.05 In. 27.82
Water year 1957-58: Max 14,100 Min 132 Mean 1,346 Cfsm 1.96 In. 26.66

Peak discharge (base, 9,000 cfs).--Dec. 9 (7:30 a.m.) 15,800 cfs (17.05 ft); Apr. 29 (6 p.m.) 9,960 cfs (12.33 ft); May 8 (1 p.m.) 14,900 cfs (16.41 ft).

* Discharge measurement made on this day.

5330. Clinch River below Norris Dam, Tenn.

Location.--Lat 36°12'56", long 84°04'56", 0.5 mile upstream from Clear Creek, 1.0 mile downstream from Norris Dam, 1.5 miles north of Norris, Anderson County, and at mile 78.8.

Drainage area.--2,913 sq mi.

Records available.--October 1903 to September 1958. Published as "at Clinton" October 1903 to September 1927, and "near Coal Creek" May 1927 to September 1937. Records published for sites "at Clinton" and "near Coal Creek" May to September 1927; for sites "near Coal Creek" and "below Norris Dam" April 1936 to September 1937. Gage-height records collected in vicinity of Clinton from 1884 to 1943 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder at present site and datum since Jan. 28, 1937. Datum of gage is 819.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct. 1, 1903, to June 30, 1920, staff gage at railroad bridge 19.6 miles downstream at datum 42.49 ft lower. July 1, 1920, to Sept. 30, 1927, chain gage at highway bridge 19.8 miles downstream (1,000 ft downstream from previous site) at datum 42.59 ft lower. May 27 to Sept. 8, 1927, staff gage and Sept. 9, 1927, to Sept. 30, 1935, water-stage recorder, at site 2.9 miles downstream at datum 10.50 ft lower. Oct. 1, 1935, to Sept. 30, 1937, water-stage recorder at site 2.9 miles downstream at datum 13.50 ft lower. Apr. 16, 1936, to Jan. 27, 1937, staff gage at present site and datum.

Average discharge.--55 years, 4,347 cfs (unadjusted).

Extremes.--Maximum discharge during year, 20,100 cfs Dec. 26 (gage height, 9.40 ft); minimum, 80 cfs Feb. 28, Mar. 1, 2 (gage height, 1.26 ft); minimum daily, 80 cfs Mar. 1, 2. 1903-58: Maximum discharge, 87,000 cfs Mar. 5, 1917 (gage height, 38.5 ft, from graph based on gage readings, site and datum then in use), from rating curve extended above 62,000 cfs; minimum, 1.3 cfs May 17, 18, 20, 24-26, May 29 to June 5, 1936 (gage height, 0.62 ft); minimum daily, 1.3 cfs May 17, 18, 24-26, May 29 to June 4, 1936.

Flood of Mar. 11, 1886, reached a stage of 43.5 ft (discharge, 130,000 cfs) at railroad bridge at Clinton, from reports by Tennessee Valley Authority. Flood of Mar. 31, 1886, reached a stage of 41.3 ft, revised (discharge, 113,000 cfs) at railroad bridge at Clinton. Flood of Feb. 24, 1862, equalled that of Mar. 31, 1886, from reports by Tennessee Valley Authority.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow completely regulated by Norris Lake (see p. 226).

Revisions (water years).--WSP 1306: 1936-46 (adjusted monthly runoff). WSP 1336: 1917-18, 1928.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 6 to July 11, July 14-19)

1.2	56	2.0	880
1.3	97	3.0	2,450
1.4	160	5.0	6,850
1.6	360	10.0	21,800

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a3,000	5,400	7,970	16,800	5,180	80	3,220	116	8,000	8,390	4,860	8,420
2	a4,500	4,700	7,940	9,280	418	80	3,520	116	6,880	8,470	150	8,470
3	a4,600	4,540	7,860	*7,750	3,330	884	2,720	116	8,050	8,590	110	*8,590
4	*a2,000	*5,740	*7,830	7,750	*8,840	2,340	3,750	116	8,080	5,790	2,900	8,700
5	157	2,340	7,720	7,690	6,660	3,130	3,160	122	8,110	4,200	4,450	8,730
6	88	3,050	7,660	7,690	221	1,330	1,880	954	8,110	2,820	*3,860	4,100
7	3,580	2,270	7,770	7,640	88	760	5,500	1,620	5,440	6,920	4,000	8,650
8	2,280	2,230	7,890	7,640	1,590	84	4,550	135	8,310	8,280	3,910	8,760
9	2,300	222	7,970	7,660	128	1,400	*4,140	3,290	8,330	2,840	7,080	8,700
10	a5,600	3,890	8,030	7,640	3,990	5,270	3,510	3,870	8,310	2,560	8,390	8,650
11	a3,500	5,670	8,030	7,610	7,180	1,530	3,890	3,660	8,390	920	8,650	7,640
12	a3,700	3,760	8,050	7,560	7,120	84	3,380	6,420	8,450	122	8,050	4,510
13	a3,700	3,170	8,080	7,530	7,150	4,560	954	7,530	*8,450	128	7,950	3,600
14	a3,600	4,200	7,890	7,500	4,770	4,030	2,490	7,890	8,420	*3,070	8,820	5,880
15	a3,600	1,030	6,800	7,500	7,530	864	894	7,890	8,450	5,890	8,820	6,060
16	3,960	92	7,910	7,530	7,640	84	88	7,880	8,470	4,540	8,790	6,230
17	3,780	106	7,910	7,530	7,240	3,820	*88	7,830	8,470	2,990	8,820	8,390
18	3,780	110	7,860	7,450	7,580	2,490	88	7,860	8,500	4,240	8,820	4,400
19	2,470	4,460	7,830	7,450	7,560	*2,600	88	7,860	8,620	2,890	8,790	6,310
20	1,740	4,680	7,890	7,420	7,530	3,800	88	7,970	8,650	564	8,760	6,320
21	4,410	4,800	7,940	7,390	7,420	3,310	1,320	7,970	8,700	5,030	8,730	4,430
22	4,530	4,690	7,910	7,340	7,070	1,540	97	*7,970	8,730	4,130	8,680	2,820
23	4,570	4,760	9,230	7,370	7,420	88	97	7,970	9,430	1,800	8,680	2,820
24	2,570	4,640	13,900	6,020	7,420	1,600	97	8,000	8,790	1,760	8,450	2,620
25	2,430	6,730	16,200	84	7,570	895	97	8,050	7,470	110	8,470	2,040
26	2,800	7,640	17,400	84	5,200	88	97	7,970	7,470	110	8,560	5,590
27	2,440	7,610	20,000	3,680	1,890	88	110	8,000	7,370	717	7,660	1,520
28	4,490	7,610	20,000	2,970	607	88	122	8,000	5,000	5,290	7,710	5,810
29	5,750	6,140	18,900	4,370	-	88	122	8,000	4,410	5,510	8,000	6,250
30	5,420	7,970	19,900	5,420	-----	88	116	7,890	8,360	5,030	5,440	5,080
31	5,340	-----	19,700	7,390	-----	2,000	-----	8,030	-----	4,920	7,620	-----
Total	104,685	124,250	328,970	214,218	143,942	50,103	50,253	171,075	238,200	118,421	214,180	180,090
Mean	3,377	4,142	10,610	6,910	5,141	1,616	1,675	5,519	7,940	3,820	6,909	6,003

Observed

Adjusted

Calendar year 1957:	Max	26,600	Min	84	Mean	5,227	Mean	5,539	Cfsm	1.90	In.	25.81
Water year 1957-58:	Max	20,000	Min	80	Mean	5,311	Mean	5,425	Cfsm	1.86	In.	25.28

* Discharge measurement made on this day.

† Adjusted for change in contents in Norris Lake.

a No gage-height record; discharge estimated on basis of Norris Powerplant records and records for station near Seaboard.

5350. Bullrun Creek near Halls Crossroads, Tenn.

Location--Lat 36°06'52", long 83°59'16", on left bank on downstream side of bridge on U. S. Highway 441, 2.1 miles downstream from Smith Branch, 4.0 miles northwest of Halls Crossroads, Knox County.

Drainage area--68.5 sq mi.

Records available--October 1957 to September 1958.

Gage--Water-stage recorder. Datum of gage is 854.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes--Maximum discharge during year, 3,360 cfs Nov. 18 (gage height, 10.26 ft); minimum, 8.0 cfs Sept. 29 (gage height, 1.54 ft).

Remarks--Records good except those for periods of no gage-height record, which are fair.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 9-26, Nov. 2-14)

1.5	7.0	4.0	292
1.6	9.5	5.0	461
1.8	18	6.0	675
2.0	29	7.0	950
2.5	69	8.0	1,430
3.0	134	10.0	3,100

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	16	134	125	82	202	155	384	40	17	34	9.2
2	30	g16	110	96	70	148	130	297	54	17	41	9.0
3	200	g15	94	*83	63	*132	112	215	37	16	91	*8.8
4	*400	*15	*91	76	*58	93	98	172	34	18	38	8.8
5	200	15	75	67	58	79	84	*260	32	18	25	8.8
6	120	14	68	64	81	73	258	*987	31	16	*20	8.8
7	g74	14	1,110	65	162	72	190	1,300	30	17	18	9.0
8	g58	32	1,280	62	161	107	143	770	28	25	21	8.8
9	*g46	37	485	58	124	240	*119	411	29	*22	31	8.8
10	g38	22	308	55	101	281	131	340	30	24	36	8.5
11	g33	19	226	50	89	191	125	281	27	17	62	8.8
12	g30	18	164	48	77	144	101	220	27	17	23	8.8
13	g27	18	134	66	70	217	89	175	*26	16	20	8.8
14	g25	68	116	104	63	217	82	142	24	27	18	8.8
15	g22	61	101	82	64	172	88	118	23	18	16	8.5
16	g21	*1,420	89	73	59	142	114	101	23	28	15	8.5
17	g37	972	83	67	58	119	89	87	22	38	16	8.5
18	34	2,430	78	61	57	226	82	80	22	20	16	8.8
19	25	*1,060	114	56	54	190	77	89	21	17	13	8.8
20	22	441	772	57	51	160	72	83	58	115	12	8.5
21	20	260	492	65	49	136	139	68	26	116	12	39
22	20	186	268	58	45	112	250	62	24	33	12	18
23	19	276	199	68	44	94	215	58	49	26	12	10
24	25	206	161	218	44	93	181	54	25	26	12	9.0
25	25	647	227	180	44	103	689	53	22	40	14	8.5
26	20	504	780	146	118	97	456	50	22	22	12	8.5
27	20	268	396	116	439	103	655	46	22	22	11	8.5
28	20	198	279	94	345	97	952	45	20	20	10	8.2
29	19	246	209	83	-	86	914	41	18	35	9.9	8.2
30	18	172	164	76	-	97	635	38	18	20	9.5	8.5
31	17	-	137	72	-	196	-	37	-	18	9.5	-
Total	1,695	9,666	8,944	2,591	2,730	4,421	7,426	7,064	864	883	689.9	301.7
Mean	54.7	322	289	85.6	97.5	143	248	228	28.8	28.5	22.3	10.1
Cfsm	0.799	4.70	4.22	1.22	1.42	2.09	3.62	3.33	0.420	0.416	0.326	0.147
In.	0.92	5.25	4.66	1.41	1.48	2.40	4.03	3.84	0.47	0.48	0.37	0.16

Calendar year 1957: Max - Min 8.2 Mean 130 Cfsm 1.90 In. 25.67
Water year 1957-58: Max 2,430 Min 8.2 Mean 130 Cfsm 1.90 In. 25.67

Peak discharge (base, 1,000 cfs)--Nov. 18 (3 a.m.) 3,360 cfs (10.26 ft); Dec. 7 (10 p.m.) 1,930 cfs (8.73 ft); Dec. 20 (6 p.m.) 1,110 cfs (7.40 ft); Apr. 28 (2:30 p.m.) 1,180 cfs (7.55 ft); May 7 (12 m.) 1,390 cfs (7.93 ft).

* Discharge measurement made on this day.

g Computed from once-daily staff-gage readings.

Note.--No gage-height record Oct. 1-6, Oct. 27 to Nov. 1, Feb. 16-21; discharge estimated on basis of recorded range in stage, weather records, 1 discharge measurement, and records for First Creek at Mineral Springs Avenue at Knoxville.

5355. Clinch River near Scarboro, Tenn.

Location.--Lat 35°56'45", long 84°13'17", on right bank 0.6 mile downstream from Beaver Creek, 2½ miles south of Scarboro, Anderson County, 4½ miles downstream from Solway Bridge, and 17 miles west of Knoxville.

Drainage area.--3,300 sq mi.

Records available.--September 1936 to September 1958. Published as "near Wheat" September 1936 to January 1941.

Gage.--Water-stage recorder. Datum of gage is 753.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 1, 1941, at site 24.5 miles downstream at datum 35.99 ft lower.

Average discharge.--22 years, 4,614 cfs (unadjusted).

Extremes.--Maximum discharge during year, 23,000 cfs Dec. 27 (gage height, 12.96 ft); minimum, 181 cfs July 28 (gage height, 1.11 ft); minimum daily, 218 cfs July 14.
1936-58: Maximum discharge, 42,900 cfs Feb. 9, 1937 (gage height, 23.45 ft, site and datum then in use), from rating curve extended above 27,000 cfs; minimum, 111 cfs Oct. 27, 28, 1947; minimum daily, 131 cfs Jan. 23, 1941.

Remarks.--Records good. Flow regulated by Norris Lake, 41 miles upstream (see p. 226). The town of Oak Ridge diverts an average of about 25 cfs for municipal supply, 2½ miles above station.

Revisions (water years).--WSP 1306: 1938-39 (adjusted monthly runoff). WSP 1386: 1937.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.1	175	4.0	4,990
1.2	236	10.0	17,000
1.5	501	13.0	23,100
2.0	1,160		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,010	5,470	8,800	20,300	7,910	1,780	3,050	2,950	8,470	8,672	4,810	8,370
2	*3,330	5,530	8,600	13,100	2,910	968	*3,850	*2,270	8,270	*8,510	4,290	8,430
3	5,950	4,250	*8,590	*8,610	1,620	792	3,960	1,780	7,590	8,570	468	*8,510
4	5,930	*5,470	8,590	8,430	*5,670	*1,910	4,370	1,390	*8,430	6,810	*551	8,630
5	3,420	4,500	8,410	8,350	7,870	2,960	3,430	1,260	8,450	5,010	2,800	8,650
6	1,260	2,820	8,230	8,310	4,340	3,550	3,690	2,880	8,470	3,980	4,530	6,830
7	1,310	2,670	12,700	8,290	1,460	1,460	3,640	5,450	5,940	4,520	3,650	5,750
8	3,550	2,500	17,300	8,230	1,140	1,400	5,270	5,170	8,250	8,510	4,750	8,650
9	2,760	2,460	12,800	8,170	2,190	912	5,250	2,950	8,550	6,490	5,110	8,650
10	3,050	1,680	10,600	8,130	1,070	5,280	4,120	5,450	8,590	1,820	8,270	8,550
11	3,870	4,310	9,830	8,090	7,150	5,230	4,070	5,310	8,550	2,380	8,750	8,030
12	3,970	5,590	9,350	8,030	7,730	1,980	4,610	6,950	8,610	1,260	8,270	5,990
13	3,790	2,640	9,090	8,030	7,690	1,900	3,570	7,650	8,630	291	7,690	3,810
14	5,490	4,530	8,850	8,330	7,490	5,450	1,960	8,710	8,610	218	8,870	4,000
15	3,830	4,530	7,450	8,230	5,630	4,350	2,390	8,610	8,630	3,990	8,870	5,810
16	3,830	5,400	8,690	8,150	8,150	1,720	1,560	8,510	8,630	6,050	8,810	5,550
17	4,290	7,910	8,610	8,110	8,090	1,330	652	8,450	8,610	3,790	8,850	8,230
18	4,050	15,600	8,530	8,030	7,650	4,890	535	8,370	8,610	3,510	8,870	6,590
19	3,380	11,600	8,650	7,930	7,990	3,830	512	8,510	8,650	4,290	8,830	4,650
20	2,470	9,050	12,000	7,890	7,970	3,860	501	8,550	8,850	2,670	8,830	6,050
21	3,060	6,930	12,300	7,910	7,930	4,530	1,240	8,450	8,830	2,340	8,810	6,130
22	4,810	6,210	10,200	7,930	7,550	3,800	2,580	8,390	8,830	4,110	8,790	3,280
23	4,270	6,390	9,450	7,830	7,870	2,040	1,910	8,370	9,230	3,840	8,770	2,840
24	3,970	6,070	13,000	8,090	7,850	1,230	1,350	8,370	9,230	1,990	8,730	2,540
25	2,790	8,330	17,100	4,600	7,810	1,940	3,210	8,410	8,270	1,860	8,530	2,900
26	2,900	10,400	20,200	1,210	7,970	1,620	3,190	8,410	7,510	328	8,590	2,560
27	2,750	3,490	22,700	3,280	4,140	779	3,470	8,350	7,530	275	8,090	3,720
28	3,710	8,990	22,200	4,160	3,440	753	4,790	8,350	6,190	1,160	8,130	2,130
29	5,170	7,270	21,600	4,080	-	690	4,950	8,330	3,910	5,490	7,670	6,270
30	5,610	9,000	21,300	3,520	-	652	4,850	8,330	7,350	5,050	7,670	5,870
31	5,630	-	21,000	7,830	-	1,140	-	8,350	-	4,910	5,370	-
Total	114,190	187,590	386,800	241,180	166,060	74,726	93,330	203,240	244,230	122,692	215,019	177,970
Mean	3,684	6,253	12,480	7,780	5,331	2,411	3,111	6,556	8,141	3,958	6,936	5,932

	Observed					Adjusted†						
Calendar year 1957:	Max	28,300	Min	194	Mean	6,146	Mean	6,458	Cfsm	1.96	In.	26.57
Water year 1957-58:	Max	22,700	Min	218	Mean	6,101	Mean	6,216	Cfsm	1.88	In.	25.57

* Discharge measurement made on this day.

† Adjusted for change in contents in Norris Lake.

5370. Whiteoak Creek below Oak Ridge National Laboratory near Oak Ridge, Tenn.

Location.--Lat 35°54'44", long 84°18'59", on right bank 0.1 mile upstream from Melton Branch, 1 mile south of Oak Ridge National Laboratory, Roane County, and 7 miles south of Oak Ridge.

Drainage area.--3.62 sq mi.

Records available.--June 1950 to July 1953, July 1955 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 750.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years (1950-52, 1955-58), 9.69 cfs.

Extremes.--Maximum discharge during year, 511 cfs Nov. 16 (gage height, 5.20 ft); minimum, 3.7 cfs Nov. 6, 7, 8 (gage height, 0.88 ft).
1950-53, 1955-58; Maximum discharge recorded, 642 cfs Aug. 30, 1950 (gage height, 5.18 ft), from rating curve extended above 230 cfs, but may have been higher Aug. 2, 1950; minimum, 1.9 cfs Oct. 2, 1950; minimum gage height, 0.64 ft July 2, 9-11, 1950, Oct. 28, Nov. 4, 1952.

Remarks.--Records good. Natural flow of stream affected by operations of Oak Ridge National Laboratory.

Rating table, water year 1957-58 (gage height, in feet, and discharge,
in cubic feet per second)
(Shifting-control method used Sept. 22-30)

0.9	4.0	3.0	64
1.0	6.0	3.5	94
2.0	30	4.0	149

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	4.6	7.0	9.0	6.8	13	8.8	19	5.5	5.0	12	5.6
2	*6.4	4.0	7.0	8.0	5.8	10	*8.5	*19	5.6	*5.6	11	5.0
3	5.5	4.4	*7.4	*7.6	5.8	8.5	8.5	16	5.4	5.8	7.8	*5.0
4	53	*4.4	7.0	6.8	*5.6	*7.6	7.8	13	*5.2	5.6	*7.2	5.6
5	18	4.4	6.0	6.4	6.6	6.8	7.0	12	5.6	6.2	6.8	6.2
6	12	4.4	5.8	6.8	11	6.2	16	14	5.6	6.4	6.2	5.8
7	9.2	4.4	130	6.8	14	8.3	9.5	19	4.8	7.1	6.6	7.7
8	7.8	13	46	6.4	10	7.8	8.0	15	5.2	6.4	6.8	5.2
9	7.4	5.4	24	6.0	8.8	15	7.8	12	6.0	6.1	6.2	4.8
10	6.4	4.6	17	5.6	8.0	12	11	15	5.4	6.0	6.0	5.4
11	5.6	4.8	13	5.6	7.6	10	8.2	12	5.2	6.2	6.2	6.0
12	5.0	4.6	10	5.6	7.0	8.5	7.2	10	5.2	8.0	6.2	6.0
13	4.8	5.6	8.8	9.9	6.4	13	6.8	8.5	5.4	3.7	6.6	5.6
14	5.0	42	7.8	17	6.0	10	6.6	8.0	5.2	6.4	6.4	5.4
15	5.0	16	7.8	11	6.2	9.5	11	7.8	5.2	5.6	6.2	5.2
16	5.0	115	7.8	9.2	5.2	8.0	9.0	7.0	5.0	9.1	5.8	6.2
17	8.4	110	7.0	8.2	5.0	10	8.0	6.6	4.6	6.4	5.8	6.8
18	5.8	*127	6.6	7.4	5.0	25	7.6	6.2	5.2	6.4	5.2	5.4
19	4.6	48	18	7.0	5.0	16	7.2	6.8	5.0	5.6	5.2	5.0
20	4.4	22	55	7.0	5.0	13	7.0	5.8	5.6	5.6	5.4	5.4
21	4.6	15	23	9.8	4.8	11	21	5.8	5.9	5.8	6.0	25
22	4.8	15	16	7.8	5.2	8.8	42	5.6	5.5	5.4	6.2	6.8
23	5.3	20	13	7.0	5.0	7.2	23	5.8	5.0	7.3	5.8	6.4
24	8.2	14	12	19	5.2	10	21	5.8	4.8	7.0	5.8	6.4
25	5.4	*22	13	14	4.8	11	68	5.4	5.0	5.6	5.4	6.2
26	5.0	15	20	12	14	10	33	5.6	6.0	5.6	5.0	6.2
27	4.6	12	14	10	35	10	26	5.0	5.2	5.6	5.2	6.6
28	4.8	9.8	12	8.5	18	10	21	5.2	4.4	6.4	5.2	4.8
29	4.8	12	10	7.8	-	8.2	44	5.4	4.6	5.6	5.2	4.8
30	4.6	8.2	9.2	7.0	-	11	24	5.0	4.8	5.2	5.2	5.8
31	4.8	-	9.5	7.4	-	10	-	5.0	-	5.9	5.6	-
Total	293.7	691.6	550.7	267.4	232.8	325.4	494.5	292.3	157.1	194.6	196.0	192.3
Mean	9.47	23.1	17.8	8.63	8.31	10.5	16.5	9.43	5.24	6.28	6.32	6.41
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 130 Min 3.7 Mean 12.2 Cfsm - In. -
Water year 1957-58: Max 130 Min 4.0 Mean 10.7 Cfsm - In. -

Peak discharge (base, 280 cfs).--Nov. 16 (10 a.m.) 511 cfs (5.20 ft).

* Discharge measurement made on this day.

5375. Melton Branch near Oak Ridge, Tenn.

Location.--Lat 35°54'38", long 84°18'54", on right bank 0.1 mile above mouth, 1 mile south of Oak Ridge National Laboratory, Roane County, and 7 miles south of Oak Ridge, Anderson County.

Drainage area.--1.48 sq mi.

Records available.--August 1955 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 751.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 120 cfs Nov. 16 (gage height, 4.64 ft); minimum, 0.3 cfs Nov. 6-8.

1955-58: Maximum discharge, that of Nov. 16, 1957; no flow for many days during August, September, October, and November 1955.

Remarks.--Records good. Natural flow affected by operations of Oak Ridge National Laboratory.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.9	0.2	1.4	7.8
1.0	.4	1.5	12
1.1	.6	2.0	26
1.2	2.0	3.0	57
1.3	4.5		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	0.4	1.8	2.5	1.9	3.8	3.2	6.5	0.7	0.7	1.4	0.8
2	*1.5	.4	1.7	1.8	1.5	3.0	*2.8	*7.8	.7	*.7	1.5	.8
3	22	.4	*1.5	*1.8	1.4	2.5	2.2	4.2	.8	.7	1.1	*.8
4	24	*.6	1.7	1.8	*1.3	*2.2	2.0	2.8	*.8	.7	*.8	.8
5	5.8	.8	1.4	1.7	1.7	1.9	1.9	2.5	.8	.7	.8	.7
6	2.8	.3	1.3	1.7	3.5	1.8	6.7	4.5	.8	.7	.8	.7
7	1.8	.3	55	1.7	5.5	2.5	3.8	7.5	.8	.7	.8	.8
8	1.5	2.5	14	1.4	3.8	3.5	3.0	4.8	.8	.7	.8	.7
9	1.3	1.4	6.5	1.3	2.2	7.2	2.5	3.2	.8	.8	.8	.7
10	1.2	1.1	4.2	1.3	1.9	5.2	3.6	5.5	.8	.7	.8	.7
11	1.2	1.0	2.5	1.3	1.8	3.5	3.0	4.2	.7	.7	.8	.7
12	1.2	.8	1.9	1.3	1.5	2.5	2.5	3.2	.7	.7	.8	.7
13	1.2	.8	1.7	2.9	1.4	4.5	2.2	2.0	.7	1.0	.8	.7
14	1.1	16	1.7	7.1	1.3	3.8	1.9	1.8	.7	.7	.8	.7
15	1.1	4.2	1.5	4.2	1.5	3.0	3.8	1.8	.7	.6	.8	.7
16	1.1	41	1.8	2.5	1.3	2.5	4.0	1.5	.7	.7	.8	.7
17	1.7	37	1.7	2.0	1.2	5.0	3.0	1.4	.7	.7	.8	.8
18	1.2	*49	1.7	1.8	1.2	12	2.8	1.3	.7	.6	.8	1.1
19	1.2	17	6.8	1.7	1.2	5.8	2.5	1.5	.7	.7	.8	1.1
20	1.1	5.8	27	1.7	1.2	4.0	2.2	1.4	.7	.7	.8	1.1
21	.8	3.2	7.8	2.8	1.3	3.2	8.4	1.1	.8	.7	.8	3.3
22	.6	3.0	4.5	2.2	1.4	2.5	20	1.0	.8	.6	*.8	.7
23	.7	8.2	3.2	2.0	1.4	2.0	8.2	.8	.8	.9	.7	.7
24	1.4	4.8	2.5	7.5	1.3	3.2	5.0	.6	.8	1.0	.8	.7
25	.8	*8.2	3.4	6.8	1.3	4.2	25	.6	*.7	.8	.8	.5
26	.8	5.2	9.6	4.0	5.7	4.0	12	.8	.7	.7	.8	.4
27	.8	3.5	5.2	2.8	16	4.0	11	.8	.7	.7	.8	.4
28	.8	2.8	4.2	1.9	6.8	3.5	6.8	.8	.7	.8	.8	.5
29	.8	3.8	2.8	1.8	-	2.8	20	.7	.7	.8	.8	.5
30	.8	2.2	2.2	1.7	-	3.5	9.6	.7	.7	.8	.8	.6
31	.6	-	2.0	1.7	-	4.5	-	.7	-	.8	.8	-
Total	84.7	225.7	184.8	78.7	73.5	115.6	185.6	78.0	22.2	22.8	26.1	24.1
Mean	2.73	7.52	5.96	2.54	2.62	3.73	6.19	2.52	0.740	0.735	0.842	0.803
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 55 Min 0.1 Mean 3.39 Cfsm - In. -
 Water year 1957-58: Max 55 Min 0.3 Mean 3.07 Cfsm - In. -

Peak discharge (base, 86 cfs).--Nov. 16 (10:30 a.m.) 120 cfs (4.64 ft); Dec. 7 (9 a.m.) 90 cfs (3.90 ft).

* Discharge measurement made on this day.

5395. Daddys Creek near Crab Orchard, Tenn.

Location.--Lat 35°55'33", long 84°54'47", on left bank 0.6 mile upstream from North Creek, 1.5 miles downstream from bridge on U. S. Highway 70, 1.5 miles downstream from Bird Creek, and 2 miles northwest of Crab Orchard, Cumberland County.

Drainage area.--93.5 sq mi.

Records available.--October 1930 to September 1958 (discontinued). Prior to October 1952, published as Daddy Creek near Crab Orchard.

Gage.--Water-stage recorder. Datum of gage is 1,569.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 17, 1934, staff gage at same site and datum.

Average discharge.--28 years, 174 cfs.

Extremes.--Maximum discharge during year, 6,670 cfs Nov. 18 (gage height, 15.82 ft); minimum, 0.7 cfs Sept. 5 (gage height, 0.60 ft).
1930-58: Maximum discharge, 11,600 cfs Feb. 13, 1948 (gage height, 21.30 ft); no flow Sept. 23, 24, 1936, Sept. 11-22, 1954.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1306: 1933(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.61	0.8	2.0	93
.7	1.8	2.5	156
.8	3.8	3.5	356
.9	6.6	5.0	754
1.0	9.8	7.0	1,430
1.1	14	11.0	3,510
1.5	42	13.5	5,100

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	93	224	175	215	183	230	631	21	3.4	a4.0	1.3
2	132	84	193	156	205	159	196	496	70	2.8	a350	*1.4
3	156	127	175	136	179	142	170	385	36	2.4	a300	1.0
4	328	127	179	122	159	122	153	326	26	2.2	a100	.9
5	406	111	156	111	167	110	139	924	20	2.8	a50	.8
6	242	98	142	105	306	103	370	1,680	18	2.6	35	.9
7	162	90	1,530	101	480	104	382	1,170	14	1.8	a25	1.1
8	120	319	1,790	93	423	164	275	740	12	1.7	a20	1.3
9	92	480	898	b80	299	215	218	490	70	1.8	a15	1.2
10	*74	308	571	b70	226	260	384	428	94	1.8	a150	1.1
11	61	218	397	b62	180	222	582	451	47	1.8	a50	6.1
12	51	174	299	b56	150	187	404	568	32	3.8	a30	13
13	45	146	246	85	b130	209	295	416	23	11	a25	4.8
14	38	796	212	202	b115	248	234	297	16	69	a20	3.4
15	33	886	192	215	b105	218	234	*220	13	40	a15	3.2
16	28	3,110	215	*189	b95	187	216	158	12	23	a12	2.6
17	47	2,920	270	164	b85	167	180	135	10	18	a9.0	2.4
18	104	5,080	301	146	b80	469	156	111	8.5	13	a7.5	2.4
19	90	3,860	349	127	b75	488	139	123	7.2	9.8	a6.0	2.0
20	73	1,200	2,000	118	b65	349	126	146	6.3	8.2	a4.8	2.4
21	61	622	1,280	135	b60	266	356	114	5.4	8.2	a3.6	86
22	51	441	636	149	b70	215	496	81	5.7	7.6	a2.8	32
23	78	546	423	135	92	184	378	71	5.7	9.0	a2.3	15
24	961	490	326	285	93	223	317	62	5.4	59	a1.8	9.2
25	853	678	382	587	92	631	1,780	57	4.5	*58	a2.4	7.9
26	315	603	308	431	94	538	1,140	50	5.1	32	3.0	7.2
27	226	433	284	338	135	*493	1,090	42	7.6	21	2.8	6.0
28	170	338	250	266	207	416	1,800	36	6.6	14	2.6	4.8
29	139	331	226	220	-	333	1,270	31	5.4	13	2.2	4.2
30	121	281	193	189	-----	279	1,040	24	4.0	9.5	1.7	4.0
31	104	-----	172	169	-----	270	-----	21	-----	6.3	1.7	-----
Total	5,311	25,010	14,819	5,416	4,582	8,154	14,730	10,484	611.4	458.5	1,255.2	229.6
Mean	171	834	478	175	164	263	491	338	20.4	14.8	40.5	7.65
Cfsm	1.83	8.92	5.11	1.87	1.75	2.81	5.25	3.61	0.218	0.158	0.433	0.082
In.	2.11	9.95	5.89	2.15	1.82	3.24	5.86	4.17	0.24	0.18	0.50	0.09

Calendar year 1957: Max 5,080 Min 0.03 Mean 293 Cfsm 3.13 In. 42.57
Water year 1957-58: Max 5,080 Min 0.8 Mean 249 Cfsm 2.66 In. 36.20

Peak discharge (base, 1,700 cfs).--Nov. 18 (12 p.m.) 6,670 cfs (15.82 ft); Dec. 7 (8 p.m.) 2,780 cfs (9.72 ft); Dec. 20 (11 a.m.) 3,120 cfs (10.34 ft); Apr. 25 (9 a.m.) 2,300 cfs (8.83 ft); Apr. 28 (3 a.m.) 2,560 cfs (9.32 ft); May 6 (2 a.m.) 2,190 cfs (8.62 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

b Stage-discharge relation affected by ice.

5396, Daddys Creek near Hebbertsburg, Tenn.

Location--Lat 35°59'53", long 84°49'24", on upstream end of left abutment of Antioch Bridge, 2.1 miles southwest of Hebbertsburg, 6.9 miles northeast of Crab Orchard, Cumberland County, and at mile 9.1.

Drainage area--139 sq mi.

Records available--May 1957 to September 1958.

Gage--Water-stage recorder. Datum of gage is 1,445.1 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes--1957: Maximum discharge during period May to September, 3,620 cfs May 22 (gage height, 8.35 ft); minimum, 0.2 cfs Sept. 6-9; minimum gage height, 1.75 ft Sept. 8, 9. 1957-58: Maximum discharge during water year, 11,100 cfs Nov. 18 (gage height, 13.15 ft), from rating curve extended above 6,600 cfs; minimum, 1.5 cfs Sept. 10, 11 (gage height, 2.01 ft).

Remarks--Records good except those for periods of ice effect, which are poor.

Discharge, in cubic feet per second, 1957

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	350	92	112	2.1	0.6	16	472	96	6.6	3.7	*54
2	304	88	92	1.8	.5	17	278	75	6.8	2.8	168
3	412	88	71	1.7	.4	18	266	63	6.1	2.2	117
4	242	86	57	1.7	.4	19	257	52	5.8	2.7	71
5	185	214	45	1.6	.3	20	287	51	5.5	2.2	48
6	147	428	35	1.4	*.3	21	180	50	5.3	1.7	37
7	125	245	28	1.2	.2	22	1,210	46	5.8	1.5	29
8	106	155	21	1.2	.2	23	1,400	44	*4.8	1.2	225
9	92	127	16	1.3	.2	24	690	86	4.8	1.1	263
10	81	611	14	1.2	1.0	25	611	*500	4.5	1.0	135
11	79	440	12	1.2	1.1	26	392	155	4.1	1.0	86
12	74	281	10	1.3	1.9	27	297	103	3.6	*1.0	62
13	85	200	8.8	1.8	4.0	28	220	97	3.2	1.0	47
14	339	162	7.7	2.8	14	29	158	180	3.0	.9	64
15	852	127	7.2	3.6	19	30	137	158	2.8	.8	202
						31	114	-	2.6	.7	-
Total						10,442	4,898	611.8	51.5	1,652.1	
Mean						337	19.7	19.7	1.66	55.1	
Cubic feet per second per square mile						2.42	1.17	0.142	0.012	0.396	
Runoff in inches						2.79	1.31	0.16	0.01	0.44	

Peak discharge (base, 3,500 cfs)--May 22 (7 p.m.) 3,620 cfs (8.35 ft).

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	182	135	359	263	318	275	353	952	31	5.5	11	2.8
2	165	119	297	236	308	245	308	748	70	4.6	73	*2.7
3	192	160	263	210	278	222	269	588	59	4.1	433	2.6
4	392	180	266	190	257	195	242	476	42	3.2	158	2.2
5	548	158	236	170	251	172	218	1,170	31	2.6	91	2.0
6	346	141	215	160	392	158	494	2,810	26	2.2	*58	1.9
7	236	127	2,100	145	620	155	562	1,950	22	2.2	40	1.9
8	172	374	2,710	135	611	245	420	1,150	19	2.7	29	2.4
9	127	675	1,340	120	454	325	339	770	48	2.7	23	2.0
10	*100	454	846	110	356	392	530	630	155	2.4	192	1.6
11	82	325	*606	100	284	353	885	616	77	2.0	64	1.6
12	71	260	444	90	230	300	655	758	51	2.7	45	3.9
13	62	222	368	115	*165	325	476	584	35	6.1	36	11
14	53	1,030	322	290	140	376	376	432	26	3.6	29	6.1
15	46	1,300	290	311	130	342	372	*332	19	66	20	4.5
16	40	4,970	297	*284	120	297	353	251	16	37	15	3.6
17	48	4,000	356	254	110	269	300	210	14	25	13	3.6
18	109	*7,810	400	230	100	602	263	172	13	19	11	3.6
19	115	6,490	444	205	90	690	230	170	10	15	8.8	3.4
20	94	1,940	2,800	190	85	530	212	215	8	12	6.9	3.1
21	78	1,000	1,910	210	80	416	503	172	7.7	9.6	5.8	80
22	68	705	940	230	80	339	*797	123	8.1	8.8	5.0	67
23	68	819	645	215	100	294	593	104	7.4	10	4.8	31
24	1,040	758	498	360	110	368	480	92	7.2	32	4.3	17
25	863	988	416	874	135	970	2,210	84	6.6	*88	4.5	12
26	440	907	480	665	135	797	1,640	77	*8.1	59	5.0	9.2
27	322	660	444	526	192	*726	1,580	66	8.5	39	4.8	8.5
28	245	508	392	424	297	625	2,580	56	7.7	27	4.1	6.9
29	205	490	346	350	-	512	1,930	46	7.2	22	3.9	5.8
30	175	420	300	300	-----	428	1,640	39	6.6	19	3.4	5.0
31	141	-----	266	269	-----	408	-----	33	-----	14	3.1	-----
Total	6,825	38,125	21,576	8,231	6,438	12,351	21,790	15,876	848.9	585.4	1,405.4	308.9
Mean	220	1,271	696	268	230	398	726	512	28.3	18.8	45.3	10.3
Cfs/m	1.58	9.14	5.01	1.91	1.65	2.86	5.22	3.68	0.204	0.135	0.326	0.074
In.	1.83	10.20	5.77	2.20	1.72	3.30	5.83	4.25	0.23	0.16	0.38	0.08

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
 Water year 1957-58: Max 7,810 Min 1.6 Mean 368 Cfs/m 2.65 In. 35.95

Peak discharge (base, 3,500 cfs)--Nov. 18 (9 p.m.) 11,100 cfs (13.15 ft); Dec. 7 (9 p.m.) 4,140 cfs (8.78 ft); Dec. 20 (1 p.m.) 4,530 cfs (9.08 ft); May 6 (3 a.m.) 3,620 cfs (8.35 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 5-12, Feb. 10-24.

5398. Obed River near Lancing, Tenn.

Location.--Lat 36°04'53", long 84°40'15", on left bank at Alley Ford, 1.4 miles upstream from mouth, 2.9 miles southwest of Lancing, Morgan County, 3.0 miles downstream from Clear Creek.

Drainage area.--518 sq mi.

Records available.--May 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 891.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1957: Maximum discharge during period May to September, 6,080 cfs May 22 (gage height, 7.28 ft); minimum, 1.2 cfs Sept. 8-10 (gage height, 0.71 ft).
1957-58: Maximum discharge during water year, 40,600 cfs Nov. 18 (gage height, 18.95 ft); minimum, 2.0 cfs Sept. 14-16 (gage height, 0.77 ft).

Remarks.--Records good except those below 10 cfs and those for periods of no gage-height record, which are fair.

Discharge, in cubic feet per second, 1957

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	850	225	*309	*11	3.2	16	825	530	27	25	171
2	710	187	225	9.8	2.4	17	542	335	25	25	*320
3	1,020	*172	179	7.7	2.2	18	432	298	22	25	282
4	724	172	144	7.7	*2.0	19	426	230	19	25	183
5	562	318	116	7.0	1.8	20	542	195	18	25	131
6	471	*2,000	98	7.0	1.4	21	497	169	15	23	102
7	400	1,180	80	5.1	1.3	22	1,750	144	13	17	85
8	358	724	69	3.8	1.2	23	3,750	128	12	15	178
9	292	667	58	2.5	1.2	24	1,640	147	13	13	464
10	265	3,740	53	2.2	1.9	25	1,370	501	13	11	276
11	235	2,250	46	2.0	1.9	26	959	432	13	9.8	187
12	230	1,330	40	1.9	2.4	27	*724	282	11	9.0	134
13	215	879	34	1.6	5.8	28	575	215	11	7.7	110
14	207	895	30	1.8	25	29	458	356	18	6.4	105
15	1,190	751	28	7.9	34	30	344	419	15	5.1	202
						31	276	-	14	3.8	-
Total.....							22,799	19,938	1,768	337.8	3,017.7
Mean.....							752	665	57.0	10.9	101
Cubic feet per square mile.....							1.32	1.28	0.110	0.021	0.195
Runoff in inches.....							1.64	1.43	0.13	0.02	0.22

Peak discharge (base, 13,000 cfs).--No peak above base.

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*314	*350	1,190	975	1,140	863	*1,300	*3,110	110	17	*35	15
2	292	514	*1,030	*879	1,190	752	1,110	2,310	110	15	34	*14
3	566	309	911	752	*1,060	*696	963	*180	15	15	407	12
4	*2,340	412	919	661	943	627	879	1,370	154	17	380	11
5	2,600	419	832	614	919	568	788	3,850	119	17	215	9.0
6	1,360	368	731	582	1,140	530	1,240	13,800	98	13	147	7.7
7	855	332	7,290	562	1,980	530	1,480	8,310	83	11	113	7.0
8	608	570	11,100	562	2,000	959	1,180	4,940	74	11	88	5.8
9	458	1,520	5,185	562	1,560	1,590	991	3,110	71	9.8	69	5.1
10	350	1,190	3,240	556	1,270	1,920	1,320	2,340	165	9.0	186	4.4
11	276	895	2,290	549	1,060	1,640	2,810	2,010	164	9.0	144	3.2
12	230	731	a1,740	516	a960	1,330	2,090	2,300	131	9.0	102	2.5
13	199	634	a1,450	478	a890	1,290	1,590	1,820	98	11	90	2.4
14	175	1,900	a1,250	834	a800	1,670	1,290	1,380	76	16	406	2.2
15	154	3,750	1,110	1,030	a650	1,480	1,230	1,080	64	30	158	2.0
16	134	*11,800	1,070	967	a600	1,250	1,220	848	53	92	108	2.5
17	131	12,000	1,230	871	a590	1,090	1,020	682	46	92	83	11
18	158	22,000	1,280	802	a560	1,910	887	608	38	69	71	11
19	260	*23,600	1,360	717	a540	2,640	788	562	35	58	60	9.0
20	220	*7,110	10,200	654	a500	2,060	717	802	30	53	48	8.4
21	183	3,630	7,970	668	a450	1,620	2,930	620	28	46	40	13
22	154	2,390	3,920	795	400	1,340	4,640	478	25	38	34	65
23	140	2,470	2,520	724	426	1,140	2,910	374	23	38	29	98
24	1,020	2,420	1,690	1,050	458	1,190	2,080	314	21	51	29	83
25	1,500	3,290	1,580	3,650	445	3,400	4,150	332	18	72	24	60
26	927	3,250	1,640	2,720	445	3,130	4,460	332	21	110	22	46
27	695	2,320	1,930	2,010	549	2,680	5,360	265	23	85	23	38
28	575	1,780	1,640	1,590	927	2,290	8,460	211	22	64	27	30
29	490	1,650	1,400	1,310	-	1,880	6,250	172	21	55	23	25
30	432	1,470	1,180	1,120	-----	1,590	5,820	144	19	44	21	23
31	393	-----	1,020	991	-----	1,500	-----	125	-----	40	18	-----
Total.....												
Mean.....												
Cfs/m.....												
In.....												
Calendar year 1957: Max - 23,600 Min - 2.0 Mean - 1,252 Cfs/m - 2.42 In. - 32.61												
Water year 1957-58: Max - 23,600 Min - 2.0 Mean - 1,252 Cfs/m - 2.42 In. - 32.61												
Peak discharge (base, 13,000 cfs).--Nov. 18 (11:30 p.m.) 40,600 cfs (18.95 ft); Dec. 7 (10 p.m.) 17,100 cfs (12.46 ft); Dec. 20 (2 p.m.) 18,200 cfs (12.86 ft); May 6 (4:30 a.m.) 19,000 cfs (13.17 ft).												

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for station at Oakdale.

5405. Emory River at Oakdale. Tenn.

Location.--Lat 35°58'59", long 84°33'29", at Oakdale, Morgan County, 1,000 ft downstream from highway bridge and 1,100 ft downstream from Mud Lick Creek.

Drainage area.--764 sq mi.

Records available.--June 1927 to September 1958. Prior to October 1929, published as Emory River at Harriman and October 1929 to September 1934 as Emory River at Oakdale.

Gage.--Water-stage recorder. Datum of gage is 763.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1929, staff gage at site 5.8 miles downstream at datum 45.60 ft lower.

Average discharge.--31 years, 1,414 cfs.

Extremes.--Maximum discharge during year, 76,700 cfs Nov. 19 (gage height, 26.92 ft); minimum, 2.0 cfs Sept. 19, 20 (gage height, 0.90 ft).

1927-58: Maximum discharge, 195,000 cfs Mar. 23, 1929 (gage height, about 42.3 ft, present site and datum, and 61.1 ft, site and datum then in use, from floodmarks), from rating curve extended above 85,000 cfs by logarithmic plotting; no flow at times in 1944, 1952-53.

Flood of Mar. 23, 1929, is the greatest flood since at least 1857, from report of Tennessee Valley Authority.

Remarks.--Records good.

Revisions (water years).--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.9	2.0	3.0	560
1.0	4.4	4.0	1,330
1.1	7.7	7.0	4,480
1.3	18	10.0	9,520
1.6	47	13.0	15,500
1.9	90	17.0	26,700
2.3	180	21.0	43,600
2.6	310		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*532	*546	1,710	1,510	1,610	1,810	*1,850	*5,160	148	18	*63	21
2	497	470	1,480	*1,360	1,690	1,500	1,620	3,850	151	16	66	18
3	964	419	1,330	1,170	*1,510	*1,290	1,460	3,080	*172	15	272	15
4	4,470	504	1,310	1,020	1,310	1,130	1,320	2,500	208	12	588	13
5	4,680	546	1,220	888	1,320	984	1,180	4,100	161	12	321	11
6	2,440	477	1,070	826	1,630	888	2,200	17,000	159	16	190	11
7	1,520	419	9,020	819	3,110	848	2,680	11,400	108	14	141	10
8	1,060	1,100	16,300	756	3,120	1,480	2,050	7,040	95	14	112	9.1
9	763	2,780	7,400	595	2,430	2,230	1,700	4,400	106	15	100	7.4
10	567	2,120	4,580	630	1,920	3,360	1,940	3,400	141	14	200	5.7
11	419	1,600	3,370	567	1,620	2,680	4,040	2,980	215	15	275	4.7
12	338	1,300	2,490	484	1,340	2,130	3,170	3,230	156	18	146	4.2
13	275	1,130	2,010	518	1,110	2,020	2,430	2,670	125	26	112	4.4
14	228	3,920	1,770	1,200	992	2,480	1,980	2,090	97	26	366	4.4
15	194	6,500	1,820	1,630	992	2,240	1,890	1,590	79	26	238	6.4
16	169	18,600	1,560	1,560	856	1,930	1,890	1,370	66	41	151	5.1
17	167	17,900	1,710	1,430	672	1,680	1,100	55	123	110	37	3.7
18	285	41,700	1,890	1,310	679	2,660	1,440	988	46	103	85	3.2
19	354	39,900	2,300	1,160	651	3,800	1,280	848	39	85	76	2.5
20	321	9,640	16,700	1,060	553	3,050	1,160	1,140	35	79	63	4.4
21	251	4,880	11,500	1,100	497	2,420	3,060	968	32	71	55	25
22	208	3,340	5,580	1,270	539	1,990	6,450	728	30	60	51	31
23	190	3,460	3,610	1,180	574	1,690	4,310	574	26	59	42	71
24	1,730	3,460	2,750	1,670	637	1,670	3,110	470	22	115	42	99
25	2,530	4,600	2,300	5,420	616	4,450	5,210	451	20	153	42	82
26	1,660	4,630	3,070	3,990	665	4,450	5,980	539	18	180	37	64
27	1,220	3,410	3,170	2,950	1,040	3,710	7,770	413	18	166	32	52
28	964	2,640	2,640	2,340	2,170	3,160	12,600	316	20	121	26	40
29	812	*2,350	2,210	1,900	-	2,640	9,720	246	21	95	29	33
30	707	2,080	1,840	1,640	-----	2,260	9,320	194	*18	79	27	32
31	623	-----	1,600	1,470	-----	2,110	-----	166	-----	68	25	-----
Total	31,188	186,421	120,910	45,423	35,913	70,740	108,440	85,081	2,557	1,855	4,083	695.2
Mean	1,005	6,214	3,900	1,465	1,283	2,282	3,548	2,745	85.2	59.8	132	23.2
Cfsm	1.32	8.13	5.10	1.92	1.68	2.93	4.64	3.59	0.112	0.078	0.173	0.030
In.	1.52	9.07	5.89	2.21	1.75	3.44	5.18	4.14	0.12	0.09	0.20	0.03

Calendar year 1957: Max 41,700 Min 3.2 Mean 2,281 Cfsm 2.99 In. 40.54
 Water year 1957-58: Max 41,700 Min 2.5 Mean 1,894 Cfsm 2.48 In. 33.64

Peak discharge (base, 19,000 cfs).--Nov. 19 (12:30 a.m.) 76,700 cfs (26.92 ft); Dec. 7 (11:30 p.m.) 24,300 cfs (16.30 ft); Dec. 20 (4 p.m.) 28,600 cfs (17.51 ft); May 6 (6 a.m.) 23,000 cfs (15.88 ft).

* Discharge measurement made on this day.

5435. Sewee Creek near Decatur, Tenn.

Location.--Lat 35°34'53", long 84°44'53", on right bank a third of a mile downstream from bridge on State Highway 58, half a mile downstream from Dry Fork, 4½ miles upstream from mouth, and 5 miles north of Decatur, Meigs County.

Drainage area.--117 sq mi.

Records available.--May 1934 to September 1958. Prior to October 1935, published as Suee Creek near Decatur.

Gage.--Water-stage recorder. Datum of gage is 694.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years, 192 cfs.

Extremes.--Maximum discharge during year, 8,760 cfs Apr. 29 (gage height, 14.50 ft); minimum, 23 cfs Sept. 14-17, 25-30; minimum gage height, 0.23 ft Sept. 14-17.
1934-58: Maximum discharge, 29,000 cfs Jan. 7, 1946 (gage height, 23.97 ft, from floodmarks), from rating curve extended above 6,700 cfs on basis of contracted-opening measurement of peak flow; minimum, 11 cfs Sept. 24, 1935, Jan. 7-10, Oct. 4, 5, 7, 11, 12, 14, 15, 1940; minimum gage height, 0.15 ft Sept. 2, 3, 7-9, 13, 20, 1954.

Remarks.--Records good.

Rating tables, water year 1957-58 (gage height, in feet, and discharge,
in cubic feet per second)
(Shifting-control method used Nov. 14-16)

Oct. 1 to Nov. 16

Nov. 17 to Sept. 30

0.36	59	0.23	23	1.0	355
.4	75	.3	39	5.0	1,580
.5	125	.4	75	8.0	3,090
.7	255	.6	185	12.0	5,530
1.0	370				
5.5	1,790				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	332	67	230	253	258	244	373	862	80	34	48	27
2	264	63	205	215	205	215	304	841	115	34	78	25
3	403	63	*200	200	179	195	271	577	75	*34	120	25
4	406	63	200	185	155	179	248	442	67	33	51	25
5	367	59	173	155	*179	*161	220	364	63	31	42	25
6	273	59	155	155	354	143	367	475	59	29	*39	25
7	237	59	768	155	412	143	244	520	55	31	36	25
8	195	158	1,300	137	320	167	210	406	55	31	48	25
9	160	125	718	125	252	205	195	350	55	31	36	25
10	*139	65	502	120	235	210	352	496	*55	29	34	*25
11	120	75	385	120	215	179	394	367	51	27	34	25
12	110	71	280	115	195	161	284	355	51	36	42	25
13	105	71	244	166	173	215	248	*288	48	42	39	27
14	95	*532	230	*382	161	215	220	248	48	55	34	25
15	85	319	210	262	161	195	230	225	51	39	31	23
16	85	1,710	220	225	149	179	220	225	48	34	31	23
17	110	2,220	200	200	125	185	*185	195	44	55	31	23
18	100	5,450	185	185	115	547	179	179	42	39	29	25
19	90	2,140	323	167	110	415	173	173	39	34	29	25
20	80	967	1,980	155	110	320	161	167	39	34	29	25
21	75	619	1,080	200	110	266	270	149	51	63	27	48
22	75	463	616	195	115	235	588	125	55	67	29	36
23	75	733	448	167	110	215	527	120	48	80	51	27
24	167	511	359	441	110	240	345	115	42	55	31	25
25	100	979	339	604	110	394	2,090	105	39	55	31	23
26	85	730	805	409	155	334	925	100	39	48	31	23
27	85	511	511	327	398	397	955	95	39	42	29	23
28	75	394	430	266	330	324	697	90	36	39	29	23
29	71	338	361	235	-	276	3,900	85	34	39	29	23
30	71	276	292	215	-----	311	2,360	80	34	36	27	23
31	71	---	258	210	-----	559	-----	75	-----	36	27	---
Total	4,700	19,910	14,207	6,946	5,491	8,024	17,755	8,874	1,557	1,272	1,182	772
Mean	152	664	458	224	196	259	592	286	51.9	41.0	38.1	25.7
Cfsm	1.30	5.68	3.91	1.91	1.68	2.21	5.06	2.44	0.444	0.350	0.326	0.220
In.	1.49	6.33	4.52	2.21	1.75	2.55	5.64	2.82	0.49	0.40	0.38	0.25

Calendar year 1957: Max 6,050 Min 16 Mean 319 Cfsm 2.73 In. 36.98
Water year 1957-58: Max 5,450 Min 25 Mean 248 Cfsm 2.12 In. 28.83

Peak discharge (base, 2,000 cfs).--Nov. 18 (11 a.m.) 7,650 cfs (13.82 ft); Dec. 20 (8 p.m.) 2,800 cfs (7.47 ft); Apr. 25 (10 a.m.) 3,010 cfs (7.85 ft); Apr. 29 (8 p.m.) 8,760 cfs (14.50 ft).

* Discharge measurement made on this day.

5450. Hiwassee River at Presley, Ga.

Note.--Records for the 1958 water year have been withheld pending better definition of the stage-discharge relation. They will be published in a subsequent annual report.

5470. Hiwassee River below Chatuge Dam, near Hayesville, N. C.

Location.--Lat 35°01'45", long 83°47'45", on left bank 0.4 mile upstream from Hyatt Mill Creek, 1.6 miles downstream from Chatuge Dam, 1.7 miles southeast of Hayesville, Clay County, and at mile 119.3.

Drainage area.--190 sq mi.

Records available.--May 1907 to December 1909 (fragmentary), August 1922 to September 1923 (gage heights only), April 1942 to September 1958. Published as "near Hayesville" 1907-9, 1922-23.

Gage.--Water-stage recorder. Datum of gage is 1,789.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 30, 1907, to Dec. 31, 1909, staff gage and Aug. 16, 1922, to Sept. 30, 1923, chain gage, at site 1.1 miles upstream at different datum.

Average discharge.--16 years (1942-58). 434 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,500 cfs June 30 (gage height, 5.21 ft); minimum, 9.8 cfs Oct. 14, 15 (gage height, 0.86 ft).

1907-9, 1922-23, 1942-58: Maximum gage height recorded, 11.9 ft Mar. 13, 1909, site and datum then in use (discharge not determined); minimum discharge, 0.6 cfs Oct. 21, 1952; minimum gage height, 0.30 ft Aug. 3, 1942, Oct. 21, 1952.

Remarks.--Records excellent except those below 10 cfs, which are good. Flow completely regulated by Chatuge Lake (see p. 286).

Revisions (water years).--WSP 973: 1942.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.8	8.2	2.0	211
.9	11	3.0	515
1.0	16	4.0	910
1.1	24	5.0	1,390
1.2	38	5.3	1,550
1.5	95		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	16	19	86	1,380	576	652	17	16	997	1,160
2	12	15	15	797	170	1,380	570	330	1,320	15	970	1,040
3	13	12	148	792	946	1,380	478	20	*798	678	907	1,050
4	12	653	107	19	995	1,310	569	20	936	1,010	1,170	970
5	11	628	16	16	978	797	18	16	1,140	1,310	973	986
6	11	608	188	747	979	744	17	605	1,030	1,360	869	1,110
7	11	903	67	797	28	731	562	242	1,100	1,360	810	1,130
8	11	20	20	1,300	21	18	351	*20	138	516	692	643
9	11	13	423	1,360	19	16	16	19	944	*18	970	750
10	10	12	760	1,360	*17	16	173	18	1,050	16	1,020	756
11	*10	12	742	72	852	15	986	21	890	15	1,220	846
12	11	12	747	17	895	*14	1,020	21	884	18	1,040	14
13	10	12	486	581	684	108	20	19	852	15	941	13
14	10	317	18	552	862	68	652	17	19	916	892	12
15	12	*200	16	682	146	16	744	16	16	1,000	902	12
16	13	15	812	648	190	16	18	16	1,120	974	520	12
17	14	18	686	571	524	940	16	16	1,230	1,020	15	11
18	13	26	614	17	766	919	92	16	1,210	994	300	11
19	13	19	*642	16	1,250	898	16	347	1,400	962	856	11
20	13	29	608	722	1,370	916	15	19	1,420	1,000	854	11
21	12	15	590	750	1,360	888	325	374	1,450	1,080	848	14
22	15	66	585	620	1,350	942	688	356	1,33	1,070	*878	11
23	12	718	*745	1,340	304	720	354	832	806	852	*106	
24	15	16	600	747	1,340	992	*17	362	726	800	860	328
25	12	20	18	17	1,380	28	537	360	682	796	998	13
26	12	17	601	16	1,340	18	126	696	716	19	572	248
27	11	46	631	738	1,380	177	17	676	700	16	657	13
28	11	16	584	748	1,420	18	23	752	708	1,270	1,010	13
29	143	15	615	741	-	16	321	753	16	956	1,020	216
30	12	278	685	740	-	16	448	753	618	908	984	243
31	12	-----	620	732	-----	541	-----	19	-----	980	950	-----
Total	498	4,039	13,078	17,679	22,688	15,602	10,131	7,921	24,095	21,913	26,547	11,733
Mean	16.1	135	422	570	810	503	338	256	803	707	856	391
(†)	+6,300	+14,000	+6,300	-1,800	-1,200	+1,500	+10,200	+13,300	-15,500	-9,700	-19,200	-6,900

Adjusted for change in contents in Chatuge Lake

Mean	219	601	625	512	767	552	678	685	286	394	237	161
Cfsm	1.15	3.16	3.29	2.69	4.04	2.91	3.57	3.61	1.51	2.07	1.25	0.847
In.	1.33	3.53	3.79	3.11	4.21	3.35	3.98	4.15	1.68	2.39	1.44	0.95

	Observed					Adjusted						
Calendar year 1957:	Max	1,510	Min	8.8	Mean	424	Mean	484	Cfsm	2.55	In.	34.53
Water year 1957-58:	Max	1,450	Min	10	Mean	482	Mean	475	Cfsm	2.50	In.	33.91

* Discharge measurement made on this day.

† Change in contents, in cfs-days, in Chatuge Lake, furnished by Tennessee Valley Authority.

5485. Hiwassee River above Murphy, N. C.

Location.--Lat 35°04'50", long 84°00'10", on right bank on U. S. Highway 64, 600 ft up-stream from Will Scott Creek, 1.9 miles east of Murphy, Cherokee County, and at mile 99.2.

Drainage area.--406 sq mi.

Records available.--June 1896 to August 1897 (gage heights only), October 1897 to September 1958. Published as "at Murphy" prior to April 1940. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,538.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 30, 1921, wire-weight or chain gages at bridge 2.8 miles downstream at datum 30.40 ft lower. Jan. 30, 1921, to Nov. 8, 1926, chain gage 2.8 miles downstream at datum 28.40 ft lower. Nov. 9, 1926, to Apr. 30, 1940, water-stage recorder 2.8 miles downstream at datum 28.20 ft lower.

Average discharge.--61 years (1897-1958), 910 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 7,030 cfs Feb. 6 (gage height, 8.44 ft); minimum, 78 cfs Sept. 20 (gage height, 1.99 ft); minimum daily, 115 cfs Sept. 19.

1897-1958: Maximum discharge, 23,100 cfs Mar. 19, 1899 (gage height, 18.4 ft, from graph based on gage readings, site and datum then in use), from rating curve extended above 5,000 cfs; minimum daily, 10 cfs Dec. 3, 1924, result of freezeup and filling of Andrews Lake; minimum daily during normal regulation, 62 cfs Oct. 19, 1952.

Remarks.--Records excellent except those for periods of ice effect, which are good. Considerable diurnal fluctuation caused by Mission powerplant at Andrews Dam (normal regulated storage, about 75 cfs-days). Flow regulated by Chatuge Lake (see p. 226).

Revisions (water years).--WSP 583: 1899(M). WSP 973: Drainage area. WSP 1003: 1943. WSP 1306: 1901-2, 1904-17, 1919(M), 1922(M), 1924-26(M).

Rating table, water year 1957-58, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	107	4.0	1,270
2.3	174	5.0	2,200
2.6	308	6.0	3,440
3.0	535	7.0	4,780
3.5	880	7.5	5,480

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	174	393	741	b550	1,900	1,200	1,710	360	506	1,350	1,280
2	166	182	350	957	b700	1,820	1,010	1,490	1,290	126	1,260	1,100
3	316	162	448	1,150	b1,050	1,800	938	854	1,280	459	1,160	1,160
4	400	800	450	612	1,370	1,760	1,000	745	*1,120	1,210	1,390	1,140
5	310	792	411	372	1,460	1,250	486	664	1,400	1,520	1,300	1,060
6	237	702	444	882	5,430	1,200	523	1,660	1,300	1,550	1,080	1,190
7	226	837	578	1,060	2,740	1,160	950	1,570	1,330	1,570	944	1,260
8	193	520	1,520	1,400	1,530	558	764	1,040	810	*2,150	895	962
9	162	206	1,370	1,580	1,090	476	439	*918	816	902	1,060	752
10	*153	172	1,350	1,590	889	443	433	806	1,260	846	1,260	844
11	148	163	1,260	743	*1,280	404	1,190	950	1,160	780	1,330	897
12	186	154	1,190	308	1,460	406	1,400	2,050	1,160	622	1,260	476
13	172	155	868	753	1,220	*498	691	1,240	1,140	566	1,230	149
14	146	615	514	798	1,320	530	818	968	538	1,160	1,120	142
15	140	471	393	1,060	794	423	1,100	858	275	1,460	*1,050	135
16	136	460	906	1,020	b760	396	605	735	999	1,430	1,020	131
17	246	580	985	772	b700	940	690	664	1,460	1,420	375	128
18	220	1,650	1,030	522	b1,100	1,530	432	808	1,440	1,360	513	136
19	188	2,060	*998	298	b1,400	1,330	366	868	1,580	1,310	781	116
20	168	962	2,120	795	b1,660	1,340	354	642	1,650	1,360	1,000	123
21	160	613	1,750	1,030	1,680	1,370	635	865	1,630	1,910	1,010	831
22	160	*482	1,350	*910	1,670	1,280	980	842	762	1,720	969	281
23	152	794	1,220	1,010	1,670	890	1,080	821	812	1,400	1,050	*193
24	466	600	1,100	1,130	1,650	1,190	*514	794	988	1,890	967	516
25	336	1,230	622	646	1,670	612	634	793	856	1,600	1,100	202
26	269	1,030	1,240	424	2,030	540	824	914	970	901	1,070	355
27	246	754	1,220	904	2,200	792	400	1,060	940	714	794	188
28	209	574	1,150	1,060	2,100	628	2,980	1,120	894	1,360	866	160
29	320	497	1,250	1,040	-	607	3,780	1,120	386	1,330	1,120	334
30	201	692	1,010	1,020	-----	568	2,410	1,100	757	1,250	1,070	348
31	182	-----	1,060	1,060	-----	690	-----	564	-----	1,250	1,080	-----
Total	6,800	18,804	30,530	27,645	43,273	29,733	29,328	31,052	31,363	37,472	32,574	16,590
Mean	219	627	985	892	1,545	959	978	1,002	1,045	1,209	1,051	553

Observed

Adjusted †

Calendar year 1957:	Max	8,100	Min	102	Mean	915	Mean	975	Cfsm	2.40	In.	32.56
Water year 1957-58:	Max	5,430	Min	115	Mean	918	Mean	911	Cfsm	2.24	In.	30.45

* Discharge measurement made on this day.

† Adjusted for change in contents in Chatuge Lake.

b Stage-discharge relation affected by ice.

5500. Valley River at Tomotla, N. C.

Location.--Lat 35°08'20", long 83°58'50", on right bank at highway bridge at Tomotla, Cherokee County, 0.2 mile upstream from Rogers Creek, 4.7 miles northeast of Murphy, and at mile 6.4 (revised).

Drainage area.--104 sq mi.

Records available.--June 1904 to December 1909, January 1914 to April 1917, October 1918 to September 1958.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,556.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 11, 1934, various staff or chain gages at same site and datum.

Average discharge.--46 years (1904-9, 1914-16, 1919-58), 252 cfs.

Extremes.--Maximum discharge during year, 3,070 cfs Apr. 29 (gage height, 9.83 ft); minimum, 48 cfs Sept. 20 (gage height, 1.80 ft).
1904-9, 1914-17, 1918-58: Maximum discharge observed, 9,030 cfs Nov. 19, 1906 (gage height, 17.3 ft), from rating curve extended above 5,800 cfs; minimum, 12 cfs several times in August and September 1925 (gage height, 0.52 ft).

Remarks.--Records excellent except those for period of ice effect, which are good.

Revisions (water years).--WSP 503: 1905-9, 1915-17. WSP 783: 1907(M). WSP 823: Drainage area. WSP 1306: 1917(M), 1920(M), 1922(M), 1925(M), 1930(M), 1933(M).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	48	4.0	793
2.0	81	5.0	1,140
2.3	153	6.0	1,490
2.6	248	7.0	1,890
3.0	396	8.1	2,330
3.5	609		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	96	255	360	551	384	318	793	174	83	148	67
2	85	92	228	311	446	341	300	762	209	81	177	63
3	228	89	270	289	376	314	282	628	168	77	162	62
4	251	85	275	272	329	293	282	525	*180	98	148	62
5	165	83	235	258	447	272	265	458	159	109	126	60
6	126	81	218	251	2,250	293	293	741	153	100	116	58
7	109	77	602	248	1,480	293	262	903	148	114	119	58
8	96	119	1,210	235	996	318	248	693	142	*933	126	58
9	87	112	758	215	733	337	238	*605	137	446	119	56
10	*81	94	546	212	593	322	251	516	131	318	116	54
11	79	89	433	209	*502	300	262	546	131	248	109	*54
12	92	87	356	199	437	282	238	656	137	235	137	63
13	85	85	304	232	388	*341	228	546	121	215	129	63
14	77	240	282	289	352	304	218	458	116	235	116	57
15	72	215	272	248	352	286	238	400	124	196	107	54
16	72	669	296	232	314	272	235	364	124	177	114	57
17	112	584	272	218	b275	279	215	333	109	159	148	56
18	102	1,370	*258	209	b255	416	209	311	107	142	109	54
19	87	1,470	304	199	b250	380	202	293	104	134	98	50
20	81	700	1,200	196	b255	348	202	333	129	129	92	50
21	77	446	903	296	251	326	205	275	112	383	85	270
22	76	*360	605	*272	255	300	241	258	109	275	*83	*102
23	74	512	471	248	248	289	228	241	102	275	96	76
24	303	408	396	415	241	300	*209	235	96	465	100	67
25	183	756	368	450	241	356	272	232	89	416	112	63
26	150	740	628	380	454	380	255	218	154	304	89	62
27	140	525	516	337	546	433	251	209	119	251	81	60
28	119	404	458	300	480	412	1,170	199	98	215	77	62
29	112	337	404	275	-	376	2,330	189	92	196	74	56
30	107	296	360	258	-----	352	1,280	177	87	171	72	58
31	102	-----	333	282	-----	352	-----	174	-----	153	70	-----
Total	3,624	11,221	14,016	8,375	14,297	10,251	11,427	13,271	3,861	7,280	3,455	2,032
Mean	117	374	452	270	511	331	381	428	129	235	111	67.7
Cfs/m	1.12	3.60	4.35	2.60	4.91	3.18	3.66	4.12	1.24	2.26	1.07	0.651
In.	1.30	4.01	5.01	2.99	5.11	3.67	4.09	4.75	1.38	2.60	1.24	0.73
Calendar year 1957: Max	5,170											
Water year 1957-58: Max	2,330											
Min	46											
Mean	329											
Cfs/m	3.16											
In.	42.90											

Peak discharge (base, 1,700 cfs).--Nov. 18 (4:30 a.m.) 1,940 cfs (7.12 ft); Dec. 20 (3 p.m.) 1,860 cfs (6.93 ft); Feb. 6 (10 a.m.) 2,980 cfs (9.63 ft); Apr. 29 (11:30 a.m.) 3,070 cfs (9.83 ft); July 8 (4:30 p.m.) 2,110 cfs (7.55 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5505. Nottely River near Blairsville, Ga.

Location.--Lat 34°50'28", long 83°56'10", on left bank 250 ft upstream from county road bridge, 0.1 mile downstream from Arkaqua Creek, 0.2 mile upstream from Akins Creek, 2.7 miles southeast of Blairsville, Union County, and at mile 44.3.

Drainage area.--74.8 sq mi.

Records available.--January 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,812.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 172 cfs.

Extremes.--Maximum discharge during year, 2,310 cfs Dec. 20 (gage height, 7.66 ft); minimum, 43 cfs Sept. 10, 11 (gage height, 1.97 ft).

1942-58: Maximum discharge, 8,500 cfs Mar. 11, 1952 (gage height, 16.78 ft, from floodmark), from rating curve extended above 3,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 27 cfs Sept. 8, Oct. 7, 1947 (gage height, 1.77 ft).

Remarks.--Records excellent except those for period of ice effect, which are good. Slight diurnal fluctuation at low flow caused by mills above station. Occasional regulation by Lake Trahlyta in Vogel State Park.

Revisions (water years).--WSP 1053: 1942(M), 1943. WSP 1236: 1946(M), 1950(M).

Rating tables, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20

Dec. 21 to Sept. 30

2.0	50	3.5	420	2.0	46	3.5	420
2.3	92	4.0	670	2.3	87	4.0	670
2.6	150	5.0	1,250	2.6	145	4.5	960
3.0	253			3.0	248		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	92	201	209	300	263	217	366	150	78	112	59
2	92	89	188	190	248	237	212	420	156	75	108	57
3	271	86	183	183	226	220	228	348	141	74	104	56
4	233	82	188	173	212	206	226	310	*138	74	97	54
5	171	79	168	166	217	206	212	291	138	84	90	53
6	123	76	162	166	555	215	278	486	132	80	98	53
7	103	75	228	166	605	212	220	434	127	81	108	52
8	87	122	412	156	424	206	206	362	125	278	96	51
9	79	99	512	190	341	196	*341	123	*215	87	48	
10	*73	87	262	145	*297	209	217	310	119	163	84	47
11	70	82	233	145	272	186	204	362	121	159	80	47
12	76	79	206	141	251	180	190	540	119	152	86	87
13	69	78	193	227	231	*193	183	400	110	143	158	65
14	66	681	186	251	217	180	176	341	106	163	125	54
15	62	312	178	209	223	173	*280	304	115	134	*97	53
16	62	521	183	190	b190	168	313	278	110	115	99	57
17	166	419	171	178	b180	178	260	257	104	108	101	56
18	120	985	*164	166	b190	228	234	242	101	99	89	54
19	97	1,210	195	159	b190	204	217	231	101	96	80	48
20	87	535	1,160	154	b175	193	206	231	101	122	75	48
21	79	359	585	297	176	186	198	215	99	166	74	168
22	*75	*303	384	*254	178	176	255	201	112	158	71	*90
23	76	356	313	220	176	170	223	198	106	161	72	68
24	401	288	281	377	176	215	209	198	96	689	103	61
25	190	440	269	396	170	300	209	190	89	297	102	57
26	152	359	320	317	272	294	196	180	99	212	80	54
27	131	297	272	275	408	288	217	168	97	180	74	53
28	116	265	257	242	317	281	739	166	87	147	68	51
29	108	245	237	226	-	257	672	159	82	132	66	50
30	103	222	220	212	-	242	452	152	80	117	64	52
31	99	-----	209	220	-	234	-	152	-----	121	62	-----
Total	3,726	8,923	8,520	6,560	7,417	6,731	7,785	8,833	3,384	4,871	2,810	1,803
Mean	120	297	275	212	265	217	260	285	113	157	90.6	60.1
Cfsm	1.60	3.97	3.68	2.83	3.54	2.90	3.48	3.81	1.51	2.10	1.21	0.803
In.	1.85	4.44	4.24	3.26	3.69	3.35	3.87	4.39	1.68	2.42	1.40	0.90

Calendar year 1957: Max 2,280 Min 37 Mean 205 Cfsm 2.74 In. 37.28
 Water year 1957-58: Max 1,210 Min 47 Mean 196 Cfsm 2.62 In. 35.49

Peak discharge (base, 1,500 cfs).--Nov. 19 (4 a.m.) 1,760 cfs (6.17 ft); Dec. 20 (11 a.m.) 2,310 cfs (7.66 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

5535. Nottely River at Nottely Dam, near Ivylog, Ga.

Location.--Lat 34°57'55", long 84°05'25", on right bank 1,600 ft downstream from Rhodes Branch, 0.6 mile downstream from Nottely Dam, 0.6 mile upstream from Dooley Creek, 1.8 miles west of Ivylog, Union County, and at mile 20.4.

Drainage area.--215 sq mi.

Records available.--July 1942 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 1,599.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 404 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,990 cfs Jan. 3 (gage height, 5.20 ft); minimum, 1.0 cfs Mar. 20, 21 (gage height, 0.28 ft).
1942-58: Maximum discharge, 3,130 cfs May 23, 1955 (gage height, 6.54 ft); minimum, 0.1 cfs Sept. 6-9, 19, 1954 (gage height, 0.15 ft).

Remarks.--Records excellent except those below 20 cfs, which are fair. Flow completely regulated by Nottely Lake (see p. 226).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

0.3	1.3	1.0	41
.4	3.1	1.5	126
.5	6.0	2.0	251
.6	9.5	3.0	640
.7	14	4.0	1,170
.8	20	4.5	1,480

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	744	15	17	100	2.4	1.4	1,040	18	1,140	1,110	943
2	13	13	15	753	194	2.4	1.4	915	1,170	1,220	444	931
3	13	13	175	752	793	2.4	1.3	868	660	1,450	522	888
4	13	812	123	18	798	2.4	1.4	17	*928	1,210	772	924
5	13	788	15	18	613	2.4	1.4	880	1,090	1,480	764	980
6	13	791	236	778	170	2.4	1.6	803	1,080	1,470	710	1,160
7	13	1,060	76	808	40	2.4	13	986	37	1,470	602	1,100
8	232	894	16	1,180	22	2.4	876	898	17	564	686	716
9	13	823	938	1,180	16	2.6	954	*154	1,070	*16	810	752
10	*13	13	1,010	1,200	18	2.4	961	18	1,080	16	827	938
11	13	1,100	1,020	16	*16	2.4	356	18	1,050	34	950	936
12	13	815	962	16	414	2.4	1,140	18	895	63	960	994
13	13	850	956	500	496	*2.6	407	18	856	16	970	358
14	13	415	11	617	494	2.6	796	18	17	985	974	348
15	13	226	22	821	17	2.6	1,040	18	18	879	*992	12
16	13	13	660	752	16	2.4	1,010	26	1,300	1,000	882	372
17	14	15	642	688	338	2.6	1,060	18	1,380	708	14	416
18	14	16	1,090	17	10	3.1	1,020	18	1,400	914	281	366
19	14	15	1,310	17	2.8	2.6	1,050	344	1,400	1,080	1,080	370
20	14	22	1,090	788	2.2	1.6	18	20	1,390	1,080	1,060	11
21	14	14	1,080	800	2.0	1.4	1,030	404	1,370	950	1,110	13
22	97	*67	1,030	*824	2.2	1.4	1,030	394	17	457	1,120	*11
23	13	15	1,020	819	2.2	1.3	1,010	374	1,020	506	1,090	564
24	103	14	1,060	810	2.2	1.3	1,050	339	792	608	1,170	446
25	269	16	17	16	2.2	1.4	1,030	384	304	612	717	488
26	14	15	990	16	3.6	1.9	1,060	556	18	15	368	468
27	14	52	842	785	3.6	1.8	1,050	567	472	15	462	11
28	756	15	16	815	2.6	1.6	970	566	482	1,100	742	21
29	776	30	16	842	-	1.4	1,040	733	16	806	727	183
30	810	326	22	833	-----	1.4	1,040	739	954	675	796	208
31	821	-----	17	453	-----	1.6	-----	18	-----	810	807	-----
Total	4,169	10,002	16,492	17,949	4,590.6	65.6	21,019.5	12,169	22,299	23,349	24,499	15,926
Mean	134	353	532	579	164	2.12	701	393	743	753	790	531
(†)	+3,800	+8,700	+500	-4,700	+13,000	+14,900	-2,900	+7,600	-13,900	-10,000	-17,100	-9,700

Adjusted for change in contents in Nottely Lake

Mean	257	623	548	427	628	483	604	638	280	431	239	208
Cfam	1.20	2.90	2.55	1.99	2.92	2.25	2.81	2.97	1.30	2.00	1.11	0.967
In.	1.38	3.24	2.94	2.29	3.04	2.59	3.13	3.42	1.45	2.31	1.28	1.08
Observed												
Adjusted												
Calendar year 1957:	Max	1,640	Min	0.7	Mean	427	Mean	468	Cfam	2.18	In.	29.56
Water year 1957-58:	Max	1,480	Min	1.3	Mean	473	Mean	446	Cfam	2.07	In.	28.15

* Discharge measurement made on this day.

† Change in contents, in cfs-days, in Nottely Lake, furnished by Tennessee Valley Authority.

5560. Turtletown Creek at Turtletown, Tenn.

Location.--Lat 35°07'57", long 84°20'37", on left bank half a mile north of Turtletown. Polk County, three-quarters of a mile downstream from Nigger Creek, and 6 miles upstream from mouth.

Drainage area.--26.9 sq mi.

Records available.--October 1933 to September 1958. Prior to May 1934 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,490.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 49.0 cfs.

Extremes.--Maximum discharge during year, 476 cfs Apr. 29 (gage height, 4.35 ft); minimum, 22 cfs Oct. 22, 23 (gage height, 1.06 ft).
1933-58: Maximum discharge, 1,120 cfs June 13, 1952 (gage height, 6.50 ft); minimum, 9.3 cfs Oct. 10, 1941; minimum gage height, 0.86 ft Oct. 10, 1941. Sept. 23, 1955.

Remarks.--Records good. Some diurnal fluctuation caused by small mills above station.

Revisions (water years).--WSP 823: Drainage area. WSP 1143: 1936(M), 1946-47(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 18, Feb. 6, Apr. 28, 29)

1.0	18	2.0	138
1.2	34	3.0	304
1.5	70	3.5	374

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	*29	45	58	93	76	71	140	69	41	48	31
2	42	28	43	52	73	71	69	128	87	40	47	30
3	*47	28	47	*50	65	69	67	112	80	40	50	30
4	41	27	53	49	60	*65	*73	102	84	43	47	*30
5	38	26	43	47	99	64	67	99	70	46	43	30
6	33	26	*41	47	342	67	80	136	*66	42	50	29
7	30	26	55	47	*178	66	69	*165	65	43	*52	29
8	29	32	123	47	122	66	65	126	66	166	43	28
9	28	27	85	44	101	71	64	120	61	*113	41	27
10	27	24	67	43	90	66	80	112	57	79	40	26
11	25	24	60	44	83	64	79	131	56	64	38	26
12	25	23	53	43	76	62	70	161	55	84	43	35
13	25	23	50	60	71	78	66	113	53	70	57	30
14	24	64	50	73	66	69	65	110	52	74	46	28
15	24	45	49	55	69	65	86	104	64	57	41	26
16	24	90	57	52	66	64	91	99	58	61	43	27
17	34	68	52	50	64	70	76	95	52	64	44	28
18	28	258	50	49	61	97	73	92	50	52	38	27
19	24	168	53	45	61	80	69	91	50	57	36	25
20	24	86	120	45	58	75	67	91	50	97	34	25
21	23	78	87	60	60	71	67	86	47	104	34	89
22	22	60	70	52	64	67	75	83	50	105	34	45
23	23	96	62	49	64	65	69	82	49	75	41	35
24	54	67	58	91	62	76	64	84	45	84	58	31
25	31	109	65	86	61	80	95	82	43	71	49	29
26	30	86	90	70	87	91	76	76	57	62	41	29
27	30	69	70	65	110	96	74	75	50	69	36	29
28	29	60	65	58	90	88	264	75	51	56	35	27
29	29	55	61	56	-	76	367	71	43	50	34	25
30	29	50	57	53	-	75	209	70	42	47	32	26
31	29	-----	55	55	-----	78	-----	69	-----	46	32	-----
Total	944	1,872	1,962	1,695	2,496	2,266	2,807	3,180	1,722	2,102	1,305	932
Mean	30.5	62.4	63.3	54.7	89.1	73.1	93.6	103	57.4	67.8	42.1	31.1
Cfsm	1.13	2.32	2.35	2.03	3.31	2.72	3.48	3.83	2.13	2.52	1.57	1.16
In.	1.31	2.59	2.71	2.34	3.45	3.13	3.88	4.40	2.38	2.91	1.80	1.29

Calendar year 1957: Max 592 Min 18 Mean 59.6 Cfsm 2.22 In. 30.07
Water year 1957-58: Max 367 Min 22 Mean 65.8 Cfsm 2.37 In. 32.19

Peak discharge (base, 300 cfs).--Nov. 18 (8 a.m.) 423 cfs (3.89 ft); Feb. 6 (10 a.m.) 463 cfs (4.25 ft); Apr. 29 (3 p.m.) 476 cfs (4.35 ft); July 8 (8 to 9 p.m.) 354 cfs (3.35 ft).

* Discharge measurement made on this day.

TENNESSEE RIVER BASIN

5565. Hiwassee River near McFarland, Tenn.

Location--Lat 35°10'48", long 84°26'36", on left bank a quarter of a mile downstream from Smith Creek, 0.4 mile downstream from Apalachia powerhouse of Tennessee Valley Authority, 2.8 miles west of McFarland, Polk County, and at mile 53.2.

Drainage area--1,136 sq mi.

Records available--October 1942 to September 1958.

Gage--Water-stage recorder. Datum of gage is 830.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--16 years, 2,370 cfs (unadjusted).

Extremes--Maximum discharge during year, 9,330 cfs Dec. 26 (gage height, 6.51 ft); minimum, 98 cfs Sept. 28, 29 (gage height, 1.38 ft); minimum daily, 280 cfs Apr. 24.
1942-58: Maximum discharge, 22,500 cfs June 13, 1952 (gage height, 10.42 ft), from rating curve extended above 15,000 cfs; minimum daily, 30 cfs (estimated) Sept. 18-20, 1955.

Remarks--Records good except those below 500 cfs, which are fair. Flow regulated by Chatuge, Nottely, Hiwassee, and Apalachia Lakes (see pp. 226,227).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.8	240	4.0	2,900
2.4	620	5.0	5,090
3.0	1,200	6.5	9,300

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	2,760	3,340	3,360	2,960	3,000	374	1,230	2,740	2,680	2,760	2,660
2	2,650	2,700	3,320	3,320	2,900	2,900	904	786	2,880	2,660	2,740	2,650
3	2,760	2,720	3,300	3,300	2,860	2,860	938	553	2,760	2,660	2,800	2,660
4	3,070	2,720	3,380	3,280	2,820	2,860	326	459	2,840	2,300	2,780	2,860
5	2,950	2,700	*3,340	3,280	2,980	2,840	682	646	2,800	2,260	2,760	2,860
6	2,740	2,700	3,300	3,260	4,840	2,820	1,010	1,370	2,740	2,240	2,740	3,000
7	2,600	2,700	3,440	3,260	4,030	2,880	2,070	1,880	2,720	2,650	2,760	2,680
8	2,740	2,720	4,320	3,260	3,810	2,860	2,550	1,650	2,760	3,120	2,760	2,650
9	2,740	2,760	3,770	3,240	3,600	2,860	1,310	1,500	2,720	3,000	2,720	2,650
10	2,740	2,760	3,540	3,260	3,520	2,880	1,780	1,520	2,720	2,940	2,940	2,630
11	2,700	2,780	3,460	3,260	3,500	2,840	1,760	580	2,720	2,800	2,800	2,630
12	2,860	2,740	3,400	3,280	3,460	2,860	951	2,040	2,720	2,800	2,720	2,460
13	1,180	2,760	3,360	3,300	3,400	2,920	356	2,640	2,720	2,690	2,740	2,660
14	2,220	2,550	3,380	3,440	3,360	2,920	1,180	2,580	2,700	2,760	2,760	2,650
15	2,720	1,870	3,360	3,400	3,400	2,860	468	2,590	2,700	2,800	2,740	2,630
16	2,700	1,470	3,380	3,360	3,360	2,490	1,030	2,540	2,760	2,800	2,740	2,650
17	2,740	1,400	3,380	2,840	3,520	2,610	918	2,440	2,700	2,800	2,780	2,680
18	2,350	3,400	3,360	2,780	3,360	3,120	*1,220	2,460	2,700	2,780	2,740	2,700
19	2,720	3,790	2,970	2,740	3,400	2,760	465	2,430	2,680	2,800	*2,720	2,680
20	1,980	3,620	4,050	2,740	2,860	2,620	350	2,430	2,700	2,900	2,700	2,460
21	2,320	3,420	3,810	2,800	2,820	2,740	290	2,450	2,490	2,840	2,700	2,250
22	*2,680	3,320	3,520	2,800	2,840	308	326	2,800	1,620	3,000	2,720	2,450
23	2,740	3,720	3,960	2,760	2,840	285	314	2,800	*2,120	2,880	2,680	2,700
24	2,880	3,520	6,430	2,920	2,820	1,670	280	2,780	2,610	2,840	2,740	2,680
25	2,860	3,960	6,570	3,200	*2,820	2,410	516	2,800	2,680	2,680	2,760	2,680
26	2,800	3,770	6,850	3,020	2,920	2,200	500	2,780	2,700	2,700	2,740	2,740
27	2,840	3,520	9,270	2,920	3,300	2,830	450	2,760	2,720	2,800	2,680	2,680
28	2,820	3,400	9,030	2,860	3,180	1,770	1,300	2,780	2,230	2,800	2,660	1,920
29	2,800	3,400	6,820	2,840	-	1,160	2,560	2,740	2,190	2,740	2,660	2,200
30	2,780	3,360	6,180	2,800	-----	410	1,780	2,740	2,570	2,760	2,660	2,450
31	2,780	-----	3,380	2,800	-----	1,000	-----	2,740	-----	2,760	2,660	-----
Total	81,200	88,990	134,970	95,640	91,280	73,543	28,958	64,494	78,710	85,540	83,930	78,250
Mean	2,619	2,966	4,354	3,085	3,260	2,372	965	2,080	2,624	2,759	2,707	2,608

Observed

Adjusted†

Calendar year 1957:	Max	10,900	Min	82	Mean	2,701	Mean	2,811	Cfsm	2.47	In.	33.59
Water year 1957-58:	Max	9,270	Min	280	Mean	2,700	Mean	2,678	Cfsm	2.36	In.	32.00

* Discharge measurement made on this day.

† Adjusted for change in contents in Chatuge, Nottely, Hiwassee, and Apalachia Lakes.

Location.--Lat 34°47'24", long 84°14'24", on right bank 1.4 miles upstream from Shallowford Bridge, 1.8 miles upstream from Stanley Creek, and 2.5 miles northwest of Dial, Fannin County.

Records available.--October 1912 to September 1958. Prior to January 1913 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,782.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1927, water-stage recorder and Oct. 1, 1927, to Nov. 16, 1928, staff gage, at same site and datum.

Extremes.--Maximum discharge during year, 3,190 cfs Dec. 20 (gage height, 5.55 ft); minimum, 188 cfs Oct. 16, 17 (gage height, 1.03 ft).
1912-58: Maximum discharge, 10,800 cfs Mar. 11, 1952 (gage height, 11.20 ft), from rating curve extended above 5,000 cfs on basis of slope-area measurement of peak flow; minimum, 60 cfs Sept. 6, 1925 (gage height, 0.40 ft).
Flood in 1898 reached a stage about 2.8 ft higher than that of Mar. 11, 1952.

Revisions (water years).--WSP 823: Drainage area. WSP 1386: 1923(M), 1924, 1927(M), 1929-32(M), 1933, 1934(M), 1944(M).

Rating table, water year 1957-58, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.04	191	3.0	1,100
1.5	340	4.0	1,780
2.0	560	4.8	2,470

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	244	546	610	735	735	630	826	484	280	402	244
2	304	238	524	*560	605	605	793	793	515	277	402	238
3	*443	232	524	a540	570	640	*595	730	470	270	398	*232
4	466	229	575	a520	542	610	620	685	456	270	368	232
5	443	223	*502	a510	575	*585	585	720	*452	340	356	229
6	326	220	484	a500	*1,200	580	793	*964	438	333	368	226
7	275	217	655	a510	1,320	580	670	886	430	*301	*340	223
8	244	222	1,100	a500	1,000	615	735	835	425	333	336	222
9	229	294	610	a480	620	660	595	793	420	782	332	211
10	240	248	695	a470	750	600	660	745	402	575	315	214
11	211	232	635	a460	710	570	635	804	412	650	308	208
12	217	229	575	a450	670	556	590	1,010	416	502	368	284
13	202	226	546	a520	640	615	570	848	384	430	479	277
14	202	1,250	542	a540	620	575	560	771	368	635	425	232
15	194	650	538	a580	645	551	750	725	372	461	340	223
16	191	782	533	a550	595	538	958	690	376	394	322	238
17	431	798	510	a530	b560	556	745	660	356	368	326	226
18	318	1,980	492	502	b550	755	685	640	348	344	304	220
19	257	2,400	533	479	b540	645	650	630	348	372	287	208
20	232	1,220	1,910	470	b540	600	635	660	360	426	284	205
21	220	854	1,230	695	546	580	625	610	340	660	277	669
22	214	735	886	650	551	556	745	590	333	585	273	433
23	211	854	776	570	546	542	690	565	336	584	273	284
24	826	700	720	788	546	645	635	575	318	1,130	384	251
25	438	1,020	690	826	542	920	650	565	304	969	440	235
26	352	854	837	710	914	876	610	551	336	685	308	226
27	315	730	710	660	1,130	881	620	528	333	590	290	229
28	284	660	685	600	898	782	1,350	528	304	528	273	223
29	267	645	655	575	-	720	1,140	528	290	488	264	208
30	264	600	615	551	-----	685	958	502	287	443	257	205
3	*257	-----	595	580	-----	675	-----	497	-----	416	254	-----
Total	9,366	19,886	21,628	17,566	19,860	20,073	21,169	21,412	11,413	16,520	10,543	7,550
M. an	3,302	663	698	587	709	648	706	691	380	533	334	252
C. sm	1.71	3.75	3.94	3.20	4.01	3.66	3.99	3.90	2.15	3.01	1.89	1.42
Int.	1.97	4.18	4.54	3.69	4.17	4.22	4.45	4.50	2.40	3.47	2.17	1.59

C. Lendar year 1957: Max	4,220	Min	132	Mean	566	Cfsm	3.20	In.	43.40
Water year 1957-58: Max	2,400	Min	191	Mean	539	Cfsm	3.05	In.	41.35

Peak discharge (base, 2,400 cfs).--Nov. 19 (5 a.m.) 2,990 cfs (5.55 ft); Dec. 20 (11 a.m.) 3,190 cfs (5.35 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations
on nearby streams.
b Stage-discharge relation affected by ice.

5590. Toccoa River near Blue Ridge, Ga.

Location.--Lat 34°53'14", long 84°17'07", on left bank three-eighths of a mile downstream from Blue Ridge Dam of Tennessee Valley Authority, 2½ miles west of Morganton, and 3½ miles northeast of Blue Ridge, Fannin County.

Drainage area.--233 sq mi.

Records available.--October 1898 to March 1903, October 1912 to September 1958. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,538.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Apr. 20, 1931, staff gage and water-stage recorders at sites within 1 mile of present site at different datum.

Average discharge.--50 years (1898-1902, 1912-58), 618 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,900 cfs May 12 (gage height, 5.14 ft); minimum, 16 cfs Sept. 17 (gage height, 1.01 ft); minimum daily, 17 cfs Oct. 25, Feb. 9, 28. 1898-1902, 1912-58: Maximum daily discharge, 15,500 cfs Aug. 22, 1901 (gage height, 14.0 ft, site and datum then in use) from rating curve extended above 5,000 cfs; no flow Dec. 6, 1930, to Mar. 3, 1931 (caused by closing of Blue Ridge Dam).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Blue Ridge Lake beginning Dec. 6, 1930 (see p. 227).

Revisions (water years).--WSP 783: 1934 (adjusted monthly mean and runoff). WSP 823: Drainage area. WSP 1386: 1901-2, 1927, 1928(M), 1929, 1931-33.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.0	15	2.0	216
1.2	29	3.0	640
1.4	52	4.0	1,170
1.6	90	5.1	1,870

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	639	108	1,310	627	54	424	310	81	792	1,310	656	1,150
2	*632	761	998	858	224	848	19	162	846	1,400	546	1,130
3	517	254	899	751	825	1,120	350	21	872	1,390	626	1,420
4	55	652	957	949	1,350	1,140	364	557	908	1,020	657	1,310
5	678	616	*454	859	521	*313	263	362	988	748	613	1,350
6	672	816	1,020	907	19	651	24	328	841	442	418	1,020
7	730	832	682	682	19	690	476	663	996	202	*648	850
8	692	172	18	1,050	18	923	314	604	1,019	190	571	1,040
9	526	670	291	972	17	870	148	1,070	1,010	23	585	1,160
10	18	620	506	634	561	880	19	1,010	1,050	201	588	880
11	1,000	561	751	1,050	840	830	428	702	831	22	1,090	950
12	1,010	568	678	1,030	982	880	157	1,840	595	23	1,140	740
13	766	698	645	415	420	990	168	799	1,010	287	1,300	740
14	19	19	583	945	234	800	439	187	1,020	858	521	770
15	446	18	862	707	841	810	113	*557	1,030	220	1,030	790
16	485	19	780	1,180	828	890	165	563	1,130	350	1,010	18
17	957	20	1,040	1,080	990	580	19	555	1,120	241	1,030	459
18	972	23	1,050	1,020	1,200	215	291	518	1,080	236	1,020	478
19	993	21	918	1,020	1,190	810	342	799	1,040	678	1,300	524
20	550	19	32	102	848	870	350	906	1,130	700	1,320	772
21	436	365	18	827	644	940	94	711	1,170	263	1,800	21
22	601	521	765	934	226	270	468	760	1,120	21	1,160	18
23	376	19	760	1,060	781	330	368	684	847	21	748	250
24	192	19	866	19	980	70	19	500	1,180	123	1,100	836
25	17	18	828	653	1,020	225	19	687	846	154	1,180	969
26	1,030	19	430	905	74	19	296	742	66	612	1,370	986
27	24	316	448	916	19	19	19	824	270	596	1,490	540
28	361	462	936	620	17	19	40	883	21	450	1,540	933
29	459	343	860	645	-	19	35	911	1,100	305	1,190	1,200
30	458	940	897	842	-----	19	358	911	1,160	581	1,110	1,680
31	966	-----	869	758	-----	370	-----	908	-----	659	1,180	-----
Total	17,277	10,690	22,351	25,417	15,722	17,834	6,475	20,795	27,079	14,306	30,537	25,084
Mean	557	356	721	820	562	575	216	671	903	461	985	836
Observed						Adjusted†						
Calendar year 1957:	Max	1,860	Min	12	Mean	619	Mean	703	Cfam	3.02	In.	40.94
Water year 1957-58:	Max	1,840	Min	17	Mean	640	Mean	673	Cfam	2.89	In.	39.20

* Discharge measurement made on this day.

† Adjusted for change in contents in Blue Ridge Lake.

Note.--No gage-height record Mar. 9 to Apr. 3, Sept. 3-16; discharge estimated on basis of Blue Ridge powerplant records.

5595. Ocoee River at Copperhill, Tenn.

Location.--Lat 34°59'29", long 84°22'36", on right bank 0.2 mile upstream from Fightingtown Creek and 0.4 mile downstream from Copperhill, Polk County.

Drainage area.--352 sq mi.

Records available.--October 1902 to October 1906, December 1906 to December 1913, October 1918 to August 1925 (gage heights only), October 1942 to September 1958. November 1914 to September 1918 (gage heights only) in Tennessee Division of Geology Bulletin 34. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder and wooden control. Datum of gage is 1,445.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 27, 1925, staff or chain gages at several sites within 0.5 mile of present site at different datum.

Average discharge.--26 years (1902-6, 1907-13, 1942-58), 845 cfs (unadjusted).

Extremes.--Maximum discharge during year, 6,350 cfs Apr. 29 (gage height, 6.49 ft); minimum, 128 cfs Oct. 15, 23 (gage height, 1.85 ft); minimum daily, 160 cfs Oct. 10, 1902-13, 1918-25, 1942-58; Maximum gage height observed, 18.5 ft Nov. 19, 1906, site and datum then in use (discharge, about 35,000 cfs from reports of Tennessee Valley Authority); minimum daily discharge determined, 76 cfs Dec. 24, 1943, Oct. 5, 1947.

Remarks.--Records good except those for periods of backwater or no gage-height record, which are fair. Sixty-six percent of drainage area regulated by Blue Ridge Lake beginning Dec. 6, 1930 (see p. 227). Record includes diversion from this stream by Tennessee Copper Co.

Revisions (water years).--WSP 973: Drainage area. WSP 1386: 1945.

Rating table, water year 1957-58, except periods of backwater from Fightingtown Creek (gage height, in feet, and discharge, in cubic feet per second)

1.9	145	3.5	1,450
2.2	305	4.0	2,120
2.8	755	5.0	4,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	805	404	a1,500	938	641	824	624	745	990	1,320	784	1,230
2	859	776	a1,200	967	637	957	299	787	1,180	1,470	720	1,450
3	*792	443	a1,100	*934	991	1,520	628	235	1,090	1,450	741	1,310
4	246	680	a1,200	1,180	1,310	*1,360	*644	888	1,120	1,400	796	*1,350
5	890	788	a800	1,160	1,280	1,010	534	894	*1,150	1,060	516	1,460
6	846	913	*1,110	1,190	1,300	842	344	879	1,070	657	760	1,330
7	688	939	1,110	1,070	*854	1,040	743	1,450	1,220	636	789	1,080
8	1,020	543	606	1,140	575	1,310	606	1,160	1,190	1,010	*736	1,160
9	655	770	675	1,240	462	1,150	396	1,460	1,330	541	719	1,140
10	160	696	830	1,030	976	1,210	305	1,750	1,110	584	740	866
11	914	706	1,110	1,070	1,190	1,030	698	1,040	1,210	287	906	1,360
12	1,090	665	1,160	1,260	1,300	1,190	424	2,650	784	318	1,280	884
13	943	728	910	873	874	1,290	400	1,450	1,030	532	1,560	868
14	362	394	908	1,070	620	1,260	666	794	1,190	814	970	802
15	564	235	994	1,000	1,160	1,110	396	950	1,110	780	930	912
16	605	668	1,090	1,230	1,120	1,110	472	794	1,280	544	1,310	178
17	875	752	1,320	1,410	1,100	910	287	884	1,280	406	1,050	416
18	1,130	c1,740	1,330	1,300	1,510	862	530	853	1,210	392	1,230	602
19	1,130	c1,200	1,320	1,140	1,500	1,100	599	1,130	1,230	637	1,230	656
20	918	515	840	590	1,460	1,170	570	1,200	1,220	1,090	1,450	958
21	507	639	478	1,080	816	1,270	340	1,130	1,280	616	1,900	956
22	762	831	1,110	1,140	709	745	618	1,020	1,310	324	1,320	324
23	514	a500	1,100	1,180	853	624	680	787	925	275	870	428
24	454	a300	1,140	642	1,230	402	354	874	1,360	542	1,260	676
25	190	a250	1,200	1,170	1,350	598	312	976	1,180	420	1,420	1,210
26	897	a250	901	1,120	908	405	524	1,010	306	794	1,390	1,050
27	436	a350	786	1,200	698	478	291	933	474	752	1,600	588
28	377	a550	1,150	981	470	419	*c3,470	1,250	622	1,630	1,290	1,280
29	590	a450	1,250	900	-	357	c3,950	1,180	946	466	1,340	1,080
30	575	a900	1,180	980	-----	344	1,400	1,150	1,280	708	1,140	1,800
31	*1,060	-----	1,190	1,140	-----	714	-----	1,280	-----	770	1,270	-----
Total	21,852	19,575	32,600	33,325	27,844	28,609	21,099	33,584	32,250	22,217	34,357	29,414
Mean	705	652	1,052	1,075	894	923	703	1,083	1,075	717	1,108	980

	Observed					Adjusted†						
Calendar year 1957:	Max	3,380	Min	160	Mean	878	Mean	961	Cfsm	2.73	In.	37.07
Water year 1957-58:	Max	3,470	Min	160	Mean	923	Mean	955	Cfsm	2.71	In.	36.84

* Discharge measurement made on this day.

† Adjusted for change in contents in Blue Ridge Lake.

a No gage-height record; discharge estimated on basis of weather records and records for Blue Ridge powerplant.

c Backwater from Fightingtown Creek.

5600. Fightingtown Creek at McCaysville, Ga.

Location.--Lat 34°58'53", long 84°23'18", on right bank 0.2 mile upstream from county highway bridge, 0.9 mile upstream from mouth, and 0.9 mile west of McCaysville, Fannin County.

Drainage area.--70.9 sq mi.

Records available.--October 1942 to September 1958. Prior to November 1942, monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,449.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 199 cfs.

Extremes.--Maximum discharge during year, 2,690 cfs Apr. 28 (gage height, 8.27 ft); minimum, 76 cfs Sept. 20 (gage height, 1.58 ft).
1942-58: Maximum discharge, 5,420 cfs Mar. 29, 1951 (gage height, 11.92 ft); minimum, 37 cfs Nov. 19, 1953; Sept. 29, 30, Oct. 22, 23, 24, 25, 26, 27, 28, 1954.

Remarks.--Records good except those for period of no gage-height record, which are fair. Diurnal fluctuation at low flows caused by small mills above station prior to November 1948; occasional fluctuation thereafter.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 8)

1.6	68	3.0	430
2.0	144	5.0	1,270
2.5	272	6.5	1,800

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	192	*116	272	281	381	292	a280	672	230	124	137	98
2	172	112	264	284	301	275	a270	592	258	150	151	96
3	*214	112	284	*255	281	281	a260	504	225	118	144	*96
4	190	109	301	247	261	*250	*275	462	220	131	137	92
5	184	109	*261	241	295	239	241	437	212	120	126	90
6	160	107	247	236	983	233	281	580	*204	120	126	89
7	144	105	404	236	*762	241	244	*540	202	140	*133	87
8	133	153	620	230	572	247	233	465	197	*461	120	87
9	126	157	454	222	451	264	230	458	192	324	114	85
10	120	118	378	220	395	244	284	420	184	272	118	82
11	114	114	339	217	364	233	261	465	180	192	112	82
12	118	112	307	214	339	225	244	490	184	236	137	99
13	112	112	292	252	321	266	233	426	174	212	140	98
14	111	285	286	298	304	289	228	388	167	406	140	85
15	107	210	275	247	307	244	281	364	170	233	118	82
16	103	534	278	230	289	230	316	348	174	207	114	83
17	160	668	269	222	272	244	289	333	165	180	112	82
18	137	1,370	258	214	272	324	252	324	156	167	107	83
19	118	1,120	269	207	261	252	241	316	156	167	103	78
20	112	616	684	207	252	a240	236	318	153	192	101	78
21	111	448	479	298	252	a230	239	301	151	264	99	404
22	107	381	378	258	255	a220	264	289	167	220	98	192
23	107	468	339	236	252	a210	241	281	149	192	98	118
24	228	370	318	392	247	a280	230	284	144	244	116	103
25	158	548	310	360	239	a400	269	281	140	207	166	94
26	144	451	402	307	333	a380	241	264	153	187	120	90
27	140	378	336	281	420	a370	241	255	151	180	112	89
28	131	339	318	258	336	a350	1,760	252	137	162	109	87
29	124	316	304	247	-	a320	1,730	244	131	156	107	83
30	122	295	289	236	-----	a300	960	236	129	144	103	82
31	120	---	281	247	-----	a290	-----	230	-----	144	101	---
Total	4,319	10,313	10,476	7,860	9,997	8,463	11,334	11,619	5,255	6,222	3,719	3,094
Mean	139	344	338	254	357	273	378	381	175	201	120	103
Cfsm	1.96	4.85	4.77	3.58	5.04	3.85	5.33	5.37	2.47	2.83	1.69	1.45
In.	2.27	5.41	5.50	4.12	5.24	4.44	5.95	6.20	2.76	3.26	1.95	1.62

Calendar year 1957: Max 2,340 Min 61 Mean 249 Cfsm 3.51 In. 47.68
Water year 1957-58: Max 1,760 Min 78 Mean 254 Cfsm 3.58 In. 48.72

Peak discharge (base, 1,200 cfs).--Nov. 18 (8 a.m.) 1,820 cfs (8.55 ft); Feb. 6 (11 a.m.) 1,300 cfs (5.08 ft); Apr. 28 (10 a.m.) 2,690 cfs (8.27 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5605. Davis Mill Creek at Copperhill, Tenn.

Location.--Lat 34°59'43", long 84°22'56", on right bank 0.4 mile northwest of Louisville & Nashville Railroad station, 0.8 mile from post office at Copperhill, Polk County, and 0.1 mile upstream from mouth.

Drainage area.--5.16 sq mi.

Records available.--July 1940 to September 1941 (published as Mill Creek at Copperhill), December 1948 to September 1958.

Gage.--Water-stage recorder and concrete San Dimas flume and dam. Datum of gage is 1,451.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 16, 1940, to Sept. 30, 1941, water-stage recorder and sharp-crested weir at site 145 ft upstream at datum 1.58 ft higher.

Average discharge.--9 years (1949-58), 36.1 cfs.

Extremes.--Maximum discharge during year, 2,120 cfs Apr. 29 (gage height, 4.77 ft), from rating curve extended above 150 cfs as explained below; minimum daily, 29 cfs Nov. 3, 4, Dec. 13.

1940-41, 1948-58: Maximum discharge, 3,950 cfs Oct. 6, 1949 (gage height, 6.02 ft), from rating curve extended above 150 cfs on basis of critical-depth measurement of peak flow; minimum daily, 3.1 cfs July 30, 1940.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Flow includes an unknown amount of diversion from other drainage basins through the sulphuric acid plant of Tennessee Copper Co. Some fluctuation due to irregular release of wastes by Tennessee Copper Co. just above gage.

Cooperation.--Water-stage recorder inspected by employee of Tennessee Copper Co.

Revisions.--WSP 1206: Drainage area.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24, Apr. 29 to Sept. 30		Oct. 25 to Apr. 28	
1.7	31	1.6	28
2.0	47	1.8	40
2.5	93	2.1	61
3.0	165	2.5	99
3.2	225	3.0	165

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	*35	41	a55	38	39	41	52	a49	42	46	40
2	42	31	44	a50	35	36	42	56	50	42	43	40
3	42	29	45	*43	34	38	*44	52	46	42	43	42
4	*43	29	45	36	34	*36	42	50	46	41	43	*43
5	38	31	*41	31	59	37	41	56	46	a45	42	45
6	a38	34	41	32	73	40	45	59	*45	a45	57	45
7	38	34	52	35	*58	43	42	*48	42	47	45	43
8	a37	49	47	32	47	37	39	44	40	147	*42	42
9	36	37	42	32	44	37	42	48	40	*63	40	40
10	34	34	42	37	45	37	49	47	40	55	40	39
11	35	37	a38	39	45	37	47	53	40	51	43	40
12	38	37	a34	40	39	38	45	50	42	75	44	43
13	36	37	29	46	34	40	44	47	43	66	64	39
14	36	53	41	42	37	37	45	47	43	60	46	39
15	36	48	45	37	35	32	52	50	52	47	42	39
16	36	80	46	37	36	32	47	48	45	48	42	43
17	43	96	41	35	36	38	46	50	43	50	42	45
18	38	93	40	30	41	39	46	48	43	52	42	43
19	51	55	47	31	42	38	44	50	44	64	42	45
20	a32	46	75	33	38	39	44	50	45	51	43	45
21	34	46	47	40	41	39	44	49	43	60	43	76
22	a35	51	43	35	42	38	47	49	42	51	41	47
23	36	53	40	36	a41	41	44	47	40	50	46	46
24	47	47	41	54	41	45	49	46	40	55	45	45
25	39	69	43	39	39	42	51	46	40	48	43	42
26	40	50	45	36	41	47	47	46	52	48	44	42
27	35	46	43	37	50	48	48	46	43	48	43	43
28	34	44	44	38	41	48	a150	47	43	47	42	40
29	32	45	44	37	-	45	199	48	43	47	42	40
30	35	43	43	37	-----	46	60	a48	43	47	40	43
31	33	---	39	38	-----	44	-----	a48	-----	58	40	---
Total	1,147	1,419	1,348	1,180	1,186	1,233	1,626	1,525	1,313	1,692	1,560	1,304
Mean	37.0	47.3	43.5	38.1	42.4	39.8	54.2	49.2	43.8	54.6	43.9	43.5
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	96			Min 18		Mean 42.7		Cfsm -		In. -		
Water year 1957-58: Max	199			Min 29		Mean 44.7		Cfsm -		In. -		

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5610. North Potato Creek near Ducktown, Tenn.

Location.--Lat 35°00'54", long 84°22'58", on right bank 50 ft upstream from bridge on State Highway 40, 1½ miles south of Ducktown, Polk County, and 2 miles upstream from mouth.

Drainage area.--13.0 sq mi.

Records available.--May 1934 to September 1958. Prior to October 1950, published as Potato Creek near Ducktown.

Gage.--Water-stage recorder and concrete San Dimas flume. Datum of gage is 1,492.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 8, 1935, water-stage recorder and wooden weir and Oct. 8, 1935, to Aug. 25, 1948, water-stage recorder and Parshall flume, at same site and datum.

Average discharge.--24 years, 29.0 cfs.

Extremes.--Maximum discharge during year, 1,350 cfs Apr. 29 (gage height, 5.60 ft); minimum daily, 14 cfs Nov. 7.

1934-58: Maximum discharge, 7,080 cfs Apr. 6, 1936 (gage height, 7.2 ft), from rating curve extended above 1,100 cfs; minimum daily, 2.8 cfs June 16, 17, 1941

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Discharge includes diversion from Brush Creek and from Ocoee River. This diversion was small prior to June 1941. Some fluctuations caused by Tennessee Copper Co. plant's irregular pumpage from mines.

Revisions (water years).--WSP 823: Drainage area. WSP 1386: 1935.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.0	14	3.0	139
1.5	32	3.5	220
2.0	57	4.0	395
2.5	92		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a25	*17	a28	a28	38	37	31	a90	a43	22	27	22
2	a22	18	28	a40	a32	33	30	74	50	25	27	22
3	a35	18	31	*32	28	34	31	53	39	24	30	20
4	*28	18	28	26	31	*33	*36	46	a36	29	25	*20
5	20	17	*25	27	68	32	25	56	a34	30	25	21
6	20	15	22	28	175	36	33	*88	*32	27	92	21
7	20	14	55	27	*84	38	28	78	30	41	a40	22
8	18	31	42	25	47	36	26	66	21	256	*32	20
9	19	a25	32	25	42	37	25	65	25	*71	26	18
10	17	a20	32	27	41	33	44	55	30	55	26	17
11	17	a18	29	26	40	31	34	91	32	41	25	17
12	19	17	25	25	36	30	29	72	29	107	25	36
13	18	18	28	44	36	48	28	60	28	62	105	25
14	21	51	27	30	36	32	32	56	28	56	30	23
15	17	25	24	24	37	28	56	52	61	36	27	21
16	18	91	30	24	34	24	37	51	26	38	28	22
17	36	123	22	25	32	47	28	45	a27	26	28	21
18	20	148	24	22	32	55	27	46	28	36	25	20
19	18	58	36	21	36	34	28	51	30	80	22	20
20	18	30	79	24	36	31	26	46	28	57	21	25
21	19	25	34	43	37	34	31	42	28	77	22	111
22	18	40	34	28	38	34	36	40	31	50	23	34
23	24	41	32	26	34	34	28	39	28	48	38	23
24	44	a30	30	64	36	46	31	38	25	40	35	23
25	19	73	40	34	32	34	48	37	25	36	31	25
26	23	32	42	a35	46	51	a47	41	40	40	25	22
27	18	a31	30	a32	85	39	a45	38	28	32	24	36
28	18	a30	27	32	41	38	263	52	21	32	25	21
29	18	a29	a27	30	-	33	376	42	23	26	23	22
30	18	a29	a26	30	-----	34	a150	36	26	25	21	26
31	18	-----	a25	37	-----	37	-----	35	-----	37	23	-----
Total	663	1,132	992	939	1,287	1,123	1,689	1,682	936	1,562	974	776
Mean	21.4	37.7	32.0	30.3	46.0	36.2	56.3	54.3	31.2	50.4	31.4	25.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 273 Min 14

Water year 1957-58: Max 376 Min 14

Mean 36.6 Cfsm - In. -

Mean 37.7 Cfsm - In. -

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5630. Ocoee River at Emf, Tenn.

Location.--Lat 35°05'48", long 84°32'07", on left bank 700 ft downstream from Tennessee Valley Authority powerplant, three-quarters of a mile upstream from former village of Emf, Polk County, and 2 miles downstream from Goforth Creek.

Drainage area.--524 sq mi.

Records available.--October 1912 to September 1958. Prior to January 1913 monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 837.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--46 years, 1,230 cfs (unadjusted).

Extremes.--Maximum discharge during year, 19,100 cfs Apr. 28 (gage height, 11.10 ft); minimum, 36 cfs June 28 (gage height, 2.53 ft); minimum daily, 137 cfs Oct. 29.
1912-58: Maximum discharge, 29,400 cfs July 10, 1916 (gage height, 13.7 ft), from rating curve extended above 17,000 cfs; minimum daily, 5.0 cfs July 28, 1944.

Remarks.--Records good. Flow regulated by Blue Ridge and Ocoee No. 3 Lakes (see p. 227) and by powerplant above station.

Cooperation.--Water-stage recorder inspected by employee of Tennessee Valley Authority.

Revisions (water years).--WSP 783: 1913-34. WSP 1306: 1931-39 (adjusted runoff).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

2.9	127	5.0	1,790
3.0	162	6.0	3,360
3.5	404	7.0	5,250
4.0	760	8.0	8,050
4.5	1,200		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	972	1,500	1,560	1,660	1,620	1,020	2,820	1,550	1,530	1,020	1,550
2	998	981	1,540	1,540	1,640	1,590	1,020	1,700	1,560	1,530	1,020	1,540
3	1,050	876	1,540	1,410	1,580	1,590	998	1,640	1,550	1,530	998	1,530
4	1,290	972	1,550	1,540	1,540	1,580	1,020	1,620	1,540	1,100	1,010	1,470
5	1,020		1,550	1,530	1,640	1,590	1,020	1,690	1,540	1,020	1,120	1,220
6	998	956	1,370	1,500	4,170	1,410	1,040	1,900	*1,540	1,010	1,040	1,250
7	990	956	1,610	1,550	3,260	*1,580	1,030	3,070	1,550	1,010	1,020	1,260
8	998	990	1,900	1,300	1,720	1,560	1,040	2,240	1,550	2,950	1,030	1,260
9	990	981	1,710	1,620	1,660	1,590	1,030	1,710	1,550	1,750	1,020	1,250
10	972	981	1,640	1,540	1,610	1,580	1,070	2,850	1,410	1,200	1,020	1,250
11	947	990	1,600	1,540	1,590	1,560	1,120	1,890	1,260	1,120	1,440	1,270
12	990	990	1,580	1,540	1,580	1,560	1,080	3,540	1,590	1,380	1,500	1,100
13	972	981	1,580	1,540	1,580	1,600	1,040	2,770	1,540	1,160	1,540	1,040
14	1,020	1,140	1,560	*1,690	1,820	1,600	1,010	1,610	1,530	1,090	*1,560	1,040
15	972	*1,090	1,560	1,610	1,580	1,590	1,030	1,590	1,580	1,040	1,520	1,040
16	956	1,550	1,560	1,600	1,560	1,600	1,100	1,590	1,550	1,040	1,520	711
17	990	1,750	1,560	1,590	1,550	1,600	1,070	1,580	1,540	1,030	1,520	667
18	964	5,250	1,620	1,580	1,540	1,700	1,040	1,580	1,530	1,030	1,500	663
19	947	4,300	1,550	1,520	1,540	1,650	1,030	1,580	1,530	1,050	1,500	715
20	1,040	2,030	2,130	1,550	1,560	1,610	998	1,620	1,450	1,090	1,500	1,020
21	1,060	1,080	2,670	1,560	1,590	1,600	1,010	1,580	1,550	1,090	1,500	1,310
22	947	1,020	1,640	1,560	1,560	1,100	1,050	1,580	1,550	1,360	1,520	1,380
23	956	1,700	1,590	1,550	1,560	1,010	1,020	1,580	1,550	1,160	1,550	1,030
24	998	1,160	1,580	1,640	1,560	1,020	1,020	1,580	1,430	1,120	1,580	1,040
25	972	1,670	1,560	1,740	1,580	1,050	1,100	1,560	1,310	1,090	1,560	1,180
26	972	1,650	1,600	1,680	1,660	1,150	1,090	1,550	1,560	1,050	1,550	1,380
27	981	1,590	1,590	1,610	1,950	1,440	1,070	1,560	619	1,030	1,550	1,500
28	476	1,550	1,590	1,600	1,720	1,260	*7,660	1,550	414	1,030	1,550	1,140
29	137	1,530	1,580	1,560	-	1,360	7,780	1,550	1,520	1,020	1,550	1,100
30	464	1,520	1,560	1,560	-----	1,100	3,180	1,540	1,500	1,020	1,550	1,100
31	972	-----	1,550	1,560	-----	1,040	-----	1,540	-----	1,030	1,550	-----
Total	29,079	44,178	50,720	48,520	49,340	44,910	46,786	57,780	43,443	37,660	42,408	34,786
Mean	938	1,473	1,636	1,565	1,762	1,449	1,560	1,864	1,448	1,215	1,368	1,160

Observed

Adjusted†

Calendar year 1957:	Max	9,870	Min	137	Mean	1,391	Mean	1,476	Cfsm	2.82	In.	38.24
Water year 1957-58:	Max	7,780	Min	137	Mean	1,451	Mean	1,464	Cfsm	2.83	In.	38.45

* Discharge measurement made on this day.

† Adjusted for change in contents in Blue Ridge and Ocoee No. 3 Lakes.

TENNESSEE RIVER BASIN

5645. Ocoee River at Parksville, Tenn.

Location.--Lat 35°05'48", long 84°39'15", on right bank 0.4 mile downstream from dam and Ocoee No. 1 powerplant of Tennessee Valley Authority at Parksville, Polk County, and at mile 11.5.

Drainage area.--595 sq mi.

Records available.--January 1911 to September 1916, March 1921 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 716.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--42 years, 1,288 cfs (unadjusted).

Extremes.--Maximum discharge during year, 13,500 cfs Apr. 28 (gage height, 14.35 ft); minimum, 148 cfs Oct. 3, 4 (gage height, 2.98 ft); minimum daily, 152 cfs Apr. 19.
1911-16, 1921-58: Maximum discharge, 21,700 cfs Mar. 29, 1951 (gage height, 20.22 ft); minimum daily, 10 cfs Oct. 28, 1925.

Remarks.--Records excellent. Flow regulated by Blue Ridge, Ocoee No. 3, and Parksville Lakes (see p. 228).

Cooperation.--Water-stage recorder inspected by employee of Tennessee Valley Authority.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1916, 1922-36 (adjusted runoff). WSP 1386: 1926.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

2.9	120	4.0	775
3.1	190	6.0	2,770
3.5	400	12.0	10,400

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,200	155	2,290	1,910	3,040	2,220	1,410	3,680	166	1,580	1,060	1,640
2	1,030	155	1,930	1,870	3,130	2,020	1,340	2,060	2,450	1,560	1,020	1,660
3	985	158	2,210	1,650	2,080	2,020	1,400	2,220	2,060	1,570	996	1,550
4	1,020	905	2,310	1,700	1,650	1,650	1,430	1,580	1,680	1,320	999	1,500
5	614	952	2,090	1,030	1,680	1,770	1,400	1,800	1,840	1,100	1,080	1,390
6	169	948	2,100	1,690	2,360	1,750	158	2,060	1,870	1,090	886	1,290
7	1,500	981	638	1,600	2,990	*1,540	1,180	2,210	300	1,120	1,200	1,140
8	1,310	894	324	1,750	2,970	993	1,220	2,780	278	2,310	1,330	1,300
9	1,510	162	2,060	1,740	2,990	158	1,270	2,790	1,790	2,990	1,100	1,110
10	1,500	158	2,820	1,810	2,140	1,740	1,280	2,780	1,940	1,620	1,040	1,240
11	1,530	1,570	2,860	1,630	1,710	2,010	1,330	2,770	1,540	1,630	1,340	1,200
12	478	1,580	2,890	172	1,640	1,850	166	2,750	1,450	1,500	1,430	914
13	169	2,070	2,940	1,620	1,660	1,870	169	2,780	1,980	1,220	1,460	1,030
14	1,320	2,110	2,480	*1,860	1,520	1,920	1,350	2,760	1,980	1,170	*1,550	897
15	1,350	*2,090	262	2,100	1,180	1,260	1,630	1,750	2,140	1,210	1,830	926
16	1,330	1,560	1,650	2,050	162	166	1,600	1,580	1,600	1,330	1,500	893
17	1,050	1,270	1,610	2,140	1,810	2,070	1,290	1,620	1,340	1,220	1,700	925
18	1,430	5,090	1,970	2,120	2,120	1,960	1,370	1,590	1,300	1,040	1,550	899
19	166	6,700	2,030	1,090	2,090	2,370	*152	1,870	1,330	1,180	1,490	754
20	162	4,180	2,100	2,080	2,110	2,000	155	2,770	1,320	1,000	1,490	948
21	1,400	2,850	2,960	2,160	2,100	2,310	1,390	2,260	1,400	1,050	1,500	1,310
22	1,440	2,810	2,340	2,000	1,680	1,880	1,410	1,150	1,360	1,500	1,440	1,820
23	1,620	2,530	2,640	2,000	236	169	1,420	1,140	1,490	1,350	1,430	1,200
24	1,580	162	2,370	2,050	1,730	1,490	1,430	162	*1,540	1,420	1,420	836
25	2,140	1,560	374	2,020	2,020	1,100	1,740	158	1,670	1,470	1,490	909
26	1,950	2,210	2,120	1,980	2,260	1,270	684	1,990	1,800	1,150	1,630	1,760
27	1,880	2,240	2,650	2,030	2,920	980	166	2,060	846	1,030	1,740	2,670
28	634	2,230	2,410	1,670	2,330	1,350	6,840	2,080	180	1,050	1,640	1,550
29	876	2,270	918	1,650	-	1,940	9,610	2,060	1,330	1,110	1,810	1,230
30	1,240	2,230	1,910	2,120	-----	162	6,760	2,070	1,410	1,080	1,850	626
31	155	-----	1,880	3,010	-----	1,570	-----	1,270	-----	1,070	1,490	-----
Total	34,618	54,780	62,136	56,302	56,488	47,558	52,750	62,600	43,560	43,020	43,471	37,117
Mean	1,117	1,826	2,004	1,816	2,017	1,534	1,758	2,019	1,452	1,368	1,402	1,237

Observed

Adjusted †

Calendar year 1957:	Max	13,500	Min	122	Mean	1,591	Mean	1,677	Cfsm	2.82	In.	38.26
Water year 1957-58:	Max	9,810	Min	152	Mean	1,628	Mean	1,661	Cfsm	2.79	In.	37.90

* Discharge measurement made on this day.

† Adjusted for change in contents in Blue Ridge, Ocoee No. 3, and Parksville Lakes.

5650. Hiwassee River above Charleston, Tenn.

Location.--Lat 35°12'33", long 84°39'31". on right bank 0.2 mile downstream from Ocoee River, a third of a mile upstream from Louisville & Nashville Railroad bridge, 2½ miles north of Benton, Polk County, 15.2 miles upstream from Charleston, and at mile 34.1.

Drainage area.--2,001 sq mi.

Records available.--October 1953 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 682.86 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Auxiliary water-stage recorder 1.8 miles downstream.

Average discharge.--5 years, 3,933 cfs (unadjusted).

Extremes.--Maximum discharge during year, 18,000 cfs Apr. 29; maximum gage height, 15.18 ft Apr. 30; minimum discharge, 929 cfs Sept. 29 (gage height, 2.47 ft); minimum daily, 970 cfs Apr. 20.
1953-58: Maximum discharge, 32,700 cfs Feb. 1, 1957; maximum gage height, 24.26 ft Feb. 1, 1957; minimum discharge, 320 cfs Nov. 14, 15, 1954; minimum daily, 355 cfs Nov. 14, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by seven reservoirs (see p. 224).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor Apr. 19-21, Apr. 29 to May 4)

2.8	1,160
4.0	2,080
6.0	4,400
10.0	9,800
14.0	15,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,080	2,960	6,010	5,850	6,600	6,020	2,790	7,310	3,290	4,300	4,000	4,450
2	3,600	2,950	5,880	5,700	6,680	5,850	2,700	5,010	5,040	4,360	4,080	4,500
3	4,150	2,940	5,540	5,650	5,880	5,540	2,680	3,670	5,100	4,400	4,180	4,330
4	4,340	3,740	6,050	5,360	5,350	4,940	2,410	3,520	5,040	4,200	4,060	4,440
5	4,340	3,690	5,880	4,720	5,200	5,270	2,580	3,200	4,860	3,440	3,960	4,320
6	3,160	3,760	*5,660	5,460	9,410	4,800	1,800	3,770	4,790	3,450	3,830	4,720
7	3,980	3,790	5,340	5,260	10,100	5,040	3,300	5,160	3,800	3,540	3,940	3,920
8	4,260	3,790	6,950	5,300	8,680	4,440	4,540	5,860	3,120	5,650	4,040	3,920
9	4,160	3,190	7,370	5,260	7,740	3,470	3,220	5,510	4,620	7,000	4,160	4,030
10	4,370	2,990	7,450	5,370	6,990	4,730	3,290	5,360	*4,910	5,040	3,060	4,010
11	4,340	4,100	7,010	5,290	5,940	5,030	3,920	4,720	4,600	4,850	4,240	3,990
12	3,530	4,460	6,750	3,950	5,700	5,040	2,400	5,420	4,360	4,730	4,270	3,520
13	2,090	4,720	6,650	4,970	5,770	5,170	1,220	6,190	4,610	5,110	4,480	3,670
14	2,960	*5,160	6,510	6,060	5,450	5,340	2,420	6,050	4,830	4,210	4,540	3,680
15	4,150	4,350	4,570	6,000	5,160	4,700	3,000	5,130	5,230	*4,300	*4,650	3,710
16	4,150	4,430	5,130	*5,690	4,180	3,360	3,290	4,690	4,740	a4,500	4,280	*3,600
17	*4,030	4,850	5,680	5,550	5,150	4,550	3,320	4,500	4,320	a4,300	4,380	3,640
18	3,750	a13,000	5,410	5,260	5,740	5,860	*2,970	4,480	4,220	a4,100	4,480	3,850
19	3,140	a15,500	5,610	4,610	5,670	5,700	*1,560	4,610	4,220	a4,300	4,320	3,490
20	2,490	a12,000	7,640	4,670	5,530	5,520	970	5,520	4,230	a4,000	4,330	3,490
21	3,190	a9,000	9,030	5,430	5,260	5,490	1,740	5,470	3,990	a4,000	4,300	3,320
22	4,000	a8,500	7,040	5,070	4,940	3,670	2,290	4,350	3,700	a4,600	4,320	4,630
23	4,120	a7,500	6,900	5,110	3,860	1,280	2,240	4,350	3,100	a4,300	4,240	3,990
24	4,860	a5,000	8,750	5,470	4,590	2,670	2,130	3,350	4,470	4,510	4,070	3,730
25	4,990	a5,500	7,410	6,230	5,250	*4,230	2,700	3,250	4,420	4,160	4,530	3,620
26	4,920	a6,000	8,470	5,990	5,260	3,980	2,350	4,540	4,420	4,240	4,370	4,010
27	4,870	a6,000	11,600	5,650	*7,120	5,060	1,340	5,100	4,340	3,960	4,540	5,430
28	3,990	a6,000	11,700	5,390	6,750	4,350	6,510	5,080	2,620	3,820	4,450	4,040
29	3,680	a6,000	8,760	5,020	-	3,920	14,600	5,070	3,160	4,010	4,620	3,600
30	4,050	6,150	8,440	4,980	-----	1,980	11,900	5,010	4,180	4,200	4,700	3,100
31	3,160	-----	6,130	6,100	-----	2,680	-----	4,620	-----	5,840	4,280	-----
Total	120,940	172,000	217,320	166,400	170,250	139,680	102,380	149,850	128,330	135,420	132,170	118,550
Mean	3,901	5,733	7,010	5,368	6,080	4,506	3,413	4,834	4,278	4,368	4,264	3,952

Observed

Adjusted †

Calendar year 1957:	Max	30,000	Min	857	Mean	4,779	Mean	4,975	Cfsm	2.49	In.	33.75
Water year 1957-58:	Max	15,000	Min	970	Mean	4,804	Mean	4,815	Cfsm	2.41	In.	32.66

* Discharge measurement made on this day.

† Adjusted for change in contents in 7 reservoirs above station.

a No gage-height record at base or auxiliary gage; discharge estimated on basis of Apalachia and Ocoee No. 1 powerplant records.

5653. South Chestuee Creek near Benton, Tenn.

Location.--35°10'02", long 84°42'59", on downstream right wingwall of county highway bridge, 1,000 ft downstream from Climer Branch, 2.4 miles southwest of Benton Station, 2.8 miles north of Ocoee, and 3.6 miles west of Benton, Polk County.

Drainage area.--31.8 sq mi.

Records available.--October 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 712.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 1,790 cfs Nov. 18 (gage height, 7.76 ft); minimum, 3.8 cfs Sept. 10, 11; minimum gage height, 0.61 ft Sept. 10, 11, 19.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 6				Feb. 7 to Sept. 30			
1.2	13	6.0	424	0.6	3.5	1.5	31
1.5	24	6.5	575	.7	5.0	2.0	55
2.0	50	7.0	840	.8	7.5	4.0	180
4.0	180	7.5	1,450	1.0	13		
5.0	275						

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	16	58	65	228	73	56	120	14	8.0	16	4.2
2	25	16	52	62	89	60	48	283	18	7.5	30	4.2
3	30	15	*56	60	66	52	44	110	15	7.8	17	4.1
4	32	15	75	58	51	46	60	79	14	9.0	11	4.1
5	28	14	49	55	82	41	44	63	13	9.5	9.8	4.1
6	25	14	43	53	*571	46	138	85	12	11	15	4.1
7	22	17	264	50	320	50	66	96	12	7.8	13	4.0
8	19	81	461	48	159	59	52	64	12	39	8.8	4.0
9	17	36	156	46	102	67	44	69	12	31	8.5	4.1
10	16	22	135	45	80	55	68	60	11	26	8.2	4.0
11	15	19	110	44	72	49	56	56	10	12	7.8	4.0
12	14	*18	95	42	61	42	43	62	10	89	7.5	4.8
13	14	17	80	41	54	115	38	42	10	25	6.8	5.0
14	13	117	68	130	48	77	35	35	10	22	6.8	4.4
15	13	94	58	106	53	60	94	32	14	*13	*6.2	4.4
16	12	578	52	*71	50	52	131	*31	13	11	5.8	*4.7
17	12	488	49	56	49	59	70	28	9.5	14	5.5	4.2
18	25	*1,060	46	46	48	194	*54	26	8.5	11	5.8	4.4
19	20	575	45	37	47	103	48	25	8.5	15	6.0	4.1
20	17	194	*600	44	46	74	43	24	8.0	15	5.2	4.4
21	16	115	247	55	45	62	44	22	8.2	14	5.0	20
22	14	108	107	42	44	52	65	21	9.0	13	5.5	*9.1
23	13	393	90	32	44	48	48	19	*7.8	20	5.8	5.5
24	30	151	87	131	42	71	39	18	7.0	153	5.8	4.7
25	26	609	80	166	40	*127	152	18	6.5	25	6.0	4.7
26	23	300	100	94	84	178	80	17	21	16	5.2	4.6
27	22	136	90	74	*236	162	65	17	13	13	4.7	4.4
28	20	105	85	58	113	97	159	16	9.2	10	4.6	4.4
29	19	91	80	48	-	73	471	16	8.8	9.0	4.4	4.6
30	18	74	75	42	-----	68	320	14	8.5	8.8	4.2	4.6
31	17	-----	70	51	-----	76	-----	14	-----	8.8	4.2	-----
Total	617	5,498	3,662	1,952	2,924	2,398	2,672	1,580	333.5	673.2	256.1	151.7
Mean	19.9	183	118	62.9	104	77.0	89.1	51.0	11.1	21.7	8.26	5.06
Cfsm	0.626	5.75	3.71	1.98	3.27	2.42	2.80	1.60	0.349	0.682	0.260	0.159
In.	0.72	6.42	4.28	2.28	3.42	2.79	3.12	1.85	0.39	0.79	0.30	0.18

Calendar year 1957: Max - Min - Mean - Cfsm - In. -
 Water year 1957-58: Max 1,060 Min 4.0 Mean 62.2 Cfsm 1.96 In. 26.54

Peak discharge (base, 800 cfs).--Nov. 18 (8 a.m.) 1,790 cfs (7.76 ft); Dec. 20 (5 p.m.) 832 cfs (6.99 ft); Apr. 29 (8 p.m.) 880 cfs (7.04 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1 to Nov. 4, Nov. 6, 7, Dec. 10-19, Dec. 23 to Jan. 15, Feb. 16-20; discharge estimated on basis of weather records and for stations on nearby streams.

5655. Oostanula Creek near Sanford, Tenn.

Location.--Lat 35°19'39", long 84°42'19", on right bank 20 ft downstream from highway bridge, 1.3 miles southeast of Sanford, 3.5 miles northeast of Calhoun, McMinn County, and 5.6 miles above mouth.

Drainage area.--57.0 sq mi.

Records available.--October 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 716.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 2,020 cfs Nov. 18 (gage height, 8.77 ft); minimum, 25 cfs Sept. 28 (gage height, 2.36 ft).
1954-58: Maximum discharge, that of Nov. 18, 1957; minimum observed, 16 cfs Oct. 13-28, 1954; minimum gage height observed, 2.12 ft Oct. 28, 1954.

Remarks.--Records good.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 14, 15)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30	
2.42	31	5.0	436	2.35	26
3.0	82	6.0	700	3.0	75
3.5	138	7.6	1,350	3.5	137
4.0	219			4.0	219

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	37	148	123	162	207	164	406	74	46	52	33
2	79	36	134	117	144	115	138	266	91	44	52	32
3	81	35	127	109	120	109	130	229	99	*44	124	32
4	82	34	127	103	112	101	129	194	78	49	61	31
5	77	34	116	98	*112	*95	123	173	71	44	49	31
6	69	32	108	94	215	93	137	192	68	44	*60	31
7	64	31	172	93	231	91	137	344	87	44	67	31
8	62	34	329	95	181	94	116	346	65	68	47	31
9	58	43	298	84	157	101	109	237	63	70	44	31
10	56	39	201	82	144	112	109	245	*62	54	44	*30
11	54	33	171	82	136	96	109	275	61	50	44	32
12	53	32	152	80	127	90	103	247	59	112	46	33
13	51	32	*137	82	120	108	96	*231	58	161	52	32
14	51	79	130	*151	113	120	91	179	56	68	47	30
15	48	113	124	116	110	102	96	161	65	57	42	30
16	45	134	122	95	109	94	120	150	74	52	65	29
17	*50	328	120	89	99	94	*109	140	57	52	57	29
18	60	*1,340	112	84	94	155	95	131	55	49	44	30
19	49	996	113	81	89	155	90	124	53	47	41	29
20	46	448	262	78	88	127	89	130	55	46	40	28
21	44	270	334	85	87	117	90	119	54	58	39	39
22	43	207	223	89	87	109	113	109	85	63	38	*46
23	43	277	173	83	87	103	112	102	67	52	38	32
24	43	273	157	128	84	101	95	99	57	83	38	30
25	47	381	148	201	84	108	133	102	52	76	39	28
26	42	441	179	151	98	112	195	95	55	55	37	28
27	40	295	171	133	167	157	165	89	59	54	36	27
28	39	213	150	122	173	141	181	84	52	47	35	26
29	39	186	145	115	-	124	410	81	49	44	34	26
30	38	165	134	109	-----	120	700	78	48	43	34	27
31	38	-----	126	108	-----	158	-----	77	-----	41	33	-----
Total	1,676	6,588	5,143	3,250	3,528	3,609	4,484	5,434	1,907	1,817	1,479	924
Mean	54.1	220	166	105	126	116	149	175	63.6	58.6	47.7	30.8
Cfs/m	0.949	3.86	2.91	1.84	2.21	2.04	2.61	3.07	1.12	1.03	0.837	0.540
In.	1.09	4.30	3.36	2.12	2.30	2.35	2.93	3.55	1.24	1.19	0.96	0.60
Calendar year 1957: Max	1,760			Min	20	Mean	117	Cfs/m	2.05	In.	27.96	
Water year 1957-58: Max	1,340			Min	26	Mean	109	Cfs/m	1.91	In.	25.99	

Peak discharge (base, 400 cfs).--Nov. 18 (8:30 p.m.) 2,020 cfs (8.77 ft); Nov. 26 (11 a.m.) 472 cfs (5.15 ft); Apr. 30 (11 a.m.) 792 cfs (6.29 ft); May 7 (11 p.m.) 472 cfs (5.15 ft).

* Discharge measurement made on this day.

5675. South Chickamauga Creek near Chickamauga, Tenn.

Location.--Lat 35°00'50", long 85°12'27", on right bank a third of a mile upstream from bridge on U. S. Highway 11, 1½ miles south of Chickamauga, Hamilton County, 6 miles east of Chattanooga, and 12 miles upstream from mouth.

Drainage area.--428 sq mi.

Records available.--October 1928 to September 1958. November and December 1930, monthly discharge only, published in WSP 1306. Prior to October 1937, published as Chickamauga Creek near Chickamauga.

Gage.--Water-stage recorder. Datum of gage is 651.12 ft above mean sea level, datum of 1929. Prior to Oct. 7, 1930, staff gage at same site and datum.

Average discharge.--30 years, 695 cfs.

Extremes.--Maximum discharge during year, 13,600 cfs Nov. 19 (gage height, 15.90 ft); minimum, 99 cfs Sept. 20 (gage height, 0.52 ft).
1928-58: Maximum discharge, 27,600 cfs Mar. 30, 1951 (gage height, 20.73 ft); minimum, 61 cfs Oct. 8, 1941; minimum gage height, 0.41 ft Sept. 4, 1957.

Remarks.--Records good. Some diurnal fluctuation at low flow caused by small mills above station.

Revisions (water years).--WSP 823: Drainage area. WSP 853: 1937. WSP 1386: 1932.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

1.08	203	0.6	116	10.0	4,000
2.0	468	1.0	205	12.0	5,720
4.0	1,140	2.0	470	14.0	8,650
6.0	2,790	4.0	1,190	16.0	13,900
10.0	4,000	6.0	2,840		

Note.--Same as following table above 10.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1,020	249	802	522	1,240	978	732	4,480	265	*167	203	158
2	897	232	*698	468	897	774	*645	2,300	*338	162	220	*134
3	1,580	232	652	443	708	*694	592	1,400	308	162	232	134
4	1,240	235	687	416	624	614	708	1,020	268	175	218	151
5	801	230	603	398	670	554	722	852	252	191	187	129
6	609	207	530	363	3,610	516	1,230	1,110	248	191	173	129
7	490	200	1,240	386	4,420	516	1,450	1,830	238	189	169	127
8	414	419	2,850	380	2,630	566	844	1,030	235	247	191	127
9	354	718	2,090	358	1,500	628	715	880	225	645	198	127
10	312	453	1,350	345	1,130	624	690	876	222	589	175	125
11	282	339	1,030	342	950	530	694	872	212	352	178	125
12	283	300	827	338	827	480	603	1,810	208	380	238	147
13	246	280	701	736	729	920	536	1,110	210	315	248	136
14	227	1,840	656	3,170	652	1,220	494	722	198	310	296	123
15	214	2,700	624	2,310	648	862	522	617	240	290	265	120
16	203	4,510	642	1,190	673	715	1,200	550	265	270	205	131
17	309	4,930	620	911	568	673	1,050	533	248	238	245	127
18	484	*8,290	558	771	491	1,750	743	480	212	220	196	136
19	315	12,800	554	659	461	1,710	642	443	200	205	173	125
20	254	6,280	3,000	592	446	1,130	582	422	198	194	160	116
21	230	4,000	5,170	718	449	911	554	398	198	933	156	1,180
22	212	1,720	3,230	984	550	788	690	370	196	1,130	151	*1,360
23	207	2,680	1,450	729	799	698	680	352	191	434	164	372
24	735	2,410	1,030	1,520	771	785	547	335	162	488	167	235
25	1,180	3,500	876	2,770	701	1,760	960	325	175	342	200	198
26	526	4,040	890	1,820	666	1,930	992	312	200	300	208	178
27	399	2,540	810	1,010	1,060	1,800	768	312	191	258	162	169
28	330	1,470	694	928	1,630	1,420	3,980	300	182	232	151	162
29	291	1,200	659	768	-	1,040	*7,540	292	173	220	147	160
30	277	981	592	*708	-----	894	7,140	275	171	200	142	173
31	*263	-----	*533	673	-----	841	-----	268	-----	*194	138	-----
Total	15,144	71,965	36,648	27,766	30,500	29,401	39,245	26,676	6,649	10,221	5,958	6,774
Mean	489	2,339	1,182	896	1,069	946	1,308	861	222	330	192	226
Cfsm	1.14	5.61	2.76	2.09	2.54	2.21	3.06	2.01	0.519	0.771	0.449	0.528
In.	1.32	6.25	3.18	2.41	2.65	2.55	3.41	2.32	0.58	0.89	0.52	0.59
Calendar year 1957: Max			13,200	Min	88	Mean	901	Cfsm	2.11	In.	28.58	
Water year 1957-58: Max			12,800	Min	116	Mean	841	Cfsm	1.96	In.	26.67	

Peak discharge (base, 5,500 cfs).--Nov. 19 (8 a.m.) 13,600 cfs (15.90 ft); Apr. 29 (8 p.m.) 8,430 cfs (13.89 ft).

* Discharge measurement made on this day.

5680. Tennessee River at Chattanooga, Tenn.

Location.--Lat 35°05'12", long 85°16'43", on right bank at Meadow Lake Country Club golf course, half a mile downstream from South Chickamauga Creek, 3 miles downstream from Chickamauga Dam, 3½ miles upstream from Walnut Street Bridge in Chattanooga, Hamilton County, and at mile 467.6.

Drainage area.--21,400 sq mi, approximately.

Records available.--April 1874 to September 1958. Monthly discharge only for some periods, published in WSP 1306. July 1930 to September 1958 at site 38 miles downstream, published as Tennessee River at Hales Bar, near Chattanooga. Gage-height records collected in this vicinity since 1874 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 621.12 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 1, 1939, staff or chain gages, or water-stage recorders at several sites from 7 miles upstream from Chattanooga to Hales Bar Dam 33 miles downstream at or within 0.2 ft of present datum; except staff gage at Bridgeport, Ala., 49.9 miles downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2½ miles downstream from base gage.

Average discharge.--84 years (1874-1958), using records at Hales Bar July 1930 to December 1935, 37,170 cfs.

Extremes.--Maximum discharge during year, 189,000 cfs Nov. 19; maximum gage height, 31.61 ft Nov. 20; maximum gage height at Walnut Street, 29.63 ft Nov. 20; minimum daily discharge, 7,900 cfs Apr. 19; minimum gage height, 10.90 ft Mar. 30.

1874-1958: Maximum discharge observed, 410,000 cfs Mar. 1, 1875 (gage height, 53.8 ft, present datum, at Walnut Street), from rating curve extended above 250,000 cfs; minimum daily, 1,200 cfs Nov. 1, 1953; minimum gage height, 0.0 ft Sept. 11-14, 1881, Sept. 19, 1883 (before filling of Hales Bar pool).

Maximum stage known, 57.9 ft Mar. 11, 1867, present datum at Walnut Street (discharge, about 459,000 cfs).

Remarks.--Records good. Since 1936, flow regulated by increasing number of reservoirs above station (see p. 224).

Revisions (water years).--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M).

WSP 973: 1942. WSP 1306: 1916(M), 1936 (monthly runoff). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31,600	38,200	61,900	83,800	45,100	41,800	*27,400	82,600	43,600	36,700	*23,200	36,000
2	31,800	38,000	61,900	80,200	43,300	44,700	28,900	45,000	42,100	38,400	15,100	41,300
3	31,600	30,900	62,200	51,000	46,200	39,800	31,100	43,800	41,200	38,600	11,200	44,000
4	31,600	34,900	60,100	55,000	36,100	37,700	35,800	37,900	41,400	32,200	30,600	41,100
5	32,600	32,000	54,800	52,600	45,600	40,600	20,000	38,600	38,500	31,400	27,500	39,600
6	32,700	33,500	63,800	49,900	50,300	34,400	19,000	38,000	40,100	29,200	28,600	30,900
7	31,600	38,100	76,800	49,000	60,600	36,700	26,700	47,000	36,500	26,500	30,900	25,700
8	30,500	40,700	116,000	47,100	52,500	29,700	34,100	63,000	35,000	32,000	33,000	36,500
9	30,900	40,400	125,000	47,700	51,000	27,000	26,500	67,300	37,600	33,800	30,200	38,600
10	30,400	37,300	95,500	48,000	50,300	35,100	15,900	77,700	39,400	28,100	25,100	42,800
11	31,300	36,800	90,700	48,100	49,900	46,200	26,700	71,700	40,500	29,100	39,300	42,800
12	31,300	41,100	75,100	47,300	49,000	43,000	17,100	62,500	40,300	20,200	38,900	42,600
13	32,800	40,700	67,700	44,300	49,600	27,100	19,000	57,600	39,600	17,200	39,300	30,400
14	36,100	37,000	65,000	48,600	49,000	33,900	18,000	59,700	41,500	23,300	40,400	25,800
15	35,300	39,500	64,900	49,600	48,800	42,800	17,000	54,500	38,800	22,200	39,500	36,500
16	34,400	53,000	57,800	42,200	48,800	28,100	11,800	48,100	39,800	24,100	33,700	39,600
17	39,200	92,900	56,900	37,700	41,200	28,000	12,900	48,500	38,800	23,800	20,000	42,900
18	42,000	124,000	63,300	45,900	45,700	39,000	12,100	48,200	38,600	28,100	37,100	41,700
19	32,500	184,000	63,500	46,600	45,900	40,600	7,900	47,500	37,600	25,300	41,600	43,000
20	31,600	173,000	78,400	46,600	45,300	36,300	10,600	48,400	36,500	29,600	40,700	28,200
21	34,700	123,000	110,000	44,100	43,600	41,900	25,400	46,700	37,700	32,600	42,600	16,100
22	33,300	89,400	112,000	43,100	43,900	39,000	19,500	45,600	38,200	29,500	40,100	23,400
23	42,800	81,300	92,700	43,800	45,100	21,700	9,600	49,300	39,200	26,900	31,800	27,100
24	*42,600	74,300	80,600	41,100	43,800	25,900	8,600	51,900	41,200	24,500	24,200	30,500
25	45,000	80,200	72,900	47,800	40,100	38,300	15,600	51,500	38,700	23,000	38,300	27,900
26	44,400	89,900	78,000	40,200	44,800	40,300	38,700	44,800	38,300	24,400	39,400	32,100
27	37,100	*93,900	92,400	43,100	41,000	31,900	41,500	43,500	39,300	24,800	39,400	28,600
28	36,800	67,400	96,500	38,200	35,400	29,500	43,500	41,800	39,600	27,700	40,300	20,400
29	37,300	76,400	97,500	40,700	-	26,900	76,200	*45,400	26,300	39,000	41,300	36,200
30	38,900	68,200	98,400	*45,200	-----	19,800	113,000	44,200	36,900	37,500	35,500	37,800
31	34,200	-----	95,300	45,600	-----	29,900	-----	43,500	-----	31,100	30,200	-----
Total	*1,088.6	*2,050.2	*2,488.6	1,473.1	*1,291.9	*1,077.6	808,900	*1,595.8	*1,153.8	890,800	*1,029.1	*1,029.1
Mean	35,120	68,330	80,280	47,520	46,140	34,760	26,960	51,480	38,460	28,740	33,190	34,500
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 202,000 Min 9,600 Mean 47,670 Cfsm 2.23 In. 30.24
 Water year 1957-58: Max 184,000 Min 7,900 Mean 43,770 Cfsm 2.05 In. 27.77

* Discharge measurement made on this day.

* Expressed in thousands.

5685. Chattanooga Creek near Flintstone, Ga.

Location.--Lat 34°58'20", long 85°19'40", on right bank 0.8 mile south of Georgia-Tennessee State line and 2.3 miles northeast of Flintstone, Walker County.

Drainage area.--50.6 sq mi.

Records available.--December 1950 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 649.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years (1951-58), 82.5 cfs.

Extremes.--Maximum discharge during year, 2,590 cfs Apr. 29 (gage height, 10.04 ft); minimum, 5.7 cfs Sept. 9, 10; minimum gage height, 0.99 ft Aug. 6.

1950-58: Maximum discharge, 6,140 cfs Mar. 29, 1951 (gage height, 12.90 ft, from high-water mark in gage well); minimum, 1.0 cfs Sept. 8, 9, 1954; minimum gage height, 0.15 ft July 29, 1952.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Some diurnal fluctuation at low flow caused by bleachery above station.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, 2, 5, Aug. 19 to Sept. 21)

1.0	7.5	6.0	340
1.5	16	7.0	550
2.0	33	7.5	750
4.0	165	8.0	1,070
5.0	240	10.0	2,560

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*250	32	130	71	155	161	130	485	20	*10	8.7	7.0
2	218	30	*114	63	122	132	*114	306	*83	9.7	8.9	*6.9
3	596	58	105	59	109	*111	102	222	30	9.5	9.2	6.9
4	358	40	100	55	96	94	122	173	22	9.4	8.5	6.7
5	231	33	82	52	106	80	106	143	21	9.5	7.8	6.4
6	162	31	75	51	509	74	164	138	20	10	7.7	6.4
7	117	29	170	52	518	72	171	137	18	11	11	6.4
8	88	101	404	48	335	77	140	107	17	13	9.7	6.5
9	68	123	273	43	234	84	122	110	16	12	8.7	6.1
10	56	95	211	42	189	85	136	103	15	13	11	6.2
11	47	79	171	41	156	77	150	142	15	12	9.7	6.2
12	41	68	134	40	130	71	131	244	15	14	20	6.5
13	37	63	116	100	111	198	113	171	15	14	21	6.9
14	32	980	106	267	96	211	101	126	14	14	62	6.9
15	26	747	92	193	101	167	117	102	14	13	15	7.0
16	26	680	91	151	84	136	199	85	14	12	14	7.3
17	159	582	83	125	70	130	167	77	13	11	14	7.2
18	107	*1,400	78	106	64	303	141	63	13	11	12	7.2
19	80	a850	82	90	60	260	121	58	13	9.5	10	7.0
20	66	a300	519	80	58	202	105	50	13	9.0	9.0	7.3
21	55	a220	440	129	58	167	103	42	13	16	8.0	159
22	46	a200	262	124	73	137	125	37	12	15	7.5	*72
23	44	a320	193	109	91	118	116	32	12	13	7.3	21
24	63	a240	152	245	88	162	104	28	11	14	8.4	16
25	55	a360	131	374	86	364	219	26	11	14	10	13
26	47	a340	125	252	87	340	234	24	12	13	9.9	13
27	41	a270	103	192	198	398	194	23	12	12	8.4	12
28	37	a220	94	152	222	289	1,200	32	11	11	7.8	12
29	34	a190	83	129	-	218	*1,800	22	11	9.9	7.3	11
30	34	164	74	*110	-----	182	1,090	21	11	9.4	7.2	11
31	*33	-----	*68	101	-----	158	-----	21	-----	*8.7	7.0	-----
Total	3,254	8,825	4,859	3,645	4,209	5,278	7,837	3,348	517	362.6	366.7	475.0
Mean	105	294	157	118	150	170	261	108	17.2	11.7	11.8	15.8
Cfsm	2.08	5.81	3.10	2.33	2.96	3.36	5.16	2.13	0.340	0.231	0.233	0.312
In.	2.39	6.49	3.57	2.68	3.09	3.68	5.76	2.46	0.38	0.27	0.27	0.35

Calendar year 1957: Max 1,780 Min 3.9 Mean 126 Cfsm 2.49 In. 33.79
Water year 1957-58: Max 1,800 Min 6.1 Mean 118 Cfsm 2.33 In. 31.59

Peak discharge (base, 800 cfs).--Nov. 14 (5 to 6 p.m.) 1,700 cfs (8.90 ft); Nov. 18 (10:30 a.m.) 1,830 cfs (9.08 ft); Dec. 20 (7 to 8 p.m.) 894 cfs (7.74 ft); Apr. 29 (4 p.m.) 2,590 cfs (10.04 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5700. Tennessee River at Hales Bar, near Chattanooga, Tenn.

Location.--Lat 35°01'43", long 85°32'48", in center pier of bridge on U. S. Highways 41, 64, and 72, 1.4 miles downstream from Hales Bar Dam. 5½ miles southeast of Jasper, Marion County, 7 miles upstream from Sequatchie River, 34.5 miles downstream from Chattanooga, and at mile 429.7.

Drainage area.--21,800 sq mi, approximately.

Records available.--July 1930 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 588.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 13, 1932, water-stage recorder on lower lock wall 1.4 miles upstream at datum 0.35 ft higher. Since Jan. 27, 1939, auxiliary water-stage recorder 22 miles downstream.

Average discharge.--28 years, 34,620 cfs.

Extremes.--Maximum discharge during year, 195,000 cfs Nov. 19; maximum gage height, 27.71 ft Nov. 19; minimum daily discharge, 9,200 cfs Apr. 19; minimum gage height, 5.87 ft Mar. 31, 1930-58; Maximum discharge, 241,000 cfs Dec. 31, 1932, Jan. 1, 1933, Mar. 30, 1936 (gage height, 31.2 ft); minimum daily, 2,900 cfs Nov. 1. 15, 1953; minimum gage height, 1.21 ft Oct. 27, 1931, site and datum then in use.
Maximum stage known, 44.6 ft in March 1867, present site and datum. A stage of 37.4 ft occurred Mar. 8, 1917, present site and datum (discharge, 320,000 cfs, from rating curve extended above 225,000 cfs).

Remarks.--Records good except those for periods of no gage-height record at base or auxiliary gage, which are fair. Since 1936, flow regulated by increasing numbers of reservoirs above station (see p. 224).

Revisions (water years).--WSP 853: Drainage area. WSP 973: 1942. WSP 1306: 1936 (monthly runoff). WSP 1386: 1932-34.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33,500	37,200	62,400	85,700	49,000	42,400	29,900	99,700	42,600	35,600	22,900	a34,000
2	33,500	37,200	62,200	66,300	47,000	46,400	30,400	55,500	42,600	36,800	14,000	a39,000
3	34,200	31,900	62,300	51,600	46,900	42,700	32,300	46,900	*41,200	37,600	9,800	a42,000
4	35,300	35,200	61,900	55,300	40,800	40,000	37,300	43,200	42,000	33,200	29,400	40,200
5	34,800	32,700	58,400	53,500	45,200	41,700	22,300	40,700	39,800	31,600	26,700	41,200
6	32,500	33,900	64,100	51,600	55,600	37,500	21,800	39,600	40,000	30,900	28,600	34,800
7	33,000	37,200	75,200	49,000	44,200	37,200	30,500	47,100	37,300	25,700	29,500	29,200
8	31,400	39,500	116,000	47,400	59,200	33,600	35,700	65,000	35,900	31,600	33,000	37,500
9	30,700	43,000	121,000	48,000	55,700	28,400	27,500	68,000	36,800	33,100	32,800	38,500
10	31,300	38,700	99,500	48,400	52,300	34,900	18,300	77,700	39,000	a28,000	27,300	42,400
11	31,000	37,500	92,400	48,300	51,800	46,800	28,200	77,000	40,500	a29,000	37,000	43,100
12	31,000	40,500	76,200	48,000	50,700	45,700	19,500	67,400	40,300	a20,000	39,000	43,200
13	33,300	41,100	68,300	46,000	50,600	31,000	15,100	59,800	39,200	a17,500	39,600	33,600
14	36,100	44,200	64,700	50,600	50,300	35,700	16,600	60,000	40,100	a23,000	41,500	29,300
15	35,700	46,800	64,800	53,200	49,800	44,800	16,800	56,200	39,600	23,000	39,100	36,600
16	34,000	70,500	61,600	47,000	50,200	31,900	11,200	50,500	39,000	24,400	37,000	39,700
17	38,700	105,000	57,800	40,200	43,600	30,100	13,100	50,000	39,000	24,700	24,600	42,300
18	42,100	162,000	63,100	45,400	45,400	40,600	13,400	50,200	37,800	26,600	35,000	42,100
19	35,100	194,000	63,200	48,000	48,000	43,700	9,200	49,400	37,600	27,200	38,700	42,700
20	31,700	188,000	77,400	49,000	46,100	39,400	10,900	49,900	37,000	31,200	41,600	30,700
21	34,400	150,000	111,000	47,100	45,200	42,900	25,900	47,700	37,400	33,800	42,400	23,100
22	34,800	104,000	114,000	44,700	46,100	42,300	18,500	44,800	38,700	29,900	42,600	23,900
23	41,800	84,800	97,100	46,000	46,000	23,800	10,400	50,500	38,300	27,400	a32,000	28,500
24	42,600	79,100	81,700	46,500	46,300	27,200	12,200	50,600	41,300	23,700	a24,000	31,600
25	45,900	82,400	74,100	47,700	41,700	42,200	17,500	50,900	38,200	25,200	a37,500	30,200
26	45,500	94,400	76,200	46,600	45,700	45,400	41,200	48,400	38,600	25,900	a40,000	31,100
27	40,400	96,400	90,800	45,900	44,900	39,000	43,800	40,400	38,900	27,000	a39,500	30,600
28	38,100	94,000	95,300	43,500	39,700	34,500	45,000	42,800	32,500	33,800	a39,000	21,600
29	37,900	77,500	96,500	a40,500	-	30,900	69,000	40,700	27,600	38,600	a40,000	38,500
30	36,300	73,200	95,600	a45,500	-	23,100	101,000	42,600	34,800	36,100	a37,000	41,400
31	36,000	-	93,400	*a45,000	-	*33,100	-	43,000	-	*32,400	a30,000	-
Total	*1,114.2	*2,231.7	*2,498.2	*1,531.5	*1,358.1	*1,157.9	844,500	*1,656.2	*1,153.5	906,500	*1,031.1	*1,062.4
Mean	35,940	74,390	80,590	49,400	48,500	37,350	28,150	53,430	38,450	29,240	33,260	35,410
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

* Discharge measurement made on this day.

† Expressed in thousands.

a No gage-height record at base or auxiliary gage; discharge estimated on basis of records for Hales Bar Dam.

Calendar year 1957: Max 216,000 Min 10,200 Mean 48,930 Cfsm 2.24 In. 30.47
Water year 1957-58: Max 194,000 Min 9,200 Mean 45,330 Cfsm 2.08 In. 28.23

5710. Sequatchie River near Whitwell, Tenn.

Location.--Lat 35°12'22", long 85°29'48", on right bank 15 ft downstream from highway bridge, 1½ miles east of Whitwell, Marion County, 3 miles upstream from bridge on State Highway 27, and 4½ miles downstream from Griffith Creek.

Drainage area.--384 sq mi.

Records available.--October 1920 to September 1958. Prior to December 1920 monthly discharge only, published in WSP 1806.

Gage.--Water-stage recorder. Datum of gage is 632.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Tennessee Valley Authority). Prior to Sept. 18, 1927, staff gage at same site at datum 0.03 ft higher. Sept. 18, 1927, to Oct. 31, 1929, staff gage and Nov. 1, 1929, to Sept. 30, 1930, wire-weight gage, at bridge 15 ft upstream at present datum.

Average discharge.--38 years, 730 cfs.

Extremes.--Maximum discharge during year, 22,600 cfs Nov. 19 (gage height, 16.71 ft); minimum, 47 cfs Sept. 17 (gage height, 0.80 ft).

1920-58: Maximum discharge, that of Nov. 19, 1957; minimum, 16 cfs Sept. 6-21, 27, 28, 1925.

Flood in March 1867 reached a stage of about 19 ft, from reports of Tennessee Valley Authority.

Remarks.--Records good. Prior to 1950, some diurnal fluctuation caused by small mills above station.

Revisions (water years).--WSP 603: 1922(M). WSP 758: 1929(M). WSP 823: Drainage area. WSP 1033: 1943(M). WSP 1386: 1921-22, 1923-25(M), 1927-28(M), 1930(M), 1933(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-10)

Oct. 1 to Nov. 19				Nov. 20 to Sept. 30			
1.9	188	12.0	4,120	0.8	47	2.0	205
2.0	209	13.0	5,200	1.0	63	3.0	455
3.0	482	14.0	7,220	1.5	120	6.0	1,510
6.0	1,510	15.0	11,500	Note.--Same as preceding table above 6.0 ft.			
10.0	3,000	16.4	20,300				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.					
1	456	*310	1,160	753	924	1,230	1,260	*4,590	265	*116	107	61					
2	492	287	961	694	872	977	1,120	2,320	272	111	105	58					
3	1,630	269	872	638	806	*812	1,010	2,000	*272	110	115	*57					
4	1,800	250	812	592	732	704	942	1,550	247	107	119	55					
5	1,100	236	725	550	736	620	886	1,380	233	111	117	53					
6	823	224	658	*518	1,700	568	1,400	1,500	223	108	112	53					
7	670	216	2,040	509	2,330	543	1,720	2,430	213	116	106	52					
8	511	489	5,160	488	2,190	540	1,470	3,000	203	147	99	52					
9	418	724	4,650	455	1,740	588	1,190	2,290	195	129	117	51					
10	351	819	3,380	434	1,380	697	1,220	1,910	276	119	160	49					
11	313	717	2,300	416	1,150	767	1,970	1,740	245	114	115	49					
12	282	572	1,620	398	970	728	1,870	1,780	203	160	132	51					
13	257	498	1,270	413	837	736	1,470	1,560	189	233	146	51					
14	236	2,550	1,080	718	739	834	1,200	1,250	178	183	136	50					
15	216	4,210	960	963	700	840	1,050	1,000	178	340	114	48					
16	203	3,730	935	946	648	802	974	848	174	245	107	48					
17	225	6,520	981	820	557	746	865	792	169	189	101	48					
18	267	15,800	1,020	729	503	1,090	774	889	160	160	96	50					
19	250	19,800	1,040	644	476	1,550	704	606	153	144	89	49					
20	241	*12,600	3,170	592	446	1,470	655	574	152	196	83	49					
21	227	7,520	5,170	641	431	1,220	778	522	148	176	79	82					
22	213	4,020	3,760	767	419	1,010	1,340	473	150	162	79	108					
23	230	3,000	2,510	725	431	868	1,370	437	148	155	77	134					
24	562	2,700	1,760	974	431	938	1,170	440	148	152	78	106					
25	768	3,240	1,380	2,400	428	2,510	2,410	380	138	150	78	94					
26	765	4,040	1,280	2,210	419	2,860	4,410	374	140	153	76	77					
27	592	3,210	1,180	1,730	888	2,410	3,890	348	136	152	73	69					
28	479	2,370	1,050	1,350	1,650	1,940	3,030	328	129	134	73	62					
29	412	1,900	952	1,100	-	1,590	3,660	302	124	124	69	59					
30	372	1,500	862	949	-----	1,380	6,860	285	120	116	68	57					
31	343	-----	784	*869	-----	*1,400	-----	268	-----	*112	83	-----					
Total	15,744	104,121	55,482	25,985	25,531	34,968	52,658	38,546	5,581	4,727	3,087	1,882					
Mean	508	3,471	1,790	838	912	1,128	1,755	1,243	186	152	99.6	62.7					
Cfsm	1.32	9.04	4.66	2.18	2.58	2.94	4.57	3.24	0.484	0.396	0.259	0.165					
In.	1.52	10.08	5.37	2.52	2.47	3.59	5.10	3.73	0.54	0.46	0.30	0.18					
Calendar year 1957: Max	19,800			Min	33			Mean	1,159			Cfsm	2.97		In.	40.26	
Water year 1957-58: Max	19,800			Min	48			Mean	1,009			Cfsm	2.63		In.	35.66	

Peak discharge (base, 5,500 cfs).--Nov. 19 (4 to 5 a.m.) 22,600 cfs (16.71 ft); Dec. 8 (4 p.m.) 5,710 cfs (13.33 ft); Dec. 21 (7:30 a.m.) 5,560 cfs (13.24 ft); Apr. 30 (8 a.m.) 7,620 cfs (14.13 ft).

* Discharge measurement made on this day.

5729. Town Creek near Geraldine, Ala.

Location.--Lat 34°22'42", long 85°59'25", in SE¹ sec. 34, T. 7 S., R. 6 E., on downstream side of bridge on State Highway 110, 1,600 ft downstream from Reedy Creek, 4,500 ft upstream from Traylor Branch, 2 miles north northeast of Geraldine, and 15 miles north-east of Albertville, Ala.

Drainage area.--141 sq mi.

Records available.--July 1957 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 1,000 ft (from topographic map).

Extremes.--1957: Maximum discharge during period July to September, 566 cfs Sept. 14 (gage height, 3.14 ft); minimum, no flow Sept. 6-13.

1957-58: Maximum discharge during water year, 10,600 cfs Nov. 18 (gage height, 15.6 ft); minimum, 0.7 cfs Sept. 19.

Remarks.--Records good except those for period of shifting control, which are fair, and those for periods of no gage-height record, which are poor.

Rating tables, July 10, 1957, to Sept. 30, 1958, except period of shifting control (gage height, in feet, and discharge, in cubic feet per second)

July 10, 1957, to June 8, 1958

June 9 to Sept. 30, 1958

0.2	0	1.1	39	0.5	0.6	2.0	135
.3	.4	1.5	101	.6	1.2	2.5	244
.4	1.0	2.0	206	.7	2.5	3.0	387
.5	2.2	2.5	337	.8	4.8	4.0	800
.6	4.4	3.5	710	.9	10	6.0	2,000
.7	8.0	5.0	1,500	1.1	24	7.0	2,720
.8	13	8.0	3,500	1.5	62		
.9	19	13.0	8,000				

Discharge, in cubic feet per second, 1957

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	2.1	0.6	9	-	0.6	0	17	118	Q.7	225	25	8.0	2.2	29
2	-	1.6	.4	10	21	.5	0	18	97	.7	140	26	5.6	1.6	24
3	-	1.4	.3	11	17	.4	0	19	55	.7	94	27	4.4	1.3	19
4	-	2.2	.2	12	*13	.3	0	20	50	.5	75	28	3.4	1.2	24
5	-	2.1	.2	13	10	.2	* 0	21	23	5.2	72	29	3.0	1.0	43
6	-	1.0	0	14	8.0	.2	*132	22	15	5.6	56	30	2.8	.8	123
7	-	.9	0	15	7.1	.4	148	23	10	3.8	48	31	2.6	.7	-
8	-	.7	0	16	10	.5	99	24	10	3.0	37				

Total.....	-	44.1	1,387.7
Mean.....	-	1.42	46.5
Cubic feet per second per square mile.....	-	0.010	0.328
Runoff in inches.....	-	0.01	0.37

Peak discharge (base, 4,800 cfs).--No peak above base.

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	116	408	317	278	528	263	a1,300	34	8.0	112	5.1
2	210	112	368	273	240	447	238	710	31	5.4	108	3.9
3	1,060	150	349	242	213	384	220	566	36	3.9	100	3.2
4	844	150	394	228	194	334	286	a430	107	3.2	84	2.8
5	352	128	317	208	211	303	268	a380	62	2.5	68	2.2
6	258	114	292	199	763	278	602	a350	38	2.3	51	1.9
7	206	109	624	194	1,060	289	454	a320	35	3.0	58	1.6
8	170	201	1,170	176	755	322	349	a300	21	31	231	1.4
9	144	294	*1,040	157	568	322	303	a280	*16	1,550	90	1.1
10	126	211	778	148	465	292	292	a260	13	2,700	59	.9
11	110	183	625	148	404	255	278		10	515	43	.9
12	101	165	490	142	346	240	235		6.8	334	*185	.9
13	96	*159	429	*148	303	426	206	a450	5.1	609	58	.9
14	87	*2,340	398	230	273	440	*190		3.9	2,300	139	.9
15	77	*1,260	371	201	279	362	238		299	665	105	.9
16	78	2,660	408	172	268	322	308		332	453	190	*1.0
17	510	3,120	368	157	a260	311	225		105	334	118	.9
18	300	*7,900	334	150	a250	547	199	a230	67	254	70	.9
19	206	3,170	343	140	a240	436	181		212	202	48	.7
20	168	1,410	1,680	138	*a230	371	172		216	116	222	.8
21	140	940	1,230	194	a240	334	201	*155	69	380	26	242
22	124	778	822	206	248	297	268	126	51	*802	20	120
23	133	1,170	645	170	331	271	273	109	41	755	21	64
24	*465	890	547	364	356	294	218	94	37	775	25	31
25	265	1,620	490	490	340	*408	468	83	27	642	32	19
26	199	1,140	528	384	322	362	454	77	24	377	31	12
27	172	822	429	331	898	440	356	67	32	275	28	7.4
28	152	665	368	297	710	378	443	69	23	217	19	6.3
29	140	586	356	273	-	337	4,420	56	16	177	13	5.9
30	130	490	314	252	-----	317	a2,500	48	11	149	9.4	4.8
31	126	-----	289	240	-----	292	-----	39	-----	123	6.8	-----
Total	7,298	33,053	17,224	6,969	11,043	10,939	15,108	9,105	1,880.8	14,869.3	2,183.2	545.3
Mean	235	1,102	556	225	394	353	504	294	62.7	480	70.4	18.2
Cfsm	1.87	7.82	3.94	1.60	2.79	2.50	3.57	2.09	0.445	3.40	0.499	0.129
In.	1.92	8.72	4.54	1.84	2.91	2.89	3.98	2.40	0.50	3.92	0.58	0.14

Calendar year 1957: Max - Min - Mean - Cfsm - In.
 Water year 1957-58: Max 7,900 Min 0.7 Mean 357 Cfsm 2.53 In. 34.34

Peak discharge (base, 4,800 cfs).--Nov. 18 (5 a.m.) 10,600 cfs (15.6 ft); Apr. 29 (12:30 p.m.) 6,000 cfs (11.0 ft); July 10 (2 a.m.) 6,000 cfs (11.0 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Big Wills Creek near Crudup.

Note.--Shifting-control method used May 23 to June 8.

5745. Paint Rock River near Woodville, Ala.

Location.--Lat 34°37'27", long 86°18'23", in NW¼ sec. 10, T. 5 S., R. 3 E., on left bank 20 ft downstream from bridge on U. S. Highway 72, 1,000 ft downstream from Southern Railway bridge, 2 miles west of Woodville, 4.1 miles upstream from Little Paint Creek, and at mile 26.6.

Drainage area.--320 sq mi.

Records available.--December 1935 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 570.95 ft above mean sea level, datum of 1929. Dec. 33, 1935, to Jan. 16, 1938, staff gage and Jan. 17, 1938, to July 24, 1940, water-stage recorder, at site 20 ft upstream at same datum.

Average discharge.--23 years (1936-58), 634 cfs.

Extremes.--Maximum discharge during year, 22,700 cfs Nov. 19 (gage height, 19.80 ft); minimum daily, 21 cfs Sept. 16; minimum recorded gage height, 0.66 ft Sept. 13. 1935-58: Maximum discharge, 31,300 cfs Dec. 28, 1942; maximum gage height, 20.84 ft Jan. 5, 1949; minimum discharge, 1.3 cfs Oct. 21, 1954 (gage height, 0.28 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 14-28, Dec. 7-11, 20-23, Jan. 24-27, Feb. 8-10, Feb. 27 to Mar. 1, Mar. 25, 26, Apr. 7, Apr. 26 to May 2, May 6, 7, July 13-15)

0.6	20	11.0	2,290
1.0	37	14.0	3,620
1.5	65	16.0	5,050
2.0	108	17.0	6,650
3.0	230	18.0	10,000
4.0	400	19.7	21,800
6.0	1,320		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	200	*94	641	459	954	*1,880	659	*4,360	92	46	*151	33
2	*219	86	*520	*463	1,290	1,000	*566	2,640	*86	42	156	31
3	193	195	459	426	*872	759	508	1,410	80	39	150	29
4	230	330	479	382	685	621	491	870	75	36	400	28
5	232	328	459	346	646	522	475	961	74	34	258	27
6	194	224	404	317	2,840	457	1,100	2,030	72	33	175	26
7	132	180	1,240	308	5,850	424	2,080	1,860	67	34	166	25
8	95	408	4,080	296	5,360	411	1,180	1,260	63	192	117	25
9	73	1,220	5,650	268	3,460	416	814	1,060	61	1,660	92	24
10	60	782	3,940	240	1,800	463	875	1,530	58	756	78	23
11	51	426	2,390	224	1,060	441	1,550	1,840	55	698	82	23
12	45	308	1,340	212	789	367	1,200	1,380	55	396	70	23
13	40	248	842	715	641	564	802	1,160	52	1,590	93	23
14	37	1,580	685	775	533	1,070	725	865	49	2,610	124	a22
15	34	3,540	602	1,130	512	889	729	648	52	1,370	100	a22
16	33	5,180	779	743	503	679	1,070	510	84	544	76	a21
17	561	6,280	768	566	404	591	911	439	117	923	69	a27
18	447	9,770	698	475	341	818	738	375	104	al,300	58	a30
19	508	21,300	630	405	308	1,080	635	339	88	722	54	a26
20	196	11,000	2,520	362	286	846	551	369	74	422	52	a40
21	138	5,200	5,410	378	274	696	536	335	64	508	47	al,500
22	103	2,920	4,660	606	335	586	867	260	59	997	44	a900
23	87	2,330	2,530	586	533	501	743	224	55	832	46	a320
24	171	2,360	1,350	1,360	595	594	602	199	54	727	53	a200
25	553	3,020	863	3,390	551	2,150	1,100	177	51	1,010	55	al30
26	342	3,960	816	4,370	499	2,310	2,730	161	49	668	46	al00
27	217	3,960	816	2,520	1,420	1,490	2,610	146	51	431	44	a85
28	165	2,340	698	1,270	2,880	1,070	2,120	134	53	321	*44	a75
29	134	1,280	619	818	-	848	2,570	122	58	251	41	a70
30	116	842	536	665	-	725	4,120	110	54	206	38	a65
31	104	-	473	571	-	681	-	101	-	175	36	-
Total	5,510	91,691	47,897	25,150	36,221	25,969	35,735	27,893	2,006	19,573	2,975	3,973
Mean	171	3,056	1,545	811	1,294	838	1,191	900	65.9	631	96.0	132
Cfsm	0.534	9.55	4.83	2.53	4.04	2.62	3.72	2.81	0.209	1.97	0.300	0.412
In.	0.62	10.66	5.57	2.92	4.21	3.02	4.35	3.24	0.23	2.27	0.35	0.46

Calendar year 1957: Max 24,300 Min 11 Mean 903 Cfsm 2.62 In. 36.30
Water year 1957-58: Max 21,300 Min 21 Mean 889 Cfsm 2.78 In. 37.70

Peak discharge (base, 6,000 cfs).--Nov. 19 (2 p.m.) 22,700 cfs (19.80 ft); Dec. 9 (6 a.m.) 6,240 cfs (16.82 ft); Dec. 21 (7 p.m.) 6,260 cfs (16.83 ft); Feb. 7 (time unknown) 6,260 cfs (16.83 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

5750. Flint River near Chase, Ala.

Location--Lat 34°49'08", long 86°28'52", in SW $\frac{1}{4}$ sec. 36, T. 2 S., R. 1 E., on left bank 250 ft downstream from Nashville, Chattanooga & St. Louis Railway bridge, a quarter of a mile downstream from highway bridge, a third of a mile downstream from Brier Fork, and 5 miles northeast of Chase.

Drainage area--342 sq mi.

Records available--October 1929 to September 1958. Prior to May 1930 monthly discharge only, published in WSP 1306.

Gage--Water-stage recorder. Datum of gage is 640.37 ft above mean sea level. datum of 1929. Prior to May 18, 1934, staff gage at railway bridge 250 ft upstream at same datum.

Average discharge--29 years, 522 cfs.

Extremes--Maximum discharge during year, 17,200 cfs Nov. 19 (gage height, 16.8 ft); minimum, 96 cfs Sept. 15 (gage height, 1.08 ft).
1929-58: Maximum discharge, 42,000 cfs Jan. 21, 1954 (gage height, 25.00 ft); minimum, 44 cfs Sept. 20, 27, 30, 1931; minimum gage height, 0.82 ft Sept. 3, 27, 1954.
Flood in September 1929 reached a stage of 25.0 ft, from floodmarks (discharge, 42,000 cfs, from rating curve extended above 27,000 cfs).

Remarks--Records good. Some diurnal fluctuation caused by small mills above station.

Revisions (water years)--WSP 823: Drainage area. WSP 853: 1936(M). WSP 1306: 1934(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 6				Feb. 7 to Sept. 30			
1.1	106	8.0	4,120	1.1	100		
1.5	228	12.0	8,050	1.5	205		
2.0	406	15.0	12,400	2.0	385		
4.0	1,400			4.0	1,400		

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	226	148	630	584	995	745	540	*1,370	224	141	*186	115
2	220	148	561	529	726	605	457	1,100	*202	*154	190	111
3	343	229	529	461	552	535	421	895	211	132	627	109
4	275	278	547	427	479	480	498	770	205	129	334	107
5	220	*223	474	398	560	439	511	2,760	199	168	221	104
6	196	196	440	390	3,010	412	2,260	2,110	196	211	186	104
7	175	187	1,750	386	1,470	421	1,210	1,560	186	307	174	104
8	160	736	3,040	358	1,520	466	720	1,040	183	367	166	104
9	148	798	1,680	336	1,020	535	565	1,560	224	475	157	100
10	139	398	1,180	321	820	545	2,000	2,370	231	268	183	100
11	133	317	895	324	720	448	2,300	2,300	205	215	154	100
12	127	275	702	321	630	403	1,040	2,040	180	834	211	104
13	124	258	*607	332	545	498	770	1,400	168	1,730	208	107
14	121	2,090	607	524	508	645	640	945	160	1,340	171	104
15	115	1,800	584	483	555	493	895	745	183	525	152	104
16	112	3,110	702	402	530	426	1,240	635	476	345	152	102
17	130	3,720	654	*362	430	394	795	1,070	303	820	146	102
18	184	10,200	584	336	372	695	615	720	196	650	141	129
19	154	11,900	538	317	357	620	535	590	196	353	136	139
20	139	2,720	3,420	310	345	*488	493	615	190	328	132	136
21	133	1,320	2,310	347	*349	426	1,450	498	205	895	127	3,990
22	127	995	1,120	423	462	390	1,370	428	199	820	124	1,750
23	130	1,510	846	358	720	369	820	373	202	845	122	595
24	181	1,210	726	1,290	630	416	620	337	171	1,180	132	365
25	211	3,650	678	1,620	555	720	2,960	318	154	610	149	278
26	176	2,900	895	945	502	625	2,580	300	183	398	141	237
27	160	1,340	774	726	1,340	605	1,980	222	231	307	127	211
28	154	995	654	607	1,210	516	1,210	264	174	257	*122	196
29	148	870	607	533	-	457	3,670	257	160	224	120	183
30	145	750	538	483	-----	457	3,360	244	149	202	118	174
31	148	-----	501	506	-----	670	-----	234	-----	186	115	-----
Total	5,156	55,271	29,773	15,739	24,010	15,944	38,505	30,128	6,126	15,416	5,424	10,162
Mean	166	1,842	960	508	858	514	1,284	972	204	497	175	339
Cfam	0.485	5.39	2.61	1.49	2.51	1.50	3.75	2.84	0.596	1.45	0.532	0.991
In.	0.58	6.01	3.24	1.71	2.61	1.73	4.19	3.28	0.67	1.66	0.59	1.11

Calendar year 1957: Max 22,000 Min 67 Mean 688 Cfam 2.01 In. 27.38
Water year 1957-58: Max 11,900 Min 100 Mean 689 Cfam 2.01 In. 27.38

Peak discharge (base, 5,000 cfs)--Nov. 19 (7:30 a.m.) 17,200 cfs (16.8 ft); Nov. 25 (9 p.m.) 5,050 cfs (9.0 ft); Apr. 29 (9 p.m.) 6,100 cfs (10.1 ft); Sept. 21 (2 p.m.) 5,140 cfs (9.1 ft).

* Discharge measurement made on this day.

5755. Tennessee River at Whitesburg, Ala.

Location.--Lat 34°34'27", long 86°32'42", in NE¼ sec. 30, T. 5 S., R. 1 E., on right bank at Whitesburg, a quarter of a mile upstream from Aldridge Creek, a third of a mile upstream from Clement C. Clay Bridge on State Highway 38, 5½ miles downstream from Flint River, 11 miles south of Huntsville, 15½ miles downstream from Guntersville Dam, 58½ miles upstream from Wheeler Dam, and at mile 333.3.

Drainage area.--25,610 sq mi, approximately.

Records available.--October 1924 to September 1958. Monthly discharge only for some periods, published in WSP 1306. Prior to October 1936, published as "at Decatur." Gage-height records collected in this vicinity since 1875 (fragmentary prior to April 1909) are contained in files of Corps of Engineers and in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 549.00 ft above mean sea level, datum of 1929. Oct. 1, 1924, to Dec. 2, 1926, staff gage and Dec. 3, 1926, to Sept. 30, 1936, water-stage recorder, at site 28.3 miles downstream at datum 14.70 ft lower. Since Mar. 4, 1937, auxiliary water-stage recorder 28.3 miles downstream.

Average discharge.--34 years, 42,520 cfs.

Extremes.--Maximum discharge during year, 268,000 cfs Nov. 20 (gage height, 22.59 ft); minimum daily, 6,200 cfs Apr. 20; minimum gage height, 1.34 ft Mar. 10.

1924-58: Maximum discharge, 293,000 cfs Feb. 2, 1957 (gage height, 23.93 ft); minimum daily, 700 cfs Sept. 7, 1952, Nov. 1, 1953, Aug. 1, 1954.

Maximum stage known, 31.4 ft in March 1867 present site and datum, from high-water profile by Corps of Engineers.

Remarks.--Records good except those for periods of no gage-height record at base or auxiliary gage and those below 20,000 cfs, which are fair. Discharge below 20,000 cfs computed on basis of records for Guntersville Dam, adjusted for storage and inflow. Since 1936, flow regulated by increasing number of reservoirs above station (see p. 224).

Revisions (water years).--WSP 1306: 1936 (monthly runoff). WSP 1436: 1938-39, 1941-42.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*36,600	38,600	80,700	102,000	55,600	58,400	39,400	154,000	43,700	43,200	33,900	29,800
2	36,700	39,200	73,200	88,500	55,800	56,200	38,400	129,000	47,100	47,400	14,900	41,500
3	35,400	41,200	69,000	69,800	56,000	54,500	36,400	88,300	49,000	49,900	13,100	43,500
4	35,600	39,900	72,900	59,000	a49,200	51,500	33,900	61,600	48,500	38,100	*40,000	48,100
5	34,700	34,600	71,800	58,000	a49,900	46,300	27,100	56,300	45,300	21,800	43,700	49,300
6	35,800	34,400	69,500	57,800	64,900	42,100	33,700	55,400	48,700	12,700	42,200	20,900
7	35,900	a35,400	72,900	57,000	94,300	43,400	*41,600	67,000	41,900	39,300	43,600	21,300
8	35,100	a37,600	110,000	53,700	93,500	45,900	43,100	73,000	37,000	44,400	42,600	37,900
9	34,800	a49,000	140,000	50,300	75,800	36,600	33,800	86,300	41,600	50,100	21,500	43,900
10	35,700	a42,000	144,000	49,400	71,000	35,800	27,500	95,500	43,100	42,100	16,100	48,300
11	35,700	a47,000	138,000	49,600	68,100	46,100	41,700	97,500	44,000	51,700	41,500	45,900
12	39,200	a38,500	113,000	49,000	66,300	52,200	25,200	96,600	44,700	29,600	48,000	44,100
13	40,400	a36,700	94,400	49,400	60,800	43,800	24,600	86,800	43,500	10,900	50,700	24,900
14	38,200	a47,900	79,700	55,600	57,500	42,600	23,900	72,200	43,200	48,100	51,000	12,800
15	32,100	a67,800	77,300	63,700	a53,900	44,600	28,800	69,900	35,500	44,300	46,000	39,000
16	33,500	a112,000	76,100	55,900	a53,900	39,600	18,000	65,600	44,300	44,300	29,500	46,800
17	43,500	a159,000	71,600	54,000	a51,500	42,400	20,000	60,000	52,800	46,400	6,400	42,800
18	49,700	a225,000	69,800	50,100	a44,100	47,900	17,500	59,900	51,000	44,700	42,600	50,300
19	43,700	233,000	73,600	48,100	a47,700	54,000	13,600	58,500	45,100	40,200	49,600	51,000
20	32,100	265,000	83,300	49,600	a48,000	49,100	6,200	55,100	37,500	11,000	49,400	15,000
21	35,000	259,000	113,000	52,100	a48,000	51,900	36,400	52,800	39,600	40,600	49,400	20,900
22	33,500	240,000	133,000	51,000	49,900	50,100	32,900	52,800	36,100	38,400	49,500	37,800
23	45,200	189,000	140,000	48,900	51,400	35,700	26,100	54,300	47,100	42,500	27,200	39,200
24	49,000	139,000	138,000	57,900	51,400	38,400	33,200	53,800	51,400	46,200	8,700	*38,600
25	41,800	*129,000	105,000	67,500	52,700	48,800	49,500	53,900	49,400	44,700	42,100	36,500
26	49,100	130,000	89,900	63,800	50,800	52,300	56,800	54,100	42,300	23,700	49,400	35,200
27	49,100	134,000	89,700	68,100	57,700	56,000	62,900	*53,800	40,600	31,500	50,500	28,600
28	44,400	144,000	97,400	*62,700	60,600	52,000	63,300	51,500	22,600	43,800	50,900	21,300
29	38,800	127,000	104,000	57,300	-	35,700	91,300	48,000	20,800	40,200	43,400	39,700
30	39,100	99,000	107,000	54,800	-----	38,700	150,000	46,200	40,300	38,600	29,800	45,000
31	34,500	-----	110,000	53,900	-----	42,800	-----	43,700	-----	36,900	18,100	-----
Total	*1,203.7	*3,216.8	*3,007.8	*1,808.5	*1,640.3	*1,435.2	*1,176.6	*2,153.4	*1,277.7	*1,187.3	*1,142.9	*1,099.7
Mean	38,830	107,200	97,030	58,340	58,580	46,300	39,220	69,460	42,590	38,300	36,870	36,660
Cfs/m	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	288,000	Min	1,100	Mean	59,240	Cfs/m	2.31	In.	31.40			
Water year 1957-58: Max	265,000	Min	6,200	Mean	55,750	Cfs/m	2.18	In.	29.55			

* Discharge measurement made on this day.

* Expressed in thousands.

a No gage-height record at base or auxiliary gage; discharge estimated on basis of records for Guntersville Dam, adjusted for storage and inflow.

5765. Flint Creek near Falkville, Ala.

Location.--Lat 34°22'23", long 86°56'01", in SW $\frac{1}{4}$ sec. 2, T. 8 S., R. 4 W., near left bank on downstream side of highway bridge, 1.2 miles downstream from Robinson Creek, 1.5 miles west of Falkville, and 2.8 miles upstream from Cedar Creek.

Drainage area.--86.3 sq mi.

Records available.--July 1952 to September 1958.

Gage.--Water-stage recorder. Altitude of gage is 580 ft (from topographic map).

Average discharge.--6 years, 128 cfs.

Extremes.--Maximum discharge during year, 7,800 cfs Nov. 19 (gage height, 14.2 ft); minimum, 1.1 cfs Sept. 10, 11 (gage height, 1.03 ft).

1952-58: Maximum discharge, 9,200 cfs (revised) Mar. 21, 1955 (gage height, 14.6 ft); minimum, no flow for many days 1952-57.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1276	1953	Feb. 21, 1953	3,160	12.2
1336	1954	Jan. 16, 1954	7,200	14.0
1386	1955	Mar. 21, 1955	9,200	14.6
1506	1957	Feb. 1, 1957	5,300	13.3

Remarks.--Records good below 450 cfs and fair above except those for periods of no gage-height record, which are poor.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1953-57, superseding those published in WSP 1276, 1336, 1386, 1436, and 1506.

Date	Discharge	Date	Discharge	Date	Discharge
1953		1954-Con.		1955-Con.	
Jan. 10	1,240	Jan. 17	2,150	Mar. 22	4,930
24	985	21	1,020		
Feb. 12	1,490	22	4,700	1956	
13	1,060	23	1,920	Feb. 3	1,160
21	2,040	Dec. 29	2,200	4	1,930
22	1,220	30	1,120	5	1,790
Mar. 4	984			1957	
5	850	1955		Jan. 5	912
May 4	998	Feb. 6	1,810	30	950
5	1,430	7	1,580	31	2,000
		22	765		
1954		23	1,430		
Jan. 16	4,480	Mar. 21	5,810		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
January 1953.....	10,856	1,240	99	350	4.06	4.68
February.....	14,390	2,040	86	514	5.96	6.20
March.....	7,760	984	84	250	2.90	3.34
May.....	8,129	1,430	22	262	3.04	3.50
Water year 1952-53.....	-	2,040	0	134	1.55	21.06
Calendar year 1953.....	-	2,040	0	132	1.53	20.83
January 1954.....	19,492	4,700	19	629	7.29	8.40
Water year 1953-54.....	-	4,700	0	92.3	1.07	14.50
December 1954.....	4,064.6	2,200	1.5	131	1.52	1.75
Calendar year 1954.....	-	4,700	0	98.2	1.14	15.43
February 1955.....	12,107	1,810	57	432	5.01	5.22
March.....	17,449	5,810	63	563	6.52	7.47
Water year 1954-55.....	-	5,810	0	127	1.47	19.95
Calendar year 1955.....	-	5,810	0	116	1.34	18.22
February 1956.....	13,095	1,930	13	468	5.42	5.84
Water year 1955-56.....	-	1,930	0	87.9	1.02	13.83
Calendar year 1956.....	-	1,930	0	100	1.16	15.81
January 1957.....	8,077	2,000	39	261	3.02	3.48
Water year 1956-57.....	-	4,890	0	113	1.31	17.73

Revised peak discharge.--1953-54: Jan. 16 (3 p.m.) 7,200 cfs (14.0 ft); Jan. 22 (12 m.)

6,050 cfs (13.6 ft).

1954-55: Dec. 29 (1 p.m.) 3,260 cfs (12.25 ft); Feb. 6 (7:30 p.m.) 3,060 cfs (12.15 ft);

Mar. 21 (3 p.m.) 9,200 cfs (14.60 ft).

1955-56: Feb. 4 (11:30 p.m.) 2,410 cfs (11.8 ft).

1956-57: Feb. 1 (6 a.m.) 5,300 cfs (13.3 ft); Apr. 4 (9:30 a.m.) 2,080 cfs (11.6 ft).

5765. Flint Creek near Falkville, Ala.--Continued

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

2.1	17	8.0	361	1.0	0.9	8.0	371
2.5	25	10.0	645	1.2	2.4	10.0	695
3.5	54	10.5	880	1.5	5.8	10.5	950
4.5	99	11.0	1,340	2.0	14	11.0	1,330
6.0	183	12.0	2,730	3.0	42	12.0	2,780
7.0	255	13.0	4,530	4.0	83	13.0	4,700
				5.0	135	14.0	7,200
				7.0	270		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	38	195	120	141	500	183	884	12	6.9	47	4.3
2	57	35	171	100	113	307	159	575	12	6.1	96	3.7
3	116	38	153	88	100	*238	141	410	13	5.0	53	3.1
4	282	39	153	80	*86	195	183	270	11	4.4	*40	2.6
5	99	38	123	76	88	165	153	327	9.4	4.0	31	2.4
6	63	35	108	71	243	150	342	246	8.6	3.7	25	2.1
7	*50	39	306	*76	545	159	238	195	8.1	8.1	41	2.0
8	39	294	605	71	515	183	*171	159	7.2	*206	29	*a1.8
9	32	382	*640	61	348	216	147	1444	6.5	1,060	21	a1.7
10	27	150	620	59	246	183	289	126	*5.5	642	17	a1.6
11	24	106	515	57	209	159	288	132	4.9	213	15	1.5
12	22	*86	327	55	177	147	202	113	4.3	118	15	2.5
13	21	79	238	59	153	246	171	*110	4.0	93	37	4.4
14	19	1,020	216	80	132	254	150	86	3.6	65	20	3.8
15	17	1,440	177	69	153	209	359	69	165	49	15	3.0
16	17	810	171	59	a140	189	1,060	61	342	41	13	2.5
17	177	750	153	53	a130	177	668	55	52	63	12	2.3
18	102	*3,950	135	49	a120	279	455	48	27	42	11	2.6
19	59	5,560	128	46	a110	209	279	50	21	32	9.7	3.5
20	46	1,460	529	44	a100	183	216	69	28	30	8.2	4.2
21	39	695	712	118	a110	165	288	43	27	52	7.5	a50
22	34	530	500	118	164	150	288	36	22	52	6.8	a70
23	35	590	307	90	279	132	230	32	22	44	7.4	25
24	96	620	230	366	288	253	202	28	17	339	13	15
25	76	1,070	202	560	288	590	1,040	25	12	680	30	12
26	54	1,160	230	455	262	605	1,380	23	21	466	14	10
27	46	680	183	288	576	590	789	22	22	183	9.7	8.6
28	40	515	159	216	580	470	575	19	15	120	7.8	7.5
29	39	359	144	177	-	327	*2,360	17	11	86	6.6	6.8
30	37	262	123	159	-----	262	2,300	15	8.4	63	5.5	6.2
31	39	-----	116	141	-----	223	-----	14	-----	61	4.8	-----
Total	1,668	22,830	8,567	4,081	6,496	8,115	15,306	4,403	923.5	4,838.2	669.0	266.7
Mean	60.3	761	276	132	232	262	510	142	30.8	156	21.6	8.89
Cfsm	0.699	8.82	3.20	1.53	2.69	3.04	5.91	1.65	0.357	1.81	0.250	0.103
In.	0.80	9.84	3.69	1.76	2.80	3.50	6.60	1.90	0.40	2.08	0.29	0.11

Calendar year 1957: Max 5,560 Min 0 Mean 191 Cfsm 2.21 In. 30.04

Water year 1957-58: Max 5,560 Min 1.5 Mean 215 Cfsm 2.49 In. 33.77

Peak discharge (base, 2,000 cfs).--Nov. 14 (10 p.m.) 2,250 cfs (11.7 ft); Nov. 19 (5 a.m.) 7,800 cfs (14.2 ft); Apr. 29 (8 p.m.) 4,900 cfs (13.1 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for nearby streams.

5780. Elk River near Pelham, Tenn.

Location--Lat 35°17'48", long 85°52'12", on right bank at downstream side of bridge on U. S. Highway 41, 1.1 miles southeast of Pelham, Grundy County, and 1.8 miles upstream from Caldwell Creek.

Drainage area--65.6 sq mi.

Records available--November 1951 to September 1958.

Gage--Water-stage recorder. Datum of gage is 981.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge--6 years (1952-58), 135 cfs.

Extremes--Maximum discharge during year, 4,730 cfs Nov. 19 (gage height, 11.90 ft); minimum, 5.0 cfs Sept. 15, 17 (gage height, 1.97 ft).
1951-58: Maximum discharge, 4,950 cfs Feb. 1, 1957 (gage height, 12.02 ft); minimum, 1.0 cfs Sept. 27, 28, 1954; minimum gage height, 1.78 ft Sept. 1, 2, 1957.

Remarks--Records good.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19

Nov. 20 to Sept. 30

2.3	6.7	8.0	745	1.9	3.7	4.0	155
2.6	20	9.0	1,020	2.2	10	8.0	755
3.0	46	10.0	1,840	2.5	21	9.0	1,020
3.5	92	11.3	3,700	3.0	47	9.7	1,530
4.0	156			3.5	90		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	42	148	129	132	186	144	581	44	9.7	32	11
2	51	36	150	111	116	146	125	362	139	8.5	76	9.9
3	86	39	116	97	100	122	112	258	64	7.7	246	9.1
4	150	53	130	86	88	103	150	202	38	7.5	127	8.3
5	201	43	108	77	197	88	154	256	50	7.0	76	7.7
6	145	38	96	72	835	80	418	461	25	8.6	51	7.5
7	92	34	633	71	964	88	341	690	22	11	38	7.3
8	*58	67	1,480	64	832	108	220	557	19	15	31	6.8
9	39	153	722	55	332	113	170	390	47	18	26	6.4
10	28	114	388	50	233	133	215	608	79	18	21	6.2
11	22	89	258	48	*185	120	302	570	34	16	52	6.2
12	18	73	*185	45	149	107	233	434	26	183	278	*5.9
13	15	64	150	54	121	113	185	446	21	372	386	5.9
14	12	443	137	179	105	137	150	293	18	377	240	5.3
15	10	778	122	146	99	118	150	206	16	194	*170	5.1
16	9.5	1,100	182	116	85	106	150	154	15	112	100	5.1
17	12	1,960	215	*100	68	99	122	118	14	*86	70	5.5
18	41	3,600	188	88	60	209	108	94	12	66	53	6.6
19	32	*3,270	174	76	55	206	99	102	*11	48	40	5.1
20	25	1,070	1,040	71	50	*170	21	168	10	36	32	7.7
21	20	499	928	87	49	140	209	111	10	161	26	60
22	16	299	449	109	60	118	*260	84	10	209	23	*335
23	16	370	281	86	75	102	221	*67	12	113	20	106
24	134	334	209	351	66	132	214	54	11	120	21	56
25	166	604	173	698	64	226	1,330	45	9.7	*127	34	38
26	120	640	174	436	61	194	986	39	23	232	30	30
27	91	395	154	270	236	178	695	34	26	155	*22	26
28	73	263	139	202	276	154	444	29	18	91	18	25
29	59	216	134	162	-	132	783	26	13	64	16	24
30	50	182	114	136	-----	126	1,080	23	11	47	14	20
31	49	-----	103	121	-----	178	-----	20	-----	37	12	-----
Total	1,872.5	16,868	9,460	4,393	5,493	4,232	9,861	7,482	827.7	2,955.0	2,381	858.6
Mean	60.4	582	305	142	196	137	329	241	27.6	95.3	76.8	28.6
Cfs	0.921	8.57	4.65	2.16	2.99	2.09	5.02	3.67	0.421	1.45	1.17	0.436
In.	1.06	9.56	5.36	2.49	3.11	2.40	5.59	4.24	0.47	1.68	1.35	0.49

Calendar year 1957: Max 4,300 Min 1.5 Mean 201 Cfs 3.06 In. 41.65
Water year 1957-58: Max 3,600 Min 5.1 Mean 183 Cfs 2.79 In. 37.80

Peak discharge (base, 1,000 cfs)--Nov. 19 (2 a.m.) 4,730 cfs (11.90 ft); Dec. 8 (3:30 a.m.) 1,910 cfs (10.06 ft); Dec. 20 (5:30 p.m.) 1,660 cfs (9.83 ft); Feb. 7 (9:30 a.m.) 1,440 cfs (9.04 ft); Apr. 25 (3:30 p.m.) 1,850 cfs (10.01 ft); Apr. 29 (11 p.m.) 1,520 cfs (9.69 ft).

* Discharge measurement made on this day.

5785. Bradley Creek near Prairie Plains, Tenn.

Location.--Lat 35°21'21", long 85°58'45", on left bank 165 ft downstream from highway bridge, 1.1 miles northwest of Prairie Plains, Coffee County, and 3.6 miles upstream from mouth.

Drainage area.--41.3 sq mi.

Records available.--November 1951 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 968.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--6 years (1952-58) 69.7 cfs.

Extremes.--Maximum discharge during year, 4,320 cfs Nov. 18 (gage height, 12.17 ft), from rating curve extended above 2,100 cfs on basis of slope-conveyance study; minimum, 9.2 cfs Oct. 1 (gage height, 1.28 ft).
1951-58: Maximum discharge, that of Nov. 18, 1957; minimum, 3.2 cfs Nov. 23, 24, 1954; minimum gage height, 1.01 ft Nov. 17, 18, 1952.

Remarks.--Records good.

Revisions (water years).--WSP 1386: 1952, 1954(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 11-24)

Oct. 1 to Nov. 18				Nov. 19 to July 12				July 13 to Sept. 30			
1.4	11	5.0	462	1.3	14	5.0	481	1.4	10		
1.7	31	7.0	820	1.6	36	7.0	851	1.6	22		
2.0	61	9.0	1,480	2.0	72	9.3	1,600	2.0	57		
3.0	166	10.4	2,210	3.0	176			3.0	176		
								5.1	498		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	102	78	93	68	57	211	82	19	67	17
2	12	11	94	68	78	60	51	194	150	19	97	17
3	18	12	88	60	69	57	50	140	59	18	67	16
4	21	11	86	57	64	52	63	115	50	18	54	15
5	17	11	77	52	120	50	59	194	46	17	48	14
6	19	11	73	50	286	49	99	343	42	18	44	14
7	17	11	525	50	323	51	73	290	40	19	42	14
8	*16	19	539	45	184	60	62	177	37	30	39	14
9	15	22	264	40	136	76	57	193	38	35	36	13
10	14	17	188	39	114	68	123	403	35	28	34	12
11	14	16	147	37	*101	58	117	279	33	22	182	12
12	14	15	*117	35	90	54	84	268	32	1,180	78	*12
13	13	15	106	34	80	64	71	176	30	418	46	12
14	12	259	101	48	74	64	64	135	28	486	42	12
15	12	121	92	40	73	56	72	113	27	147	*38	11
16	12	954	116	36	65	52	68	98	25	108	35	11
17	17	591	106	*33	59	51	58	87	25	*92	33	12
18	14	2,180	93	31	55	107	52	78	24	72	31	14
19	14	*1,580	91	28	51	85	48	96	*22	61	29	10
20	13	330	577	28	49	*72	46	100	21	53	28	12
21	12	218	278	32	48	66	118	75	22	50	27	29
22	12	175	176	35	52	60	*100	67	29	142	26	20
23	12	204	138	31	53	58	72	*61	20	217	25	17
24	14	184	118	258	52	70	68	57	20	92	24	16
25	13	301	109	325	50	100	440	53	19	208	24	15
26	12	237	122	166	48	82	461	50	53	398	22	14
27	12	166	102	129	100	78	314	48	28	122	22	14
28	12	140	92	108	91	68	186	45	25	90	20	13
29	12	142	86	96	-	63	383	42	21	77	20	12
30	12	121	76	88	-----	60	289	40	20	65	19	12
31	12	-----	71	81	-----	61	-----	39	-----	57	18	-----
Total	430	8,065	4,950	2,236	2,658	2,020	3,805	4,287	1,103	4,378	1,317	426
Mean	13.9	269	160	72.1	94.9	65.2	127	138	36.8	141	42.5	14.2
Cfsm	0.337	6.51	3.87	1.75	2.30	1.58	3.34	0.891	3.41	1.03	0.344	0.38
In.	0.39	7.26	4.46	2.01	2.39	1.82	3.43	3.86	0.99	3.94	1.19	0.38

Calendar year 1957: Max 2,500 Min 4.4 Mean 93.4 Cfsm 2.26 In. 30.70
Water year 1957-58: Max 2,180 Min 10 Mean 97.7 Cfsm 2.37 In. 32.12

Peak discharge (base, 600 cfs).--Nov. 18 (12 p.m.) 4,320 cfs (12.17 ft); Dec. 7 (10:30 p.m.) 976 cfs (7.42 ft); Dec. 20 (2 p.m.) 1,020 cfs (7.58 ft); Jan. 24 (10 p.m.) 626 cfs (5.85 ft); Apr. 29 (7:30 p.m.) 612 cfs (5.77 ft); July 12 (2:30 p.m.) 2,640 cfs (10.63 ft); July 25 (11 p.m.) 961 cfs (7.37 ft).

* Discharge measurement made on this day.

5815. West Fork Mulberry Creek at Mulberry, Tenn.

Location.--Lat 35°12'34", long 86°27'46", near right bank on downstream side of old bridge, 1,000 ft downstream from State Highway 50, 0.2 mile southwest of Mulberry, Lincoln County, and 1.7 miles upstream from confluence with East Fork.

Drainage area.--41.2 sq mi.

Records available.--December 1953 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 687.72 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 12,800 cfs Nov. 17 (gage height, 14.8 ft), from rating curve extended above 5,600 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.1 cfs Sept. 7 (gage height, 0.91 ft).
1953-58: Maximum discharge, that of Nov. 17, 1957; no flow at times in 1954-57.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Revisions (water years).--WSP 1506: 1954-55(M), 1956(P).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 17				Nov. 18 to Sept. 30			
1.5	13	4.0	477	0.94	0.2	1.5	15
1.8	35	5.0	816	1.0	1.6	1.7	29
2.0	51	9.0	2,390	1.1	1.6	2.0	60
2.5	129	10.1	3,010	1.2	4.0	2.5	129
3.5	337			1.3	6.5	3.0	230

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	40	64	40	80	71	58	186	8.0	2.7	6.5	0.4
2	40	35	51	*35	61	58	51	146	7.5	1.9	24	.4
3	*218	50	*43	33	80	49	48	107	7.0	1.6	12	.4
4	133	45	37	28	44	41	57	148	6.5	1.3	7.5	.2
5	110	40	29	26	156	34	62	361	6.0	5.3	5.7	.2
6	100	35	26	25	*816	*33	140	459	5.5	6.0	4.5	.2
7	80	35	1,390	26	461	34	79	*444	5.0	14	3.6	.2
8	65	30	512	23	182	43	*61	198	4.5	70	3.6	.2
9	55	150	198	20	115	76	53	357	4.5	26	3.3	.2
10	50	100	120	18	89	62	531	316	4.0	14	2.7	.2
11	40	75	84	17	73	50	175	268	3.5	*8.2	2.4	*.2
12	35	50	60	16	59	43	113	169	3.5	437	2.7	.2
13	30	150	50	24	49	79	84	113	*3.3	78	*2.4	.3
14	25	637	43	58	41	73	70	84	2.7	38	2.2	.3
15	20	192	39	42	43	60	94	66	2.4	21	1.9	.4
16	30	700	40	34	33	53	78	53	2.2	188	1.7	.6
17	50	*3,000	39	29	29	69	62	45	2.2	257	1.7	17
18	40	2,500	37	26	28	138	55	36	2.1	66	2.1	18
19	30	1,010	120	23	25	92	49	34	1.9	35	1.7	4.7
20	25	284	1,440	22	22	77	42	28	1.9	29	1.3	389
21	20	147	254	47	19	66	365	23	3.7	20	1.0	1,400
22	15	108	137	47	22	55	138	20	19	132	.9	154
23	400	159	96	36	23	48	94	18	6.0	126	.9	66
24	300	156	76	549	22	65	232	15	4.0	57	2.4	39
25	200	534	67	260	22	135	1,240	14	2.7	33	5.7	23
26	130	241	85	148	22	108	507	12	34	22	2.4	18
27	90	144	68	101	203	93	303	11	10	14	1.7	13
28	60	115	65	78	104	79	198	10	5.7	11	1.2	10
29	40	110	53	66	-	67	557	9.5	4.2	8.9	.9	8.9
30	45	83	46	56	-	70	220	9.0	3.0	7.8	.7	7.8
31	40	-----	41	61	-----	67	-----	8.5	-----	6.5	.5	-----
Total	2,546	10,955	5,410	2,016	2,893	2,088	5,816	3,768.0	176.5	1,738.2	111.8	2,175.0
Mean	82.1	365	175	65.0	103	67.4	194	122	5.88	56.1	3.61	72.4
Cfs/m	1.99	8.86	4.25	1.58	2.50	1.64	4.71	2.96	0.143	1.36	0.088	1.76
In.	2.30	9.89	4.88	1.82	2.61	1.88	5.25	3.40	0.16	1.57	0.10	1.96

Calendar year 1957: Max 3,000 Min 0 Mean 119 Cfs/m 2.89 In. 39.34
Water year 1957-58: Max 3,000 Min 0.2 Mean 109 Cfs/m 2.65 In. 35.82

Peak discharge (base, 3,500 cfs).--Nov. 17 (time unknown) 12,800 cfs (14.8 ft); Dec. 20 (4:30 a.m.) 4,950 cfs (11.82 ft); Sept. 21 (11 a.m.) 5,270 cfs (12.00 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1, 2, Oct. 5 to Nov. 13, Nov. 16-18, May 29 to June 12; discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams.

5820. Elk River above Fayetteville, Tenn.

Location.--Lat 35°08'04", long 86°32'23", on right bank 100 ft downstream from highway bridge, 1½ miles southeast of Fayetteville, Lincoln County, 4 miles upstream from Norris Creek, and at mile 93.9.

Drainage area.--827 sq mi.

Records available.--August 1934 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 650.58 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 1,401 cfs (unadjusted).

Extremes.--Maximum discharge during year, 29,500 cfs Nov. 18 (gage height, 25.17 ft); minimum, 269 cfs Sept. 6 (gage height, 1.84 ft).

1934-58: Maximum discharge, 35,500 cfs Jan. 5, 1949 (gage height, 27.14 ft); minimum, 111 cfs Sept. 17, 1954; minimum gage height, 1.02 ft Oct. 27, 1941.

Flood in March 1842 reached a stage of 27.5 ft, from reports of Tennessee Valley Authority.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Prior to August 1949, diurnal fluctuation at low flow caused by powerplants upstream. Flow regulated by Woods Reservoir since 1952 (see p. 228).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 10-23)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
1.9	283	15.0	9,050	1.8	252	10.0	5,170
2.0	323	19.0	13,500	2.0	336	15.0	9,050
4.0	1,250	24.0	26,000	3.0	776	19.0	13,300
10.0	5,050			6.0	2,520	25.0	29,000

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	650	2,260	1,390	1,890	1,960	1,350	6,360	739	445	744	349
2	660	600	*2,070	*1,580	1,740	1,550	1,270	4,720	730	428	860	340
3	1,140	1,100	1,780	1,270	1,550	1,410	1,160	3,360	1,970	374	1,500	332
4	*705	1,500	1,750	1,210	1,380	1,080	1,240	2,820	856	357	1,010	328
5	810	1,200	1,600	1,160	1,350	906	1,230	3,930	712	370	1,010	286
6	925	1,000	1,450	1,120	*3,640	*851	2,710	4,200	725	524	933	273
7	815	800	4,660	1,100	6,580	827	2,560	*5,310	716	466	748	290
8	624	1,500	7,140	1,000	5,860	841	*1,970	4,650	684	739	*581	294
9	409	2,500	7,780	950	4,840	960	1,850	5,950	693	785	550	332
10	370	2,000	5,550	906	3,560	960	3,570	5,420	762	*922	524	336
11	340	1,600	3,400	886	2,350	880	3,230	5,300	725	785	519	*302
12	320	1,300	2,520	870	1,980	822	2,690	5,120	625	2,380	515	294
13	310	1,100	2,220	875	1,810	886	2,290	4,030	*576	5,020	594	365
14	300	*3,730	1,910	1,060	1,670	978	2,060	3,420	546	4,480	822	374
15	290	3,300	1,720	1,190	1,520	928	1,720	2,560	634	3,530	813	340
16	330	7,010	1,810	1,240	1,500	922	1,690	2,260	880	2,880	799	298
17	400	9,280	1,770	1,640	1,400	896	1,210	1,990	559	3,400	656	365
18	600	24,600	1,660	1,750	1,200	1,240	1,020	1,700	497	2,080	666	546
19	540	*27,800	1,690	1,730	1,010	1,540	929	1,600	480	1,410	603	462
20	480	22,800	6,050	1,710	944	1,450	896	1,790	471	1,180	454	694
21	430	15,300	6,360	1,760	960	1,330	2,120	1,770	428	1,190	378	6,600
22	400	9,340	5,840	1,760	878	1,240	2,250	1,480	475	1,900	407	7,710
23	500	4,050	4,070	1,390	1,070	1,170	2,750	1,210	546	2,630	378	3,110
24	1,700	3,790	2,690	2,460	1,170	1,180	2,610	1,090	519	2,200	471	1,900
25	1,600	5,830	2,240	4,480	1,070	1,520	5,920	1,030	424	1,590	594	1,180
26	1,200	6,350	2,250	4,240	967	1,690	7,920	984	502	1,380	515	944
27	900	4,830	2,140	3,610	1,810	1,640	8,310	922	550	1,420	462	789
28	800	3,770	1,890	2,590	2,500	1,540	5,740	739	563	1,580	386	698
29	850	2,890	1,810	1,980	-	1,440	5,790	702	480	1,380	374	698
30	800	2,590	1,760	1,810	-	1,380	6,820	707	454	1,050	365	585
31	700	-	1,330	1,610	-	1,400	-	758	-	860	357	-
Total	20,666	174,110	93,150	52,327	58,099	37,447	86,845	85,882	19,521	49,735	19,608	31,424
Mean	667	5,804	3,005	1,688	2,075	1,208	2,895	2,770	651	1,604	633	1,047
Observed						Adjusted†						
Calendar year 1957:	Max	31,300	Min	137	Mean	2,095	Mean	2,095	Cfsm	2.53	In.	34.39
Water year 1957-58:	Max	27,800	Min	273	Mean	1,997	Mean	1,997	Cfsm	2.41	In.	32.78

Peak discharge (base, 8,000 cfs).--Nov. 18 (12 p.m.) 29,500 cfs (25.17 ft); Dec. 9 (8 a.m.) 8,140 cfs (13.98 ft); Apr. 26 (11:30 p.m.) 9,280 cfs (15.24 ft); Sept. 21 (time unknown) 9,510 cfs (15.45 ft).

* Discharge measurement made on this day.

† Adjusted for change in contents in Woods Reservoir.

Note.--No gage-height record Oct. 10 to Nov. 13, Sept. 21; discharge estimated on basis of high-water marks, weather records, and records for stations on nearby streams.

5830. Bradshaw Creek at Frankewing, Tenn.

Location.--Lat 35°11'31", long 86°50'43", on downstream side of second pier from right abutment of bridge on U. S. Highway 64, 0.4 mile east of Frankewing, 2.2 miles downstream from Little Bradshaw Creek, and 10.5 miles east of Pulaski, Giles Coutny.

Drainage area.--36.5 sq mi.

Records available.--November 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 655.61 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,500 cfs Nov. 18 (gage height, 11.82 ft); minimum, 0.04 cfs Sept. 10, 11 (gage height, 1.30 ft).

1954-58: Maximum discharge, 12,600 cfs Mar. 21, 1955 (gage height, 16.38 ft), from rating curve extended above 7,200 cfs on basis of contracted-opening measurement of peak flow; no flow at times in 1954-57.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 4, 5, May 6-9, June 8, 9, 11-19, June 21 to July 7)

Oct. 1 to Apr. 10

Apr. 11 to Sept. 30

1.77	15	1.31	0.05	2.0	31
2.0	31	1.4	.2	2.5	88
2.5	74	1.5	1.1	3.0	160
3.0	140	1.6	3.8	4.0	332
5.0	520	1.7	7.8	6.3	802
8.0	1,380	1.8	15		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	35	47	46	39	54	46	133	13	0.9	4.4	0.4
2	30	30	42	40	32	47	43	99	13	.7	4.1	.2
3	40	45	*39	34	29	40	42	75	10	.5	3.5	.2
4	*34	40	34	32	27	36	43	154	9.6	.4	2.6	*.2
5	49	35	30	28	53	33	92	405	8.4	10	2.0	.1
6	45	33	28	28	292	33	132	414	8.4	3.5	1.5	.1
7	40	30	908	28	192	34	60	245	7.3	25	1.3	.1
8	35	30	297	24	103	32	49	157	6.3	47	*.9	.07
9	30	120	122	*22	74	35	46	*377	6.5	22	.7	.06
10	28	90	62	20	62	31	384	291	7.3	*10	.7	.05
11	25	70	58	20	52	28	*151	216	5.1	7.3	11	.06
12	23	50	46	18	44	28	110	134	*3.8	19	25	.08
13	22	150	40	23	38	34	87	96	3.2	85	31	.1
14	21	*320	40	32	*35	*32	73	76	2.6	34	14	.1
15	20	91	34	27	37	31	167	63	2.3	18	6.8	.08
16	30	817	33	24	30	30	106	55	2.6	16	4.7	.1
17	45	921	30	23	28	41	85	47	2.3	12	4.1	7.6
18	40	1,360	29	20	26	67	75	41	2.0	8.4	3.5	7.0
19	30	412	64	18	22	49	67	39	6.1	6.8	2.6	2.3
20	25	122	798	18	25	44	64	35	12	26	2.3	294
21	20	80	179	56	23	40	373	31	3.2	13	1.7	565
22	15	71	114	44	27	37	133	28	2.3	9.0	1.3	91
23	300	92	81	37	27	35	92	25	1.7	7.8	2.0	50
24	200	110	67	494	26	85	165	23	1.1	7.8	11	36
25	150	355	119	203	25	82	801	22	1.0	5.9	6.3	28
26	100	126	124	117	25	84	292	21	31	5.9	3.2	24
27	80	88	81	76	248	79	182	19	5.1	5.1	1.7	21
28	60	80	72	59	78	64	134	19	2.3	4.7	1.3	17
29	40	66	60	50	-	56	372	17	1.5	4.7	1.0	13
30	45	56	52	43	-	58	150	14	1.0	7.1	.8	13
31	40	-	49	42	-	53	-	14	-	9.5	.5	-
Total	1,682	5,915	3,799	1,746	1,719	1,429	4,616	3,385	181.8	433.0	157.5	1,170.90
Mean	54.3	197	123	56.3	61.4	46.1	154	109	6.06	14.0	5.08	39.0
Cfsm	1.43	5.40	3.37	1.54	1.68	1.26	4.22	2.99	0.166	0.384	0.139	1.07
In.	1.71	6.03	3.87	1.78	1.75	1.46	4.70	3.45	0.19	0.44	0.16	1.19
Calendar year 1957: Max	1,940				Min 0	Mean 80.1		Cfsm 2.19		In. 29.80		
Water year 1957-58: Max	1,360				Min 0.05	Mean 71.9		Cfsm 1.97		In. 26.73		

Peak discharge (base, 2,500 cfs).--Nov. 18 (6 p.m.) 3,500 cfs (11.82 ft); Dec. 20 (3:30 a.m.) 3,410 cfs (11.71 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1-3, Oct. 6 to Nov. 13; discharge estimated on basis of weather records and records for stations on nearby streams.

5835. Weakley Creek near Bodenham, Tenn.

Location.--Lat 35°15'08", long 87°10'08", on right downstream bank at wingwall of highway bridge, 1.6 miles northwest of Bodenham, 1.6 miles downstream from Muckle Creek, 8.7 miles northwest of Pulaski, Giles County, and 4.9 miles upstream from mouth.

Drainage area.--24.4 sq mi.

Records available.--July 1955 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 688.62 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 2,440 cfs Nov. 17 (gage height, 7.68 ft), from rating curve extended above 670 cfs; minimum, 4.5 cfs Sept. 10, 11 (gage height, 1.45 ft).

1955-58: Maximum discharge, that of Nov. 17, 1957; minimum, 3.8 cfs Sept. 18, 1956; minimum gage height, 0.66 ft June 10-12, Sept. 18, 1956.

Flood of Mar. 21, 1955, reached a discharge of 13,500 cfs at site 2.3 miles upstream (drainage area, 20.4 sq mi), from slope-area measurement of peak flow.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 3, Dec. 21 to Jan. 24)

Oct. 1 to Dec. 20

Dec. 21 to May 9

May 10 to Sept. 30

1.66	8.5	1.5	20	1.4	3.0
1.7	12	1.7	34	1.5	6.0
1.8	22	2.0	64	1.6	11
2.0	50	2.5	130	1.8	28
3.0	214	3.0	214	2.0	50
5.7	745	4.3	444	3.1	231

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	11	54	41	52	51	39	103	21	11	8.0	5.4
2	9.0	14	*47	38	47	46	36	88	20	10	9.0	5.4
3	*8.5	17	42	35	42	41	35	78	19	10	9.0	5.4
4	25	15	35	33	39	36	37	89	19	10	8.0	*5.1
5	17	14	33	32	39	32	38	95	19	9.5	7.5	4.8
6	14	13	30	31	65	31	68	82	17	10	7.0	4.8
7	12	12	350	31	32	31	56	74	17	10	6.5	4.8
8	25	243	*29	28	30	30	49	*65	17	9.5	*6.0	4.8
9	10	25	136	28	65	30	45	129	17	9.5	7.0	4.8
10	9.5	20	97	25	56	29	*160	228	16	*10	8.5	4.8
11	9.0	18	73	25	52	28	122	195	*16	9.0	8.5	4.8
12	9.0	15	59	24	46	28	86	135	16	10	11	5.1
13	9.0	13	49	24	*41	*28	68	92	15	10	10	5.4
14	8.5	*99	37	28	38	26	60	69	15	9.5	9.0	5.4
15	8.5	68	30	28	38	26	93	55	15	9.0	8.0	5.1
16	9.5	291	28	28	32	25	100	45	15	8.5	7.5	5.1
17	13	723	25	28	31	25	86	40	14	8.0	7.5	7.0
18	12	*549	23	27	29	33	71	36	13	7.5	7.5	9.0
19	11	285	25	26	28	35	60	34	13	7.0	6.5	7.0
20	11	131	284	25	27	36	54	32	13	7.5	6.0	26
21	10	87	116	29	27	35	75	30	13	9.5	5.7	140
22	10	62	86	30	27	32	75	28	13	10	6.0	35
23	25	53	66	31	27	32	65	28	13	10	6.0	27
24	40	46	54	146	27	49	76	28	13	10	7.0	23
25	25	79	59	170	27	95	439	27	12	9.5	8.0	19
26	20	71	78	113	27	93	188	28	15	9.5	7.0	17
27	15	54	69	87	63	76	130	26	16	9.0	6.0	14
28	13	73	62	72	61	62	114	24	14	8.5	5.7	13
29	12	84	54	62	-	55	140	24	13	8.0	5.7	12
30	12	70	49	56	-	50	122	23	11	7.5	5.4	11
31	12	-	46	54	-	45	-	22	-	7.5	5.4	-
Total	419.5	3,037	2,439	1,436	1,223	1,271	2,787	2,052	460	284.5	225.9	441.0
Mean	13.5	101	78.7	46.3	43.7	41.0	92.9	66.2	15.3	9.18	7.29	14.7
Cfsm	0.553	4.14	3.23	1.90	1.79	1.68	3.81	2.71	0.627	0.376	0.299	0.602
In.	0.64	4.63	3.72	2.19	1.86	1.94	4.25	3.13	0.70	0.43	0.34	0.67

Calendar year 1957: Max 1,050

Min 4.8

Mean 53.0

Cfsm 2.17

In. 29.49

Water year 1957-58: Max 723

Min 4.8

Mean 44.0

Cfsm 1.80

In. 24.50

Peak discharge (base, 1,000 cfs).--Nov. 17 (6:30 p.m.) 2,440 cfs (7.68 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1, 2, Oct. 4 to Nov. 13; discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams.

5840. Richland Creek near Pulaski, Tenn.

Location.--Lat 35°12'51", long 87°06'05", on right bank 1,200 ft upstream from bridge on U. S. Highway 64. 1 mile downstream from Weakley Creek, and 4 miles west of Pulaski, Giles County.

Drainage area.--366 sq mi.

Records available.--April 1934 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 642.54 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 596 cfs.

Extremes.--Maximum discharge during year, 19,500 cfs Nov. 18 (gage height, 18.82 ft); minimum, 24 cfs Sept. 10, 11 (gage height, 0.72 ft).

1934-58: Maximum discharge, 75,000 cfs Mar. 21, 1955 (gage height, 27.49 ft), from rating curve extended above 32,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 7.9 cfs Sept. 11, 1954 (gage height, 0.52 ft).

Flood in March 1902 (discharge, about 100,000 cfs) exceeded all known floods, including those of 1842 and 1856, from report by Tennessee Valley Authority.

Remarks.--Records good except those for period of no gage-height record, which are fair.

Revisions (water years).--WSP 823: 1935-36(M), drainage area. WSP 1386: 1935-36, 1938, 1944, 1945-46(M), 1948, 1950-51(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-23			Oct. 24 to Sept. 30		
1.2	72		0.7	22	12.0
1.5	112		1.0	60	15.0
2.0	200		2.5	375	15.5
3.0	440		3.5	675	16.5
			10.0	3,220	17.8
					14,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	160	218	882	a620	602	738	598	1,940	192	86	98	34
2	160	234	756	a550	498	654	528	1,600	186	80	145	32
3	168	519	*664	a500	442	543	501	1,270	180	74	130	31
4	*434	430	574	a460	402	477	543	1,270	166	73	98	*29
5	266	370	492	a420	438	426	526	2,350	158	69	80	28
6	214	324	448	a390	997	408	1,700	2,420	150	98	67	28
7	166	292	3,920	a370	2,040	405	1,140	2,180	146	106	80	28
8	134	964	5,420	*359	1,510	405	857	1,580	138	126	*57	26
9	118	1,000	2,590	351	1,110	590	717	*1,870	130	142	54	25
10	104	682	1,650	315	899	366	2,650	3,260	130	*106	56	25
11	95	522	1,180	306	762	338	*2,520	3,010	126	92	69	25
12	90	438	874	292	640	320	1,590	2,310	*124	112	162	28
13	85	*417	734	327	546	338	1,160	1,580	118	200	139	28
14	78	1,980	644	410	*492	*338	941	1,140	110	178	177	29
15	73	1,760	577	385	495	315	1,380	899	106	148	90	29
16	78	5,070	543	361	425	306	1,730	742	106	108	76	28
17	195	7,110	495	347	368	324	1,370	633	102	124	69	172
18	168	14,200	465	354	339	513	1,110	531	94	128	64	236
19	129	8,100	584	315	327	540	924	492	90	98	56	82
20	112	3,440	4,860	311	315	519	787	435	130	92	51	289
21	99	1,770	3,000	382	311	486	1,400	390	112	94	46	2,430
22	93	1,230	1,630	450	334	445	1,580	357	188	118	44	1,510
23	276	1,150	1,170	398	343	422	1,100	324	138	138	46	480
24	1,440	994	930	1,780	351	570	1,020	304	104	184	57	320
25	710	1,830	930	3,180	324	1,160	5,140	292	90	144	96	242
26	471	1,700	1,310	1,980	320	1,250	3,770	276	178	120	67	200
27	366	1,280	a1,100	1,340	855	1,140	2,420	256	184	102	51	172
28	299	1,250	a980	994	952	969	2,700	253	128	88	45	152
29	260	1,370	a860	822	-	829	2,690	228	106	78	41	132
30	249	1,110	a750	703	-----	762	2,500	210	94	73	39	122
31	242	-----	a680	630	-----	696	-----	202	-----	114	37	-----
Total	7,532	61,754	41,642	20,352	17,416	17,394	47,282	34,624	3,994	3,493	2,357	6,792
Mean	243	2,058	1,343	657	622	561	1,576	1,117	133	113	76.0	226
Cfsm	0.664	5.62	3.67	1.80	1.70	1.53	4.31	3.05	0.363	0.309	0.208	0.617
In.	0.77	6.27	4.23	2.07	1.77	1.77	4.80	3.52	0.41	0.35	0.24	0.69

Calendar year 1957: Max 17,900 Min 18 Mean 848 Cfsm 2.32 In. 31.45
 Water year 1957-58: Max 14,200 Min 25 Mean 725 Cfsm 1.98 In. 26.89

Peak discharge (base, 6,000 cfs).--Nov. 18 (4 a.m.) 19,500 cfs (18.82 ft); Dec. 8 (4 a.m.) 6,250 cfs (14.45 ft); Apr. 25 (7 to 8 a.m.) 6,070 cfs (14.27 ft).

* Discharge measurement made on this date.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5845. Elk River near Prospect, Tenn.

Location.--Lat 35°01'39", long 86°56'52", on right bank 50 ft upstream from highway bridge, 1.1 miles downstream from Richland Creek, 3.2 miles east of Prospect, Giles County, 5.4 miles upstream from Ford Creek, 7.9 miles upstream from Tennessee-Alabama State line, and at mile 41.5.

Drainage area.--1,784 sq mi.

Records available.--July 1904 to February 1908, January 1919 to September 1958. Published as "near Elkmont, Ala." 1904-8, 1919-34.

Gage.--Water-stage recorder. Datum of gage is 563.29 ft above mean sea level, datum of 1929. July 1904 to February 1908 and January 1919 to March 1934, chain gage at site 11½ miles downstream at datum 13.52 ft lower.

Average discharge.--42 years (1904-7, 1919-58), 3,022 cfs (unadjusted).

Extremes.--Maximum discharge during year, 53,200 cfs Nov. 19 (gage height, 33.25 ft); minimum, 293 cfs Sept. 7 (gage height, 0.91 ft).

1904-8, 1919-58: Maximum discharge, 104,000 cfs Mar. 22, 1955 (gage height, 38.96 ft), from rating curve extended above 63,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 85 cfs Sept. 18-20, 1925, Sept. 11, 1931.

Flood in March 1902 reached a stage of 40.9 ft (discharge, 130,000 cfs), and may have been equalled by the flood in March 1897, from reports by Tennessee Valley Authority.

Remarks.--Records excellent. Prior to August 1949, diurnal fluctuation at low flow caused by powerplants upstream. Flow regulated by Woods Reservoir since 1952 (see p. 228).

Revisions (water years).--WSP 523: 1904-8, 1919-20. WSP 823: Drainage area. WSP 1436: 1920-22, 1923(M), 1924, 1927, 1929, 1931-32(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
1.4	420	10.0	7,260	0.9	290	10.0	7,600
1.8	590	18.0	15,600	1.0	318	20.0	18,200
3.0	1,260	25.0	25,100	2.0	780	25.0	25,100
6.0	3,640	28.0	30,300	3.0	1,350	30.0	36,400
				6.0	3,800	35.0	51,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	755	4,410	2,690	3,280	4,690	3,120	12,400	1,200	600	1,090	410
2	1,100	740	3,820	2,640	3,170	3,550	2,850	11,100	1,180	565	956	394
3	*2,250	1,680	3,380	2,520	2,800	3,030	2,640	8,250	1,300	540	1,220	378
4	2,170	1,900	3,090	2,220	2,360	2,600	2,540	6,750	2,190	468	1,570	367
5	1,880	1,510	2,740	2,080	2,300	2,180	2,690	11,600	1,190	454	1,190	*360
6	1,750	1,510	2,500	1,990	6,600	1,950	6,380	11,800	1,060	508	1,150	325
7	1,530	1,110	9,640	1,950	12,900	1,880	6,420	11,500	1,060	818	*1,070	296
8	1,270	2,470	18,000	*1,870	12,000	1,900	4,770	*10,600	1,040	1,030	934	301
9	974	4,710	16,200	1,710	9,430	1,910	3,840	10,600	1,060	*1,380	791	310
10	740	2,930	12,100	1,610	7,400	2,010	*7,670	15,100	1,040	1,150	698	338
11	622	2,250	8,390	1,540	5,100	1,860	11,100	14,500	*1,100	1,150	786	356
12	550	1,620	5,240	1,490	3,940	1,710	7,490	12,100	1,030	1,090	892	335
13	468	*1,810	4,320	1,490	*3,370	*1,720	5,510	9,610	923	4,100	874	310
14	456	6,500	3,670	1,830	2,990	1,960	4,520	7,420	857	6,280	912	367
15	436	9,060	3,170	2,020	2,770	1,910	5,560	5,600	824	5,040	1,090	398
16	452	12,500	3,080	2,000	2,580	1,770	5,950	4,820	1,000	3,940	1,000	366
17	635	19,200	3,020	2,030	2,350	1,810	4,790	4,200	1,070	4,010	956	361
18	879	30,000	2,820	2,450	2,140	2,590	3,660	3,400	798	3,910	802	646
19	791	49,700	2,810	2,420	1,890	2,980	3,120	2,920	708	2,340	766	894
20	715	46,000	12,900	2,390	1,710	2,980	2,730	2,810	808	1,760	698	798
21	626	34,500	16,400	2,590	1,640	2,710	5,240	2,860	725	1,720	540	8,600
22	563	26,700	11,600	2,870	1,710	2,480	6,600	2,630	714	1,760	450	13,300
23	651	19,400	8,990	2,750	1,790	2,310	4,970	2,250	850	2,960	490	9,480
24	3,080	7,610	6,130	6,160	1,860	2,410	9,500	1,830	791	3,530	515	3,880
25	2,590	10,600	4,670	11,400	1,910	3,670	13,200	1,770	703	2,780	772	2,340
26	1,650	12,000	5,560	10,100	1,790	4,480	17,200	1,670	681	2,080	796	1,610
27	1,280	10,200	4,770	7,880	4,430	4,600	15,700	1,570	940	1,670	635	1,540
28	1,030	7,770	4,300	6,080	5,430	4,070	14,500	1,470	862	1,660	555	1,350
29	1,080	6,510	3,710	4,420	-	3,580	13,900	1,280	774	1,750	466	1,010
30	1,050	5,240	3,350	3,620	-	3,470	14,200	1,190	665	1,490	442	970
31	846	-	3,050	3,180	-	3,460	-	1,170	-	1,200	422	-
Total	35,164	340,485	198,030	101,990	111,640	84,440	212,660	196,870	29,101	63,709	25,548	52,418
Mean	1,134	11,350	6,388	3,290	3,987	2,724	7,089	6,351	970	2,055	824	1,747

Observed				Adjusted†			
Calendar year 1957:	Max	63,800	Min 165	Mean 4,223	Mean 4,224	Cfsm 2.37	In. 32.14
Water year 1957-58:	Max	49,700	Min 296	Mean 3,978	Mean 3,979	Cfsm 2.23	In. 30.27

Peak discharge (base, 17,000 cfs).--Nov. 19 (7:30 p.m.) 53,200 cfs (33.25 ft); Dec. 6 (8 p.m.) 18,500 cfs (20.22 ft); Dec. 21 (10 a.m.) 17,100 cfs (19.13 ft); Apr. 26 (7 p.m.) 17,900 cfs (19.75 ft).

* Discharge measurement made on this day.

† Adjusted for change in contents in Woods Reservoir.

Note.--Discharge for periods Jan. 27 to Feb. 20, Apr. 13 to May 8, computed from graph based on bihourly radio-gage readings furnished by Tennessee Valley Authority.

5853. Sugar Creek near Good Springs, Ala.

Location--Lat 34°56'40", long 87°09'20", in SW¹/₄ sec. 22, T. 1 S., R. 6 W., on downstream side of bridge on Limestone County Highway 60, 0.2 mile downstream from Bridgeforth Branch, 2.2 miles east of Good Springs, and 2.4 miles upstream from Dobbins Branch.

Drainage area--152 sq. mi.

Records available--July 1957 to September 1958.

Gage--Water-stage recorder. Altitude of gage is 575 ft (from topographic map).

Extremes--1957: Maximum discharge during period July to September, 692 cfs Sept. 13 (gage height, 3.81 ft); minimum, 15 cfs Sept. 8 (gage height, 0.22 ft).

1957-58: Maximum discharge during water year, 10,500 cfs Nov. 18 (gage height, 10.85 ft); minimum, 25 cfs Sept. 8, 9, 10 (gage height, 0.38 ft).

Remarks--Records good below 1,000 cfs and fair above except those for periods of no gage-height record, which are poor.

Rating tables, July 1, 1957, to Sept. 30, 1958 (gage height, in feet, and discharge, in cubic feet per second)

July 1 to Nov. 18, 1957					Nov. 19, 1957, to Sept. 30, 1958				
0.2	14	3.0	460	8.0	3,500	0.3	19	1.5	142
.4	27	4.0	760	9.0	5,000	.5	33	2.0	225
.8	65	5.0	1,180	10.0	7,400	1.0	79	.	.
1.5	148	6.0	1,720						
2.0	225	7.0	2,450						

Note--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, 1957

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	a80	37	18	9	37	22	*83	17	90	25	104
2	a74	31	18	10	34	22	49	18	114	55	78
3	a70	29	17	11	33	22	33	19	55	37	72
4	a56	27	17	12	32	22	41	20	42	29	80
5	i47	*26	18	13	30	24	353	21	38	26	78
6	a43	24	16	14	31	33	114	22	34	24	95
7	a40	23	16	15	35	26	217	23	33	22	173
8	*58	22	36	16	46	25	194	24	36	22	108
Total									1,414	789	2,494
Mean									45.6	25.5	83.1
Cubic feet per second per square mile									0.30	0.168	0.547
Runoff in inches									0.36	0.19	0.61

Peak discharge (base, 3,000 cfs)--No peak above base.

* Discharge measurement made* on this day.

a No gage-height record; discharge estimated on basis of weather records and records for nearby streams.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	90	342	274	264	a300	330	856	122	60	52	30
2	79	132	296	242	221	a270	296	876	116	58	55	29
3	73	676	264	223	202	*a240	274	661	112	55	53	26
4	77	318	258	209	*185	221	405	787	107	54	*48	27
5	85	220	211	197	204	204	366	1,720	102	55	45	27
6	77	173	195	190	551	195	957	1,160	112	55	43	27
7	*66	148	1,410	*190	1,071	202	631	760	103	88	39	27
8	60	332	2,340	178	646	212	*460	573	95	*83	39	*27
9	54	366	1,020	167	474	197	366	1,010	92	142	39	25
10	50	248	*646	162	379	182	1,070	2,370	*91	83	43	25
11	48	194	488	157	318	170	957	2,000	89	72	50	27
12	47	*166	368	151	274	182	631	1,110	92	120	98	33
13	47	166	307	175	238	180	474	*692	82	136	78	35
14	44	1,090	285	240	221	176	392	516	76	91	58	32
15	42	816	264	205	234	162	1,020	405	76	86	49	30
16	47	1,460	274	192	a220	157	1,360	405	116	72	48	30
17	121	2,020	244	162	a200	163	778	474	88	65	47	55
18	121	*5,950	229	173	a190	246	573	330	77	59	45	112
19	88	5,760	250	163	a180	234	460	285	75	54	42	106
20	76	1,160	2,310	162	a180	225	379	260	74	52	39	188
21	66	661	1,260	220	a170	212	631	229	63	54	36	836
22	62	468	692	227	a250	197	544	207	81	72	35	385
23	102	516	516	211	a420	187	446	190	76	113	37	160
24	361	460	405	709	a320	252	379	176	69	152	46	107
25	209	1,020	366	1,090	a270	544	1,530	170	63	92	55	87
26	152	816	602	692	a230	616	1,200	182	140	77	43	75
27	122	573	446	502	a500	544	656	160	118	68	38	66
28	104	468	405	392	a350	460	1,180	150	80	62	35	60
29	95	558	354	318	-	392	1,520	141	70	60	35	54
30	95	416	307	265	-----	392	1,200	132	64	57	32	53
31	96	-----	285	258	-----	379	-----	125	-----	54	32	-----
Total	2,851	25,503	17,617	8,736	8,961	8,273	21,665	19,112	2,743	2,401	1,437	2,803
Mean	92.0	850	568	282	320	267	722	617	91.4	77.5	46.4	93.4
Cfs/m	0.605	5.59	3.74	1.86	2.11	1.76	4.75	4.06	0.601	0.510	0.305	0.614
In.	0.70	6.24	4.31	2.14	2.19	2.02	5.30	4.68	0.67	0.59	0.35	0.69

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
 Water year 1957-58: Max 5,950 Min 25 Mean 335 Cfs/m 2.20 In. 29.88

Peak discharge (base, 3,000 cfs)--Nov. 18 (5:30 a.m.) 10,500 cfs (10.85 ft); Dec. 8 (4 a.m.) 3,140 cfs (7.70 ft); Dec. 20 (5 p.m.) 3,630 cfs (8.13 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for nearby streams.

5865. Big Nance Creek at Courtland, Ala.

Location.--Lat 34°40'12", long 87°19'02", in SW $\frac{1}{4}$ sec. 30, T. 4 S., R. 7 W., near right bank on downstream side of pier of bridge on State Highway 20, at Courtland, 12 $\frac{3}{4}$ miles upstream from mouth.

Drainage area.--166 sq mi.

Records available.--July 1935 to September 1940, March 1945 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 537.60 ft above mean sea level, datum of 1929. July 25, 1935, to Sept. 30, 1940, staff gage at same site and datum.

Average discharge.--18 years, 268 cfs.

Extremes.--Maximum discharge during year, 6,190 cfs Nov. 18; maximum gage height, 19.5 ft Nov. 19; minimum daily discharge, 11 cfs Sept. 9, 10.
1935-40, 1945-58: Maximum discharge, 12,300 cfs Jan. 7, 1950 (gage height, 22.60 ft); minimum daily, 0.4 cfs Sept. 15-17, 1954, Oct. 3-6, 12-17, 20-22, 1955; minimum gage height observed, 1.18 ft Oct. 25, 1954.

Remarks.--Records good except those for periods of shifting control, which are fair.

Revisions (water years).--WSP 1033: 1939, 1940(M). WSP 1053: 1929(M). WSP 1306: 1936(M).

Rating table, water year 1957-58, except periods of shifting control (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 16, 17, 20)

1.4	6.5	6.0	750
1.5	14	10.0	1,780
2.0	56	16.0	3,860
3.0	178	18.0	4,860
4.0	340	20.0	6,750

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	20	277	185	286	370	295	1,140	48	26	306	20
2	42	20	228	199	344	252	220	520	48	24	113	19
3	46	24	213	153	175	213	192	410	45	21	230	*18
4	145	23	213	136	*146	185	428	530	42	20	*142	16
5	100	22	206	126	142	*164	480	1,590	41	73	79	15
6	72	20	174	119	723	150	520	1,620	39	178	58	15
7	47	22	610	*119	1,540	151	540	820	37	90	49	14
8	*36	328	1,540	116	1,050	213	*244	370	38	922	42	13
9	31	810	*1,560	103	4,600	268	192	540	*33	*1,880	37	11
10	26	370	1,200	92	313	304	464	520	31	1,350	36	11
11	22	148	600	92	268	199	918	790	31	318	36	14
12	20	*92	370	94	228	160	410	662	30	286	73	17
13	19	152	277	102	182	233	244	410	28	580	268	20
14	17	900	260	206	187	420	199	295	27	440	260	20
15	16	1,700	252	220	178	228	396	220	31	236	206	19
16	17	2,550	277	156	199	177	1,100	*192	31	157	88	18
17	27	4,340	277	126	178	160	620	164	28	213	56	20
18	29	5,210	236	110	161	560	313	145	27	142	46	20
19	25	5,740	228	98	149	460	244	131	27	90	40	20
20	22	3,270	974	92	136	244	206	121	24	111	35	25
21	20	1,140	1,120	116	144	185	855	113	23	213	30	665
22	19	470	480	244	292	158	1,540	100	23	371	27	1,560
23	20	684	313	167	790	142	620	91	22	662	27	925
24	42	810	260	612	600	185	304	83	21	1,100	35	206
25	52	1,560	236	1,420	400	560	469	77	20	1,820	150	125
26	58	2,220	286	728	304	470	1,230	74	248	1,760	84	95
27	37	1,150	313	370	640	894	1,600	78	310	796	42	73
28	28	520	228	268	850	540	580	71	78	252	32	58
29	23	420	199	220	-	322	1,050	61	39	170	27	50
30	20	350	174	192	-----	286	2,060	56	30	142	24	42
31	20	-----	158	199	-----	400	-----	52	-----	311	22	-----
Total	1,153	35,085	13,739	7,180	10,955	9,253	17,911	11,846	1,500	14,764	2,700	4,144
Mean	37.2	1,170	443	232	391	298	597	382	50.0	476	87.1	138
Cfsm	0.224	7.05	2.67	1.40	2.36	1.80	3.60	2.30	0.301	2.87	0.525	0.831
In.	0.26	7.86	3.08	1.61	2.45	2.07	4.01	2.65	0.34	3.31	0.60	0.93

Calendar year 1957: Max 8,220 Min 0.9 Mean 320 Cfsm 1.93 In. 26.14
Water year 1957-58: Max 5,740 Min 11 Mean 357 Cfsm 2.15 In. 29.17

Peak discharge (base, 3,800 cfs).--Nov. 18 (11 p.m.) 6,190 cfs (19.5 ft at 3 a.m. Nov. 19).

* Discharge measurement made this day.

Note.--Shifting-control method used Nov. 10-12, May 21 to June 25, July 27 to Sept. 21, Sept. 23-30.

TENNESSEE RIVER BASIN

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5885. Shoal Creek at Iron City, Tenn.

Location.--Lat 35°01'27", long 87°34'44", on downstream side near center of bridge on county road, 400 ft downstream from Holly Creek, 1,350 ft upstream from Louisville & Nashville Railroad bridge, 1,350 ft northeast of post office at Iron City, Lawrence County, and 21.8 miles upstream from mouth. Prior to Oct. 1, 1957, at site 750 ft downstream.

Drainage area.--348 sq mi.

Records available.--July 1925 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 534.25 ft above mean sea level, datum of 1929. Prior to Feb. 25, 1931, staff gage at railroad bridge, 1,350 ft downstream at datum 0.88 ft lower. Feb. 25, 1931, to Sept. 30, 1933, staff gage at site 825 ft downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft downstream at datum 0.66 ft higher.

Average discharge.--33 years, 632 cfs.

Extremes.--Maximum discharge during year, 21,000 cfs Nov. 18 (gage height, 17.82 ft); minimum, 118 cfs Sept. 9, 10, 11; minimum daily, 123 cfs Sept. 9-11; minimum gage height, 2.50 ft Oct. 15, 16.

1925-58: Maximum discharge, 132,000 cfs Mar. 21, 1955 (gage height, 27.22 ft, site and datum then in use), from rating curve extended above 32,000 cfs on basis of contracted-opening measurement at gage height 22.9 ft and a slope-area measurement at gage height 27.22 ft; minimum, 38 cfs Aug. 31, 1943 (gage height, -0.02 ft, site and datum then in use).

Flood in March 1902 reached a stage about 3 ft higher than that of Mar. 21, 1955, from information by local residents.

Remarks.--Records good. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg.

Revisions (water years).--WSP 823: Drainage area. WSP 1113: 1927(M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
2.5	122	10.0	4,680	2.6	112		
3.0	297	12.0	7,600	3.0	245		
4.0	810	16.0	15,800	4.0	810		
8.0	3,240						

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	143	172	858	648	618	702	660	1,490	345	233	217	140
2	137	245	*714	576	534	636	588	1,550	380	225	225	137
3	177	918	618	522	480	582	546	1,350	545	225	213	134
4	*331	510	540	486	426	528	666	1,130	330	217	194	129
5	202	349	462	450	438	492	660	1,100	320	217	184	*126
6	168	281	408	426	702	474	1,430	990	315	283	174	126
7	149	246	2,770	426	1,430	474	1,180	864	305	250	*170	126
8	140	1,020	4,100	*402	1,170	492	900	768	295	237	170	126
9	134	1,090	2,080	375	936	486	768	*1,340	290	245	167	123
10	128	607	1,430	365	786	456	1,900	3,270	286	*225	164	123
11	125	445	1,090	355	690	426	*2,000	3,060	286	221	258	123
12	125	367	846	345	612	408	1,380	2,210	*290	867	624	140
13	128	*358	708	402	*540	*456	1,080	1,510	281	570	350	140
14	128	2,760	618	600	504	456	906	1,130	268	325	225	132
15	125	2,090	564	594	516	426	2,080	924	272	263	202	126
16	128	2,760	540	564	456	414	3,130	882	281	229	217	126
17	168	4,660	486	516	402	432	1,880	924	258	221	198	152
18	175	14,900	462	486	396	624	1,380	750	241	205	188	188
19	149	8,500	516	450	360	648	1,100	672	233	202	174	152
20	140	2,490	3,940	420	350	630	950	624	237	194	164	413
21	134	1,450	2,410	582	350	594	948	558	237	217	161	1,840
22	131	1,050	1,530	684	370	552	900	510	268	254	158	1,420
23	229	942	1,150	630	396	516	762	480	250	564	164	546
24	918	846	924	1,520	380	714	678	468	233	588	180	340
25	385	1,220	840	2,770	385	1,300	3,170	450	225	498	177	263
26	253	1,210	1,300	1,760	385	1,360	2,630	432	630	408	161	229
27	990	990	1,120	1,270	732	1,310	1,760	402	442	290	155	209
28	185	978	990	984	858	1,130	1,610	402	266	245	149	194
29	172	1,440	852	816	-	954	1,710	385	254	250	146	180
30	172	1,110	738	708	-----	858	1,730	365	241	237	143	180
31	185	-----	678	648	-----	750	-----	355	-----	258	140	-----
Total	6,067	56,004	36,282	21,780	16,202	20,280	41,062	31,325	8,924	9,443	6,212	8,385
Mean	196	1,867	1,170	703	579	654	1,369	1,010	297	305	200	279
Cfsm	0.563	5.36	3.36	2.02	1.66	1.88	3.95	2.90	0.853	0.876	0.575	0.802
In.	0.65	5.99	3.88	2.33	1.73	2.17	4.39	3.35	0.95	1.01	0.65	0.90

Calendar year 1957: Max 15,800 Min 93 Mean 766 Cfsm 2.20 In. 29.87
Water year 1957-58: Max 14,900 Min 123 Mean 718 Cfsm 2.06 In. 28.01

Peak discharge (base, 6,000 cfs).--Nov. 18 (5:30 a.m.) 21,000 cfs (17.82 ft).

* Discharge measurement made on this day.

5895. Tennessee River at Florence, Ala.

Location.--Lat 34°47'12", long 87°40'12", in SW $\frac{1}{4}$ sec. 14, T. 3 S., R. 11 W., on right bank of old lock and dam 1 canal at lower end of Patten Island, 300 ft upstream from Southern Railway bridge, 600 ft upstream from O'Neal Bridge on U. S. Highway 72, 1 mile south of Florence, 1.7 miles upstream from Cypress Creek, 2.7 miles downstream from Wilson Dam, and at mile 256.7. Prior to Mar. 12, 1958, on left bank 400 ft upstream.

Drainage area.--30,810 sq mi, approximately.

Records available.--November 1871 to September 1894 (gage heights only), October 1894 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 401.12 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1926, several U. S. Weather Bureau staff gages at or near Southern Railway bridge 300 ft downstream at same datum. Apr. 1, 1926, to Mar. 11, 1958, water-stage recorder on left bank at lower end of old lock and dam 1,400 ft upstream at same datum. Since Oct. 1, 1938, auxiliary water-stage recorder 15 $\frac{1}{4}$ miles downstream.

Average discharge.--64 years (1894-1958), 50,850 cfs.

Extremes.--Maximum discharge during year, 337,000 cfs Nov. 19 (computed on basis of Wilson Dam releases); maximum gage height, 25.00 ft Nov. 20 (based on bihourly staff-gage readings); minimum daily discharge, 24,300 cfs Apr. 20; minimum gage height, 7.64 ft Feb. 3.

1871-1958: Maximum discharge observed, 444,000 cfs Mar. 19, 1897 (gage height, 32.5 ft), from rating curve extended above 390,000 cfs; minimum daily, 250 cfs Sept. 13, 1953 (computed on basis of Wilson Dam records); minimum gage height, -3.0 ft Oct. 8, 1925, caused by filling of Wilson Lake.

Flood in 1867 reached a stage of 31.1 ft, from U. S. Weather Bureau (discharge, 421,000 cfs).

Remarks.--Records good except those for periods of no gage-height record at base or auxiliary gage and those below 25,000 cfs, which are fair. Discharge below 25,000 cfs computed on basis of records for Wilson Dam. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 224). Flow now almost completely regulated.

Cooperation.--Auxiliary water-stage-recorder graph furnished by the Tennessee Valley Authority.

Revisions (water years).--WSP 473: 1897(M). WSP 1306: 1914(M), 1936 (monthly runoff). WSP 1436: 1897, 1899, 1916.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45,500	38,000	99,200	116,000	62,700	69,500	42,600	175,000	50,400	42,900	32,800	37,600
2	40,500	50,600	82,600	96,400	63,500	63,700	43,500	159,000	52,500	44,400	39,800	44,500
3	40,800	50,600	82,700	84,100	60,500	70,100	41,800	122,000	50,800	48,600	26,300	48,400
4	45,900	51,600	77,100	68,600	54,300	60,700	41,100	84,000	54,100	31,900	47,800	49,800
5	32,700	40,700	78,200	61,900	62,200	61,000	38,800	84,300	54,100	35,000	*42,800	49,500
6	38,200	45,400	79,000	58,600	84,600	55,500	44,700	80,100	52,300	26,200	44,300	36,200
7	40,000	48,000	97,500	61,700	108,000	46,800	52,500	87,500	44,000	39,500	50,100	27,500
8	40,000	50,700	141,000	58,600	114,000	53,100	46,300	97,800	31,300	44,400	46,700	40,700
9	38,500	55,200	160,000	56,200	114,000	50,600	46,900	109,000	53,000	48,800	39,200	46,500
10	38,500	50,700	167,000	52,200	100,000	36,100	47,600	127,000	44,100	51,400	36,200	44,500
11	38,200	48,400	156,000	51,300	82,000	43,500	57,600	129,000	48,700	52,900	50,900	35,500
12	30,600	42,900	135,000	53,100	80,900	52,600	41,100	125,000	46,400	45,800	48,200	44,400
13	32,900	40,900	119,000	53,900	81,000	57,200	38,200	106,000	52,200	42,300	45,000	37,300
14	40,600	61,200	102,000	55,800	64,300	55,100	39,600	88,300	47,900	54,500	44,800	30,300
15	47,400	74,400	86,500	74,600	68,600	48,000	51,200	79,100	36,100	48,700	46,500	39,700
16	47,700	121,000	83,900	66,200	62,800	39,300	45,100	73,900	48,800	46,600	41,500	46,600
17	42,800	202,000	81,200	57,700	64,700	44,500	41,800	66,600	53,200	51,700	33,100	40,600
18	41,800	295,000	87,800	56,600	60,700	51,900	36,500	65,000	58,600	49,300	42,300	44,100
19	54,000	322,000	85,500	49,500	52,500	60,800	31,300	67,400	51,700	50,300	44,800	48,700
20	47,900	330,000	105,000	57,000	56,200	64,000	24,300	56,100	49,600	40,000	48,000	37,300
21	38,800	330,000	134,000	54,700	59,400	*53,900	45,800	62,500	46,000	49,100	49,600	49,700
22	41,500	304,000	149,000	56,600	54,200	53,400	39,100	52,100	35,900	45,900	51,700	57,700
23	52,300	256,000	151,000	51,800	55,800	44,400	37,200	62,600	44,100	41,500	39,000	43,900
24	47,800	202,000	158,000	65,700	54,400	48,700	45,100	59,100	46,200	52,400	35,900	43,100
25	45,700	198,000	135,000	79,000	58,000	56,100	61,800	56,500	56,400	64,400	46,100	*38,900
26	40,400	*135,000	114,000	81,900	67,800	56,700	92,200	57,200	51,800	47,200	47,700	45,100
27	35,300	177,000	113,000	85,200	79,800	58,400	99,100	56,300	49,200	44,000	49,200	34,500
28	44,600	167,000	105,000	80,700	72,800	63,200	89,800	*58,700	41,800	50,600	44,700	30,100
29	44,500	145,000	104,000	80,800	-	54,300	126,000	53,200	46,400	48,900	47,900	44,200
30	48,200	125,000	116,000	*70,500	-	46,600	178,000	48,800	51,000	40,500	43,700	48,500
31	40,400	-	127,000	65,000	-	46,800	-	49,300	-	37,900	51,600	-
Total	*1,303.8	*4,092.5	*3,512.2	*2,061.7	*1,999.7	*1,665.5	*1,669.4	*2,596.4	*1,448.6	*1,415.6	*1,337.6	*1,265.4
Mean	42,060	136,400	113,300	66,510	71,420	53,730	55,650	83,750	48,290	45,660	43,150	42,180
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1957: Max	364,000			Min 11,700		Mean 68,670	Cfsm 2.23	In. 30.25				
Water year 1957-58: Max	330,000			Min 24,500		Mean 66,760	Cfsm 2.17	In. 29.41				

* Discharge measurement made on this day.

† Expressed in thousands.

Note.--No gage-height record at base or auxiliary gage Oct. 5 to Nov. 5, Nov. 14-26, Apr. 18-23, 25-30; discharge computed on basis of records for Wilson Dam.

5905. Tuscumbia Spring at Tuscumbia, Ala.

Location.--Lat 34°43'45", long 87°42'15", in NW $\frac{1}{4}$ sec. 9, T. 4 S., R. 11 W., at south end of Main Street in Tuscumbia, about an eighth of a mile upstream from mouth.

Records available.--November 1928 to April 1930, January 1956 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 409.65 ft above mean sea level, datum of 1929. Prior to April 1930 at approximately the same location at different datum.

Extremes.--Maximum daily discharge during year, 150 cfs Nov. 19, 20, minimum daily, 13 cfs Nov. 7.

1928-30, 1956-58: Maximum daily discharge, 160 cfs Mar. 9, 1929; minimum daily discharge, 13 cfs Dec. 4-11, 1956, Nov. 7, 1957.

Remarks.--Records good except those for periods of backwater from Spring Creek, which are poor. Records include diversion averaging about 1 cfs for water supply for city of Tuscumbia.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	17	97	99	87	91	78	136	102	88	89	67
2	23	17	95	98	87	90	78	136	103	86	85	66
3	24	17	95	97	87	89	78	120	102	85	84	65
4	23	16	94	97	85	89	79	112	101	85	82	64
5	23	15	94	97	*86	*88	79	c109	100	85	*80	62
6	23	15	93	97	90	87	83	108	100	86	80	61
7	24	15	99	96	97	87	83	108	99	85	80	61
8	23	21	99	*95	97	86	83	108	99	88	80	*59
9	*23	23	99	94	97	85	*83	116	98	*91	80	59
10	23	25	*99	93	97	85	85	116	97	a91	80	57
11	22	25	99	92	97	84	85	124	101	a91	80	59
12	21	25	98	92	97	84	85	120	97	a91	80	61
13	21	*26	99	92	97	83	85	116	94	a90	80	59
14	21	42	98	92	97	83	84	116	94	a89	79	58
15	20	50	99	91	97	82	90	*116	92	a88	78	56
16	20	c76	99	90	97	81	92	116	92	a87	78	53
17	20	c120	99	a89	96	81	92	116	91	a86	77	53
18	19	c140	98	a88	96	81	93	112	91	a85	76	53
19	19	c150	98	87	95	80	93	112	92	a84	75	53
20	17	c150	103	87	94	80	93	112	94	a83	74	56
21	16	c140	102	87	94	79	94	112	94	a82	74	78
22	15	c130	100	88	93	78	93	112	94	81	74	71
23	18	c120	100	85	94	78	92	108	92	82	74	68
24	17	116	100	89	92	79	93	108	92	84	74	68
25	17	124	100	89	92	79	108	108	92	85	73	68
26	17	106	100	89	91	80	103	107	95	85	72	66
27	16	100	100	89	92	80	104	106	95	86	72	66
28	18	98	100	89	91	79	104	106	94	87	71	65
29	18	97	99	88	-	79	136	105	92	86	71	64
30	17	97	99	88	-----	79	144	104	92	88	69	64
31	17	-----	99	88	-----	78	-----	103	-----	90	69	-----
Total	618	2,111	3,053	2,830	2,612	2,564	2,772	3,508	2,871	2,680	2,390	1,860
Mean	19.9	70.4	98.5	91.3	93.3	82.7	92.4	113	95.7	86.5	77.1	62.0
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 150 Min 13 Mean 71.9 Cfsm - In. -

Water year 1957-58: Max 150 Min 13 Mean 81.8 Cfsm - In. -

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

c Backwater from Spring Creek.

5918. Bear Creek near Hackleburg, Ala.

Location.--Lat 34°17'01", long 87°46'26", in SW $\frac{1}{4}$ sec. 11, T. 9 S. R. 12 W., on right bank at downstream side of bridge on U. S. Highway 43, 2 miles upstream from Bluff Creek and $\frac{3}{4}$ miles east of Hackleburg, Ala.

Drainage area.--143 sq mi.

Records available.--July 1956 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 646.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1941.

Extremes.--Maximum discharge during year, 6,600 cfs Nov. 18 (gage height, 19.2 ft); minimum, 17 cfs Oct. 15, 16, Sept. 10.

1956-58: Maximum discharge, 7,000 cfs Jan. 31, 1957 (gage height, 20.0 ft); minimum, 6.1 cfs Sept. 18, 19, 1956.

Remarks.--Records good except those for periods of ice effect or shifting-control, which are fair, and those for period of no gage-height record, which are poor.

Rating table, water year 1957-58, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.6	14	3.0	260
1.7	18	7.0	1,460
1.9	34	11.0	2,800
2.2	72	15.0	4,500
2.5	126	17.0	5,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	58	410	216	266	440	308	a800	62	36	112	36
2	45	49	362	179	204	362	266	a560	55	31	190	33
3	66	48	329	168	181	314	257	a410	55	30	329	30
4	68	89	311	158	163	260	311	a460	53	26	148	27
5	65	57	281	148	*193	227	278	<u>1,340</u>	50	<u>25</u>	99	25
6	45	49	251	144	1,070	*213	311	1,070	46	27	82	24
7	32	53	740	156	<u>1,280</u>	239	260	740	44	76	*71	22
8	*26	736	<u>1,130</u>	*139	770	275	224	530	42	1,960	65	21
9	24	380	980	122	545	395	*207	440	40	<u>2,420</u>	61	19
10	19	201	770	122	440	335	425	470	37	860	61	*18
11	18	144	575	120	371	290	395	545	31	*515	57	22
12	18	122	*410	112	305	260	317	545	*31	470	57	64
13	18	231	344	141	254	440	266	425	31	425	94	61
14	18	2,150	299	251	233	410	233	332	27	605	71	42
15	17	1,190	266	195	251	350	329	*263	76	425	65	33
16	26	3,040	254	173	b210	311	395	224	151	269	66	30
17	102	3,100	227	163	b190	314	332	257	62	257	71	94
18	71	5,100	213	150	b180	470	290	198	48	168	64	272
19	43	2,550	207	141	b170	380	254	179	41	128	54	102
20	32	1,160	890	141	b160	335	221	170	66	118	45	294
21	28	800	620	284	b180	293	680	144	65	218	40	2,650
22	26	620	455	281	254	254	650	130	49	332	46	1,520
23	78	725	365	233	500	224	440	122	44	635	260	530
24	210	800	311	890	590	272	590	112	36	1,400	410	326
25	108	1,730	290	920	515	341	1,760	104	30	950	198	239
26	75	1,100	341	620	440	860	1,400	99	469	515	101	210
27	62	710	272	440	770	<u>1,130</u>	1,040	95	158	350	74	190
28	52	560	260	350	620	710	755	86	71	248	61	141
29	48	500	230	293	-	530	<u>2,160</u>	80	54	181	53	108
30	52	455	204	254	-----	440	1,310	71	42	141	46	101
31	59	-----	201	251	-----	380	-----	68	-----	120	41	-----
Total	1,617	28,487	12,798	7,955	11,285	12,054	16,464	11,069	2,065	13,961	3,192	7,284
Mean	52.2	950	413	257	403	389	549	357	68.8	450	103	243
Cfsm	0.365	6.64	2.89	1.80	2.82	2.72	3.84	2.50	0.481	3.15	0.720	1.70
In.	0.42	7.41	3.33	2.07	2.93	3.13	4.28	2.88	0.54	3.63	0.83	1.89

Calendar year 1957: Max 5,850 Min 6.7 Mean 308 Cfsm 2.15 In. 29.20
 Water year 1957-58: Max 5,100 Min 17 Mean 351 Cfsm 2.45 In. 33.34

Peak discharge (base, 3,000 cfs).--Nov. 14 (11 a.m.) 3,120 cfs (11.8 ft); Nov. 18 (6 a.m.) 3,600 cfs (13.0 ft); Nov. 18 (3 a.m.) 6,600 cfs (19.2 ft); July 9 (2 a.m.) 4,280 cfs (14.5 ft); Sept. 21 (2 p.m.) 3,920 cfs (13.7 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for nearby streams.

b Stage-discharge relation affected by ice.

Note.--Shifting-control method used May 16 to Sept. 30.

5950. Bear Creek near Red Bay, Ala.

Location.--Lat 34°26'39", long 88°06'55", in NE $\frac{1}{4}$ sec. 21, T. 7 S., R. 15 W., near left abutment on downstream side of bridge on State Highway 24, 0.6 mile downstream from Norman Branch, 1.7 miles upstream from Mud Creek, and 1.4 miles east of Red Bay.

Drainage area.--223 sq mi.

Records available.--August 1913 to May 1920, July to September 1958. Prior to October 1918 monthly discharge only, published in WSP 1306.

Gage.--Wire-weight gage and crest-stage indicator. Gage read twice daily. Altitude of gage is 510 ft (from topographic map). September 1913 to June 1920 staff gage at site 0.7 mile upstream at different datums.

Average discharge.--6 years (1913-19), 410 cfs.

Extremes.--Maximum discharge during period July to September, 3,840 cfs Sept. 23 (gage height, 15.4 ft); minimum observed, 45 cfs Sept. 11 (gage height, 3.90 ft).
1913-20, 1958: Maximum discharge, 4,660 cfs Apr. 2, 1920 (gage height, 15.0 ft, from graph based on gage readings, site and datum then in use); minimum daily, 10 cfs Aug. 15-17, Sept. 17, 1918 (gage height, 1.2 ft, site and datum then in use).

Remarks.--Records good.

Revisions (water years).--WSP 1306: 1913-16, 1920(M), drainage area at former site.

Rating table, July 1 to Sept. 30, 1958 (gage height, in feet, and discharge, in cubic feet per second)

4.0	51	9.0	1,070
4.5	93	13.0	1,880
5.0	150	14.0	2,250
6.0	315	15.0	3,220

Discharge, in cubic feet per second, July to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										98	208	84
2										88	208	80
3										90	378	80
4										75	503	70
5										75	224	66
6										84	*178	62
7										178	150	62
8										439	131	58
9										2,320	114	*58
10										*3,060	114	54
11									†89.0	*1,320	114	51
12										974	125	54
13										926	144	77
14										853	137	98
15								†610		853	131	84
16										619	125	70
17										401	120	154
18										401	114	224
19										259	114	296
20										224	93	381
21										335	88	1,340
22										356	84	2,880
23										619	84	*2,490
24							†651			950	478	950
25										1,740	503	531
26										1,310	259	378
27										752	178	335
28										476	131	296
29										356	108	241
30										277	93	208
31										241	93	-
Total										20,738	5,524	11,812
Mean										669	178	394
Cfs/m										2.54	0.677	1.50
In.										2.93	0.78	1.67

Calendar year : Max Min Mean Cfs/m In.
Water year : Max Min Mean Cfs/m In.

Peak discharge (base, 4,000 cfs).--No peak above base.

* Discharge measurement made on this day.

† Result of discharge measurement.

TENNESSEE RIVER BASIN

5922. Cedar Creek near Pleasant Site, Ala.

Location.--Lat 34°32'56", long 88°01'09", in SW¹/₄ sec. 9, T. 6 S., R. 14 W., on left bank on downstream side of pier of highway bridge, 2.6 miles east of Pleasant Site, and 4.3 miles upstream from Little Bear Creek.

Drainage area.--189 sq mi.

Records available.--August 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 482.67 ft above mean sea level, datum of 1937.

Extremes.--1957: Maximum discharge during period August to September, 338 cfs Aug. 18 (gage height, 3.05 ft); minimum, 3.5 cfs Sept. 6.

1957-58: Maximum discharge during water year, 6,860 cfs Nov. 16 (gage height, 18.6 ft); minimum, 12 cfs Sept. 10.

Flood in March 1951 reached a stage of 22.1 ft, from floodmarks, from information by Tennessee Valley Authority.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Discharge, in cubic feet per second, 1957

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	7.1	7	-	5.1	13	56	11	19	106	*20	25	25	33
2	-	8.2	8	40	5.6	14	33	18	20	61	22	26	23	24
3	-	7.1	9	41	7.1	15	27	21	21	37	72	27	24	19
4	-	5.8	10	43	9.3	16	21	35	22	31	60	28	12	22
5	-	4.5	11	51	*8.2	17	21	72	23	26	90	29	6.7	41
6	-	4.1	12	97	22	18	195	27	24	22	60	30	5.5	63
												31	6.7	-
Total														804.3
Mean														26.8
Cubic feet per second per square mile														0.142
Runoff in inches														0.6

Peak discharge (base, 3,500 cfs).--No peak above base.

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	53	338	338	350	375	375	970	100	55	65	33
2	55	51	302	268	278	325	338	820	98	50	61	33
3	64	83	278	238	240	288	352	612	94	46	72	29
4	102	74	258	222	218	*255	790	932	86	44	65	26
5	88	63	230	206	266	232	500	4,150	81	62	52	24
6	63	57	216	198	*1,930	222	760	1,880	80	202	*46	24
7	52	51	1,750	194	2,020	238	450	940	87	176	42	22
8	40	518	1,680	180	910	278	425	662	74	403	38	19
9	*33	428	1,390	*167	638	285	338	600	71	700	37	*16
10	30	190	940	162	525	246	*949	784	66	*198	76	14
11	28	141	*638	158	450	220	650	2,470	*67	192	40	22
12	28	118	500	151	388	206	450	1,060	71	596	36	78
13	29	262	425	246	338	275	388	688	70	568	39	47
14	28	2,730	388	350	310	308	338	*525	69	375	62	34
15	23	1,190	350	250	338	244	2,270	438	85	a260	51	27
16	23	5,010	350	212	b270	226	1,260	375	151	a190	55	23
17	72	5,150	302	192	b230	367	700	388	85	a150	55	98
18	83	*4,400	275	180	b210	662	550	308	68	a130	41	145
19	54	*4,860	265	169	b200	412	462	285	322	a110	34	80
20	47	1,440	2,740	169	b190	338	400	250	86	a100	29	337
21	42	790	1,360	388	224	298	910	218	83	a190	27	2,270
22	36	588	650	322	305	268	662	196	74	a160	28	1,170
23	92	820	512	240	375	248	475	179	63	a310	117	362
24	267	814	425	1,550	315	475	400	166	54	224	311	222
25	122	2,390	438	1,170	275	550	1,790	155	50	285	160	171
26	86	1,210	800	790	255	670	1,360	144	433	194	80	139
27	73	715	425	488	1,080	1,090	1,030	138	198	151	59	117
28	64	588	388	400	538	625	790	123	91	102	49	104
29	55	512	350	350	-	500	2,660	113	72	86	44	93
30	55	412	302	310	-----	488	1,740	107	62	75	38	85
31	58	-----	290	308	-----	450	-----	104	-----	68	36	-----
Total	1,969	35,688	19,335	10,566	13,666	11,664	24,562	20,780	3,089	6,432	1,945	5,865
Mean	63.5	1,190	624	341	488	376	819	670	103	207	62.7	196
Cfs/m	0.336	6.30	3.30	1.80	2.58	1.99	4.33	3.54	0.545	1.10	0.332	1.04
In.	0.39	7.02	3.80	2.08	2.69	2.30	4.83	4.09	0.61	1.27	0.38	1.15

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
 Water year 1957-58: Max 5,130 Min 14 Mean 426 Cfs/m 2.25 In. 30.61

Peak discharge (base, 3,500 cfs).--Nov. 16 (7 p.m.) 6,860 cfs (18.6 ft); Apr. 29 (3.30 p.m.) 3,630 cfs (12.7 ft); May 5 (9 p.m.) 4,550 cfs (14.7 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Little Bear Creek near Halltown.

b Stage-discharge relation affected by ice.

5923. Little Bear Creek near Halltown, Ala.

Location.--Lat 34°29'19", long 88°02'07", in NW $\frac{1}{4}$ sec. 5, T. 7 S., R. 14 W., near right bank on downstream side of pier of highway bridge, 2.7 miles northeast of Halltown and 4.2 miles upstream from Cedar Creek.

Drainage area.--78.2 sq mi.

Records available.--August 1957 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 499.30 ft above mean sea level, datum of 1929.

Extremes.--1957: Maximum discharge during period August to September, 539 cfs Aug. 18 (gage height, 5.2 ft); minimum daily, 7.2 cfs Sept. 7.

1957-58: Maximum discharge during water year, 4,130 cfs Nov. 18 (gage height, 12.1 ft); minimum daily, 14 cfs Sept. 9, 10.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Occasional slight diurnal fluctuation at low flow caused by mill above station.

Rating table, Aug. 9, 1957, to Sept. 30, 1958, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	4.0	2.0	87	9.0	1,480
1.1	12	3.0	202	10.0	1,960
1.3	23	5.0	505	11.0	2,810
1.5	38	7.0	895	12.0	4,000

Discharge, in cubic feet per second, 1957

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	9.4	7	-	7.2	13	22	18	19	58	*18	25	14	19
2	-	9.4	8	-	10	14	14	16	20	31	21	26	14	16
3	-	11	9	11	12	15	14	30	21	22	21	27	12	15
4	-	9.8	10	11	11	16	12	22	19	30	28	12	17	17
5	-	8.9	11	9.8	*11	17	18	22	23	16	44	29	11	23
6	-	7.6	12	30	17	18	167	22	24	15	26	30	8.9	28
												31	9.4	-

Total.....	-	532.3
Mean.....	-	17.7
Cubic feet per second per square mile.....	-	0.226
Runoff in inches.....	-	0.25

Peak discharge (base, 1,100 cfs).--No peak above base.

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	32	164	136	146	182	158	374	55	29	40	21
2	33	31	146	121	126	158	144	322	55	32	39	20
3	39	32	154	112	114	141	144	258	53	20	300	19
4	39	36	128	107	103	*129	176	581	49	23	100	17
5	32	34	112	101	134	121	151	1,570	48	26	68	16
6	25	32	105	99	*578	116	176	628	48	216	*53	16
7	21	32	502	99	539	126	151	406	46	119	44	15
8	19	195	574	92	336	145	129	314	43	417	41	15
9	*18	152	471	*86	258	152	122	265	43	329	36	*14
10	16	90	359	83	209	131	*255	434	41	*152	35	14
11	16	70	279	82	189	122	237	1,520	*42	109	32	17
12	16	43	*223	80	158	114	189	471	45	270	32	25
13	16	101	189	101	140	152	164	322	38	230	68	25
14	16	953	170	148	131	147	148	*251	34	182	37	21
15	15	410	158	122	140	131	604	209	91	137	33	18
16	16	2,440	152	109	b110	122	438	176	118	103	36	16
17	47	1,860	137	101	b100	152	286	209	61	84	39	88
18	36	*2,840	129	95	a90	258	237	152	46	72	34	94
19	26	*1,690	136	90	a85	196	202	147	43	62	29	54
20	21	*556	946	89	b80	170	176	136	45	57	26	225
21	20	359	422	158	b90	152	322	118	55	118	24	895
22	16	279	286	148	121	138	106	51	95	24	404	
23	76	336	230	127	144	130	202	98	41	164	69	182
24	108	345	189	475	138	189	176	89	36	150	116	126
25	71	850	189	438	126	237	492	89	32	142	99	98
26	47	471	216	300	124	251	488	81	97	101	46	81
27	36	329	176	230	336	336	374	75	81	77	34	69
28	32	272	164	189	237	251	307	72	47	62	28	61
29	29	237	152	-	-	209	753	66	38	52	25	53
30	32	196	138	150	-----	189	539	62	32	45	23	51
31	32	-----	133	142	-----	182	-----	59	-----	42	22	-----
Total	1,011	15,303	7,509	4,573	5,082	5,229	8,245	9,660	1,554	3,715	1,632	2,770
Mean	32.6	510	242	148	182	169	275	312	51.8	120	52.6	92.3
Cfs/m	0.417	6.52	3.09	1.89	2.33	2.16	3.52	3.99	0.662	1.53	0.673	1.18
In.	0.48	7.28	3.57	2.17	2.42	2.49	3.92	4.59	0.74	1.77	0.78	1.32

Calendar year 1957: Max - Min - Mean - Cfs/m - In. -
 Water year 1957-58: Max 2,840 Min 14 Mean 182 Cfs/m 2.33 In. 31.53

Peak discharge (base, 1,100 cfs).--Nov. 14 (4:30 p.m.) 1,130 cfs (7.9 ft); Nov. 18 (2 p.m.) 4,130 cfs (12.1 ft); Dec. 20 (1:30 p.m.) 1,540 cfs (8.6 ft); May 5 (10:30 a.m.) 2,090 cfs (10.2 ft); May 11 (4:30 a.m.) 2,410 cfs (10.6 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for nearby streams.

b Stage-discharge relation affected by ice.

5925. Bear Creek at Bishop, Ala.

Location.--Lat 34°39'21", long 88°07'21", in SE $\frac{1}{4}$ sec. 5, T. 5 S., R. 15 W., on left bank 20 ft upstream from highway bridge, half a mile downstream from Cedar Creek (formerly called Little Bear Creek), three-quarters of a mile southwest of Bishop, and at mile 27.3.

Drainage area.--667 sq mi.

Records available.--August 1926 to June 1928, February 1929 to March 1932, June 1933 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 419.91 ft above mean sea level, datum of 1929. Prior to June 23, 1928, and Feb. 10, 1929, to Mar. 31, 1932, staff gage at site 35 ft downstream at datum 5.00 ft lower. June 7, 1933, to May 28, 1934, chain gage at bridge 20 ft downstream at same datum as staff gage.

Average discharge.--28 years (1926-27, 1929-31, 1933-58), 1,070 cfs.

Extremes.--Maximum discharge during year, 19,100 cfs Nov. 19 (gage height, 18.08 ft); minimum, 100 cfs Oct. 16; minimum gage height, 1.29 ft Sept. 11.
1926-58: Maximum discharge, 37,000 cfs Mar. 22, 1955; maximum gage height, 22.0 ft (present datum) Dec. 26, 1926, from floodmarks; minimum discharge, 9.3 cfs Sept. 15-17, 1954; minimum gage height, -0.15 ft Sept. 1, 1943.

Remarks.--Records good.

Revisions (water years).--WSP 698: 1929. WSP 823: Drainage area. WSP 853: 1927, 1928(M), 1929, 1930(M), 1932(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19				Nov. 20 to Sept. 30			
1.4	96	13.0	6,200	1.3	103	5.0	1,260
2.0	202	15.0	9,500	1.5	133	10.0	3,720
3.0	460	17.0	14,700	2.0	225	15.0	6,200
5.0	1,210	18.0	18,700	3.0	510		
10.0	3,650						

Note.--Same as preceding table above 13.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285	196	1,600	1,140	1,240	1,980	1,500	4,340	375	285	465	179
2	265	197	1,370	1,060	1,130	1,590	1,310	4,710	375	240	420	167
3	233	195	1,210	975	1,010	1,350	1,280	3,370	351	213	572	156
4	292	218	1,110	892	892	*1,190	1,980	2,400	324	191	774	144
5	288	196	1,020	632	892	1,060	1,590	5,120	300	175	603	133
6	255	162	946	799	2,470	960	2,020	6,400	300	240	*420	127
7	206	*132	2,320	776	4,200	972	1,560	4,220	324	852	*339	121
8	175	657	4,160	750	3,390	1,060	1,310	3,620	265	756	292	114
9	*152	1,180	3,760	*716	3,020	1,110	1,150	3,050	262	*2,100	258	*108
10	135	1,150	3,640	694	*2,260	1,110	*1,590	2,860	245	2,460	258	103
11	125	715	*3,060	622	1,790	1,080	1,940	6,340	*230	2,600	260	112
12	114	504	2,300	645	1,530	996	1,850	5,140	242	2,810	245	158
13	111	636	1,790	757	1,320	1,000	1,410	3,400	228	2,450	250	167
14	109	3,750	1,540	1,040	1,180	1,150	1,250	*2,280	209	1,640	298	156
15	104	4,460	1,380	1,010	1,150	1,200	3,760	1,600	258	1,470	280	185
16	105	6,940	1,350	956	1,090	1,090	4,350	1,490	469	1,290	270	165
17	112	14,800	1,210	932	960	1,100	2,660	1,370	562	944	345	250
18	189	14,600	1,100	779	924	1,640	1,080	1,250	477	764	250	596
19	202	17,900	1,260	732	782	1,630	1,700	1,130	465	638	219	507
20	197	13,300	5,020	704	765	1,450	1,470	1,040	445	544	201	1,540
21	171	8,980	4,670	1,010	799	1,280	1,720	904	363	578	177	3,070
22	152	6,060	3,070	1,190	892	1,150	2,180	806	531	732	158	4,110
23	177	3,440	2,260	1,100	1,050	1,060	2,040	722	384	972	248	2,850
24	472	2,770	1,780	2,340	1,160	1,410	1,690	659	292	1,970	872	3,070
25	448	4,010	1,545	3,460	1,500	1,780	2,520	606	240	1,860	1,210	2,050
26	597	4,380	2,060	2,900	1,210	1,660	3,850	572	1,840	2,320	757	1,020
27	295	3,660	1,870	2,460	2,480	2,420	3,600	534	932	2,010	459	778
28	237	3,530	1,510	1,840	2,390	2,560	4,000	495	872	1,140	333	676
29	208	2,620	1,360	1,520	-	2,400	5,560	453	495	824	268	569
30	197	1,960	1,220	1,310	-----	1,980	5,890	423	360	648	223	507
31	204	-----	1,100	1,190	-----	1,750	-----	396	-----	534	199	-----
Total	6,830	124,065	63,488	37,065	43,316	44,566	70,620	71,870	13,045	36,250	11,923	23,868
Mean	214	4,136	2,046	1,196	1,547	1,431	2,354	2,318	435	1,169	385	796
Cfsm	0.351	6.20	3.07	1.79	2.32	2.15	3.53	3.48	0.652	1.75	0.577	1.19
In.	0.37	6.32	3.54	2.07	2.42	2.47	3.34	4.01	0.73	2.02	0.66	1.33

Calendar year 1957: Max 27,900 Min 40 Mean 1,442 Cfsm 2.16 In. 29.35
Water year 1957-58: Max 17,900 Min 103 Mean 1,497 Cfsm 2.24 In. 30.48

Peak discharge (base, 7,500 cfs).--Nov. 19 (6 a.m.) 19,100 cfs (18.08 ft).

* Discharge measurement made on this day.

5935. Tennessee River at Savannah, Tenn.

Location.--Lat 35°13'29", long 88°15'36", on left bank pier of bridge on U. S. Highway 64, at Savannah, Hardin County, 16.8 miles downstream from Pickwick Landing Dam and at mile 189.9.

Drainage area.--33.140 sq mi, approximately.

Records available.--September 1930 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 300.00 ft above mean sea level, datum of 1929. Prior to Apr. 7, 1945, at datum 41.61 ft higher. Since Oct. 1, 1948, auxiliary water-stage recorder on downstream end of lock wall in lower pool at Pickwick Landing Dam, 16.8 miles upstream. Apr. 5, 1937, to Jan. 31, 1939, auxiliary staff gage 4.0 miles downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 miles downstream.

Average discharge.--28 years, 52,470 cfs.

Extremes.--Maximum discharge during year, 316,000 cfs Nov. 21; maximum gage height, 86.44 ft Nov. 21; minimum daily discharge, 12,500 cfs July 29; minimum gage height, 55.40 ft Mar. 17.

1930-58: Maximum discharge, 403,000 cfs Feb. 6, 1957; maximum gage height, 92.42 ft Feb. 6, 1957; minimum daily discharge, 1,100 cfs Sept. 3, 1945, caused by experimental closure of Pickwick Landing Dam; minimum gage height, 41.20 ft, present datum, Oct. 20, 1931.

Maximum stage known, 101.2 ft Mar. 21, 1897, present datum, from floodmarks (discharge, 450,000 cfs, from rating curve extended above 320,000 cfs). Flood of Jan. 2, 1927, reached a stage of 92.7 ft, present datum (discharge, 349,000 cfs).

Minimum stage known, 38.8 ft Sept. 8, 1925, present datum.

Remarks.--Records good except those for periods of no gage-height record at auxiliary gage and days of extremely low fall, which are fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 229). Flow now almost completely regulated.

Cooperation.--Auxiliary water-stage-recorder graph furnished by Tennessee Valley Authority.

Revisions (water years). WSP 853: 1937, drainage area. WSP 1306: 1936 (monthly runoff).

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40,000	45,800	133,000	a126,000	72,700	70,600	42,800	182,000	49,500	*40,400	42,300	33,100
2	43,100	53,300	111,000	a107,000	65,500	70,400	43,100	185,000	55,500	41,300	56,500	39,400
3	40,700	53,400	95,400	a91,400	60,000	*64,100	40,200	165,000	50,900	46,600	47,000	41,600
4	42,800	52,100	88,100	a68,100	61,100	66,200	37,000	125,000	56,600	26,300	68,200	56,200
5	45,100	49,800	83,800	a59,000	61,400	61,400	43,200	99,800	54,700	40,500	52,000	45,200
6	42,800	47,900	79,500	62,800	75,800	63,700	36,200	90,700	54,400	38,100	52,600	40,100
7	44,300	61,200	95,100	67,800	113,000	48,300	43,700	91,800	39,900	42,200	59,700	32,300
8	42,200	59,500	135,000	70,400	119,000	51,200	56,500	95,000	28,800	42,800	56,700	*36,000
9	39,800	56,000	159,000	a59,500	117,000	56,200	50,700	117,000	55,000	53,700	45,200	42,900
10	40,800	47,200	166,000	a57,300	102,000	42,800	48,000	149,000	47,700	44,400	35,800	40,800
11	43,300	55,300	166,000	a54,100	86,100	38,400	64,000	167,000	46,600	54,600	46,700	38,400
12	36,900	50,700	153,000	a58,300	83,600	50,800	46,300	156,000	48,700	57,800	43,100	41,400
13	36,500	44,900	132,000	a74,400	84,000	48,600	29,900	*132,000	53,600	54,600	43,500	46,200
14	42,500	82,700	115,000	a64,200	72,100	57,000	40,400	99,700	43,200	59,200	48,400	45,200
15	49,200	112,000	98,200	*a78,300	67,500	47,900	46,100	86,000	34,600	50,000	55,600	44,700
16	48,800	134,000	86,500	a65,200	67,600	31,600	53,500	82,700	49,200	46,000	52,600	44,500
17	46,500	187,000	84,900	a61,700	66,800	40,200	47,600	69,900	57,600	51,000	33,400	34,700
18	39,100	260,000	84,600	a59,300	58,100	51,300	39,300	73,800	58,500	54,300	42,700	42,300
19	39,200	298,000	85,100	a56,300	57,800	63,200	48,100	72,300	50,900	59,700	45,600	43,400
20	40,000	308,000	108,000	a67,400	52,500	61,700	48,300	64,900	48,300	52,900	47,500	41,000
21	44,600	307,000	144,000	63,600	53,100	54,700	55,100	63,100	48,300	44,600	45,400	61,500
22	*45,800	297,000	155,000	59,300	54,800	49,000	49,700	79,700	34,300	28,600	44,700	71,200
23	44,600	282,000	163,000	50,400	56,200	39,900	43,700	64,600	41,200	28,700	46,700	44,000
24	44,400	253,000	164,000	66,300	56,600	49,700	46,400	57,200	49,700	44,800	40,500	33,700
25	41,100	229,000	156,000	84,000	59,800	54,300	65,700	56,100	50,600	59,800	45,400	31,400
26	41,100	221,000	127,000	85,000	71,100	56,500	87,900	55,800	56,400	43,800	49,700	41,000
27	44,400	*217,000	111,000	85,600	80,400	48,700	90,000	58,300	60,500	41,900	44,900	34,200
28	49,200	204,000	111,000	85,300	68,800	48,200	102,000	64,900	55,100	52,300	39,800	29,300
29	46,600	181,000	108,000	84,500	---	49,100	133,000	56,100	42,600	e12,500	41,900	49,700
30	46,500	160,000	a123,000	76,900	---	49,200	172,000	49,300	42,400	e18,700	49,100	49,500
31	42,300	---	a133,000	74,600	---	48,600	---	48,700	---	34,000	38,200	---
Total	11,334.3	*44,098.8	*3,754.2	*2,223.8	*2,042.4	*1,633.5	*1,750.4	*2,960.4	*1,465.1	*1,366.7	*1,461.4	*1,273.9
Mean	43,040	147,000	121,100	71,740	72,940	52,690	58,350	95,500	48,840	44,090	47,140	42,460
Cfs/m	---	---	---	---	---	---	---	---	---	---	---	---
In.	---	---	---	---	---	---	---	---	---	---	---	---

Calendar year 1957: Max 395,000 Min 18,500 Mean 74,270 Cfs/m 2.24 In. 30.42

Water year 1957-58: Max 308,000 Min 12,500 Mean 70,340 Cfs/m 2.12 In. 28.81

* Discharge measurement made on this day.

* Expressed in thousands.

a No gage-height record at auxiliary gage; discharge computed on basis of Pickwick Landing powerplant records.

e Days of extremely low fall; discharge computed on basis of Pickwick Landing powerplant records.

TENNESSEE RIVER BASIN

5450. Duck River below Manchester, Tenn.

Location.--Lat 35°28'15", long 86°07'13", on right bank 50 ft downstream from Powers Bridge, 2 miles southwest of Manchester, Coffee County, $\frac{3}{4}$ miles downstream from Little Duck River, and 7 miles upstream from Crumpton Creek.

Drainage area.--107 sq mi.

Records available.--April 1934 to September 1956.

Gage.--Water-stage recorder. Datum of gage is 878.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years, 178 cfs.

Extremes.--Maximum discharge during year, 8,580 cfs Nov. 18 (gage height, 13.08 ft); minimum, 13 cfs Oct. 15 (gage height, 1.14 ft).
1934-58: Maximum discharge, 30,000 cfs Feb. 13, 1948 (gage height, 18.93 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of peak flow; minimum, 8 cfs Aug. 12, 1934; minimum gage height, 0.57 ft Sept. 19, 20, 1947.
Maximum stage known, 38.2 ft in March 1929 (discharge, about 50,000 cfs), from high-water mark by Tennessee Valley Authority. Flood in March 1902 reached approximately the same stage as the flood in March 1929.

Remarks.--Records good. Occasional regulation for short periods during low flow by small reservoir above station.

Revisions (water years).--WSF 1436: 1946-47.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 19 to Dec. 7)

Oct. 1 to Apr. 29

Apr. 30 to Sept. 30

1.1	11	2.5	280	1.3	20	2.5	220
1.2	15	4.0	895	1.4	27	3.0	415
1.4	29	7.0	2,480	1.6	46	4.5	1,120
1.7	65	9.0	3,850	2.0	107		
2.0	120	12.0	6,800				

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	44	166	205	280	244	125	458	59	33	45	32
2	67	43	158	169	230	172	107	442	80	33	60	31
3	125	46	125	135	175	140	99	290	68	33	53	31
4	154	44	122	120	145	118	114	215	80	33	47	29
5	202	41	105	107	352	103	125	559	54	33	42	29
6	145	39	95	103	922	97	456	1,000	53	35	38	29
7	99	38	1,690	103	1,240	105	308	885	50	38	37	29
8	73	38	1,930	95	532	188	175	415	49	75	37	28
9	58	101	712	*95	308	208	132	406	63	52	35	25
10	51	76	436	79	219	230	523	1,120	56	44	34	26
11	49	59	316	79	*184	157	652	852	50	41	38	26
12	43	52	*226	78	157	125	308	541	46	1,000	160	*27
13	39	54	193	90	128	145	199	274	44	1,010	78	27
14	32	278	190	181	114	205	183	190	41	360	*52	26
15	*14	240	178	157	122	145	233	156	42	210	43	25
16	14	1,020	300	120	110	118	296	131	41	300	40	26
17	33	1,600	300	101	92	118	181	116	39	*262	38	91
18	25	6,710	240	90	88	476	138	105	37	148	37	72
19	20	4,200	252	83	75	368	118	105	*36	104	35	49
20	19	*814	2,240	79	73	*222	110	112	36	86	33	152
21	19	420	993	101	73	172	500	99	43	77	33	945
22	19	284	460	157	92	142	692	91	60	81	32	244
23	23	368	320	120	112	128	*364	*85	49	151	32	121
24	41	344	256	777	116	157	268	80	41	133	39	86
25	51	764	222	1,340	116	264	1,070	78	36	109	38	64
26	55	632	416	512	105	240	926	77	86	77	53	53
27	49	352	324	344	496	216	972	74	64	62	40	49
28	45	252	256	252	492	172	720	70	46	54	36	44
29	44	332	233	199	-	138	1,280	66	39	50	34	39
30	45	230	187	169	-----	130	915	62	36	46	33	37
31	45	-----	166	160	-----	145	-----	59	-----	43	33	-----
Total	1,763	19,549	15,787	6,390	7,148	5,564	12,269	9,133	1,504	5,229	1,585	2,492
Mean	56.9	552	445	206	255	179	409	297	50.1	169	44.7	83.1
Cfsm	0.532	6.09	4.16	1.93	2.58	1.67	3.82	2.78	0.468	1.58	0.418	0.777
In.	0.61	6.78	4.79	2.22	2.48	1.93	4.26	3.20	0.52	1.82	0.48	0.87

Calendar year 1957: Max 6,710 Min 13 Mean 253 Cfsm 2.36 In. 32.06
Water year 1957-58: Max 6,710 Mean 236 Cfsm 2.21 In. 29.97

Peak discharge (base, 2,500 cfs).--Nov. 18 (8 a.m.) 8,580 cfs (13.08 ft); Dec. 7 (10 p.m.) 3,390 cfs (8.41 ft); Dec. 20 (4:30 p.m.) 3,040 cfs (7.90 ft).

* Discharge measurement made on this day.

5970. Garrison Fork at Fairfield, Tenn.

Location.--Lat 35°33'59", long 86°17'00", near left bank on downstream side of center pier of highway bridge, 0.1 mile east of Fairfield, 0.6 mile downstream from Noah Fork, and 4.5 miles northeast of Wartrace, Bedford County.

Drainage area.--66.3 sq mi.

Records available.--November 1953 to December 1958 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 800.85 ft above mean sea level, datum of 1929.

Extremes.--1957-58: Maximum discharge during water year, 7,060 cfs Nov. 17 (gage height, 16.26 ft), from rating curve extended above 3,800 cfs as explained below; minimum, 5.6 cfs Sept. 10 (gage height, 0.95 ft).

1958: Maximum discharge during period October to December, 1,200 cfs Nov. 28 (gage height, 5.50 ft); minimum, 12 cfs Oct. 15, 21-31; minimum gage height, 1.10 ft Oct. 25-31.

1953-58: Maximum discharge, 25,300 cfs Mar. 21, 1955 (gage height, 23.13 ft), from rating curve extended above 3,800 cfs on basis of slope-area measurement of peak flow; minimum, 1.2 cfs Sept. 17-20, 1954; minimum gage height, 0.79 ft Sept. 7-9, 1957.

Remarks.--Records good except those for period of no gage-height record, which are fair.

Rating tables, Oct. 1, 1957, to Dec. 17, 1958 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1, 1957, to Sept. 21, 1958

Sept. 21 to Dec. 17, 1958

0.95	5.9	2.5	216	1.1	12
1.0	9.0	3.0	345	1.3	24
1.2	20	5.0	1,020	1.6	58
1.5	49	9.2	2,530	2.0	115
2.0	115				

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	30	86	85	102	103	80	300	27	14	57	9.0
2	269	28	80	73	89	90	73	218	33	13	62	8.0
3	516	30	76	*67	83	80	71	178	27	12	40	7.0
4	280	28	69	63	78	72	69	164	26	12	27	6.6
5	204	27	61	59	137	65	110	191	24	12	22	6.2
6	125	26	57	57	497	61	192	515	23	12	19	6.2
7	87	25	1,610	59	*502	*63	112	670	23	12	19	6.2
8	67	104	772	54	288	65	89	*351	22	17	18	6.6
9	54	93	342	49	a220	81	80	402	29	17	15	6.2
10	44	69	211	47	a170	80	*325	342	31	14	16	5.9
11	38	57	145	46	a140	74	207	405	22	13	31	5.9
12	34	50	*108	42	a120	69	149	238	21	1,040	66	*8.5
13	29	50	92	69	a100	97	191	191	18	125	45	7.5
14	26	346	81	87	a90	93	99	140	18	69	*26	6.6
15	*24	204	84	76	a75	86	112	112	17	47	19	6.2
16	24	744	106	68	a70	82	93	96	17	73	16	7.0
17	28	1,850	103	63	a65	126	82	83	16	61	16	170
18	26	2,510	96	60	a60	230	77	74	*15	42	14	66
19	23	1,080	111	55	a55	180	72	77	14	35	12	29
20	22	342	1,310	55	a50	142	68	67	18	139	12	65
21	19	*191	408	72	49	118	525	60	37	129	12	686
22	19	140	226	67	51	99	288	54	37	67	12	160
23	64	157	198	61	51	90	182	50	22	136	12	89
24	103	192	122	757	50	86	173	47	18	82	124	61
25	59	465	141	516	50	97	616	48	15	*54	42	46
26	46	308	304	280	49	108	666	44	51	45	21	36
27	38	193	172	180	211	118	670	39	26	35	16	53
28	33	153	142	132	140	108	572	37	19	28	14	34
29	31	125	112	109	-	99	773	33	16	26	12	28
30	34	106	96	97	-----	94	453	31	14	22	10	25
31	33	-----	90	90	-----	90	-----	29	-----	19	10	-----
Total	2,477	9,723	7,609	3,595	3,642	3,046	7,195	5,356	697	2,418	857	1,657.6
Mean	79.9	324	245	116	130	98.3	240	172	23.2	78.0	27.0	55.3
Cfs/m	1.21	4.89	3.70	1.75	1.96	1.48	3.62	2.59	0.350	1.18	0.407	0.834
In.	1.39	5.45	4.27	2.02	2.04	1.71	4.04	2.99	0.39	1.36	0.47	0.93

Calendar year 1957: Max 3,760 Min 1.5 Mean 156 Cfs/m 2.35 In. 31.93

Water year 1957-58: Max 2,510 Min 5.9 Mean 132 Cfs/m 1.99 In. 27.06

Peak discharge (base, 3,000 cfs).--Nov. 17 (7:30 p.m.) 7,060 cfs (16.26 ft); Dec. 21 (4:30 a.m.) 3,540 cfs (11.27 ft); July 12 (8:30 a.m.) 3,800 cfs (12.40 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams.

Discharge, in cubic feet per second, 1958

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	27	22	92	9	16	14	32	17	13	20	*20	25	12	24	-
2	23	19	72	10	16	14	29	18	13	-	-	26	12	27	-
3	22	16	66	11	14	14	28	19	14	163	-	27	12	25	-
4	21	14	61	12	14	13	27	20	13	75	-	28	12	386	-
5	20	14	52	13	13	13	24	21	13	50	-	29	12	262	-
6	18	14	41	14	*13	13	22	22	12	39	-	30	12	127	-
7	16	13	36	15	12	29	20	23	12	32	-	31	12	-	-
8	16	13	35	16	13	29	20	24	12	28	-	-	-	-	-

Total..... 460 1,544 -

Mean..... 14.6 51.5 -

Cubic feet per second per square mile..... 0.223 0.777 -

Runoff in inches..... 0.26 0.87 -

Peak discharge (base, 3,000 cfs).--No peak above base.

* Discharge measurement made on this day.

5975. Wartrace Creek at Bell Buckle, Tenn.

Location.--Lat 35°35'16", long 86°20'22", on downstream right bank wingwall of bridge on State Highway 82, 0.2 mile downstream from Kelly Creek, 0.9 mile east of Bell Buckle, Bedford County, 4.0 miles northeast of Fairfield, and 7.7 miles upstream from mouth.

Drainage area.--16.3 sq mi.

Records available.--December 1953 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 822.74 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 5,340 cfs Nov. 17 (gage height, 10.00 ft), from rating curve extended above 1,200 cfs as explained below; minimum, 0.1 cfs Sept. 7-11; minimum gage height, 2.37 ft Sept. 9.
1954-58: Maximum discharge, 8,240 cfs Mar. 21, 1955 (gage height, 11.25 ft), from rating curve extended above 1,200 cfs on basis of contracted-opening measurement of peak flow; no flow at times in 1954-57.

Remarks.--Records fair.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 24 to Sept. 17)

Oct. 1 to Nov. 17

Nov. 18 to Sept. 30

2.48	1.2	3.0	27	2.27	0.1	2.7	6.6
2.5	1.3	3.5	95	2.3	.2	2.8	12
2.6	3.3	4.5	298	2.4	.4	3.0	26
2.7	6.8	5.5	615	2.5	1.0	3.5	95
2.8	12	7.0	1,140	2.6	3.0		

Note.--Same as preceding table above 3.5 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	4.9	20	20	18		16	63	1.5	0.5	18	0.3
2	63	4.6	17	16	15		15	47	1.7	.5	11	.3
3	136	5.3	16	*14	13		15	36	1.3	.4	6.6	.2
4	79	4.6	13	13	13		14	52	1.2	.4	4.5	.2
5	54	4.6	11	12	31		12	13	152	1.0	.8	3.6
6	29	3.9	9.8	12	130	10	21	278	1.0	.8	2.7	.2
7	19	4.6	506	12	*81	*11	14	186	.9	8.9	2.1	.1
8	12	46	160	11	42	12	14	*79	.8	9.3	1.7	.1
9	8.8	24	63	10	31	19	13	126	30	3.9	26	.1
10	6.8	15	41	9.3	24	17	*135	131	6.6	1.7	6.6	.1
11	5.3	10	26	8.8	20	15	37	93	3.3	1.0	9.2	.1
12	4.6	8.3	*19	8.2	16	13	26	54	1.9	354	5.3	*.2
13	3.3	8.3	16	17	13	26	20	36	1.3	47	7.9	.2
14	3.0	103	15	20	12	22	17	25	1.0	22	*5.7	.2
15	*1.6	38	22	16	11	18	24	19	.8	12	3.0	.2
16	2.0	292	36	15	9.3	16	17	16	.8	82	2.4	.2
17	4.3	1,110	32	13	9.3	45	15	13	.6	34	1.7	47
18	2.5	726	24	12	9.3	72	13	11	*.5	16	1.3	12
19	1.6	168	34	11	8.2	45	12	13	.6	10	1.0	4.2
20	1.4	62	338	11	6.6	30	11	9.8	1.3	43	.8	423
21	1.3	*35	64	16	7.1	20	243	7.7	18	85	.7	231
22	1.2	28	39	16	9.3	19	66	6.6	5.7	28	.6	46
23	57	41	29	14	8.8	17	40	5.3	2.4	198	.6	24
24	39	78	22	240	8.8	16	53	4.5	1.3	*108	63	16
25	17	143	110	91	9.3	28	200	4.5	.8	34	3.3	12
26	11	58	98	49	9.8	30	174	4.2	8.7	24	1.1	8.8
27	7.8	37	47	34	114	33	131	3.6	3.3	16	.7	21
28	5.7	42	37	25	35	27	97	3.0	1.7	14	.5	9.8
29	5.7	35	29	12	-	23	198	2.4	1.1	9.5	.4	7.7
30	6.4	26	25	18	-----	20	81	1.9	.8	6.1	.4	7.7
31	5.7	-----	21	17	-----	19	-----	1.7	-----	4.9	.2	-----
Total	608.0	3,166.1	1,937.8	802.3	714.8	702	1,744	1,485.2	101.9	1,171.5	192.7	873.1
Mean	19.6	108	62.5	25.9	25.5	22.6	58.1	47.9	3.40	37.8	6.22	29.1
Cfsm	1.20	6.50	3.83	1.59	1.56	1.39	3.56	2.94	0.209	2.32	0.382	1.79
In.	1.39	7.22	4.42	1.83	1.63	1.60	3.98	3.39	0.23	2.67	0.44	1.99

Calendar year 1957: Max 1,110

Min 0

Mean 40.0

Cfsm 2.45

In. 33.27

Water year 1957-58: Max 1,110

Min 0.1

Mean 37.0

Cfsm 2.27

In. 30.79

Peak discharge (base, 2,000 cfs).--Nov. 17 (7 p.m.) 5,340 cfs (10.00 ft).

* Discharge measurement made on this day.

5980. Duck River near Shelbyville, Tenn.

Location.--Lat 35°38'49", long 86°29'57", on right bank 150 ft downstream from Sims Bridge, 2.1 miles upstream from Sugar Creek, 2.2 miles west of Shelbyville, Bedford County, 2.9 miles downstream from Flat Creek, and at mile 216.2.

Drainage area.--481 sq mi.

Records available.--October 1933 to September 1958. Prior to April 1934, monthly discharge only, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 685.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 801 cfs.

Extremes.--Maximum discharge during year, 23,400 cfs Nov. 19 (gage height, 27.02 ft); minimum, 98 cfs Sept. 11, 12 (gage height, 0.97 ft).
1933-58: Maximum discharge, 62,900 cfs Feb. 13, 1948 (gage height, 36.40 ft, from floodmark), from rating curve extended above 27,000 cfs on basis of slope-area measurement of peak flow; minimum, 5 cfs Aug. 23, 1936; minimum daily, 20 cfs Sept. 2, 1945. Flood in March 1929 reached a stage of 37.6 ft (discharge, about 70,000 cfs), from high-water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2 ft higher than that in March 1929, from information by local residents.

Remarks.--Records good. Prior to 1948, diurnal fluctuation caused by powerplant upstream.

Revisions (water years).--WSP 783: 1934. WSP 853: Drainage area.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 10-20, Mar. 4-9, 12, 12, 16, 17, May 7-16)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

1.3	125	6.0	2,200	0.9	89	10.0	4,450
1.5	167	12.0	5,650	1.2	132	15.0	8,100
2.0	285	20.0	12,600	1.5	192	20.0	12,600
2.5	460	22.2	15,300	2.0	320	26.2	21,800
				5.0	1,750		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	610	218	1,040	820	985	1,560	720	2,960	242	158	197	118
2	819	209	845	760	990	975	630	2,290	429	150	320	114
3	2,750	291	735	675	880	825	580	1,880	461	145	338	111
4	1,700	263	680	580	750	730	570	1,500	303	141	234	106
5	1,580	238	600	523	1,140	660	575	2,060	259	137	194	105
6	1,140	220	536	489	2,900	635	2,060	3,830	249	139	172	105
7	795	204	5,130	481	*4,490	*625	1,480	4,820	232	143	158	105
8	546	663	7,290	457	3,310	640	1,080	*2,840	220	185	162	106
9	396	1,000	4,250	*417	2,050	725	*825	2,320	225	259	154	104
10	309	685	2,290	389	1,460	830	2,020	3,530	280	208	172	101
11	*263	492	1,550	374	1,170	775	2,360	3,400	239	*179	154	99
12	233	396	*1,100	354	975	680	1,840	2,660	213	1,560	160	*105
13	209	355	895	385	820	735	1,280	1,920	199	3,140	244	108
14	191	2,120	760	635	700	860	1,010	1,380	188	2,080	*249	106
15	174	2,060	665	665	670	815	1,080	1,100	179	1,420	194	102
16	165	4,250	755	595	605	745	1,080	925	181	600	162	105
17	169	5,590	890	510	501	725	965	825	177	1,040	152	174
18	185	15,200	850	461	450	1,500	780	695	*168	690	148	857
19	174	*21,700	925	421	420	1,580	675	660	162	417	139	280
20	152	10,700	6,480	397	400	1,500	610	670	158	373	132	506
21	137	2,790	5,540	465	393	1,040	2,700	550	170	785	128	5,260
22	129	1,860	2,760	575	405	865	2,950	477	357	929	123	2,520
23	176	1,780	1,850	565	441	750	2,060	425	239	690	123	1,150
24	1,160	1,700	1,420	2,340	453	705	1,430	382	194	958	137	635
25	565	3,520	1,220	4,490	457	900	3,800	354	172	493	420	393
26	378	3,210	2,080	3,160	449	1,080	4,490	344	311	397	185	291
27	312	2,310	1,580	1,980	1,480	1,140	4,430	320	357	300	152	244
28	260	1,640	1,320	1,460	1,700	1,020	4,070	303	244	244	139	259
29	233	1,460	1,120	1,160	-	885	4,710	286	194	229	130	204
30	231	1,310	975	980	-----	810	4,580	267	170	206	124	185
31	235	-----	850	870	-----	785	-----	254	-----	185	118	-----
Total	16,376	88,234	58,981	28,443	31,444	27,700	57,440	46,227	7,172	18,580	5,614	14,656
Mean	528	2,941	1,903	918	1,123	894	1,915	1,491	239	599	181	489
Cfsm	1.10	8.11	3.36	1.91	2.33	1.86	3.98	3.10	0.497	1.25	0.376	1.02
In.	1.27	6.82	4.56	2.20	2.43	2.14	4.44	3.57	0.55	1.44	0.43	1.13

Calendar year 1957: Max 21,700 Min 49 Mean 1,190 Cfsm 2.47 In. 33.57
Water year 1957-58: Max 21,700 Min 99 Mean 1,098 Cfsm 2.28 In. 30.98

Peak discharge (base, 8,000 cfs)--Nov. 19 (9:30 a.m.) 23,400 cfs (27.02 ft); Dec. 7 (7:30 p.m.) 8,040 cfs (14.93 ft); Dec. 20 (5 p.m.) 8,440 cfs (15.38 ft).

* Discharge measurement made on this day.

5990. Big Rock Creek at Lewisburg, Tenn.

Location.--Lat 35°26'56", long 86°47'09", on downstream side of center pier of bridge on State Highway 50, 800 ft east of Marshall County courthouse in Lewisburg and at mile 17.9.

Drainage area.--24.9 sq mi.

Records available.--January 1954 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 705.01 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 5,220 cfs Nov. 17 (gage height, 12.04 ft), from rating curve extended above 2,400 cfs as explained below; minimum, 0.02 cfs Sept. 5 (gage height, 0.24 ft).
1954-58; Maximum discharge, 16,700 cfs Mar. 21, 1955 (gage height, 17.62 ft, from floodmarks), from rating curve extended above 2,400 cfs on basis of contracted-opening measurement of peak flow 0.6 mile upstream (drainage area, 19.0 sq mi); no flow at times in 1954-57.

Flood in July 1939 (discharge, 16,300 cfs) exceeded all previously known floods, including those of 1902, and 1856, from reports by Tennessee Valley Authority.

Remarks.--Records fair except those for periods of no gage-height record, which are poor.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 20-23)

Oct. 1 to Nov. 17

Nov. 18 to Sept. 30

0.97	3.6	2.0	110	0.26	0.08	1.2	13
1.0	4.0	3.0	290	.3	.2	1.5	42
1.2	10	4.0	510	.4	.6	2.0	110
1.5	42	6.4	1,110	.5	1.1	3.0	290
				.7	2.9	5.6	910
				1.0	7.6		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	10	52	36	38	41	32	110	7.2	1.4	35	0.3
2	51	9.3	45	*29	30	34	28	89	6.8	1.1	36	.1
3	48	16	39	27	26	28	26	71	6.3	1.1	11	.1
4	46	12	33	21	23	24	25	96	5.7	.8	7.0	.1
5	42	11	26	18	47	21	71	130	5.4	2.9	5.6	.08
6	34	9.3	26	18	*107	*21	142	238	5.1	2.1	4.4	.1
7	25	8.5	611	18	109	22	51	*142	5.0	2.6	3.9	.3
8	17	80	201	17	76	23	*39	104	5.0	5.0	3.3	.1
9	13	47	132	15	55	24	32	246	5.2	3.0	2.4	.1
10	10	33	102	14	a50	20	319	190	4.2	1.7	1.7	.1
11	*8.9	22	81	14	a43	18	104	140	4.2	*1.7	2.5	*.2
12	7.8	17	*67	13	a40	17	72	103	a4.0	3.1	2.5	.2
13	7.0	27	58	17	a35	25	56	76	a3.5	2.4	2.1	.2
14	6.1	211	55	17	a31	21	46	60	a3.0	1.6	*1.4	.2
15	5.2	92	50	15	a28	19	87	48	a2.5	1.0	1.4	.2
16	5.6	392	47	14	a25	18	60	39	a2.0	1.7	1.2	.3
17	12	1,100	45	13	a22	32	48	32	a1.5	20	1.0	75
18	7.0	889	41	12	a19	65	42	26	*1.0	4.6	.8	7.1
19	5.8	304	48	12	a17	46	36	23	6.5	2.7	.7	4.2
20	4.7	128	489	12	a16	38	33	19	5.1	1.8	.6	378
21	4.0	*86	126	34	15	33	152	17	4.4	51	.4	266
22	3.6	67	90	26	17	27	74	15	10	42	.4	113
23	148	67	71	24	17	26	55	13	6.1	17	.4	54
24	113	88	58	456	15	48	126	12	4.2	12	30	24
25	58	198	58	158	15	62	382	12	3.2	7.4	4.2	13
26	38	110	133	106	15	60	208	11	7.0	6.1	1.5	9.5
27	83	69	81	119	56	309	9.5	5.4	5.0	9.0	.9	8.6
28	19	102	60	64	59	48	203	9.0	64.2	4.1	6	7.0
29	15	82	48	54	-	42	285	8.3	3.3	3.6	6	5.9
30	16	65	42	45	-	41	128	7.8	1.8	2.8	.4	5.9
31	13	-	38	41	-	37	-	7.2	-	4.7	.2	-
Total	868.7	4,366.1	3,039	1,441	1,109	1,034	3,272	2,103.8	138.8	218.0	164.1	973.88
Mean	28.0	146	98.0	46.5	39.6	33.4	109	67.9	4.63	7.03	5.29	32.5
Cfsm	1.12	5.86	3.94	1.67	1.59	1.34	4.38	2.73	0.166	0.282	0.212	1.31
In.	1.30	6.52	4.54	2.15	1.66	1.54	4.89	3.14	0.21	0.33	0.25	1.45

Calendar year 1957: Max 1,610 Min 0 Mean 64.4 Cfsm 2.59 In. 35.13
Water year 1957-58: Max 1,100 Min 0.08 Mean 51.3 Cfsm 2.06 In. 27.98

Peak discharge (base, 1,500 cfs).--Nov. 17 (5 p.m.) 5,220 cfs (12.04 ft); Dec. 7 (3:30 a.m.) 1,570 cfs (8.00 ft); Dec. 20 (3 a.m.) 2,460 cfs (9.76 ft); Sept. 20 (6:30 p.m.) 1,930 cfs (8.92 ft).

* Discharge measurement made on this day.

No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

5995. Duck River at Columbia, Tenn.

Location.--Lat 35°37'05", long 87°01'56", on right bank 4 ft downstream from bridge on former U. S. Highway 31, 2 blocks north of public square at Columbia, Maury County, 0.7 mile downstream from Columbia hydroelectric plant, 2.4 miles upstream from Rutherford Creek, and at mile 132.8.

Drainage area.--1,208 sq mi.

Records available (corrected).--October 1904 to December 1908, May 1930 to September 1958.

Prior to November 1904 monthly discharge only, published in WSP 1306. Gage-height records collected at same site, 1887-95, 1911 (fragmentary), and since 1947, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 535.52 ft above mean sea level, datum of 1929. Prior to Jan. 9, 1925, chain, tape, or staff gages near this site; all gages at datum 2.37 ft higher prior to Oct. 1, 1933.

Average discharge.--42 years (1904-46, 1920-58), 1,930 cfs.

Extremes.--Maximum discharge during year, 26,100 cfs Nov. 20 (gage height, 33.48 ft); minimum, 46 cfs Sept. 8, 9; minimum gage height, 1.55 ft Jan. 10, Sept. 8, 9; minimum daily discharge, 46 cfs Sept. 8.

1904-8, 1920-58: Maximum discharge, 61,100 cfs Feb. 14, 1948 (gage height, 51.75 ft); no flow Oct. 22, 1922.

Flood of Mar. 30, 1902, reached a stage of 48.0 ft. present datum (discharge, 50,700 cfs).

Remarks.--Records good except those below 100 cfs, which are fair. Occasional diurnal fluctuation and infrequent regulation at low flow caused by powerplants above station. Prior to about 1953, fluctuation and regulation were more pronounced.

Revisions (water years).--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-23.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

(Shifting-control method used Oct. 2, 3, 11-25, Oct. 29 to Nov. 7, July 27-30, Aug. 1 to Sept. 5, Sept. 16-19)

1.6	42	6.0	2,180
1.7	62	9.0	4,100
1.8	90	20.0	13,700
2.0	168	50.0	22,700
4.0	1,020	54.0	26,600

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,080	442	2,880	1,600	1,740	2,890	1,680	8,720	413	305	574	125
2	*895	479	*1,240	1,510	1,710	2,370	*1,510	5,840	335	242	361	117
3	990	482	1,320	1,360	1,590	1,830	1,380	4,240	369	*199	*417	110
4	2,570	528	1,660	1,730	*1,500	1,480	1,350	3,390	524	184	627	259
5	2,790	612	1,410	1,110	1,370	*1,280	1,380	4,640	549	178	545	*203
6	2,480	549	1,200	990	2,040	1,080	2,770	7,540	430	493	365	76
7	1,750	*475	8,340	880	6,810	1,100	4,050	9,740	381	195	*285	50
8	1,300	1,300	15,600	871	7,730	980	2,820	9,770	329	180	273	46
9	951	2,040	14,200	908	5,460	1,110	2,070	6,890	325	375	219	48
10	750	2,160	8,790	*610	3,420	1,050	5,640	9,060	*313	483	199	70
11	466	1,510	4,680	773	2,550	1,280	9,050	10,400	552	426	186	87
12	450	1,180	3,150	650	2,070	1,120	5,480	8,940	428	458	281	94
13	381	951	2,410	722	1,720	1,150	3,790	6,080	353	553	537	94
14	333	2,090	1,950	654	1,480	1,060	2,750	*4,050	181	3,100	293	90
15	269	4,420	1,720	894	1,320	1,550	2,660	2,900	250	2,500	317	94
16	266	7,610	1,786	980	1,220	1,200	3,050	2,300	250	1,580	345	98
17	428	13,100	2,020	851	1,110	1,250	2,800	1,850	219	985	289	*117
18	407	20,700	1,960	853	965	2,070	2,120	1,540	195	713	223	160
19	385	25,000	1,890	778	862	3,170	1,800	1,330	191	941	184	696
20	349	25,800	7,160	756	804	2,690	1,540	1,180	180	718	172	1,070
21	301	24,800	12,600	722	769	2,180	2,640	1,130	176	955	160	4,500
22	246	11,600	10,100	804	756	1,860	7,180	995	172	922	145	8,380
23	889	3,960	5,460	1,040	782	1,520	5,270	880	258	1,330	133	4,540
24	2,380	3,680	3,320	3,520	835	1,600	2,760	785	426	1,390	145	1,360
25	2,620	5,470	2,620	10,200	786	2,070	7,410	679	557	1,380	145	1,180
26	1,720	7,670	2,970	9,110	970	2,460	10,300	700	545	871	151	853
27	1,130	5,720	3,960	6,120	1,850	2,480	10,500	557	413	633	357	616
28	746	4,290	2,900	3,780	3,780	2,380	*10,300	553	524	553	509	562
29	654	4,400	2,430	2,780	-	2,100	10,200	524	520	471	203	512
30	578	5,400	2,040	2,250	-----	1,670	11,000	463	385	540	160	499
31	616	-----	1,770	1,930	-----	1,740	-----	442	-----	714	157	-----
Total	31,430	186,682	134,450	61,290	57,559	55,950	158,040	118,118	10,640	24,353	8,570	27,306
Mean	1,014	6,223	4,337	1,977	2,058	1,740	4,801	3,810	355	786	276	910
Cfsm	0.839	5.15	3.59	1.64	1.70	1.44	3.81	3.15	0.294	0.651	0.228	0.753
In.	0.97	5.75	4.14	1.89	1.77	1.66	4.25	3.64	0.33	0.75	0.26	0.654
Calendar year 1957: Max	34,100	Min	46	Mean	2,727	Cfsm	2.26	In.	30.65			
Water year 1957-58: Max	25,900	Min	46	Mean	2,335	Cfsm	1.93	In.	26.25			

Peak discharge (base, 16,000 cfs).--Nov. 20 (10:30 p.m.) 26,100 cfs (33.48 ft); Dec. 8 (6:30 p.m.) 16,600 cfs (23.21 ft).

* Discharge measurement made on this day.

6000. Rutherford Creek near Carters Creek, Tenn.

Location.--Lat 35°40'23", long 86°58'42", on right bank at upstream side of county road bridge, 1 mile downstream from Double Branch, 3.2 miles south of town of Carters Creek, Maury County, 3.5 miles upstream from Carters Creek, and 5.1 miles northeast of Columbia.

Drainage area.--68.8 sq mi.

Records available.--September 1953 to December 1958 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 590 ft (from topographic map).

Average discharge.--5 years, 105 cfs.

Extremes.--1957-58: Maximum discharge during water year, 2,290 cfs Sept. 21 (gage height, 11.41 ft); minimum, 0.2 cfs Sept. 9, 10; minimum gage height, 0.92 ft Sept. 9.
1958: Maximum discharge during period October to December, 295 cfs Nov. 28 (gage height, 3.66 ft); minimum, 3.0 cfs Nov. 8-10; minimum gage height, 1.52 ft Dec. 27.
1953-58: Maximum discharge, 11,800 cfs Mar. 22, 1955 (gage height, 24.38 ft, from high-water mark in gage house), from rating curve extended above 4,000 cfs on basis of slope-area measurement of peak flow; no flow on many days in 1953-57.

Remarks.--Records fair except those below 10 cfs, which are poor.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	17	160	108	97	108	92	215	23	4.8	18	0.9
2	*4.6	17	*134	93	84	92	*84	179	a22	4.2	26	.9
3	7.3	15	117	87	75	83	82	144	a21	*3.7	20	.8
4	43	13	101	79	*67	74	93	136	a19	3.3	14	.7
5	28	12	89	72	70	*66	99	249	a18	3.0	12	*.6
6	16	11	83	69	157	62	337	388	a17	151	10	.5
7	13	*11	828	66	393	61	146	234	a16	57	*9.2	.3
8	9.0	228	479	59	213	65	117	184	a15	13	8.8	.3
9	6.7	112	307	54	163	62	101	240	a19	11	7.9	.2
10	6.2	70	227	*51	134	57	778	330	*17	11	7.5	.2
11	5.4	49	171	49	115	53	357	434	14	9.7	53	.5
12	5.1	40	131	46	98	49	245	425	14	9.2	35	.5
13	5.1	37	115	49	88	58	186	252	14	10	8.3	.6
14	4.8	306	101	54	80	60	150	*190	10	7.9	16	.5
15	4.6	156	102	48	79	55	248	146	9.2	5.8	5.4	.6
16	5.4	670	121	45	a75	53	179	122	8.3	4.2	3.5	.6
17	21	891	110	45	a70	67	144	101	7.9	3.3	2.8	2.2
18	17	1,030	104	41	a55	225	124	86	7.0	3.5	2.2	2.0
19	9.0	611	104	40	a50	152	112	79	6.6	2.8	2.0	2.6
20	6.7	341	794	41	a55	126	102	70	6.2	18	1.9	172
21	5.8	240	333	50	a50	109	269	60	5.8	140	1.7	803
22	5.8	181	240	51	48	95	179	52	6.2	116	1.5	100
23	142	168	186	47	45	93	139	45	5.8	192	1.7	63
24	141	174	152	511	43	172	285	39	4.8	74	4.2	45
25	48	340	148	399	42	215	802	36	4.5	39	7.6	33
26	32	207	341	269	41	183	470	33	30	28	2.0	25
27	24	162	184	200	297	156	387	29	14	20	1.5	20
28	21	370	166	156	142	131	314	28	7.9	29	1.3	17
29	19	358	138	130	-	114	348	26	6.6	23	1.2	15
30	20	213	121	114	-----	113	258	25	5.4	17	1.2	12
31	18	-----	109	102	-----	106	-----	24	-----	42	1.0	-----
Total	699.3	7,030	6,496	3,223	2,946	3,115	7,227	4,601	375.2	1,056.4	286.4	1,320.5
Mean	22.6	234	210	104	105	100	241	148	12.5	34.1	9.30	44.0
Cfs/m	0.328	3.40	3.05	1.51	1.53	1.45	3.50	2.15	0.182	0.496	0.135	0.640
In.	0.38	3.80	3.51	1.74	1.59	1.68	3.91	2.49	0.20	0.57	0.16	0.71

Calendar year 1957: Max 2,160 Min 0 Mean 142 Cfs/m 2.06 In. 28.05
Water year 1957-58: Max 1,030 Min 0.2 Mean 105 Cfs/m 1.53 In. 20.74

Peak discharge (base, 1,800 cfs).--Nov. 17 (11 p.m.) 2,150 cfs (10.99 ft); Dec. 20 (7 a.m.) 1,890 cfs (10.16 ft); Sept. 21 (5 a.m.) 2,290 cfs (11.41 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and normal recession.

Discharge, in cubic feet per second, 1958

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	11	23	46	9	6.6	3.0	10	17	6.6	8.2	6.6	25	6.6	5.2	4.9
2	10	19	*35	10	7.7	3.0	9.2	18	6.6	7.5	6.6	26	7.3	4.7	4.7
3	9.7	10	30	11	8.2	3.2	7.7	19	6.2	87	6.6	27	7.3	4.2	5.8
4	9.2	6.6	27	12	8.2	3.2	7.7	20	6.2	35	6.2	28	9.2	82	19
5	9.2	4.9	20	13	7.7	3.2	7.3	21	6.2	17	5.8	29	12	117	20
6	*9.2	3.7	15	14	7.3	*3.2	7.3	22	6.2	9.7	5.5	30	14	65	16
7	7.3	3.4	12	15	6.9	4.7	7.3	23	6.2	7.3	5.2	31	14	-	14
8	6.6	3.0	11	16	6.9	9.7	7.3	24	6.6	5.8	5.5				
Total.....												251.9	562.4	392.2	
Mean.....												8.13	18.7	12.7	
Cubic feet per second per square mile.....												0.118	0.272	0.185	
Runoff in inches.....												0.14	0.30	0.21	
Calendar year 1958: Max 803 Min 0.2 Mean 69.5 Cfs/m 1.01 In. 13.70															

Peak discharge (base, 1,800 cfs).--No peak above base.

* Discharge measurement made on this day.

6005. Big Bigby Creek at Sandy Hook, Tenn.

Location.--Lat 35°29'19", long 87°13'59", on right bank 45 ft west of Louisville & Nashville Railroad track, 0.2 mile downstream from bridge on U. S. Highway 43, 0.4 mile northeast of Sandy Hook, Maury County, 0.5 mile upstream from Dry Creek, and 3.5 miles southwest of Mount Pleasant.

Drainage area.--17.5 sq mi.

Records available.--September 1953 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 670.59 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 23.9 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs Nov. 17 (gage height, 6.66 ft), from rating curve extended above 830 cfs; minimum, 1.0 cfs Sept. 10 (gage height, 0.88 ft), caused by bridge construction upstream; minimum discharge unaffected by construction, 3.3 cfs Sept. 6, 7 (gage height, 1.09 ft).

1953-58: Maximum discharge, 2,550 cfs Mar. 21, 1955 (gage height, 11.22 ft), from rating curve extended above 830 cfs; minimum, that of Sept. 10, 1958; minimum discharge unaffected by construction, 1.5 cfs Sept. 4-7, 1954; minimum gage height, 0.50 ft Sept. 17, 1956.

Remarks.--Records fair.

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 1-23)

0.9	1.8	2.0	55
1.0	3.3	2.5	106
1.2	7.5	3.0	176
1.3	10	4.0	365
1.5	19		

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	7.0	30	24	24	33	24	61	13	6.2	7.2	3.9
2	*7.2	7.0	*26	21	21	29	*23	49	14	7.9	7.2	3.7
3	7.2	7.7	23	19	20	26	23	39	14	*7.7	7.2	3.5
4	7.2	7.5	20	18	*17	23	35	32	13	7.5	6.6	3.5
5	7.2	7.2	18	17	20	*21	40	32	12	7.5	6.4	*3.5
6	6.6	7.0	17	16	46	21	98	35	12	7.7	6.2	3.3
7	6.6	*7.0	285	15	49	21	59	29	11	7.7	*5.9	3.5
8	6.4	53	135	15	38	22	43	26	11	7.9	5.9	3.7
9	6.2	21	70	14	31	23	36	77	11	8.2	5.9	3.5
10	5.9	13	47	*14	27	21	165	129	*11	7.9	6.2	3.1
11	5.9	11	36	14	24	20	90	88	12	8.8	7.0	3.7
12	5.9	9.3	28	14	21	20	58	61	12	9.6	7.2	4.5
13	5.9	9.8	24	16	20	23	45	47	11	9.9	6.6	4.3
14	5.7	74	23	21	19	23	37	*39	10	9.6	5.9	3.9
15	5.7	28	23	19	19	22	91	33	10	8.5	5.9	3.5
16	6.6	129	25	17	17	21	87	31	10	8.5	5.9	3.7
17	9.9	342	24	17	16	27	60	28	9.9	8.8	5.7	5.3
18	7.9	306	23	15	16	49	49	25	9.3	7.9	5.3	4.9
19	7.2	160	26	15	16	39	38	25	9.3	7.7	5.1	4.7
20	6.6	64	282	15	16	33	32	23	10	7.5	4.7	22
21	6.6	40	90	17	16	29	37	21	9.6	8.5	4.7	26
22	6.6	31	54	18	16	26	33	20	9.9	9.6	4.7	10
23	31	30	39	17	17	24	28	19	9.6	9.9	5.1	7.2
24	25	35	32	169	16	44	27	17	9.3	9.6	5.9	6.6
25	12	70	44	115	16	52	117	19	8.8	8.8	5.5	6.4
26	9.3	47	73	67	16	45	76	19	22	8.2	5.1	5.5
27	7.9	36	49	45	59	42	82	16	12	7.7	4.9	5.7
28	7.5	43	41	36	43	34	54	17	9.9	7.7	4.7	5.7
29	7.0	51	33	31	-	31	145	15	9.3	8.8	4.3	5.5
30	7.2	38	28	26	-----	28	91	14	8.8	7.5	4.1	5.9
31	7.5	-----	26	25	-----	26	-----	14	-----	7.2	4.1	-----
Total	261.0	1,691.5	1,694	902	676	896	1,803	1,100	334.7	258.5	177.1	180.2
Mean	8.42	56.4	54.6	29.1	24.1	28.9	60.1	35.5	11.2	8.34	5.71	6.01
Cfsm	0.481	3.22	3.12	1.66	1.39	1.65	3.43	2.03	0.640	0.477	0.326	0.343
In.	0.55	3.59	3.60	1.92	1.44	1.90	3.83	2.34	0.71	0.55	0.38	0.38

Calendar year 1957: Max 693 Min 4.3 Mean 38.4 Cfsm 2.19 In. 29.81
Water year 1957-58: Max 342 Min 3.1 Mean 27.3 Cfsm 1.56 In. 21.19

Peak discharge (base, 600 cfs).--Nov. 17 (6 p.m.) 1,260 cfs (6.66 ft); Dec. 20 (3 a.m.) 719 cfs (5.15 ft).

* Discharge measurement made on this day.

6035. Piney River at Vernon, Tenn.

Location.--Lat 35°52'17", long 97°30'00", on left bank 350 ft upstream from county highway bridge, 400 ft upstream from Pretty Creek, 0.2 miles northwest of Vernon, Hickman County, 2.5 miles downstream from Mill Creek, 6.6 miles north of Centerville, and 8.4 miles upstream from mouth.

Drainage area.--193 sq mi.

Records available.--July 1925 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 464.89 ft above mean sea level, datum of 1929. Prior to Aug. 30, 1927, tape gage and Aug. 30, 1927, to Feb. 8, 1931, chain gage at same site and datum. Feb. 9, 1931, to May 10, 1934, staff gage at site half a mile downstream at datum 2.77 ft lower.

Average discharge.--33 years, 306 cfs.

Extremes.--Maximum discharge during year, 9,340 cfs May 11 (gage height, 11.57 ft); minimum, 84 cfs Sept. 4-7, 8-11, 13-17 (gage height, 0.49 ft).

1925-58: Maximum discharge observed, 32,500 cfs Dec. 21, 1926 (gage height, 16.5 ft); minimum discharge, 35 cfs Sept. 19, 20, 1936; minimum gage height observed, -0.09 ft Sept. 27, Oct. 16, 1951.

Remarks.--Records fair.

Revisions (water years).--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-4			Oct. 5 to Nov. 18			Nov. 19 to Sept. 30		
0.5	102		0.5	85	2.0	485	0.49	84
.8	129		.9	124	4.0	1,600	.5	86
1.0	162		1.0	162	6.0	2,940	1.0	174
			1.5	290	8.0	4,660	1.5	318
							2.0	550
							4.0	1,720
							6.0	2,980
							9.0	5,800

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	121	520	289	305	185	346	869	222	125	115	91
2	107	118	447	265	278	181	320	701	490	123	121	89
3	107	121	400	248	255	176	312	591	271	121	116	87
4	151	114	355	237	237	174	312	490	240	120	110	86
5	119	110	312	227	235	172	305	490	219	118	104	84
6	108	105	293	219	297	170	486	747	208	133	103	84
7	103	105	1,790	217	443	174	443	550	196	158	101	86
8	99	314	1,850	212	410	196	382	471	189	215	99	86
9	*96	417	*1,110	205	359	255	350	447	183	104	98	84
10	95	297	816	198	329	305	985	1,540	178	137	99	84
11	93	244	634	196	305	289	1,060	5,050	174	132	127	87
12	92	213	*505	192	282	275	770	1,630	174	135	121	91
13	91	216	433	198	262	275	607	1,070	185	138	113	84
14	90	3,040	382	205	245	271	515	799	162	138	108	84
15	90	1,220	346	196	245	252	828	640	158	128	101	84
16	104	720	320	189	235	240	*1,140	540	158	*123	99	84
17	242	948	308	187	219	242	869	482	152	123	98	*96
18	154	3,940	316	185	203	350	695	400	146	123	96	86
19	128	3,310	438	181	*196	382	576	368	145	118	92	86
20	114	1,280	1,430	181	196	*373	500	333	145	118	89	270
21	107	828	1,020	198	192	359	462	*297	146	142	87	289
22	104	618	747	217	192	325	405	271	150	135	89	154
23	230	515	602	217	187	364	355	255	144	137	94	127
24	421	438	505	336	185	618	329	240	140	145	261	115
25	255	447	457	651	183	816	391	748	135	123	152	106
26	203	405	481	602	181	712	405	500	154	120	116	103
27	173	377	414	500	192	586	724	364	*144	116	*108	99
28	152	495	387	424	194	500	1,130	312	133	116	101	96
29	140	*768	359	*568	-	433	1,370	271	128	138	99	94
30	135	645	325	358	-----	414	1,150	242	127	118	96	92
31	128	-----	308	312	-----	391	-----	227	-----	115	92	-----
Total	4,336	22,477	18,690	8,392	7,042	10,455	18,522	21,905	5,394	4,095	3,403	3,178
Mean	140	749	600	271	252	337	617	707	180	132	110	106
Cfsm	0.725	3.88	3.11	1.40	1.31	1.75	3.20	3.66	0.933	0.684	0.570	0.549
In.	0.84	4.33	3.58	1.62	1.36	2.01	3.57	4.22	1.04	0.79	0.66	0.61

Calendar year 1957: Max 9,440 Min 60 Mean 413 Cfsm 2.14 In. 29.07
Water year 1957-58: Max 5,050 Min 84 Mean 350 Cfsm 1.81 In. 24.63

Peak discharge (base, 4,000 cfs).--Nov. 14 (1 p.m.) 5,100 cfs (8.42 ft); Nov. 18 (12 p.m.) 6,480 cfs (9.52 ft); May 11 (3 a.m.) 9,340 cfs (11.57 ft).

* Discharge measurement made on this day.

6030. Duck River above Hurricane Mills, Tenn.

Location.--Lat 35°55'48", long 87°44'25", on left bank 0.4 mile downstream from Tumbling Creek, 1.3 miles upstream from bridge on State Highway 13, 3.6 miles southeast of Hurricane Mills, Humphreys County, and at mile 26.0.

Drainage area.--2,557 sq mi.

Records available.--July 1925 to September 1958. Prior to October 1951, published as "near Hurricane Mills."

Gage.--Water-stage recorder. Datum of gage is 370.53 ft above mean sea level, datum of 1929. Prior to June 2, 1927, tape gage, June 2, 1927, to Feb. 20, 1934, staff gages, and Feb. 21, 1934, to Sept. 30, 1951, water-stage recorder, at bridge 5.6 miles downstream at datum 8.80 ft lower.

Average discharge.--33 years, 3,952 cfs.

Extremes.--Maximum discharge during year, 37,600 cfs Nov. 20 (gage height, 20.78 ft); minimum, 430 cfs Sept. 11-13 (gage height, 0.76 ft).

1925-58: Maximum discharge, 122,000 cfs Feb. 14, 1948 (gage height, 30.70 ft, from floodmark in gage house, present site and datum); minimum, 185 cfs Sept. 11, 12, 1925; minimum gage height, 0.15 ft Oct. 2, 1941, site and datum then in use.

Remarks.--Records good. Occasional minor fluctuations at low flow from small dams upstream. Prior to about 1953, fluctuation and regulation were more pronounced. Minor diversions for irrigation.

Revisions (water years).--WSP 803: 1935. WSP 823: 1927(M). WSP 853: Drainage area. WSP 1436: 1926-28, 1938(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 20

Nov. 21 to Sept. 30

1.6	840	9.0	9,600	0.7	400
2.0	1,100	16.0	23,000	1.0	550
4.0	2,930	21.0	38,500	2.0	1,180
6.0	5,100			6.0	5,100

Note.--Same as preceding table above 6.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*958	1,370	7,230	4,180	4,400	4,680	4,180	16,500	1,520	1,080	*1,300	588
2	1,340	1,340	5,840	3,840	4,070	4,870	3,890	14,600	1,880	958	1,380	550
3	1,490	1,250	4,970	3,520	3,730	4,130	3,650	11,000	1,720	870	1,260	535
4	1,480	1,180	4,320	3,270	3,520	3,520	3,490	8,340	1,480	810	1,120	515
5	1,930	1,180	3,820	3,010	3,300	3,070	3,540	6,840	1,380	756	1,030	495
6	3,610	1,180	3,500	2,800	3,230	2,750	3,830	7,870	1,410	714	1,100	480
7	3,280	1,250	4,870	2,610	4,320	2,550	5,550	10,400	1,430	816	1,050	572
8	2,770	1,480	14,200	2,470	3,060	6,780	12,400	1,510	2,210	2,210	1,090	556
9	*2,150	3,650	20,200	2,230	11,100	2,410	5,620	13,100	1,180	1,620	906	490
10	1,740	4,380	*21,100	2,160	9,100	2,670	5,560	11,900	1,110	1,120	852	450
11	1,430	4,040	15,700	2,170	6,740	2,820	11,600	19,500	1,140	1,180	796	430
12	1,220	3,420	9,650	1,820	5,180	2,680	14,500	20,100	1,100	1,220	920	430
13	1,080	2,780	6,850	1,980	4,340	2,820	11,200	16,200	1,240	1,150	846	435
14	906	5,800	5,420	1,920	3,820	2,700	8,260	12,000	1,180	1,200	978	455
15	888	10,000	4,580	2,050	3,480	2,720	6,980	8,800	1,080	2,000	906	465
16	846	8,510	4,130	1,890	3,200	2,630	8,910	6,630	978	3,450	840	465
17	1,440	11,400	3,980	2,130	2,800	2,820	9,150	5,270	920	2,870	796	*465
18	1,500	21,600	4,020	2,110	2,600	3,020	7,730	4,420	888	*2,260	804	465
19	1,450	33,300	4,330	2,020	*2,590	4,250	6,250	3,890	846	1,640	774	475
20	1,260	37,300	7,820	*1,910	2,230	*5,540	5,320	3,520	828	1,340	*708	762
21	1,070	36,300	16,600	1,940	2,080	5,370	4,900	*3,180	816	1,460	660	2,080
22	1,020	33,900	17,600	1,970	2,020	4,760	5,300	2,900	816	1,710	636	4,800
23	1,010	29,800	16,400	1,970	1,990	4,280	9,100	2,670	810	3,710	616	8,050
24	1,670	10,900	11,100	2,390	1,870	4,250	8,510	2,410	774	3,560	708	6,610
25	3,690	7,650	7,580	7,620	1,970	5,800	7,360	2,380	762	3,100	920	3,740
26	3,930	8,780	6,600	14,400	1,980	6,710	11,200	2,700	1,020	2,500	810	2,450
27	3,540	10,900	7,230	14,400	1,980	6,530	14,400	2,180	*1,710	2,230	702	1,760
28	2,570	9,760	7,340	11,000	2,940	6,100	15,300	2,080	1,520	1,700	649	1,380
29	2,000	*8,740	6,450	7,740	1,990	5,510	16,100	1,840	1,180	1,460	649	1,120
30	1,610	8,660	5,340	*5,930	-----	4,980	*17,500	1,730	1,080	1,330	720	998
31	1,470	-----	4,640	4,920	-----	4,550	-----	1,610	-----	1,170	649	-----
Total	56,328	321,780	263,410	124,370	109,640	124,100	245,680	238,940	35,118	53,174	27,169	43,066
Mean	1,817	10,730	8,497	4,012	3,915	4,003	8,189	7,708	1,171	1,715	876	1,436
Cfsm	0.711	4.20	3.32	1.57	1.53	1.57	3.20	3.01	0.458	0.671	0.343	0.562
In.	0.82	4.68	3.83	1.81	1.59	1.80	3.57	3.48	0.51	0.77	0.40	0.83

Calendar year 1957: Max 53,900 Min 428 Mean 5,481 Cfsm 2.14 In. 29.08
 Water year 1957-58: Max 37,300 Min 430 Mean 4,501 Cfsm 1.76 In. 23.89

* Discharge measurement made on this day.

6040. Buffalo River near Flat Woods, Tenn.

Location.--Lat 35°29'45", long 87°49'58", on right bank 0.5 mile downstream from Little Opossum Creek and bridge on State Highway 13, 1.3 miles north of Flat Woods, Perry County, 3.9 miles upstream from Sinking Creek, and at mile 58.7.

Drainage area.--447 sq mi.

Records available.--May 1920 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 513.58 ft above mean sea level, datum of 1929. Prior to May 27, 1934, staff gage at same site and datum.

Average discharge.--38 years, 728 cfs.

Extremes.--Maximum discharge during year, 16,100 cfs Nov. 19 (gage height, 19.70 ft); minimum, 153 cfs Sept. 16 (gage height, 1.93 ft), caused by withdrawal upstream; minimum discharge unaffected by withdrawal, 160 cfs Sept. 10, 11 (gage height, 1.96 ft).

1920-58: Maximum discharge, 90,000 cfs Feb. 13, 1948 (gage height, 32.0 ft, from high-water mark in gage house), from rating curve extended above 50,000 cfs on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum observed, 65 cfs Sept. 9, 1925; minimum gage height observed, 1.12 ft Sept. 26, 1931.

Remarks.--Records good except those for period of no gage-height record, which are fair.

Revisions (water years).--WSI 753: 1933. WSP 803: 1935. WSP 823: Drainage area.

WSP 143E: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M).

Rating table, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

1.3	145	10.0	4,800
2.0	170	14.0	6,550
1.0	930	16.0	11,000
6.0	1,990	19.0	15,100

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	228	266	874	730	750	626	758	1,650	372	*294	274	182
2	228	274	766	678	694	592	678	1,480	376	280	280	179
3	224	538	690	622	630	*558	646	1,300	362	266	277	176
4	221	586	634	582	578	530	758	1,130	364	256	266	170
5	246	438	578	554	558	506	818	1,020	350	252	252	170
6	260	396	538	526	646	490	818	1,040	*340	270	238	168
7	238	322	1,360	510	970	490	979	992	336	288	232	165
8	221	1,070	4,620	494	1,080	502	870	894	326	291	228	*165
9	207	1,400	5,080	470	934	514	794	1,100	312	291	224	165
10	204	930	*1,800	450	834	510	954	2,910	308	288	218	162
11	200	640	1,330	434	766	486	1,760	5,560	305	270	218	165
12	200	510	1,050	426	702	458	1,520	3,580	305	478	224	170
13	200	1,600	882	446	642	462	1,230	*2,020	302	622	347	179
14	*197	6,100	786	570	602	494	1,030	1,450	291	422	291	176
15	200	5,800	738	*578	596	478	1,270	1,150	277	344	249	173
16	204	3,700	754	554	558	458	*3,760	966	284	322	260	168
17	260	4,600	730	534	490	466	2,490	874	291	400	277	173
18	294	11,000	682	522	446	606	1,670	774	274	336	260	191
19	266	14,000	690	502	*450	698	1,290	714	270	291	238	204
20	235	7,400	2,080	486	442	682	1,100	690	266	274	224	344
21	221	3,700	3,870	526	434	658	1,020	622	274	280	210	514
22	218	2,200	2,080	566	442	626	946	566	277	372	204	1,050
23	249	1,600	1,440	546	454	614	854	526	280	466	207	626
24	422	1,200	1,150	793	450	674	778	494	270	798	224	400
25	522	1,000	974	2,530	438	922	1,580	470	260	582	249	358
26	378	1,200	1,010	2,200	430	1,110	2,440	458	400	422	235	330
27	316	*1,130	1,090	1,560	514	1,200	1,740	442	698	354	*214	284
28	277	979	946	1,220	650	1,130	1,430	422	466	316	204	260
29	265	1,010	870	1,020	-	992	1,520	414	558	305	197	246
30	260	1,020	794	882	-----	894	1,920	592	312	302	194	242
31	270	-	742	802	-----	830	-----	376	-----	280	188	-----
Total	7,929	76,609	39,628	23,313	17,178	20,246	39,421	36,478	9,929	11,012	7,403	7,935
Mean	256	2,554	1,278	752	614	653	1,314	1,177	331	355	239	264
Cfsm	0.573	5.71	2.86	1.68	1.37	1.46	2.94	2.63	0.740	0.794	0.535	0.591
In.	0.66	6.37	3.30	1.94	1.43	1.68	3.28	3.03	0.83	0.92	0.62	0.66

Calendar year 1957: Max 14,900 Min 150 Mean 1,028 Cfsm 2.30 In. 31.23
 Water year 1957-58: Max 14,000 Min 162 Mean 814 Cfsm 1.92 In. 24.72

Peak discharge (base, 4,500 cfs).--Nov. 15 (about 1 a.m.) 6,760 cfs (12.23 ft); Nov. 19 (about 2 a.m.) 16,100 cfs (19.70 ft); Dec. 8 (3 p.m.) 4,990 cfs (10.24 ft); May 11 (1 a.m.) 5,810 cfs (11.18 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 9-26; discharge estimated on basis of recorded range in stage and records for station near Lobelville.

6045, Buffalo River near Lobelville, Tenn.

Location.--Lat 35°48'46", long 87°47'51", on right bank 30 ft upstream from Standing Rock Bridge, 1.4 miles downstream from State Highway 13, 3 miles north of Lobelville, Perry County, 13 miles downstream from Cane Creek, and at mile 17.7.

Drainage area.--707 sq mi.

Records available.--October 1927 to September 1958. Monthly discharge only for October 1927, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 403.15 ft above mean sea level, datum of 1929. Nov. 1, 1927, to June 1, 1934, staff gage 40 ft downstream on left bank at same datum.

Average discharge.--31 years, 1,154 cfs.

Extremes.--Maximum discharge during year, 20,000 cfs Nov. 20 (gage height, 15.44 ft); minimum, 267 cfs Sept. 8 (gage height, 1.47 ft) but may have been less Sept. 10 during period of shifting control.

1927-58: Maximum discharge, 100,000 cfs Feb. 14, 1948 (gage height, 23.76 ft, from high-water mark in gage house), from rating curve extended above 40,000 cfs on basis of slope-area measurement of peak flow; minimum, 135 cfs Aug. 18, 1953, caused by regulation upstream at unknown location; minimum discharge unaffected by regulation, 142 cfs Oct. 1-8, 1931; minimum gage height, 0.36 ft Oct. 3, 4, 7, 8, 1931.

Remarks.--Records good except those for period Sept. 9-30, which are fair.

Revisions (water years).--WSP 803: 1935. WSP 853: 1928-37.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-16, 19-23, Oct. 28 to Nov. 4, Nov. 7, Sept. 9-30)

Oct. 1 to Nov. 19

Nov. 20 to Sept. 30

2.6	568	12.0	8,000	1.4	252	9.0	4,530
3.0	720	14.0	13,000	2.0	405	12.0	8,000
6.0	2,220	15.0	17,700	3.0	793	14.0	13,000
9.0	4,450			5.0	1,740	16.0	23,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	372	441	1,740	1,210	1,420	g974	1,380	2,950	665	519	428	294
2	378	436	1,500	1,150	1,300	g964	1,260	2,570	793	466	409	287
3	378	433	1,320	1,090	1,200	948	1,180	2,240	693	435	413	284
4	383	505	1,200	1,020	1,100	902	1,170	1,980	661	409	402	278
5	376	668	1,100	1,000	1,040	871	1,240	1,760	633	395	386	273
6	374	640	1,020	912	1,070	835	1,480	1,730	610	386	367	273
7	381	578	1,760	880	1,260	831	1,560	1,640	587	420	353	271
8	383	724	3,480	844	1,540	835	1,620	1,540	565	466	359	269
9	*369	1,580	5,370	810	1,620	898	1,480	1,580	549	485	370	269
10	356	1,640	*4,070	785	1,490	948	1,890	2,190	530	466	340	271
11	346	1,270	2,720	757	1,360	930	2,350	6,770	527	451	340	273
12	346	1,010	2,100	737	1,250	898	2,700	8,930	515	481	340	280
13	344	863	1,720	745	1,150	876	2,370	5,180	500	561	345	278
14	340	3,220	1,480	793	1,080	866	2,000	3,090	489	761	365	278
15	340	5,240	1,520	866	1,020	871	2,120	2,510	477	685	413	275
16	342	5,120	1,260	899	979	840	3,100	1,880	454	599	376	271
17	633	3,630	1,220	862	916	844	4,260	1,600	447	572	402	*271
18	596	7,640	1,180	831	831	1,000	3,500	1,420	439	*572	399	275
19	505	14,000	1,590	806	*785	1,130	2,600	1,280	435	549	376	294
20	471	18,600	3,340	*793	757	*1,200	2,120	1,190	424	489	356	527
21	430	9,140	4,000	g844	737	1,190	1,820	*1,100	420	492	*338	1,050
22	404	3,320	4,590	g889	753	1,140	1,650	1,020	473	466	325	871
23	425	2,390	3,090	g825	753	1,130	1,510	1,858	454	504	320	*1,070
24	772	1,940	2,500	g1,030	757	1,240	1,380	866	432	576	330	948
25	712	1,790	1,890	g1,720	749	1,450	1,630	831	416	789	335	709
26	732	1,770	1,700	g3,090	g737	1,690	2,490	789	473	835	340	587
27	660	*1,890	1,640	g2,930	769	1,870	3,120	761	*565	697	340	527
28	578	1,830	1,640	g2,310	g884	1,920	2,590	749	757	591	328	470
29	515	1,910	1,500	g1,900	-	1,800	2,810	721	717	523	313	416
30	474	1,820	1,580	*1,620	-----	1,640	*3,000	693	599	473	303	592
31	453	-----	1,280	1,440	-----	1,500	-----	669	-----	451	296	-----
Total	14,168	95,838	65,300	36,478	29,307	35,051	63,380	62,967	16,299	16,564	11,107	12,831
Mean	457	3,195	2,106	1,177	1,047	1,131	2,113	2,031	543	534	358	428
Cfs/m	0.646	4.52	2.98	1.66	1.48	1.60	2.99	2.87	0.768	0.755	0.506	0.605
In.	0.75	5.04	3.43	1.92	1.54	1.84	3.33	3.31	0.86	0.87	0.58	0.67

Calendar year 1957: Max 18,600 Min 271 Mean 1,623 Cfs/m 2.30 In. 31.17
Water year 1957-58: Max 18,600 Min 269 Mean 1,258 Cfs/m 1.78 In. 24.14

Peak discharge (base, 5,200 cfs).--Nov. 16 (3 a.m.) 6,210 cfs (10.74 ft); Nov. 20 (5 a.m.) 20,000 cfs (15.44 ft); Dec. 9 (5 p.m.) 5,680 cfs (10.34 ft); May 12 (2:30 a.m.) 10,100 cfs (13.07 ft).

* Discharge measurement made on this day.

g Computed from bihourly radio-gage readings furnished by Tennessee Valley Authority.

6065. Big Sandy River at Bruceton, Tenn.

Location.--Lat 36°02'19", long 88°13'42", on downstream end of right abutment of county bridge, 700 ft downstream from bridge on U. S. Highway 70, 0.6 mile upstream from Cherry Creek, and 0.9 mile east of Bruceton, Carroll County.

Drainage area.--205 sq mi.

Records available.--July 1929 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 380.76 ft above mean sea level, datum of 1929. Prior to Mar. 1, 1940, chain gage at same site and datum.

Average discharge.--29 years, 294 cfs.

Extremes.--Maximum discharge during year, 3,350 cfs Nov. 16 (gage height, 12.33 ft); minimum, 46 cfs Sept. 5-7 (gage height, 2.44 ft).

1929-58: Maximum discharge, 17,000 cfs Jan. 21, 1935 (gage height, 16.16 ft, from graph based on gage readings), from rating curve extended above 9,200 cfs; minimum, 28 cfs Aug. 17-19, 22, Sept. 1, 1943.

Flood in March 1897 reached a stage of 18 ft (discharge, 25,000 cfs), as determined by Tennessee Valley Authority.

Remarks.--Records good except those for period Mar. 1-9, which are fair.

Revisions (water years).--WSP 853: Drainage area. WSP 923: 1929-35.

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 23 to Dec. 6, Dec. 11-18, Dec. 23 to Jan. 2, Mar. 10-17, 19-22)

Oct. 1-23			Oct. 24 to July 10			July 11 to Sept. 30		
2.6	64		2.5	56	11.0	1,500	2.4	43
3.0	104		3.0	94	11.5	1,940	3.0	92
5.0	383		4.0	202	12.0	2,700	4.0	202
			9.0	950	12.2	3,080		
			10.0	1,150				

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	99	248	180	212	a240	209	357	80	61	83	49
2	86	100	219	154	172	a210	183	536	90	80	87	49
3	*83	131	208	149	149	a180	186	420	88	58	66	49
4	96	116	194	144	132	a155	402	235	85	57	63	49
5	88	106	180	134	161	a140	311	246	80	56	59	47
6	79	100	201	138	342	a140	477	*416	74	64	57	46
7	73	107	1,520	142	496	a200	*256	270	71	219	56	47
8	70	1,840	1,440	120	352	a400	182	180	69	884	55	52
9	69	1,420	1,270	122	178	a575	167	368	66	1,300	54	49
10	68	1,170	712	*126	144	*417	335	622	65	1,570	54	49
11	68	615	282	136	134	235	274	555	225	1,330	66	49
12	67	227	195	131	125	188	186	286	184	568	78	56
13	67	448	189	303	116	298	160	184	90	739	63	53
14	68	2,560	202	462	128	283	155	142	74	624	57	51
15	68	2,880	189	266	146	201	513	130	70	296	56	*51
16	73	2,960	*194	185	134	174	644	135	*84	150	58	56
17	146	1,770	188	161	a130	299	477	507	76	120	62	78
18	101	*1,760	256	147	a125	682	248	219	68	104	58	72
19	86	2,830	567	136	a125	520	196	189	66	93	55	60
20	81	3,020	1,250	143	a125	273	182	231	68	85	52	249
21	79	2,000	1,170	452	124	209	252	144	76	84	*52	417
22	79	592	1,040	391	172	184	204	114	160	103	33	310
23	372	356	361	218	184	587	168	101	118	130	60	119
24	560	294	262	232	176	1,510	160	94	76	101	64	83
25	283	406	248	384	172	1,300	483	92	67	*88	59	73
26	144	322	*310	392	160	1,120	542	92	*83	a80	55	69
27	113	258	236	382	352	501	384	85	83	a75	52	74
28	102	428	268	273	*272	268	308	124	72	a71	52	69
29	99	560	238	213	-	218	674	101	67	a68	*51	64
30	100	*375	200	*191	-----	300	544	*87	64	a55	49	*64
31	*101	-----	191	188	-----	290	-----	84	-----	*62	49	-----
Total	3,650	29,850	14,228	6,795	5,216	12,295	9,460	7,346	2,639	9,565	1,795	2,603
Mean	118	995	459	219	166	397	315	237	88.0	302	57.9	86.8
Cfsm	0.578	4.85	2.24	1.07	0.907	1.94	1.54	1.16	0.429	1.47	0.282	0.423
In.	0.66	5.42	2.58	1.23	0.95	2.23	1.72	1.33	0.48	1.70	0.33	0.47

Calendar year 1957: Max 4,790 Min 45 Mean 395 Cfsm 1.95 In. 26.14

Water year 1957-58: Max 3,020 Min 46 Mean 288 Cfsm 1.40 In. 19.10

Peak discharge (base, 2,000 cfs).--Nov. 8 (3 p.m.) 2,200 cfs (11.70 ft); Nov. 16 (1:30 a.m.) 3,350 cfs (12.33 ft); Nov. 20 (7 a.m.) 3,180 cfs (12.25 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage when available, and records for South Fork Obion River near Greenfield.

6095. Tennessee River near Paducah, Ky.

Location.--Lat 37°01'11", long 88°16'50", on left bank at Gilbertsville, Marshall County, 3.500 ft downstream from Kentucky Dam, 2.3 miles upstream from Shadie Creek, 16 miles east of Paducah, McCracken County, and at mile 21.7.

Drainage area.--40,200 sq mi. approximately (at Gilbertsville).

Records available.--October 1875 to August 1889 (gage heights only), September 1889 to September 1958. Prior to October 1931, published as "at Johnsonville, Tenn." July 1930 to September 1931, published as "at Aurora Landing, Ky." October 1931 to August 1944, published as "near Johnsonville, Tenn." October 1931 to September 1935, published as "at Shannon Dam site near Murray, Ky." October 1935 to December 1942, published as "near Buchanan, Tenn."

Gage.--Water-stage recorder at present site since Feb. 8, 1939. Datum of gage is 286.35 ft above mean sea level, datum of 1929. Feb. 8, 1939, to Sept. 30, 1942, water-stage recorder 16.3 miles downstream at same datum (prior to July 30, 1940, at datum 3.85 ft higher); Oct. 1, 1942, to Jan. 1, 1946, water-stage recorder 500 ft upstream from present site at same datum. Auxiliary water-stage recorder 16.3 miles downstream at same datum. Feb. 15, 1939, to Sept. 30, 1942, water-stage recorder 500 ft upstream from present base gage at same datum (prior to July 30, 1940, at datum 3.65 ft higher).

Prior to Oct. 21, 1928, U. S. Weather Bureau staff gages at various sites and datums in the vicinity of old Nashville, Chattanooga, & St. Louis Railway bridge near Johnsonville. Oct. 21, 1926, to Oct. 7, 1931, water-stage recorder at site 3.9 miles downstream from present U. S. Highway 70 bridge, at datum 320.72 ft above mean sea level, datum of 1929. Oct. 1, 1931, to Aug. 20, 1944, water-stage recorder at U. S. Highway 70 bridge at datum 1.21 ft lower. July 15, 1930, to Dec. 12, 1942, staff and wire-weight gages and water-stage recorders used as base and auxiliary gages at five different locations, ranging from Paducah to river mile 86.2, all at different datums.

Average discharge.--69 years (1889-1958), 64,030 cfs.

Extremes.--Maximum discharge during year, 336,000 cfs Nov. 30; maximum gage height, 43.03 ft Nov. 22; minimum daily discharge, 250 cfs (based on lockages at Kentucky Dam) July 26; minimum gage height, 13.55 ft Aug. 31.

1889-1958: Maximum discharge, 500,000 cfs Feb. 17, 1948; maximum gage height, 62.43 ft Feb. 2, 1937, at Gilbertsville, present datum; minimum daily discharge, that of July 26, 1958.

Remarks.--Records good. Backwater from Ohio River and dam 52; discharge computed using fall as determined by auxiliary water-stage recorder as a factor. Discharge for days of extremely low fall (below 0.40 ft) computed on basis of records for Kentucky Dam. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 224). Flow now almost completely regulated. Records of chemical analyses and water temperatures for the water year 1959 are given in WSP 1571.

Revisions (water years).--WSP 1806: 1936 (monthly runoff).

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42,900	50,300	299,000	125,000	90,300	91,400	54,200	210,000	54,200	54,400	55,500	45,800
2	43,500	52,900	241,000	126,000	80,000	87,000	56,900	212,000	52,400	54,200	65,100	46,100
3	44,500	53,700	194,000	120,000	82,500	83,200	56,100	205,000	53,700	55,600	76,100	46,900
4	42,600	54,300	155,000	102,000	81,800	76,900	57,300	173,000	54,100	54,700	78,800	54,500
5	44,100	53,300	136,000	89,000	82,000	71,400	56,100	142,000	55,700	55,600	75,200	42,200
6	43,600	54,000	120,000	85,800	83,200	64,600	52,200	125,000	63,800	56,500	69,800	43,000
7	43,800	53,200	118,000	77,500	95,900	60,100	48,100	124,000	61,900	53,400	61,400	36,500
8	43,400	56,300	146,000	74,800	121,000	64,000	53,600	119,000	52,100	48,300	59,500	44,100
9	43,700	55,400	172,000	*72,900	138,000	68,100	51,200	102,000	53,200	51,900	56,100	46,800
10	44,600	54,400	193,000	75,400	139,000	70,300	53,500	87,700	*53,600	54,600	51,300	45,600
11	43,300	54,800	197,000	70,200	129,000	71,000	55,900	75,300	53,800	51,900	51,500	45,600
12	44,000	54,700	204,000	70,200	109,000	62,800	55,900	74,900	52,900	51,900	51,700	45,300
13	43,900	57,100	193,000	69,800	98,600	57,500	56,300	82,400	53,400	55,300	52,200	41,500
14	43,400	92,300	167,000	74,300	93,600	57,800	55,600	90,800	53,800	65,300	52,800	36,800
15	43,500	149,000	140,000	81,700	87,900	57,600	47,100	103,000	52,200	*71,300	55,800	43,800
16	43,500	174,000	117,000	75,100	84,300	57,700	55,400	110,000	52,500	65,300	56,300	44,500
17	44,400	225,000	107,000	67,200	78,700	56,500	55,400	110,000	52,000	59,200	55,500	43,800
18	*44,800	221,000	108,000	62,900	72,900	63,200	55,000	118,000	52,000	58,700	54,000	45,300
19	43,900	320,000	108,000	62,800	71,300	*70,700	57,000	136,000	53,000	55,400	53,700	44,300
20	43,800	324,000	138,000	85,500	65,900	62,500	56,400	152,000	53,400	55,600	*53,700	47,100
21	44,400	314,000	167,000	75,800	63,500	57,200	55,600	154,000	55,200	52,800	54,000	56,000
22	43,600	305,000	172,000	80,100	64,800	57,500	54,700	139,000	55,200	52,700	54,700	54,700
23	43,800	282,000	178,000	78,200	64,400	55,900	53,000	128,000	56,100	52,700	50,800	56,900
24	44,500	268,000	179,000	78,100	64,200	71,000	54,100	119,000	56,000	52,100	34,300	55,100
25	44,900	*294,000	183,000	86,000	68,800	93,000	65,100	105,000	56,000	12,800	42,000	53,200
26	43,800	301,000	180,000	105,000	74,600	89,300	90,000	95,000	67,600	250	52,900	56,200
27	45,500	315,000	171,000	116,000	87,100	80,200	106,000	77,200	58,000	5,100	52,800	56,800
28	45,100	326,000	147,000	116,000	96,100	74,000	*134,000	60,500	55,900	17,800	53,800	57,000
29	43,900	327,000	131,000	118,000	-	71,000	169,000	54,900	55,300	20,600	53,500	56,200
30	44,800	328,000	123,000	109,000	-	62,800	192,000	54,300	54,800	27,400	53,800	55,800
31	46,100	-	119,000	98,000	-	56,900	-	54,400	-	41,800	57,300	-

Total 1,364.9 *5,359.7 *5,001.2 *2,703.5 *2,465.8 *2,122.9 *2,062.7 *3,593.4 *1,651.8 1,392,950 *1,725.7 *1,447.4
Mean 44,030 178,700 181,300 87,220 88,060 68,480 68,760 115,900 55,060 44,610 55,670 46,250
Cfsm - - - - - - - - - - - - -
In. - - - - - - - - - - - - -

Calendar year 1957: Max 405,000 Min 25,300 Mean 90,370 Cfsm 2.25 In. 30.52
Water year 1957-58: Max 328,000 Min 250 Mean 84,610 Cfsm 2.10 In. 28.57

* Discharge measurement made on this day.

* Expressed in thousands.

6100. East Fork Clarks River at Murray, Ky.

Location.--Lat 36°35'34", long 88°18'00", on downstream side of left pier of Nashville, Chattanooga & St. Louis Railway bridge, 0.1 mile downstream from bridge on State Highway 121, 1 mile south of Murray, Calloway County, and $1\frac{1}{2}$ miles upstream from Clayton Creek.

Drainage area.--89.7 sq mi.

Records available.--October 1951 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 459.88 ft above mean sea level, datum of 1929.

Average discharge.--7 years, 105 cfs.

Extremes.--Maximum discharge during year, 32,300 cfs Nov. 18 (gage height, 15.20 ft); no flow for many days.
1951-58: Maximum discharge, 32,300 cfs Mar. 22, 1952, Nov. 18, 1957 (gage height, 15.20 ft); no flow for many days each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Revisions (water years).--WSP 1506: 1952(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 24-29, May 31 to July 7, Aug. 24 to Sept. 30)

Oct. 1 to Nov. 18

Nov. 19 to Sept. 30

1.36	0	5.0	380	1.4	0	2.0	18
1.4	1.3	7.0	810	1.5	1.0	2.4	43
1.5	1.3	8.0	1,100	1.6	2.6	2.9	93
1.6	3.6	10.0	2,050				
2.0	25	11.0	3,100				
2.9	93	12.0	5,500				
4.0	225	13.1	10,400				

Note.--Same as preceding table above 2.9 ft.

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.0	20	a20	360	40	68	52	6.8	0.2	193	0
2	0	1.2	17	a18	94	26	45	1,050	6.4	.2	87	0
3	0	1.4	16	a16	51	20	35	1,290	6.0	.2	13	0
4	0	*1.3	14	a15	33	16	33	170	5.7	.2	6.8	*0
5	0	1.3	14	a14	35	14	103	352	4.6	.2	4.0	0
6	0	1.3	209	a13	657	13	357	282	2.6	.4	2.9	0
7	0	108	3,280	*12	425	656	70	80	2.4	158	2.1	0
8	0	1,440	475	11	103	508	38	44	1.8	812	*2.1	0
9	0	162	140	9.2	a50	739	29	34	*1.3	38	2.3	0
10	0	44	83	8.8	a40	156	52	122	1.3	14	4.0	0
11	0	25	50	8.4	a35	*79	47	169	2.4	9.6	130	0
12	0	17	33	9.0	a27	49	28	53	4.6	6.0	131	0
13	0	1,450	26	266	a25	658	22	30	5.0	6.4	11	0
14	0	*5,610	24	326	a21	226	18	20	2.1	5.3	4.3	0
15	*0	482	22	104	a20	93	31	18	1.6	3.6	2.6	0
16	0	111	322	55	a18	56	72	16	1.6	2.9	2.1	*0
17	0	736	1,310	37	a15	51	34	14	1.5	6.0	2.0	0
18	0	*1,400	817	28	a13	366	23	12	1.3	*5.3	1.6	0
19	0	1,750	1,520	22	a12	287	18	12	1.3	5.3	1.0	0
20	0	162	2,710	202	a12	92	165	11	1.2	17	.8	6.7
21	0	82	241	1,600	a12	54	408	11	.9	217	.6	9.4
22	0	51	112	243	a12	39	*84	10	.9	290	.5	.7
23	21	37	*70	115	a13	1,470	43	10	.9	88	.4	.6
24	32	30	48	93	a14	2,050	32	9.2	.9	18	.4	.7
25	1.9	24	67	145	16	404	154	10	.7	12	.3	.6
26	.6	21	201	209	20	154	104	12	.9	8.4	.3	.5
27	.1	18	75	119	118	84	244	20	1.3	5.7	.2	.4
28	.1	38	a55	62	101	56	194	26	.9	4.6	.2	.3
29	.5	58	a40	43	-	41	162	10	.5	4.6	.1	.2
30	1.0	29	a30	*36	-----	566	61	8.0	.2	4.3	.1	.1
31	1.3	-----	a25	273	-----	157	-----	7.2	-----	8.0	0	-----
Total	58.5	20,892.5	12,086	4,131.4	2,352	9,220	2,774	3,964.4	69.6	1,751.4	606.7	20.2
Mean	1.69	696	389	133	84.0	297	92.5	128	2.32	56.5	19.6	0.67
Cfsm	0.021	7.76	4.34	1.48	0.936	3.31	1.03	1.43	0.026	0.630	0.219	0.0075
In.	0.02	8.68	5.00	1.71	0.98	3.82	1.15	1.64	0.03	0.73	0.25	0.008

Calendar year 1957: Max 10,400 Min 0 Mean 205 Cfsm 2.29 In. 30.99
Water year 1957-58: Max 10,400 Min 0 Mean 159 Cfsm 1.77 In. 24.00

Peak discharge (base, 3,000 cfs).--Nov. 14 (6 to 11 a.m.) 4,200 cfs (11.50 ft); Nov. 18 (1 p.m.) 32,300 cfs (15.20 ft); Dec. 7 (10:30 a.m.) 4,220 cfs (11.51 ft); Dec. 20 (2:30 a.m.) 4,150 cfs (11.48 ft).

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for station near Benton.

6105. East Fork Clarks River near Benton, Ky.

Location.--Lat 36°52'24", long 88°20'48", on downstream side of right pier of bridge on U. S. Highway 641 and State Highway 58, 1 mile north of Benton, Marshall County, and 6.8 miles upstream from Middle Fork Creek.

Drainage area.--227 sq mi.

Records available.--May 1938 to September 1958.

Gage.--Water-stage recorder. Datum of gage is 344.53 ft above mean sea level, datum of 1929 (Tennessee Valley Authority bench mark). Prior to Sept. 10, 1951, wire-weight gage at same site and datum.

Average discharge.--20 years, 285 cfs.

Extremes.--Maximum discharge during year, 36,000 cfs Nov. 19 (gage height, 17.10 ft), from rating curve extended above 17,000 cfs; minimum, 4.4 cfs Sept. 13, 14.

1938-58: Maximum discharge, that of Nov. 19, 1957; minimum observed, 1.8 cfs Aug. 9, 1948.

Maximum stage known, 17.8 ft in February 1937, from floodmarks.

Remarks.--Records good.

Revisions (water years).--WSP 923: Drainage area. WSP 1143: 1938-47. WSP 1206: 1949(M).

Rating tables, water year 1957-58 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 9				Nov. 10 to Sept. 30			
2.2	4.7	8.0	540	2.3	4.0	11.0	1,020
2.4	9.4	10.0	805	2.4	6.2	11.5	1,220
2.6	16	11.0	1,020	2.8	23	12.0	1,600
3.0	56	12.0	1,480	3.3	50	13.0	3,800
5.0	200	12.3	1,950	4.0	102	14.0	7,600
				7.0	400	15.0	14,400
				10.0	805	16.1	24,500

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	16	112	130	810	172	345	250	32	12	63	6.6
2	5.8	17	95	108	518	106	231	517	29	12	210	6.2
3	5.5	20	86	95	239	83	220	1,840	26	11	108	6.2
4	5.3	*23	78	84	165	71	184	3,120	25	11	52	*5.5
5	5.8	18	71	74	153	63	159	1,180	24	11	38	5.3
6	5.8	17	239	70	260	60	553	1,620	22	11	32	5.3
7	4.9	161	2,330	*68	1,100	258	609	20	36	*27		5.1
8	5.3	1,450	4,280	61	581	1,290	203	290	20	723	24	5.1
9	5.5	1,830	3,050	56	231	1,740	144	222	*18	1,130	23	5.1
10	5.8	893	591	54	148	1,360	138	423	18	231	21	5.5
11	5.5	237	287	53	115	*450	164	564	32	100	20	5.3
12	5.5	140	189	50	96	268	133	343	57	72	145	4.9
13	7.1	1,670	147	135	82	488	104	195	89	71	106	4.7
14	6.2	4,550	132	796	74	1,430	89	132	49	80	34	4.9
15	*5.3	*6,180	118	462	73	673	87	104	33	*51	23	5.1
16	6.8	4,460	234	239	65	317	104	87	27	45	20	*5.1
17	6.4	1,020	1,540	165	54	241	137	74	23	114	17	5.5
18	5.5	8,430	2,580	129	48	339	97	65	20	112	14	8.1
19	5.1	*23,800	2,600	107	45	891	79	61	20	83	13	7.7
20	5.3	5,440	4,340	189	45	475	153	60	18	54	12	111
21	5.3	1,490	5,720	1,620	45	272	545	50	18	111	11	164
22	6.0	350	2,000	2,830	49	198	*439	45	17	909	11	45
23	69	233	*430	1,330	54	984	191	40	16	639	10	24
24	108	182	272	406	57	3,380	132	37	15	199	10	17
25	68	149	240	384	63	4,310	125	43	14	104	9.6	14
26	35	127	454	410	69	1,920	272	53	15	77	8.9	12
27	20	111	366	372	98	486	322	39	14	62	8.5	11
28	16	132	249	258	228	307	458	206	14	58	9.1	9.2
29	15	155	212	185	-	232	961	94	14	58	7.3	8.9
30	16	157	174	*153	-----	464	564	50	13	41	7.0	8.5
31	16	-----	148	165	-----	865	-----	38	-----	36	7.0	-----
Total	488.7	63,458	33,364	11,238	5,565	24,173	7,780	12,451	752	5,264	1,100.4	534.8
Mean	15.8	2,115	1,076	363	199	780	259	402	25.1	170	35.5	17.8
Cfsm	0.070	9.32	4.74	1.60	0.877	3.44	1.14	1.77	0.111	0.749	0.156	0.078
In.	0.08	10.40	5.47	1.94	0.91	3.96	1.27	2.04	0.12	0.86	0.18	0.09

Calendar year 1957: Max 23,800 Min 4.9 Mean 585 Cfsm 2.58 In. 35.00
Water year 1957-58: Max 23,800 Min 4.7 Mean 455 Cfsm 2.00 In. 27.22

Peak discharge (base, 4,400 cfs)-- Nov. 15 (2 p.m.) 6,600 cfs (13.82 ft); Nov. 19 (3 a.m.) 36,000 cfs (17.10 ft); Dec. 8 (6 p.m.) 5,330 cfs (13.48 ft); Dec. 20 (11:30 p.m.) 6,850 cfs (13.87 ft); Mar. 25 (2 a.m.) 4,740 cfs (13.31 ft).

* Discharge measurement made on this day.

Reservoirs in Tennessee River basin

Douglas Lake.--Lat 35°57'40", long 83°32'20", at Douglas Dam on French Broad River, 62 miles north of Sevierville, Sevier County, Tenn., and at mile 32.3. Drainage area, 4,541 sq mi. Records available, February 1943 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 727,000 cfs-days May 10 (elevation, 999.67 ft); minimum, 69,700 cfs-days Jan. 14 (elevation, 927.05 ft). Maximum contents during period 1943-58, 760,000 cfs-days July 25, 1949 (elevation, 1,001.79 ft); minimum (after first filling), 1,000 cfs-days Jan. 16, 1956 (elevation, 883.7 ft, estimated).

Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 taintor gates, 32 ft high by 40 ft wide and 8 sluice gates 10 ft high by 5.67 ft wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Total capacity at elevation 1,002.00 ft (top of gates) is 763,400 cfs-days, of which 715,800 cfs-days is controlled storage above elevation 920.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Revisions (water years).--WSP 1276: 1948.

South Holston Lake.--Lat 36°31'15", long 82°05'11", 470 ft upstream from South Holston Dam on South Fork Holston River in Sullivan County, Tenn., 7.0 miles southeast of Bristol, Virginia-Tennessee, and at mile 49.8. Drainage area, 703 sq mi. Records available, November 1950 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 11, 1951, staff gage at same site and datum. Maximum contents during year, 315,800 cfs-days May 19 (elevation, 1,727.42 ft); minimum, 164,200 cfs-days Oct. 31 (elevation, 1,676.64 ft). Maximum contents during period 1950-58, that of May 19, 1958; minimum (after first filling), 57,700 cfs-days Jan. 13, 1956 (elevation, 1,614.15 ft).

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with 6 piers 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Total capacity at elevation 1,742.00 ft (spillway crest) is 375,100 cfs-days, of which 315,200 cfs-days is controlled storage above elevation 1,616.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Watauga Lake.--Lat 36°19'20", long 82°07'16", at Watauga Dam on Watauga River, 5 miles east of Elizabethton, Carter County, Tenn., and at mile 36.7. Drainage area, 468 sq mi. Records available, November 1948 to September 1958. Prior to December 1948 month-end contents only published in WSP 1306. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 276,000 cfs-days May 23 (elevation, 1,955.47 ft); minimum, 172,500 cfs-days Nov. 13 (elevation, 1,918.14 ft). Maximum contents during period of 1948-58, 286,900 cfs-days Apr. 10, 1957 (elevation, 1,958.90 ft); minimum (after first filling), 25,100 cfs-days Jan. 13, 1956 (elevation, 1,813.47 ft).

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft in diameter with 6 piers 3 ft wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Total capacity at elevation 1,975.00 ft (spillway crest) is 342,200 cfs-days, of which 316,200 cfs-days is controlled storage above elevation 1,815.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Boone Lake.--Lat 36°26'26", long 82°28'16", at Boone Dam on South Fork Holston River in Sullivan County, Tenn., 0.7 mile northeast of Spurgeon, Washington County, Tenn., 1.3 miles downstream from Watauga River, and at mile 18.6. Drainage area, 1,840 sq mi. Records available, December 1952 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 97,800 cfs-days July 10 (elevation, 1,384.42 ft); minimum, 46,600 cfs-days Jan. 16 (elevation, 1,353.53 ft). Maximum contents during period of 1952-58, 98,100 cfs-days June 10, 1953 (elevation, 1,384.52 ft); minimum (after first filling), 21,300 cfs-days Jan. 23, 1956 (elevation, 1,327.06 ft).

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with 5 radial gates, 35 ft high by 35 ft wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Total capacity at elevation 1,385.0 ft (top of gates) is 99,200 cfs-days, of which 75,700 cfs-days is controlled storage above elevation 1,330 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Fort Patrick Henry Lake.--Lat 36°29'53", long 82°30'32", at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mile upstream from bridge on U. S. Highway 23, 4.5 miles southeast of Kingsport, Sullivan County, Tenn., and at mile 8.2. Drainage area, 1,903 sq mi. Records available, October 1953 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 13,600 cfs-days July 28 (elevation, 1,262.91 ft); minimum, 11,500 cfs-days Dec. 12 (elevation, 1,258.09 ft). Maximum contents during period 1953-58, 14,000 cfs-days Feb. 11, 1954 (elevation, 1,263.80 ft); minimum (after first filling), 9,300 cfs-days Mar. 16, 1954 (elevation, 1,252.32 ft).

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with 5 radial gates, 35 ft high by 35 ft wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Total capacity at elevation 1,263 ft (top of gates) is 13,700 cfs-days, of which 2,200 cfs-days is controlled storage above elevation 1,258 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Reservoirs in Tennessee River basin--Continued

Cherokee Lake.--Lat 36°10'00", long 83°29'55", at Cherokee Dam on Holston River, 0.3 mile upstream from bridge on State Highway 92, 2.7 miles upstream from Mill Spring Creek, 2.8 miles north of Jefferson City, Jefferson County, Tenn., and at mile 52.3. Drainage area, 3,429 sq mi. Records available, December 1941 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 764,400 cfs-days May 15 (elevation, 1,073.40 ft); minimum, 116,500 cfs-days Jan. 14 (elevation, 1,001.53 ft). Maximum contents during period 1941-58, 779,400 cfs-days May 11, 1944 (elevation, 1,074.37 ft); minimum (after first filling) 48,400 cfs-days Jan. 7, 1954 (elevation, 980.77 ft).

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 9 radial gates 32 ft high by 40 ft wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 8, 1942. Total capacity at elevation 1,075.0 ft (top of gates) is 789,200 cfs-days, of which 742,700 cfs-days is controlled storage above elevation 980.0 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Fort Loudoun Lake.--Lat 35°47'30", long 84°14'35", at Fort Loudoun Dam on Tennessee River, 1 mile northeast of Lenoir City, Loudoun County, Tenn., and at mile 602.3. Drainage area, 9,550 sq mi. Records available, July 1943 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum 12 p.m. contents during year, 193,000 cfs-days Apr. 25; maximum elevation, 814.74 ft Apr. 25; minimum 12 p.m. contents, 141,000 cfs-days Mar. 2; minimum elevation, 806.70 ft Mar. 3. Maximum elevation during period 1943-58, 815.00 ft Sept. 11, 1943, May 14, 1945; minimum (after first filling), 805.54 ft Jan. 18, 1954. Contents based on backwater profile.

Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 tainter gates 32 ft high by 40 ft wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Total level pool capacity at elevation 815.00 ft (top of gates) is 194,900 cfs-days, of which 55,100 cfs-days is controlled flood storage above elevation 807.00 ft (minimum navigation pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Nantahala Lake.--Lat 35°11'56", long 83°39'17", at Nantahala Dam on Nantahala River, 4.2 miles southeast of Topton, Cherokee County, N. C., 5.5 miles upstream from Whiteoak Creek, and at mile 22.8. Drainage area, 91.0 sq mi. Records available, January 1942 to September 1958. Prior to October 1944 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is a local datum which is 122.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 3, 1942, staff gage at same site and datum. Maximum contents during year, 68,300 cfs-days May 14 (elevation, 2,887.97 ft); minimum, 35,800 cfs-days Nov. 13 (elevation, 2,838.76 ft). Maximum contents during period 1942-58, 70,400 cfs-days Apr. 12, 1957 (elevation, 2,890.55 ft); minimum (after first filling), 6,700 cfs-days Jan. 28, 1955 (elevation, 2,760.11 ft).

Reservoir is formed by rockfill dam with side channel gate-controlled spillway supplemented by fuse-plug dam. Dam completed and storage began Jan. 30, 1942; water in reservoir first reached minimum pool elevation Feb. 16, 1942. Total capacity at elevation 2,890.0 ft (top of gates) is 69,900 cfs-days, of which 63,300 cfs-days is controlled storage above 2,760.0 ft (minimum pool). Reservoir is used for flood control and power. Gage-height record furnished by the Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Revisions (water years).--WSP 1306: 1942.

Thorpe Lake.--Lat 35°11'57", long 83°09'15", at Thorpe Dam on West Fork Tuckasegee River, 2.3 miles northwest of Glenville, Jackson County, N. C., 3.0 miles upstream from Shoal Creek, and at mile 9.7. Drainage area, 36.7 sq mi. Records available, February 1941 to September 1958. Prior to October 1944 month-end contents only, published in WSP 1306. Prior to October 1948, published as Glenville Reservoir. Gage, water-stage recorder. Datum of gage is a local datum which is 391.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Apr. 9, 1941, staff gage at same site and datum. Maximum contents during year, 33,400 cfs-days May 5 (elevation, 3,096.76 ft); minimum, 19,300 cfs-days Nov. 13 (elevation, 3,074.32 ft). Maximum contents during period 1941-58, 35,700 cfs-days Mar. 13, 1950 (elevation, 3,100.01 ft); minimum (after first filling), 2,200 cfs-days Feb. 5, 1955, Jan. 13, 1956; minimum elevation, 3,025.10 ft Feb. 5, 1955.

Reservoir is formed by earth and rock dam and six 40-foot fuse-plug dams. Side channel spillway equipped with 2 tainter gates 12 ft high by 25 ft wide. Dam completed and storage began Feb. 12, 1941. Water in reservoir first reached minimum pool elevation Mar. 15, 1941. Total capacity at elevation 3,100.0 ft (top of gates) is 35,700 cfs-days of which 33,600 cfs-days is controlled storage above elevation 3,025.0 ft (minimum pool). Reservoir is used for flood control and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Fontana Lake.--Lat 35°27'07", long 83°48'18", at Fontana Dam on Little Tennessee River, 5.7 miles upstream from Twenty Mile Creek, 9.0 miles north of Robbinsville, Graham County, N. C., 9.5 miles upstream from Cheoah Dam, and at mile 61.0. Drainage area, 1,571 sq mi. Records available, October 1944 to September 1958. Prior to November 1944 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 552,200 cfs-days May 22 (elevation, 1,695.17 ft); minimum, 240,100 cfs-days Feb. 5 (elevation, 1,576.66 ft). Maximum contents during period 1944-58, 722,300 cfs-days July 23, 1949 (elevation, 1,708.91 ft); minimum (after first filling), 78,300 cfs-days Jan. 29, 1955 (elevation, 1,472.0 ft).

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway equipped with 4 radial gates 35 ft high by 35 ft wide. Storage began Nov. 7, 1944; dam completed March 1945; water in reservoir first reached minimum pool elevation Jan. 16, 1945. Total capacity at elevation 1,710.0 ft (top of gates) is 728,200 cfs-days, of which 563,500 cfs-days is controlled storage above elevation 1,525.0 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Reservoirs in Tennessee River basin--Continued

Santeetlah Lake.--Lat 35°22'38", long 83°52'33", at Santeetlah Dam on Cheoah River, 1 mile downstream from Santeetlah Creek, 5.5 miles northwest of Robbinsville, Graham County, N. C., and at mile 9.3. Drainage area, 176 sq mi. Records available, December 1927 to September 1958. Prior to October 1946 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is a local datum which is 122.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to February 1937, staff gage at same site and datum. Maximum contents during year, 74,400 cfs-days Jan. 14 (elevation, 1,813.22 ft); minimum, 26,100 cfs-days Nov. 13 (elevation, 1,765.34 ft). Maximum contents during period 1927-58, 81,100 cfs-days Sept. 3, 1928 (elevation, 1,817.90 ft); minimum (after first filling), 13,100 cfs-days Feb. 6, 1940 (elevation, 1,741.39 ft).

Reservoir is formed by concrete gravity and arch dam with concrete spillway controlled by 6 tainter gates 12 ft high by 25 ft wide. Dam completed and storage began Dec. 7, 1927. Water in reservoir first reached minimum pool elevation December 1927. Total capacity at elevation 1,817.00 ft (top of gates) is 79,800 cfs-days, of which 67,200 cfs-days is controlled storage above 1,740.08 ft (minimum pool). Reservoir is used for power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Chilhowee Lake.--Lat 35°32'44", long 84°03'01", at Chilhowee Dam on Little Tennessee River, 2.4 miles southwest of Chilhowee, Blount County, Tenn., 2.6 miles upstream from Citico Creek, 10.1 miles downstream from Calderwood Dam, and at mile 33.6. Drainage area, 1,976 sq mi. Records available, August 1957 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum 12 p.m. contents during year, 25,200 cfs-days Feb. 6 (elevation, 874.46 ft); minimum, 20,900 cfs-days Dec. 9 (elevation, 869.37 ft). Maximum 12 p.m. contents during period 1957-58, that of Feb. 6, 1958; minimum (after first filling) that of Dec. 9, 1957.

Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by 6 tainter gates 38 ft high by 35 ft wide. Closure of dam was made June 9, 1957. Storage above spillway crest (elevation, 836.0 ft) began Aug. 1, 1957; water in reservoir first reached minimum pool elevation Aug. 9, 1957. Total capacity at elevation 874.0 ft (top of gates) is 24,800 cfs-days, of which 3,400 cfs-days is controlled storage above elevation 870.0 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

Norris Lake.--Lat 36°13'29", long 84°05'29", at Norris Dam on Clinch River, 2½ miles northwest of Norris, Anderson County, Tenn., and at mile 79.8. Drainage area, 2,912 sq mi. Records available, June 1935 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, adjustment of 1912, and 0.11 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Elevations given herein are referred to adjustment of 1912. Maximum contents during year, 1,115,700 cfs-days May 15 (elevation, 1,024.72 ft); minimum, 372,600 cfs-days Jan. 24 (elevation, 967.36 ft). Maximum contents during period 1935-58, 1,236,700 cfs-days Feb. 11, 1937 (elevation, 1,031.10 ft); minimum (after first filling), 75,500 cfs-days Jan. 24, 1956 (elevation, 909.35 ft).

Reservoir is formed by concrete gravity dam with 3 drum gates 100 ft wide by 14 ft high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Total capacity at elevation 1,034.0 ft (top of gates) is 1,294,200 cfs-days, of which 1,150,000 cfs-days is controlled storage above elevation 930.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Watts Bar Lake.--Lat 35°37'13", long 84°47'00", at Watts Bar Dam on Tennessee River, 6.5 miles southeast of Spring City, Rhea County, Tenn., 72.4 miles downstream from Fort Loudoun Dam, and at mile 529.9. Drainage area, 17,310 sq mi, approximately. Records available, October 1941 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum 12 p.m. contents during year, 558,000 cfs-days Apr. 27; maximum elevation, 744.45 ft Nov. 19; minimum 12 p.m. contents, 383,000 cfs-days Mar. 4; minimum elevation, 734.81 ft Jan. 3. Maximum elevation during period 1941-58, 745.12 ft Mar. 9, 1942; minimum (after first filling), 733.44 ft Mar. 20, 1945. Contents based on backwater profile.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 tainter gates 32 ft high by 40 ft wide, also one 2-section leaf trashway gate 16.3 ft high by 24 ft wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Total level pool capacity at elevation 745.0 ft (top of gates) is 570,700 cfs-days, of which 190,400 cfs-days is controlled flood storage above elevation 735.0 ft (minimum navigation pool). Reservoir is used for navigation, flood control and power. Records furnished by Tennessee Valley Authority.

Chatuge Lake.--Lat 35°01'01", long 83°47'28", at Chatuge Dam on Hiwassee River, 2.0 miles upstream from Hyatt Mill Creek, 2.5 miles downstream from Georgia-North Carolina State line, 2.5 miles southeast of Hayesville, Clay County, N. C., and at mile 121.0. Drainage area, 189 sq mi. Records available, February 1942 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 4, 1942, staff gage at same site and datum. Maximum contents during year, 95,400 cfs-days May 26 (elevation, 1,918.93 ft); minimum, 41,000 cfs-days Sept. 11 (elevation, 1,893.94 ft). Maximum contents during period 1942-58, 124,200 cfs-days Apr. 20, 1943 (elevation, 1,927.80 ft); minimum (after first filling), 9,400 cfs-days Sept. 5, 1947, Jan. 27, 1956; minimum elevation, 1,860.11 ft Sept. 5, 1947.

Reservoir is formed by a rolled earthfill dam with side channel spillway equipped with flashboards. Storage began Feb. 12, 1942; water in reservoir first reached minimum pool elevation Feb. 26, 1942. Total capacity at elevation 1,928.0 ft (top of flashboards) is 124,900 cfs-days, of which 115,600 cfs-days is controlled storage above elevation 1,860.0 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Reservoirs in Tennessee River basin--Continued

Nottely Lake.--Lat 34°57'29", long 84°05'22", at Nottely Dam on Nottely River, 1.3 miles upstream from Dooley Creek, 1.8 miles west of Ivylog, Union County, Ga., 2.5 miles upstream from Georgia-North Carolina State line, and at mile 21.0. Drainage area, 214 sq mi. Records available, January 1942 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 66,400 cfs-days May 25 (elevation, 1,765.75 ft); minimum, 14,000 cfs-days Sept. 19 (elevation, 1,709.75 ft). Maximum contents during period 1942-58, 94,100 cfs-days Apr. 20, 1943 (elevation, 1,780.50 ft); minimum (after first filling), 200 cfs-days Oct. 6, 1947 (elevation, 1,638.6 ft).

Reservoir is formed by rock and rolled earthfill dam with side channel spillway equipped with flashboards. Storage began Jan. 24, 1942; water in reservoir first reached minimum pool elevation Jan. 26, 1942. Total capacity at elevation 1,780.00 ft (top of flashboards) is 93,000 cfs-days of which 92,800 cfs-days is controlled storage above elevation 1,640.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Hiwassee Lake.--Lat 35°09'05", long 84°10'40", at Hiwassee Dam on Hiwassee River, a third of a mile northwest of village of Hiwassee Dam, Cherokee County, N. C., 3.9 miles upstream from Shoal Creek and at mile 75.8. Drainage area, 968 sq mi. Records available, September 1939 to September 1958. Error to October 1939 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is at mean sea level, preliminary adjustment of 1929. Subtract 0.63 ft from all elevations to reduce to datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 209,200 cfs-days July 25 (elevation, 1,522.75 ft); minimum, 58,200 cfs-days Jan. 20 (elevation, 1,440.51 ft). Maximum contents during period 1939-58, 220,700 cfs-days Apr. 24, 1944 (elevation, 1,526.48 ft); minimum (after first filling), 35,800 cfs-days Jan. 28, 1948 (elevation, 1,413.41 ft).

Reservoir is formed by gravity overflow concrete dam with 7 taintor gates 23 ft high by 32 ft long. Slight storage began Apr. 13, 1939, during construction; systematic storage operation began Jan. 14, 1940; dam completed February 1940; water in reservoir first reached minimum pool elevation Feb. 23, 1940. Total capacity at elevation 1,526.5 ft (top of gates) is 220,800 cfs-days, of which 183,800 cfs-days is controlled storage above elevation 1,415.0 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Apalachia Lake.--Lat 35°10'04", long 84°17'49", at Apalachia Dam on Hiwassee River in Cherokee County, N. C., 0.1 mile upstream from North Carolina-Tennessee State line, 1.5 miles northeast of Farnner, Polk County, Tenn., 9.8 miles downstream from Hiwassee Dam, and at mile 66.1. Drainage area, 1,018 sq mi. Records available, February 1943 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 29,500 cfs-days Feb. 18 (elevation, 1,279.92 ft); minimum, 25,400 cfs-days Dec. 26 (elevation, 1,272.45 ft). Maximum contents during period 1943-58, 30,300 cfs-days June 13, 1952 (elevation, 1,281.40 ft); minimum (after first filling), 15,700 cfs-days Aug. 28, 1955 (elevation, 1,251.73 ft).

Reservoir is formed by concrete gravity dam. Spillway equipped with 10 radial gates. Storage began Feb. 14, 1943; water in reservoir first reached minimum pool elevation Feb. 21, 1943. Total capacity at elevation 1,280.00 ft (top of gates) is 29,500 cfs-days, of which 18,000 cfs-days is controlled storage above elevation 1,240.00 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Blue Ridge Lake.--Lat 34°52'52", long 84°16'46", 400 ft upstream from Blue Ridge Dam on Toccoa River, 2 1/2 miles northeast of Blue Ridge, Fannin County, Ga., and at mile 53.0. Drainage area, 232 sq mi. Records available, December 1930 to September 1958. Gage, water-stage recorder. To convert elevations given herein to datum of 1929, supplementary adjustment of 1936, 0.18 ft should be subtracted. Maximum contents during year, 99,700 cfs-days May 25 (elevation, 1,690.06 ft); minimum, 39,400 cfs-days Nov. 13 (elevation, 1,642.97 ft). Maximum 12 p.m. contents during period 1930-58, 100,900 cfs-days Feb. 11, 1946 (elevation, 1,690.83 ft); minimum (after first filling), 6,500 cfs-days Jan. 16, 1956 (elevation, 1,587.75 ft).

Reservoir is formed by earth dam. Spillway equipped with 5 taintor gates 15 ft high by 22 ft wide. Dam completed and storage began Dec. 6, 1930. Total capacity at elevation 1,690.0 ft (top of gates) is 99,600 cfs-days, of which 92,300 cfs-days is controlled storage above elevation 1,590.0 ft (minimum pool). Reservoir is used for power. Records furnished by Tennessee Valley Authority.

Ocoee No. 3 Lake.--Lat 35°02'25", long 84°28'00", at Ocoee No. 3 Dam on Ocoee River, 5 miles west of Ducktown, Polk County, Tenn., and at mile 29.2. Drainage area, 496 sq mi. Records available, October 1942 to September 1958. Gage, water-stage recorder. Datum of gage is 1,410.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936; gage readings have been adjusted to mean sea level. Maximum contents during year, 5,100 cfs-days Apr. 28 (elevation, 1,437.4 ft, estimated); minimum, 1,800 cfs-days Feb. 3 (elevation, 1,419.8 ft, estimated). Maximum contents during period 1942-58, 7,800 cfs-days Jan. 8, 1946 (elevation, 1,436.7 ft, estimated); minimum 12 p.m. contents (after first filling), 1,100 cfs-days Apr. 3, 1943 (elevation, 1,394.95 ft).

Reservoir is formed by concrete dam. Spillway with crest at elevation 1,412.00 ft equipped with 7 taintor gates 23 ft high and 32 ft wide. Storage began Aug. 15, 1942; water in reservoir first reached minimum pool elevation Dec. 28, 1942. Capacity of reservoir has been considerably reduced by silting; revised capacity tables used after Sept. 30, 1946, and after Dec. 31, 1953. Total capacity at elevation, 1,435.00 ft (top of gates) is 4,400 cfs-days, of which 3,000 cfs-days is controlled storage above elevation 1,413.00 ft (minimum pool). Reservoir is used for power. Records furnished by Tennessee Valley Authority.

Reservoirs in Tennessee River basin--Continued

Parksville Lake.--Lat 35°05'44", long 84°38'51" at Parksville Dam on Ocoee River at Parksville, Polk County, Tenn., 13 $\frac{1}{2}$ miles east of Cleveland, and at mile 11.9. Drainage area, 595 sq mi. Records available, June 1914 to September 1958. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir. Indicator gage. Datum of gage, is 6.89 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Gage readings have been reduced to elevations above mean sea level. Maximum contents during year, 45,600 cfs-days Apr. 28 (elevation, 839.4 ft); minimum, 30,000 cfs-days Feb. 4 (elevation, 821.6 ft). Maximum 12 p.m. contents during period 1914-58, 53,300 cfs-days July 9, 1916; maximum 12 p.m. elevation, 840.2 ft Feb. 10, 1946; minimum contents, 27,300 cfs-days Jan. 27, 1956 (elevation, 817.7 ft); minimum 12 p.m. elevation, 814.8 ft Dec. 14, 1934.

Reservoir is formed by concrete dam with 347 ft of spillway. Spillway is equipped with 4 floodgates 7 ft high by 20 ft wide and 265 ft of flashboards about 5 2/3 ft high. Crest of spillway is 1.0 ft lower under gates. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting; revised capacity table used after Oct. 31, 1952. Total capacity at elevation 837.55 ft (about top of flashboards) is 43,700 cfs-days, of which 16,900 cfs-days is controlled storage above elevation 816.9 ft (minimum pool). Reservoir is used for power. Records furnished by Tennessee Valley Authority.

Chickamauga Lake.--Lat 35°06'07", long 85°13'42" at Chickamauga Dam on Tennessee River, 5 $\frac{1}{2}$ miles northeast of Chattanooga, Hamilton County, Tenn., 58.9 miles downstream from Watts Bar Dam, and at mile 471.0. Drainage area, 20,790 sq mi, approximately. Records available, October 1939 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 351,000 cfs-days May 3; maximum elevation, 685.32 ft May 3; minimum 12 p.m. contents, 194,000 cfs-days Mar. 7; minimum elevation, 674.77 ft Jan. 5. Maximum elevation during period 1939-58, 685.37 ft May 20, 1950; minimum (after first filling), 673.27 ft Jan. 21, 1942. Contents based on backwater profile.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates 40.44 ft high by 40 ft wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Total level pool capacity at elevation 685.44 ft (top of gates) is 355,600 cfs-days, of which 166,100 cfs-days is controlled flood storage above elevation 675.0 ft (minimum navigation pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Hales Bar Lake.--Lat 35°02'48", long 85°22'19", at Hales Bar Dam on Tennessee River, 5 $\frac{1}{2}$ miles southeast of Jasper, Marion County, Tenn., 8.5 miles upstream from Sequatchie River, 39.9 miles downstream from Chickamauga Dam, and at mile 431.1. Drainage area, 21,790 sq mi, approximately. Records available, October 1914 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum 12 p.m. contents during year, 112,000 cfs-days Nov. 19; maximum elevation, 634.65 ft Nov. 16; minimum 12 p.m. contents, 70,000 cfs-days Apr. 10; minimum elevation, 631.85 ft Jan. 3. Maximum elevation during period 1914-58, 642.8 ft Mar. 8, 1917; minimum (after first filling) 619.0 ft Apr. 16, 1918. Contents based on backwater profile.

Reservoir is formed by concrete dam with earth embankments containing concrete core walls. Spillway with crest at 616.0 ft equipped with 17 taintor gates 19 ft high by 40 ft wide, and 1 trash gate 5.5 ft high by 15 ft wide (prior to July 1948 spillway with crest elevation at 626.25 ft, equipped with flashboards 3 ft high prior to July 1944 and 5 ft high thereafter). Dam completed and storage began Oct. 13, 1913. Capacity of reservoir has been considerably reduced by silting. Total level pool capacity at elevation 634.0 ft (maximum allowable pool), is 77,800 cfs-days, of which 6,600 cfs-days is controlled flood storage above elevation 632.0 ft (minimum navigation pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Guntersville Lake.--Lat 34°25'17", long 86°23'34" in powerhouse at Guntersville Dam on Tennessee River in sec. 14, T. 7 S., R. 2 E., 11 miles northwest of Guntersville, Ala., 82.1 miles downstream from Hales Bar Dam, and at mile 349.0. Drainage area, 24,450 sq mi, approximately. Records available, October 1938 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 666,000 cfs-days Nov. 20; maximum elevation, 595.49 ft Apr. 29; minimum 12 p.m. contents, 436,000 cfs-days Mar. 30; minimum elevation, 592.75 ft Dec. 26. Maximum elevation during period 1939-58, 596.29 ft Mar. 2, 1944; minimum (after start of operation plan in April 1940), 591.65 ft Sept. 8, 1953. Contents based on backwater profile.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates 40.44 ft high by 50 ft wide. Dam completed and storage began Jan. 16, 1939; water in reservoir first reached minimum navigation pool elevation Jan. 27, 1939. Total level pool capacity at elevation 595.44 ft (top of gates) is 513,600 cfs-days, of which 82,100 cfs-days is controlled flood storage above elevation 593.0 ft (minimum navigation pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Revisions (water years).--WSP 1306: 1947-48.

Woods Reservoir.--Lat 35°17'54", long 86°05'48", at Elk River Dam on Elk River, 1.2 miles upstream from Spring Creek, 2 $\frac{1}{2}$ miles northeast of Estill Springs, Franklin County, Tenn., and 6.8 miles upstream from bridge on U. S. Highway 41A. Drainage area, 263 sq mi. Records available, May 1952 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 42,100 cfs-days Apr. 22 (elevation, 960.92 ft); minimum, 29,400 cfs-days Feb. 10 (elevation, 953.94 ft). Maximum contents during period 1952-58, 42,300 cfs-days Apr. 21, 1956 (elevation, 960.98 ft); minimum (after first filling), 26,300 cfs-days Nov. 8-11, 1953 (elevation, 951.93 ft).

Reservoirs in Tennessee River basin--Continued

Woods Reservoir--Continued.

Reservoir is formed by concrete gravity and earthfill type dam with riprapped embankments. Spillway equipped with 3 taintor gates, 25 ft high by 50 ft wide and 2 sluice gates 6 ft high by 4 ft wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft (surcharge pool) is 44,400 cfs-days of which 9,900 cfs-days is controlled storage above elevation 957.0 ft (minimum pool). Reservoir is used for cooling water, flood control, and recreational purposes. Records furnished by U. S. Air Force.

Wheeler Lake.--Lat 34°47'52", long 87°22'51", at Wheeler Dam on Tennessee River, in SW $\frac{1}{4}$ sec. 9, T. 3 S., R. 8 W., 0.8 mile upstream from Big Nance Creek, 30.1 miles downstream from Decatur, Ala., 74.1 miles downstream from Guntersville Dam, and at mile 274.9. Drainage area, 29,590 sq mi, approximately. Records available, September 1936 to September 1958. Prior to October 1936 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 713,000 cfs-days Nov. 20; maximum elevation, 556.42 ft Apr. 26; minimum 12 p.m. contents, 412,000 cfs-days Mar. 6; minimum elevation, 549.79 ft Jan. 1. Maximum elevation during period 1936-58, 557.32 ft Mar. 1, 1944; minimum (after start of operation plan in August 1937), 548.92 ft Nov. 1, 1937. Contents based on backwater profile.

Reservoir is formed by concrete dam with 60 taintor gates 15 ft high by 40 ft wide and 2 trashway gates 6 ft high by 37.5 ft wide. Storage began Oct. 3, 1936; water in reservoir first reached minimum pool elevation Dec. 10, 1936. Total level pool capacity at elevation 556.28 ft (top of gates) is 580,000 cfs-days of which 175,200 cfs-days is controlled flood storage above elevation 550.0 ft (ordinary minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Revisions (water years).--WSP 1306: 1947-48.

Wilson Lake.--Lat 34°47'46", long 87°37'27", in SE $\frac{1}{4}$ sec. 18, T. 3 S. R. 10 W., at cooling-water intake at Wilson Dam on Tennessee River, 2.9 miles southeast of Florence, Ala., 4.1 miles upstream from Cypress Creek, 15.5 miles downstream from Wheeler Dam, and at mile 259.4. Drainage area, 30,750 sq mi, approximately. Records available, April 1924 to September 1958. Prior to August 1926 month-end contents only, published in WSP 1306. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum contents during year, 328,700 cfs-days June 9 (elevation, 508.00 ft); minimum, 300,200 cfs-days Mar. 10 (elevation, 504.40 ft). Maximum contents during period 1924-58, 329,200 cfs-days Apr. 20, 1954 (elevation, 508.07 ft); maximum elevation, 508.35 ft Feb. 11, 1948; minimum contents, 233,200 cfs-days, Apr. 6, 1927 (elevation, 501.3 ft).

Reservoir is formed by concrete gravity dam with fixed ogee crest. Spillway equipped with 58 Stoney gates 20.54 ft (18.77 ft prior to June 1941) high by 38 ft wide. Storage began Apr. 14, 1924. Revised capacity table used after Dec. 31, 1953. Total capacity at elevation 507.88 ft (top of gates) is 327,700 cfs-days of which 26,700 cfs-days is controlled flood storage above elevation 504.50 ft (minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Pickwick Lake.--Lat 35°04'16", long 88°15'04", at Pickwick Landing Dam on Tennessee River, 1 $\frac{1}{2}$ miles north of town of Pickwick Dam, Hardin County, Tenn., 6.1 miles upstream from Lick Creek, 52.7 miles downstream from Wilson Dam, and at mile 206.7. Drainage area, 32,820 sq mi, approximately. Records available, October 1937 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 570,000 cfs-days Nov. 21; maximum elevation, 417.93 ft July 31; minimum 12 p.m. contents, 346,000 cfs-days Mar. 9; minimum elevation, 407.70 ft Dec. 26. Maximum elevation during period 1937-58, 419.49 ft Mar. 30, 1944; minimum (after first filling), 407.12 ft Dec. 18, 1944. Contents based on backwater profile.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates 40 ft high by 40 ft wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Total level pool capacity at elevation 418.0 ft (top of gates) is 550,200 cfs-days, of which 210,900 cfs-days is controlled flood storage above elevation 408.0 ft (minimum navigation pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Kentucky Lake.--Lat 37°00'45", long 88°16'12", at Kentucky Dam on Tennessee River at Gilbertsville, Marshall County, Ky., and at mile 22.4. Drainage area, 40,200 sq mi, approximately. Records available, July 1944 to September 1958. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 2,028,000 cfs-days Nov. 23; maximum elevation, 364.68 ft May 15; minimum 12 p.m. contents, 1,001,000 cfs-days Jan. 12; minimum elevation, 353.30 ft Jan. 7. Maximum elevation during period 1944-58, 368.81 ft Jan. 24, 1950; minimum (after first filling) 349.20 ft Jan. 22, 1947. Contents based on backwater profile.

Reservoir is formed by concrete dam with 24 lift gates 50 ft high by 40 ft wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Total level pool capacity at elevation 375.0 ft (top of gates) is 3,026,300 cfs-days, of which 2,022,100 cfs-days is controlled storage above 354.0 ft (ordinary minimum pool). Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Other reservoirs.--The following smaller reservoirs in the Tennessee River basin are described below, but records of contents are not published herein:

Burnett Lake on North Fork Swannanoa River near Black Mountain, N. C., with total capacity of 11,600 cfs-days, of which 8,900 cfs-days is controlled storage. Storage began Jan. 28, 1954.

Lake Walters on Pigeon River near Waterville, N. C., with total capacity of 12,700 cfs-days, of which 10,300 cfs-days is controlled storage. Storage began Oct. 27, 1929.

TENNESSEE RIVER BASIN

Reservoirs in Tennessee River basin--Continued

Davy Crockett Lake on Nolichucky River at Nolichucky Dam, Tenn., with total capacity of 8,070 cfs-days of which 4,060 cfs-days is controlled storage.

Tennessee Creek project lakes, Wolf Creek Lake on Wolf Creek and East Fork Lake on Tuckasee River near Tuckasee, N. C., with total capacity of 5,750 cfs-days, of which 4,480 cfs-days is controlled storage. Storage began Mar. 22, 1955.

Bear Creek Lake on Tuckasee River near Tuckasee, N. C., with total capacity of 17,500 cfs-days, of which 2,290 cfs-days is controlled storage. Storage began Oct. 9, 1953.

Cedar Cliff Lake on Tuckasee River near Tuckasee, N. C., with total capacity of 3,200 cfs-days, of which 400 cfs-days is controlled storage. Storage began Apr. 26, 1952.

Cheoah Lake on Little Tennessee River at Cheoah, N. C., with total capacity of 17,700 cfs-days, of which 3,700 cfs-days is controlled storage. Storage began Dec. 8, 1918.

Calderwood Lake on Little Tennessee River at Calderwood, Tenn., with total capacity of 20,800 cfs-days of which 2,060 cfs-days is controlled storage.

Month-end elevation and contents, water year October 1957 to September 1958									
Date	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)
Douglas Lake									
Sept. 30.....	962.88	290,700	-	1,684.47	183,000	-	1,931.59	206,600	-
Oct. 31.....	947.84	174,400	-116,300	1,678.64	164,200	-18,800	1,924.00	186,900	-19,700
Nov. 30.....	959.04	257,700	+83,300	1,676.95	164,900	+700	1,925.00	189,400	+2,500
Dec. 31.....	935.76	105,900	-151,800	1,695.08	210,900	+46,000	1,934.70	215,000	+25,600
Calendar year 1957.	-	-	+22,200	-	-	+56,500	-	-	+62,100
Jan. 31.....	937.29	115,300	+7,400	1,696.93	216,100	+5,200	1,930.01	202,400	-12,600
Feb. 28.....	942.46	141,200	+27,900	1,700.56	226,500	+10,400	1,933.05	210,500	+8,100
Mar. 31.....	960.80	272,600	+131,400	1,701.86	230,400	+3,900	1,935.75	217,800	+7,300
Apr. 30.....	985.34	528,500	+255,700	1,713.58	267,000	+36,600	1,946.22	247,600	+29,800
May 31.....	992.30	619,600	+91,300	1,726.24	311,400	+44,400	1,954.22	272,000	+24,400
June 30.....	985.33	508,800	-115,900	1,722.92	289,200	-12,200	1,952.40	224,400	-5,800
July 31.....	985.08	525,100	+21,300	1,716.81	277,800	-21,400	1,945.32	245,000	-21,400
Aug. 31.....	975.86	418,500	-106,600	1,712.83	264,600	-13,200	1,941.41	233,700	-11,300
Sept. 30.....	957.42	244,500	-174,000	1,698.03	219,200	-45,400	1,932.07	207,800	-25,900
Water year 1957-58.	-	-	-46,200	-	-	+36,200	-	-	+1,200
Boone Lake									
Sept. 30.....	1,378.17	84,900	-	1,261.55	13,000	-	1,043.05	392,300	-
Oct. 31.....	1,372.85	75,100	-9,800	1,261.00	12,800	-200	1,032.86	302,600	-89,700
Nov. 30.....	1,367.67	66,400	-8,700	1,260.21	12,400	-400	1,033.16	305,000	+2,400
Dec. 31.....	1,357.09	51,100	-15,300	1,260.24	12,400	0	1,020.70	215,900	-89,100
Calendar year 1957.	-	-	-1,800	-	-	+200	-	-	+63,600
Jan. 31.....	1,357.68	51,800	+700	1,260.92	12,700	+300	1,012.08	166,300	-49,600
Feb. 28.....	1,369.13	68,800	+17,000	1,259.69	12,200	-500	1,024.67	241,900	+75,600
Mar. 31.....	1,373.01	75,400	+6,600	1,260.94	12,800	+600	1,043.56	397,200	+155,300
Apr. 30.....	1,375.95	80,700	+5,300	1,261.30	12,900	+100	1,059.05	567,000	+169,800
May 31.....	1,381.00	90,500	+9,800	1,261.82	13,100	+200	1,070.41	719,600	+152,600
June 30.....	1,382.92	94,600	+4,100	1,260.18	12,400	-700	1,060.53	585,500	-134,100
July 31.....	1,385.24	95,200	+600	1,262.09	13,300	+900	1,059.47	572,200	-13,300
Aug. 31.....	1,381.81	87,200	-8,000	1,261.23	12,900	-400	1,053.71	503,800	-68,400
Sept. 30.....	1,379.28	87,000	-5,200	1,262.13	13,300	+400	1,039.29	357,300	-146,500
Water year 1957-58.	-	-	+2,100	-	-	+300	-	-	-35,000
Fort Loudoun Lake†									
Sept. 30.....	813.20	181,000	-	2,842.13	37,600	-	3,077.36	21,000	-
Oct. 31.....	813.09	180,000	-1,000	2,843.68	38,500	+900	3,076.70	20,600	-400
Nov. 30.....	808.54	150,000	-30,000	2,856.70	46,200	+7,700	3,083.57	24,700	+4,100
Dec. 31.....	807.52	144,000	-6,000	2,876.94	59,900	+13,700	3,089.97	28,600	+4,100
Calendar year 1957.	-	-	-4,000	-	-	+25,600	-	-	+13,900
Jan. 31.....	807.41	143,000	-1,000	2,881.64	63,400	+3,500	3,092.64	30,500	+1,700
Feb. 28.....	808.00	146,000	+3,000	2,883.03	64,400	+1,000	3,091.92	30,100	-400
Mar. 31.....	808.23	147,000	+1,000	2,879.72	61,900	-2,500	3,092.18	30,200	+100
Apr. 30.....	812.92	179,000	+32,000	2,884.52	65,600	+3,700	3,096.00	32,800	+2,600
May 31.....	813.00	180,000	+1,000	2,883.27	64,600	-1,000	3,093.22	30,900	-1,900
June 30.....	812.39	176,000	-4,000	2,874.93	58,400	-6,200	3,087.69	27,300	-3,600
July 31.....	812.39	176,000	0	2,870.10	55,000	-3,400	3,084.22	25,100	-2,200
Aug. 31.....	813.00	180,000	+4,000	2,885.58	61,900	+3,100	3,091.56	23,600	-1,600
Sept. 30.....	813.19	181,000	+1,000	2,884.81	45,000	-6,900	3,076.81	20,700	-2,800
Water year 1957-58.	-	-	0	-	-	+7,400	-	-	-300
Mantahala Lake††									
Sept. 30.....	813.20	181,000	-	2,842.13	37,600	-	3,077.36	21,000	-
Oct. 31.....	813.09	180,000	-1,000	2,843.68	38,500	+900	3,076.70	20,600	-400
Nov. 30.....	808.54	150,000	-30,000	2,856.70	46,200	+7,700	3,083.57	24,700	+4,100
Dec. 31.....	807.52	144,000	-6,000	2,876.94	59,900	+13,700	3,089.97	28,600	+4,100
Calendar year 1957.	-	-	-4,000	-	-	+25,600	-	-	+13,900
Jan. 31.....	807.41	143,000	-1,000	2,881.64	63,400	+3,500	3,092.64	30,500	+1,700
Feb. 28.....	808.00	146,000	+3,000	2,883.03	64,400	+1,000	3,091.92	30,100	-400
Mar. 31.....	808.23	147,000	+1,000	2,879.72	61,900	-2,500	3,092.18	30,200	+100
Apr. 30.....	812.92	179,000	+32,000	2,884.52	65,600	+3,700	3,096.00	32,800	+2,600
May 31.....	813.00	180,000	+1,000	2,883.27	64,600	-1,000	3,093.22	30,900	-1,900
June 30.....	812.39	176,000	-4,000	2,874.93	58,400	-6,200	3,087.69	27,300	-3,600
July 31.....	812.39	176,000	0	2,870.10	55,000	-3,400	3,084.22	25,100	-2,200
Aug. 31.....	813.00	180,000	+4,000	2,885.58	61,900	+3,100	3,091.56	23,600	-1,600
Sept. 30.....	813.19	181,000	+1,000	2,884.81	45,000	-6,900	3,076.81	20,700	-2,800
Water year 1957-58.	-	-	0	-	-	+7,400	-	-	-300
Thorpe Lake††									
Sept. 30.....	813.20	181,000	-	2,842.13	37,600	-	3,077.36	21,000	-
Oct. 31.....	813.09	180,000	-1,000	2,843.68	38,500	+900	3,076.70	20,600	-400
Nov. 30.....	808.54	150,000	-30,000	2,856.70	46,200	+7,700	3,083.57	24,700	+4,100
Dec. 31.....	807.52	144,000	-6,000	2,876.94	59,900	+13,700	3,089.97	28,600	+4,100
Calendar year 1957.	-	-	-4,000	-	-	+25,600	-	-	+13,900
Jan. 31.....	807.41	143,000	-1,000	2,881.64	63,400	+3,500	3,092.64	30,500	+1,700
Feb. 28.....	808.00	146,000	+3,000	2,883.03	64,400	+1,000	3,091.92	30,100	-400
Mar. 31.....	808.23	147,000	+1,000	2,879.72	61,900	-2,500	3,092.18	30,200	+100
Apr. 30.....	812.92	179,000	+32,000	2,884.52	65,600	+3,700	3,096.00	32,800	+2,600
May 31.....	813.00	180,000	+1,000	2,883.27	64,600	-1,000	3,093.22	30,900	-1,900
June 30.....	812.39	176,000	-4,000	2,874.93	58,400	-6,200	3,087.69	27,300	-3,600
July 31.....	812.39	176,000	0	2,870.10	55,000	-3,400	3,084.22	25,100	-2,200
Aug. 31.....	813.00	180,000	+4,000	2,885.58	61,900	+3,100	3,091.56	23,600	-1,600
Sept. 30.....	813.19	181,000	+1,000	2,884.81	45,000	-6,900	3,076.81	20,700	-2,800
Water year 1957-58.	-	-	0	-	-	+7,400	-	-	-300

† Elevation at 12 p.m.

‡ Contents based on backwater profile.

†† Elevation is above a local datum; see text for adjustment to datum of 1929, supplementary adjustment of 1956.

Reservoirs in Tennessee River basin--Continued

Month-end elevation and contents, water year October 1957 to September 1958									
Date	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)
	Fontana Lake			Santeeelah Lake*			Chilhowee Lake		
Sept. 30.....	1,634.53	401,600	-	1,768.39	28,300	-	872.43	23,500	-
Oct. 31.....	1,624.81	369,600	-32,000	1,771.05	30,200	+1,900	872.65	23,700	+200
Nov. 30.....	1,632.87	396,000	+26,400	1,785.74	42,700	+12,500	872.40	23,400	-300
Dec. 31.....	1,615.00	339,400	-56,600	1,809.38	69,200	+26,500	872.00	23,100	-300
Calendar year 1957.	-	-	+77,300	-	-	+38,600	-	-	-
Jan. 31.....	1,579.00	245,400	-94,000	1,808.92	68,600	-800	872.04	23,100	0
Feb. 28.....	1,591.65	275,500	+30,100	1,807.94	67,400	-1,200	872.15	23,200	+100
Mar. 31.....	1,619.57	353,200	+77,700	1,804.15	62,600	-4,800	873.16	24,100	+900
Apr. 30.....	1,653.27	509,200	+156,000	1,803.91	62,300	-300	873.47	24,400	+300
May 31.....	1,693.54	644,200	+135,000	1,806.90	66,000	+3,700	872.56	23,600	-800
June 30.....	1,684.74	602,600	-41,600	1,797.02	54,300	-11,700	873.13	24,100	+500
July 31.....	1,685.73	607,200	+4,600	1,792.76	49,700	-4,600	872.25	23,300	-800
Aug. 31.....	1,670.14	537,800	-69,400	1,790.21	47,100	-2,600	871.95	23,000	-300
Sept. 30.....	1,631.57	391,600	-146,200	1,788.25	45,100	-2,000	871.02	22,300	-700
Water year 1957-58.	-	-	-10,000	-	-	+16,800	-	-	-1,200
	Norris Lake			Watts Bar Lake†			Chatuge Lake		
Sept. 30.....	980.17	491,800	-	740.61	481,000	-	1,896.68	45,300	-
Oct. 31.....	974.70	435,500	-53,500	738.45	440,000	-41,000	1,900.34	51,600	+6,300
Nov. 30.....	979.87	486,700	+50,400	736.00	408,000	-32,000	1,907.28	65,600	+14,000
Dec. 31.....	979.75	487,500	+1,200	735.31	395,000	-13,000	1,910.05	71,900	+6,300
Calendar year 1957.	-	-	+113,900	-	-	-4,000	-	-	+21,800
Jan. 31.....	970.45	399,400	-88,100	735.24	387,000	-8,000	1,909.29	70,100	-1,800
Feb. 28.....	972.87	421,300	+21,900	736.57	407,000	+20,000	1,908.77	68,900	-1,200
Mar. 31.....	987.28	568,600	+147,300	735.70	392,000	-15,000	1,909.43	70,400	+1,500
Apr. 30.....	1,009.30	859,100	+290,500	743.75	545,000	+153,000	1,913.57	80,600	+10,200
May 31.....	1,020.75	1,045,300	+186,200	741.23	494,000	-51,000	1,918.42	93,900	+13,300
June 30.....	1,009.45	861,400	-183,900	739.80	467,000	-27,000	1,912.69	78,400	-15,500
July 31.....	1,005.85	808,000	-53,400	740.77	484,000	+17,000	1,908.68	68,700	-9,700
Aug. 31.....	996.72	683,000	-125,000	740.07	471,000	-13,000	1,899.14	49,500	-19,200
Sept. 30.....	984.14	533,700	-149,300	740.52	481,000	+10,000	1,894.98	42,600	-6,900
Water year 1957-58.	-	-	+41,900	-	-	0	-	-	-2,700
	Nottely Lake			Hiwassee Lake			Apalachia Lake		
Sept. 30.....	1,727.40	24,400	-	1,506.68	165,300	-	1,278.56	28,700	-
Oct. 31.....	1,732.35	26,200	+3,800	1,463.38	116,100	-49,200	1,278.52	28,700	0
Nov. 30.....	1,742.39	36,900	+8,700	1,476.80	104,800	-11,300	1,277.55	28,200	-500
Dec. 31.....	1,742.93	37,400	+500	1,454.95	74,000	-30,800	1,277.72	28,200	0
Calendar year 1957.	-	-	+15,100	-	-	+1,700	-	-	+1,600
Jan. 31.....	1,737.81	32,700	-4,700	1,442.34	60,000	-14,000	1,278.88	28,900	+700
Feb. 28.....	1,750.71	45,700	+13,000	1,460.51	81,000	+21,000	1,276.84	27,800	-1,100
Mar. 31.....	1,762.05	60,800	+14,900	1,462.78	84,000	+3,000	1,279.53	29,300	+1,500
Apr. 30.....	1,780.06	57,700	-2,900	1,505.54	162,500	+78,500	1,278.30	28,600	-700
May 31.....	1,785.09	65,300	+7,600	1,519.63	200,000	+37,500	1,277.93	28,400	-200
June 30.....	1,755.41	51,400	-13,900	1,519.19	198,700	-1,300	1,277.29	28,000	-400
July 31.....	1,746.85	41,400	-10,000	1,522.23	207,700	+9,000	1,277.70	28,200	+200
Aug. 31.....	1,727.17	24,500	-17,100	1,519.99	201,000	-6,700	1,278.20	28,500	+300
Sept. 30.....	1,710.90	14,600	-9,700	1,508.42	169,600	-31,400	1,278.97	29,000	+500
Water year 1957-58.	-	-	-9,800	-	-	+4,300	-	-	+300
	Blue Ridge Lake			Ocoee No. 3 Lake			Parksville Lake		
Sept. 30.....	1,652.57	46,800	-	1,432.63	3,700	-	833.9	40,200	-
Oct. 31.....	1,646.92	43,100	-5,700	1,433.90	4,100	+400	831.0	37,600	-2,600
Nov. 30.....	1,660.60	57,900	+14,800	1,426.91	2,600	-1,500	831.7	38,200	+600
Dec. 31.....	1,663.75	61,700	+3,800	1,432.75	3,800	+1,200	828.0	35,000	-3,200
Calendar year 1957.	-	-	+30,400	-	-	+800	-	-	+400
Jan. 31.....	1,660.45	57,700	-4,000	1,430.25	3,200	-600	825.2	32,700	-2,300
Feb. 28.....	1,667.33	66,200	+8,500	1,428.65	2,900	-300	827.7	34,700	+2,000
Mar. 31.....	1,672.41	72,800	+6,600	1,431.16	3,400	+500	831.9	38,400	+3,700
Apr. 30.....	1,685.66	92,600	+19,700	1,434.23	4,200	+800	835.5	41,700	+3,300
May 31.....	1,689.09	98,100	+5,500	1,433.72	4,000	-200	835.4	41,600	-100
June 30.....	1,681.45	86,000	-12,100	1,426.65	2,600	-1,400	836.7	42,900	+1,300
July 31.....	1,685.82	92,800	+6,800	1,430.95	3,300	+700	835.4	41,600	-1,300
Aug. 31.....	1,674.53	75,900	-16,900	1,429.16	3,000	-300	835.4	41,600	0
Sept. 30.....	1,663.00	60,800	-15,100	1,433.32	3,900	+900	833.7	40,000	-1,600
Water year 1957-58.	-	-	+12,000	-	-	+200	-	-	-200

* Elevation is above a local datum; see text for adjustment to datum of 1929, supplementary adjustment of 1936.

† Elevation at 12 p.m.

‡ Contents based on backwater profile.

Reservoirs in Tennessee River basin--Continued

Month-end elevation and contents, water year October 1957 to September 1958									
Date	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)	Elevation (feet)†	Contents (cfs- days)	Change in contents (cfs- days)
Chickamauga Lake‡			Hales Bar Lake‡			Guntersville Lake‡			
Sept. 30.....	679.77	256,000	-	633.73	75,000	-	594.20	479,000	-
Oct. 31.....	678.27	236,000	-20,000	633.70	76,000	+1,000	593.90	469,000	-10,000
Nov. 30.....	675.12	208,000	-33,000	632.55	78,000	+2,000	593.28	462,000	-7,000
Dec. 31.....	675.21	210,000	+7,000	632.72	84,000	+6,000	592.93	476,000	+14,000
Calendar year 1957.	-	-	+5,000	-	-	+10,000	-	-	+30,000
Jan. 31.....	675.47	201,000	-9,000	632.85	75,000	-9,000	592.90	445,000	-31,000
Feb. 28.....	676.47	209,000	+8,000	632.50	73,000	-2,000	593.25	452,000	+7,000
Mar. 31.....	676.24	206,000	-3,000	632.36	73,000	-1,000	593.15	449,000	-3,000
Apr. 30.....	684.08	336,000	+130,000	633.34	90,000	+18,000	594.88	566,000	+117,000
May 31.....	682.32	301,000	-35,000	633.78	77,000	-13,000	594.90	506,000	-60,000
June 30.....	682.37	299,000	-2,000	633.40	75,000	-2,000	594.90	503,000	-3,000
July 31.....	680.40	266,000	-33,000	633.73	75,000	0	594.55	491,000	-12,000
Aug. 31.....	680.89	277,000	+11,000	632.79	73,000	-2,000	594.10	475,000	-16,000
Sept. 30.....	680.75	274,000	-3,000	632.80	73,000	0	593.34	453,000	-22,000
Water year 1957-58.	-	-	+18,000	-	-	-2,000	-	-	-26,000
Woods Reservoir			Wheeler Lake‡			Wilson Lake			
Sept. 30.....	957.02	34,600	-	554.00	511,000	-	507.56	325,100	-
Oct. 31.....	957.10	34,700	+100	553.01	483,000	-28,000	506.79	318,900	-6,200
Nov. 30.....	957.13	34,800	+100	550.80	457,000	-26,000	506.41	315,800	-3,100
Dec. 31.....	957.08	34,700	-100	549.92	452,000	-5,000	505.17	306,200	-9,600
Calendar year 1957.	-	-	+100	-	-	+21,000	-	-	-3,300
Jan. 31.....	954.03	29,500	-5,200	550.00	422,000	-30,000	505.53	309,000	+2,800
Feb. 28.....	954.27	29,900	+400	550.33	429,000	+7,000	505.73	310,500	+1,500
Mar. 31.....	958.45	37,200	+7,300	553.48	495,000	+66,000	505.79	311,000	+500
Apr. 30.....	960.06	40,400	+3,200	556.05	642,000	+147,000	507.28	322,600	+11,600
May 31.....	959.98	40,200	-200	555.70	566,000	-76,000	507.49	324,500	+1,900
June 30.....	959.36	39,000	-1,200	554.82	537,000	-29,000	507.04	320,900	-3,600
July 31.....	958.83	36,000	-1,000	555.63	559,000	+22,000	506.45	316,200	-4,700
Aug. 31.....	958.63	37,600	+400	552.95	478,000	-81,000	507.46	324,300	+8,100
Sept. 30.....	957.05	34,700	-2,900	553.37	499,000	+21,000	507.27	322,700	-1,600
Water year 1957-58.	-	-	+100	-	-	-12,000	-	-	-2,400
Plekwick Lake‡			Kentucky Lake‡						
Sept. 30.....	411.21	404,000	-	355.81	1,117,000	-			
Oct. 31.....	414.25	485,000	+81,000	356.30	1,157,000	+40,000			
Nov. 30.....	411.30	416,000	-49,000	356.67	1,455,000	+298,000			
Dec. 31.....	408.22	365,000	-51,000	353.83	1,097,000	-358,000			
Calendar year 1957.	-	-	+9,000	-	-	+92,000			
Jan. 31.....	408.60	359,000	-6,000	353.47	1,031,000	-66,000			
Feb. 28.....	408.84	363,000	+4,000	354.00	1,030,000	-1,000			
Mar. 31.....	413.60	455,000	+92,000	354.93	1,074,000	+44,000			
Apr. 30.....	416.63	535,000	+80,000	357.65	1,451,000	+377,000			
May 31.....	414.13	463,000	-72,000	359.29	1,380,000	-71,000			
June 30.....	413.45	448,000	-15,000	357.87	1,268,000	-112,000			
July 31.....	417.75	545,000	+97,000	359.44	1,380,000	+112,000			
Aug. 31.....	411.25	404,000	-141,000	355.84	1,115,000	-265,000			
Sept. 30.....	411.95	418,000	+14,000	354.58	1,063,000	-52,000			
Water year 1957-58.	-	-	+14,000	-	-	-54,000			

† Elevation at 12 p.m.

‡ Contents based on backwater profile.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1958

Discharge measurements made at 106-flow partial-record stations during water year 1958						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Tennessee River basin						
4489.1	Swannanoa River at Grovestone, N. C.	Lat 35°36'11", long 82°21'55", at bridge on U. S. Highway 70, 0.2 mile above North Fork and 1.8 miles northeast of Swannanoa, Buncombe County.	21.2	1944, 1953-54, 1958	2-12-58 3- 5-58 4- 4-58 6- 9-58 9- 3-58	42.8 45.4 60.4 30.4 9.55
4578.1	Richland Creek below Hyatt Creek at Hazelwood, N. C.	Lat 35°27'57", long 83°00'41", just below Hyatt Creek at Hazelwood, Haywood County.	13.2	1941, 1955-58	10- 9-57 12- 5-57	11.3 51.1
4662	Big Limestone Creek at Limestone, Tenn.	Lat 36°13'07", long 82°38'27", 0.5 mile downstream from bridge on former U. S. Highway 11E and Southern Ry. and 2.0 miles upstream from mouth, at Limestone, Washington County.	78.1	1958	9-17-58	26.9
4972	Little River near Townsend, Tenn.	Lat 35°39'13", long 83°42'25", 600 ft upstream from Middle Prong in Great Smoky Mountain National Park and 3 miles southeast of Townsend, Blount County.	60.1	1952-58	9-17-58	26.4
5106.1	Connelly Creek at Whittier, N. C.	Lat 35°25'55", long 83°21'42", at railroad bridge, 100 ft above mouth and $\frac{1}{2}$ mile southeast of Whittier, Swain County.	13.5	1953, 1955-58	10-28-57	13.8
5113.6	Soco Creek near Cherokee, N. C.	Lat 35°27'42", long 83°19'09", at bridge on U. S. Highway 441, 0.6 mile above mouth and 1.0 mile south of Cherokee, Jackson County.	43.2	1925, 1943, 1947, 1953-54, 1958	9-10-58	30.2
5127.4	Deep Creek near Bryson City, N. C.	Lat 35°27'51", long 83°26'03", at ranger station, 100 ft below Juney Whank Branch, 2.4 miles above mouth and 2.6 miles north of Bryson City, Swain County.	40.2	1950-58	10-15-57	49.2
*5382	Poplar Creek near Oliver Springs, Tenn.	Lat 36°01'20", long 84°18'37", at bridge on State Highway 61, 2.5 miles southeast of Oliver Springs, Anderson County, and 4 miles upstream from Indian Creek.	55.9	1951-58	9-17-58	4.43
6027	Tumbling Creek near Hurricane Mills, Tenn.	Lat 35°55'51", long 87°43'56", 800 ft below highway bridge and 4.0 miles southeast of Hurricane Mills, Humphreys County (location revised).	51.2	1944, 1953-58	6-27-58	29.2
6072	West Sandy Creek near Springville, Tenn.	Lat 36°15'37", long 86°12'10", at bridge on State Highway 69, 3.6 miles southwest of Springville, Henry County.	47.9	1958	7-31-58	22.3

* Also a crest-stage station.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined. The maximum discharge for each year since the crest-stage gage was established is given. The peak discharge for some years may have been published in a previous report as a measurement of discharge. Figures given herein supersede all previous figures of peak discharge for the floods listed.

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Cumberland River basin							
4082	Brimstone Creek near Robbins, Tenn.	Lat 36°20'43", long 84°32'22", at Walker Bridge on rural road S-2342-1, 3.0 miles east of Robbins, Scott County.	48.7	1955-58	2- 6-55 13.96 1957 (b) 1-28-57 18.64 11-18-57 20.35	(+) (+) (+) (+)	
4090	White Oak Creek at Sunbright, Tenn.	Lat 36°14'38", long 84°40'14", at bridge on U. S. Highway 27 in Sunbright, Morgan County.	13.5	1933*, 1955-58	3-21-55 14.29 2- -56 11.29 12- -56 11.56 11-18-57 13.61	(+) (+) (+) (+)	
4096	Black Creek tributary near Robbins, Tenn.	Lat 36°21'53", long 84°33'21", at culvert under U. S. Highway 27, 0.8 mile upstream from mouth and 1.5 miles north of Robbins, Scott County.	.25	1955-58	3-21-55 3.40 2- -56 2.27 4- -57 2.98 11-18-57 3.21	(+) (+) (+) (+)	
4147	Puncheon Camp Creek at Allred, Tenn.	Lat 36°19'35", long 85°11'10", at bridge on State Highway 85 at Allred, Overton County, 7.0 miles south of intersection of State Highways 85 and 52.	15.5	1955-58	3-21-55 11.38 2- -56 5.94 1-29-57 7.72 11-18-57 8.44	(+) (+) (+) (+)	
4157	Big Eagle Creek near Livingston, Tenn.	Lat 36°26'57", long 85°16'27", at bridge on county road, 0.8 mile north of intersection with State Highway 42 and 4.7 miles northeast of Livingston city limits, Overton County.	7.98	1955-58	3-21-55 4.61 2- -56 4.15 1-29-57 4.48 11-18-57 3.51	(+) (+) (+) (+)	962
4177	Mathews Branch tributary near Livingston, Tenn.	Lat 36°20'04", long 85°20'23", at culvert under State Highway 42, 2.0 miles south of intersection of State Highways 85 and 42 and 2.9 miles southwest of Livingston, Overton County.	.49	1955-58	3-21-55 4.44 2- -56 5.54 1-29-57 3.05 9-21-58 2.61	188 273 99 76	(+)
4205	Barren Fork near Trousdale, Tenn.	Lat 35°39'55", long 85°53'00", at county highway bridge on Trousdale-McMinnville pike, 3½ miles east of Trousdale, Warren County.	132	1933-57*, 1958	11- -57 11.50	9,920	(+)
4206	Owen Branch near Centertown, Tenn.	Lat 35°42'30", long 85°53'05", at bridge on U. S. Highway 70S, 2.4 miles southeast of Centertown, Warren County.	4.60	1955-58	3-21-55 7.0 1-30-56 3.21 1- -57 2.64 11- -57 3.54	2,860 (+) (+) (+)	
4207	Owen Branch near Trousdale, Tenn.	Lat 35°39'55", long 85°51'50", at bridge 0.2 mile upstream from mouth, 1.0 mile east of Barren Fork near Trousdale gaging station, and 4.3 miles east of Trousdale, Warren County.	9.42	1955-58	3-21-55 11.9 1-30-56 5.88 2-19-57 7.70 11- -57 6.11	(+) (+) (+) (+)	
*4212	Charles Creek near McMinnville, Tenn.	Lat 35°43'00", long 85°46'05", at bridge on county road at Faulkner Springs, 2.7 miles north of McMinnville, Warren County.	32.0	1955-58	3-21-55 13.00 1-30-56 7.66 1957 (b) 11- -57 8.60	(+) (+) (+) (+)	
4213	Bybee Branch at McMinnville, Tenn.	Lat 35°42'15", long 85°47'25", at culvert under State Highway 56, at northwest city limits of McMinnville, Warren County.	1.16	1955-58	3-21-55 4.20 7-17-56 3.24 12- -56 4.98 11- -57 5.68	200 125 270 335	(+)
4257	Spencer Creek near Lebanon, Tenn.	Lat 36°14'20", long 86°24'03", at bridge on county road, 100 ft north of junction of county road and U. S. Highway 70N and 6.5 miles west of square in Lebanon, Wilson County.	3.32	1955-58	7- -55 7.69 2- -56 7.02 1-29-57 8.4 4- 5-58 6.81	1,610 1,140 2,220 1,010	(+)
4258	Cedar Creek tributary at Green Hill, Tenn.	Lat 36°13'52", long 86°31'40", at culvert under U. S. Highway 70N, 0.2 mile east of Green Hill, Wilson County.	.86	1955-57	3-21-55 c5.2 2- -56 d4.10 1-29-57 5.4	319 (+) (+)	

* Also a low-flow partial-record station.

† Discharge not determined.

* Operated as a continuous-record gaging station.

a Maximum recorded.

b Peak stage did not reach bottom of gage.

c Maximum for period Nov. 16, 1954, to Mar. 21, 1955.

d Maximum for period Dec. 13, 1955, to Sept. 30, 1956.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Cumberland River basin--Continued							
4368	Musterground Creek near Erin, Tenn.	Lat 36°19'12", long 87°40'19" at bridge on State Highway 13, 0.1 mile northeast of intersection with State Highway 49 and 1.5 miles east of Erin, Houston County.	3.57	1955-58	2-22-55 1956 1- -57 11-14-57	2.15 - 2.71 2.49	(+) (+) (+) (+)
Tennessee River basin							
4464.1	Laurel Branch near Edneyville, N. C.	Lat 35°22'15", long 82°24'10", at culvert on U. S. Highway 64, 0.5 mile above mouth and 4 miles southwest of Edneyville, Henderson County.	0.57	1955-58	7-24-55 7- 6-56 6-28-57 7-31-58	19.78 20.30 20.54 20.13	(+) (+) (+) (+)
4538.8	Brush Creek at Walnut, N. C.	Lat 35°50'40", long 82°44'30", at bridge on secondary road, 0.7 mile southwest of Walnut, Madison County, and 0.8 mile above mouth.	7.99	1954-58	7-23-54 8-15-55 4-16-56 4- 5-57 5- 7-58	15.23 13.09 12.17 13.70 12.86	1,190 510 320 680 460
4619.1	North Toe River at Newland, N. C.	Lat 36°05'01", long 81°55'45", at culvert on State Highway 194 at Newland, Avery County, 100 ft below Kentucky Creek.	9.24	1955-58	4-14-55 4-16-56 4- 4-57 11-19-57	20.08 19.18 19.80 17.87	(+) (+) (+) (+)
4639.1	Phipps Creek near Burnsville, N. C.	Lat 35°54'40", long 82°22'10", at culvert on U. S. Highway 19E, 0.4 mile above mouth and 3.9 miles west of Burnsville, Yancey County.	1.60	1955-58	1955 1956 5- 1-57 5-24-58	(b) (b) 18.08 17.67	<65 <65 188 153
4658	Muddy Fork at Fairview, Tenn.	Lat 36°18'52", long 82°32'38", at bridge on State Highway 81, 0.7 mile west of Fairview, Washington County.	9.86	1955-58	3-18-55 4-16-56 4-18-57 5- 5-58	3.98 5.30 4.11 5.67	(+) (+) (+) (+)
4692	Little Pigeon River at Sevierville, Tenn.	Lat 35°52'12", long 83°34'04", at bridge just above West Fork on State Highway 66 in Sevierville, Sevier County.	201	1954-58	1-21-54 3- -55 4-16-56 1-31-57 1958	11.88 - 13.76 15.59 -	8,680 - 10,800 12,800 -
4695	West Fork Little Pigeon River near Pigeon Forge, Tenn.	Lat 35°48'21", long 83°34'28", at bridge on old State Highway 71, 1.6 miles northwest of Pigeon Forge, Sevier County.	76.2	1946-49*, 1954-58	1-21-54 3-18-55 4-16-56 1-31-57 12-20-57	8.32 8.17 9.31 10.98 8.45	3,620 3,480 4,560 6,400 3,750
4735	Middle Fork Holston River at Groseclose, Va.	Lat 36°53'19", long 81°20'51", 0.2 mile south of Groseclose.	7.39	1948-57*, 1958	5- 6-58	4.66	256
4738	Staley Creek near Marion, Va.	Lat 36°49'25", long 81°28'25", 2 miles southeast of Marion.	8.33	1951-58	12- 7-50 1952 7- 6-53 1954 3-18-55 4-16-56 1-29-57 5- 6-58	4.3 - 2.95 - 3.78 3.23 4.04 3.38	410 e150 190 e150 320 230 360 250
4775	Beaver Creek near Wallace, Va.	Lat 36°38'25", long 82°06'42", 1.2 miles southeast of Wallace.	13.7	1946-57*, 1958	5- 6-58	4.44	274
4789.1	Cove Creek at Sherwood, N. C.	Lat 36°15'50", long 81°47'03", at bridge on secondary road, 0.3 mile below Isaac Hollow and 0.5 mile southwest of Sherwood, Watauga County.	23.1	1940, 1955-58	8-13-40 4-14-55 4-16-56 4- 5-57 5- 6-58	- 18.24 17.95 18.58 16.03	f12000 (+) (+) 1,390 (+)
4804.1	Grassy Creek near Banner Elk, N. C.	Lat 36°10'20", long 81°54'42", at culvert on State Highway 194, 100 ft above mouth and 2.7 miles west of Banner Elk, Avery County.	.54	1955-58	4-14-55 4-16-56 4- 5-57 5- 7-58	16.69 16.22 17.77 16.36	22 12 24 15
4898	Cove Creek near Shelleys, Va.	Lat 36°39'13", long 82°21'16", 2 miles north of Shelleys.	17.3	1951-58	12- 7-50 3-23-52 5-19-53 1-22-54 3-18-55 4-16-56 1-29-57 5- 5-58	3.13 5.25 6.03 5.25 6.15 6.65 5.78 5.65	110 600 920 600 980 1,260 810 430
4908	Surgoinsville Creek at Surgoinsville, Tenn.	Lat 36°28'15", long 82°51'06", at bridge on U. S. Highway 11W, at Surgoinsville, Hawkins County.	4.38	1955-58	3-18-55 1956 1957 1958	5.55 - - (b)	(+) (+) (+) (+)
4912	Big Creek tributary near Rogersville, Tenn.	Lat 36°25'30", long 82°57'17", at culvert under county road, 300 ft upstream from mouth and 2.8 miles northeast of Rogersville, Hawkins County.	2.00	1955-58	3-19-55 4- -56 2- 1-57 5- -58	5.72 5.73 6.46 7.52	(+) (+) (+) (+)

† Discharge not determined.

* Operated as a continuous-record gaging station.

b Peak stage did not reach bottom of gage.

c Estimated.

f From TVA slope-area measurement at site $\frac{1}{4}$ mile upstream.

Annual maximum discharge at crest-stage partial-record stations--Continued

Annual maximum discharge at crest-stage partial-record stations--Continued							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Tennessee River basin--Continued							
4987	Nails Creek near Knoxville, Tenn.	Lat 35°52'49", long 83°46'47", at culvert under State Highway 71, 0.8 mile southeast of Shooks Gap, Blount County, and 10½ miles southeast of Knoxville.	0.361	1955-58	12-29-54 2-17-56 4- 8-57 7- -58	1.98 2.30 2.94 2.18	(+) (+) (+) (+)
5017.6	Coon Creek near Franklin, N. C.	Lat 35°14'04", long 83°20'28", at culvert on U. S. Highway 23, 0.7 mile above mouth and 4.5 miles northeast of Franklin, Macon County.	1.60	1957-58	4- 5-57 5- 7-58	4.22 4.84	89 153
5134.1	Jenkins Branch tributary at Bryson City, N. C.	Lat 35°24'40", long 83°27'20", at culvert on secondary road, 500 ft above mouth and 1 mile southwest of Bryson City, Swain County.	.45	1955-58	1955 1956 1-31-57 4-29-58	(b) (b) 19.35 18.67	(+) (+) (+) (+)
5196	Island Creek at Vonore, Tenn.	Lat 35°35'38", long 84°14'58", at bridge on State Highway 72, 0.5 mile northwest of Vonore, Monroe County.	11.2	1954-58	1-21-54 4- -55 1- -56 1-31-57 5- 6-58	9.44 8.34 9.20 9.04 9.71	725 383 640 582 835
5197	Bat Creek near Vonore, Tenn.	Lat 35°38'36", long 84°15'12", at bridge on State Highway 72, 2.5 miles upstream from mouth and 4.5 miles north of Vonore, Monroe County.	30.7	1954-58	1-21-54 1955 2- 3-56 1-31-57 11-17-57	10.42 (b) 9.76 10.36 10.76	1,480 4,480 1,030 1,420 1,820
5250	Stony Creek at Fort Blackmore, Va.	Lat 36°46'30", long 82°34'50", at Fort Blackmore, 2,000 ft upstream from mouth.	41.4	1950-52*, 1953-58	2- -53 1954 1955 4-16-56 1-29-57 5- 6-58	6.08 - - 6.55 6.12 6.40	2,220 e1,000 e1,500 2,550 2,220 2,410
5275	North Fork Clinch River at Duffield, Va.	Lat 36°42'40", long 82°47'45", on U. S. Highway 58, at Duffield.	23.1	1951-52, 1953-58*	12- -50 3-23-52	6.08 3.20	595 164
5300	South Fork Powell River at Big Stone Gap, Va.	Lat 36°51'54", long 82°46'16", at bridge in town of Big Stone Gap.	40	1945-47*, 1951-58	12- 7-50 1952 2-21-53 1954 1955 4-16-56 1-29-57 5- 6-58	6.9 - 6.65 - - 7.05 8.82 6.10	2,330 e2,220 2,140 e1,000 e2,000 2,400 3,550 1,840
5305	North Fork Powell River at Pennington Gap, Va.	Lat 36°46'26", long 83°01'59", north of town of Pennington Gap.	70	1945-51*, 1952-58	12-15-51 1-22-53 1-16-54 3-16-55 4-16-56 1-29-57 5- 6-58	8.45 8.20 6.00 7.45 8.12 8.70 8.00	4,250 4,150 3,000 3,800 4,100 4,430 4,050
5340	Coal Creek at Lake City, Tenn.	Lat 36°13'14", long 84°09'27", at bridge on U. S. Highway 25W, at Lake City, Anderson County.	24.5	1933*, 1955-58	4- -55 2- -56 1-31-57 11-17-57	12.43 7.48 12.02 13.92	2,880 1,030 2,580 4,380
5345	Buffalo Creek at Norris, Tenn.	Lat 36°11'05", long 84°03'34", at culvert under Norris Freeway (State Highway 71), 1.0 mile southeast of Norris, Anderson County.	9.45	1948-50*, 1955-58	12-29-54 4-15-55 1-31-56 11-17-57	7.59 7.34 9.03 8.93	700 640 1,150 1,100
*5382	Poplar Creek near Oliver Springs, Tenn.	See previous table.	55.9	1954-58	1-21-54 3-21-55 4-16-56 2- -57 11-17-57	12.11 14.76 13.64 12.66 15.16	(+) (+) (+) (+) (+)
5383	Rock Creek near Sunbright, Tenn.	Lat 36°11'54", long 84°39'39", at bridge on U. S. Highway 27 at Pilot Mountain, 3.5 miles south of Sunbright, Morgan County.	5.54	1955-58	3-21-55 2-18-56 1-31-57 11-17-57	6.21 4.76 5.48 5.78	(+) (+) e1,060 (+)
5386	Obed River at Crossville, Tenn.	Lat 35°57'27", long 85°03'00", at bridge on U. S. Highway 70S, 0.9 mile west of junction of U. S. Highways 70S and 70N, at northwest city limits of Crossville, Cumberland County.	12.0	1955-58	3-21-55 1-30-56 12- -56 11-18-57	8.78 7.22 8.18 7.61	(+) (+) (+) (+)
5387	Little Obed River near Crossville, Tenn.	Lat 35°58'31", long 85°02'06", at bridge on State Highway 28, 2.0 miles north of intersection of State Highway 28 and U. S. Highway 70 in Crossville, Cumberland County.	4.71	1955-58	3-21-55 2-18-56 12- -56 12- 7-57	8.00 5.46 4.64 3.76	(+) (+) (+) (+)

* Also a low-flow partial-record station.

† Discharge not determined.

* Operated as a continuous-record gaging station.

b Peak stage did not reach bottom of gage.

e Estimated.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Tennessee River basin--Continued							
5388	Obed River tributary near Crossville, Tenn.	Lat 35°58'59", long 85°03'31", at culvert under U. S. Highway 70N, 2.3 miles northwest of junction with U. S. Highway 70S, at northwest city limits of Crossville, Cumberland County.	0.717	1955-58	3-21-55 7-17-56 1- -57 11-18-57	6.03 3.76 3.86 4.65	(+) (+) (+) (+)
5415	Whites Creek near Glen Alice, Tenn.	Lat 35°47'49", long 84°45'37", at former gaging station, 2,200 ft upstream from Southern Ry. bridge and 1.2 miles southwest of Glen Alice, Roane County.	123	1935-55*, 1956-58	3-14-56 1-28-57 11-18-57	15.40 13.67 25.1	11,000 6,000 51,000
5425	Piney Creek at Spring City, Tenn.	Lat 35°41'59", long 84°51'17", at bridge on U. S. Highway 27, 0.5 mile northeast of Spring City, Rhea County.	98.3	1928-30*, 1955-58	12- -54 2-18-56 12- -56 11-18-57	13.75 14.04 15.17 18.00	10,000 11,100 15,800 g32200
*5432	Ten Mile Creek near Decatur, Tenn.	Lat 35°37'05", long 84°41'30", at bridge on State Highway 68, 10.5 miles northeast of Decatur, Meigs County.	26.4	1954-58	1-21-54 3- -55 2- -56 9-18-57 4-29-58	11.41 10.05 11.65 13.75 12.44	2,500 1,530 2,690 (+) 3,400
5445	Richland Creek near Dayton, Tenn.	Lat 35°30'17", long 85°01'20", at former gaging station, 0.4 mile upstream from bridge on State Highway 30 and 1.0 mile northwest of Dayton, Rhea County.	50.2	1928-31*, 1935-55*, 1956-58	3-14-56 12- -56 11-18-57	8.0 8.60 10.2	6,850 7,830 11,000
5498.1	Hyatt Creek at Marble, N. C.	Lat 35°11'22", long 83°55'14", at bridge on secondary road, 0.8 mile north of railroad station at Marble, Cherokee County, and 1 mile above mouth.	6.90	1955-58	1955 1958 1-31-57 5- 8-58	- - 17.66 17.03	(+) (+) (+) (+)
5552.1	Shoal Creek near Murphy, N. C.	Lat 35°06'40", long 84°14'00", at bridge on State Highway 294, 50 ft below Thompson Branch, 4 miles southwest of Hiwassee Dam, and 11 miles west of Murphy, Cherokee County.	12.6	1955-58	1955 4-16-56 1-31-57 4-28-58	- 14.31 14.66 14.53	(+) (+) (+) (+)
5661	South Mouse Creek tributary near Cleveland, Tenn.	Lat 35°12'32", long 84°50'15", at bridge on old location of U. S. Highway 11, 4.2 miles northeast of intersection with U. S. Highway 64 in Cleveland, Bradley County.	1.31	1955-58	12- -54 4- -55 2- 1-57 11-17-57	5.01 5.70 5.89 5.07	(+) (+) (+) (+)
5662	Brymer Creek near McDonald, Tenn.	Lat 35°07'20", long 84°57'00", at bridge on U. S. Highways 11 and 64, 1.9 miles east of McDonald, Bradley County.	9.68	1955-58	12- -54 2- -56 9- -57 11-17-57	6.02 5.10 6.34 5.60	(+) (+) (+) (+)
5667	South Chickamauga Creek at Ringgold, Ga.	Lat 34°55', long 85°08', at State Highway 3 at Ringgold, Catoosa County.	161	1950-58	9- 7-50 3-29-51 3-10-52 2-24-53 1-16-54 5-16-55 2- -56 2- 1-57 11-18-57	20.54 25.07 18.33 13.94 17.79 12.63 10.6 16.17 15.75	7,800 10,000 6,820 4,900 8,820 4,320 3,490 5,900 5,720
5672	West Chickamauga Creek near Kinsington, Ga.	Lat 34°48', long 85°21', at State Highway 2, 2½ miles northeast of Kinsington, Walker County.	73.0	1951-58	3-29-51 3-11-52 2-21-53 1-16-54 2- 6-55 2-20-56 2-26-57 11-18-57	18.5 16.65 13.29 15.61 13.44 12.09 14.75 14.74	(+) (+) (+) (+) 3,440 2,460 4,940 4,810
5716	Brown Spring Branch near Sequatchie, Tenn.	Lat 35°08'55", long 85°33'28", at culvert under State Highway 27, 2.1 miles northeast of bridge over Little Sequatchie River and 3.1 miles northeast of Sequatchie, Marion County.	.67	1955-58	5-29-55 2- 2-56 1-31-57 11- -57	5.65 5.81 4.98 6.23	113 120 86 140
5717	Pryor Cove Branch near Jasper, Tenn.	Lat 35°05'25", long 85°37'22", at bridge on State Highway 27, 1.1 miles north of Jasper, Marion County.	12.9	1955-57	5-29-55 2- -56 1-31-57	4.78 5.10 5.02	460 572 542
5718	Battle Creek near Monteagle, Tenn.	Lat 35°08'03", long 85°46'15", at bridge on U. S. Highways 41 and 64, 9.2 miles southeast of Monteagle, Grundy County.	50.4	1955-58	3-22-55 2- 3-58 2- 1-57 11-18-57	7.15 8.29 7.74 9.09	(+) (+) (+) (+)

* Also a low-flow partial-record station.

† Discharge not determined.

‡ Operated as a continuous-record gaging station.

§ Affected by storage behind railroad fill.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Tennessee River basin--Continued							
5730	Short Creek near Albertville, Ala.	Lat 34°18'05", long 86°10'53", in NE¼ sec.35, T.8 S., R.4 E., on left bank 325 ft downstream from county highway bridge, 800 ft downstream from Turkey Creek, 3 miles northeast of Albertville, Marshall County, and 4½ miles upstream from Soarham Creek.	91.6	1946-53, 1954-58	1-16-54 2- 6-55 4-16-56 6- 9-57 11-14-57	7.9 9.0 10.1 11.6 9.1	2,700 3,660 4,760 6,430 3,760
5747	Big Huckleberry Creek near Belvidere, Tenn.	Lat 35°04'00", long 86°21'29", at culvert under U. S. Highway 64, 1.3 miles southeast of intersection of U. S. Highway 64 and State Highway 121 and 11 miles southwest of Belvidere, Lincoln County.	2.18	1955-58	3-21-55 2- 3-56 1-31-57 11- -57	3.95 4.02 3.74 4.62	(†) (†) (†) (†)
5770	West Fork Flint Creek near Oakville, Ala.	Lat 34°28'35", long 87°08'30", in SW¼ sec.35, T.6 S., R.6 W., on right bank at downstream side of bridge on county highway, 0.9 mile east of Fire Points, 0.9 mile upstream from Shoal Creek, 1½ miles downstream from McDaniel Branch, and 2½ miles northeast of Oakville.	87.6	1953-57, 1958	11-18-57	19.8	3,040
5798	Miller Creek near Cowan, Tenn.	Lat 35°10'17", long 85°59'00", at bridge on U. S. Highway 64, 1.8 miles east of Cowan, Franklin County.	4.30	1955-58	12- -54 2- 3-56 1-31-57 11- -57	6.74 6.70 6.73 6.97	395 389 392 430
5800	Boiling Fork Creek at Cowan, Tenn.	Lat 35°09'45", long 86°00'20", at bridge on county road, 1,200 ft southeast of intersection of county road with U. S. Highway 64 in Cowan, Franklin County.	17.0	1955-58	12- -54 2- 3-56 1-31-57 11- -57	6.89 8.02 7.79 8.21	1,390 1,900 1,790 2,000
5822	Norris Creek tributary near Belleville, Tenn.	Lat 35°13'55", long 86°33'50", at culvert under U. S. Highway 231, 0.4 mile north of first crossing of Norris Creek from Fayetteville, 3.1 miles south of Belleville, and 5.4 miles north of junction with U. S. Highway 64 in Fayetteville, Lincoln County.	.034	1955-58	3-21-55 12- 3-55 4- 4-57 11- -57	5.77 5.81 4.30 5.16	75 85 36 40
5823	Norris Creek near Fayetteville, Tenn.	Lat 35°09'53", long 86°32'43", at bridge on State Highway 50, 2.0 miles northeast of Fayetteville, Lincoln County.	42.6	1954-58	1- -54 3-22-55 12- 4-55 4- 4-57 11-17-57	10.29 10.61 10.95 8.92 12.2	9,000 9,800 10,600 6,200 14,300
5832	Chicken Creek at McBurn, Tenn.	Lat 35°11'03", long 86°48'47", at bridge on county highway R7374 in McBurn, Lincoln.	7.66	1955-58	3-21-55 12- 4-55 5-22-57 11- -57	6.66 6.64 5.22 6.60	3,660 3,640 1,780 3,590
5872	Bluewater Creek tributary near Leoma, Tenn.	Lat 35°08'29", long 87°22'05", at culvert under U. S. Highway 43, 1.8 miles southwest of Leoma, Lawrence County.	.49	1955-58	3-21-55 1-29-56 12-13-56 11- -57	4.87 2.45 2.68 2.52	(†) (†) (†) (†)
5875	Shoal Creek at Lawrenceburg, Tenn.	Lat 35°14'02", long 87°20'00", at bridge on U. S. Highway 43, ¼ mile upstream from former gaging station and 0.5 mile south of intersection of U. S. Highways 43 and 64 in Lawrenceburg, Lawrence County.	27.0	1933-34, 1955-58	3-21-55 1-29-56 2- 1-57 11- -57	17.27 9.98 8.42 9.20	8,120 (†) (†) (†)
5942	Eagle Creek near Clifton Junction, Tenn.	Lat 35°20'21", long 87°58'22", at bridge on State Highway 114, 3.0 miles north of intersection of State Highway 114 with U. S. Highway 64 in Clifton Junction, Wayne County.	19.0	1955-58	3-21-55 1956 1-28-57 11- -57	7.25 (b) 3.46 4.52	4,810 (†) (†) (†)
5943	Cypress Creek tributary near Pope, Tenn.	Lat 35°37'10", long 87°57'20", at culvert under State Highways 20 and 100, in Craig Hollow, 2.0 miles east of Pope, Perry County.	.75	1955-58	3-21-55 2-17-56 4- 4-57 11-17-57	3.16 2.26 4.03 1.88	(†) (†) (†) (†)
*5944	Cypress Creek at Pope near Parsons, Tenn.	Lat 35°36'55", long 87°59'23", at bridge on county highway R7029, 0.2 mile south of intersection of County Highway R7029 and State Highways 20 and 100 in Pope, Perry County.	16.8	1955-58	3-21-55 2-17-56 4- 4-57 11-12-57	6.78 5.66 7.85 3.79	2,340 (†) (†) (†)

* Also a low-flow partial-record station.

† Discharge not determined.

* Operated as a continuous-record gaging station.

b Peak stage did not reach bottom of gage.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Tennessee River basin--Continued							
5982	Weakley Creek near Rover, Tenn.	Lat 35°38'05", long 86°33'03", at culvert under county road, 3.7 miles southeast of intersection of road with U. S. Highway 41A at Rover, Bedford County.	9.46	1955-58	3-21-55 1-30-56 2- 1-57 11-17-57	6.15 5.02 5.01 4.80	2,330 700 895 600
5992	East Rock Creek at Farmington, Tenn.	Lat 35°30'05", long 86°42'50", at bridge on State Highway 64, 0.2 mile west of Farmington, Marshall County.	43.1	1954-58	1- -54 3-21-55 1-30-56 12-14-56 11- -57	10.84 11.66 10.69 13.43 10.82	3,000 3,530 2,910 4,750 3,000
5994	Little Flat Creek tributary near Rally Hill, Tenn.	Lat 35°41'15", long 86°49'46", at culvert under U. S. Highway 431 and State Highway 106, 1.5 miles north of crossing of Flat Creek in Rally Hill, Maury County.	.630	1955-58	3-21-55 2- 3-56 12-13-56 3- -58	5.98 5.20 4.68 3.56	372 293 246 150
6021	Moss Spring Hollow near Centerville, Tenn.	Lat 35°45'44", long 87°27'47", at bridge on State Highways 48 and 100, 1.2 miles south of Centerville, Hickman County.	3.68	1955-58	3-21-55 2-17-56 12- -56 1958	5.83 3.67 2.09 (b)	(†) (†) (†) (†)
6038	Chalk Creek near Waynesboro, Tenn.	Lat 35°14'51", long 87°46'03", at bridge on State Highway 13, 5.0 miles south of Waynesboro, Wayne County.	4.88	1955-57	3-21-55 3-15-56 12-13-56	7.11 1.15 h3.14	e1,600 (†) (†)
*6042	Cane Creek at Farmers Exchange, Tenn.	Lat 35°38'53", long 87°39'39", at bridge on county highway, 0.5 mile north of Farmers Exchange, Hickman County.	45.1	1955-58	3-21-55 4- -56 5-22-57 11- -57	9.20 8.25 7.58 5.81	(†) (†) (†) (†)
6055	Trace Creek at Waverly, Tenn.	Lat 36°04'58", long 87°46'32", at bridge on U. S. Highway 70, on east side of Waverly, Humphreys County.	17.4	1932-33a, 1955-58	3-21-55 1-29-56 1-29-57 11-17-57	5.27 7.43 5.94 7.07	(†) (†) (†) (†)
6057	Deer Creek tributary near Waverly, Tenn.	Lat 36°10'20", long 87°44'40", at culvert under State Highway 13 in Smith Hollow, 8.0 miles northeast of Waverly, Humphreys County.	1.04	1955-58	3-21-55 1-29-56 1-23-57 11-17-57	2.02 - 3.30 1.99	(†) (†) (†) (†)

* Also a low-flow partial-record station.

† Discharge not determined.

‡ Operated as a continuous-record gaging station.

b Peak stage did not reach bottom of gage.

e Estimated.

h Maximum for period Oct. 1, 1956, to Apr. 24, 1957; no record thereafter.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during the water year 1958

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Cumberland River basin						
Yellow Creek Bypass.	Yellow Creek.	Lat 36°37'52", long 83°43'45", at Middlesboro, Ky., 1/3 mile upstream from Fourmile Run and 1/3 mile downstream from Lick Fork.	-	1940-41, 1944-50, 1952-57	12- 7-57 5-28-58	1,100 34.8
Lynn Camp Creek.	Laurel River.	Lat 36°57'18", long 84°05'41", at bridge on U. S. Highway 25W at Corbin, Ky., 1.1 miles upstream from Horse Creek.	-		11-18-57 11-18-57 11-19-57 11-20-57 4-10-58 4-21-58 4-22-58 4-23-58	1,200 1,580 2,220 302 269 1,260 864 672
Tennessee River basin						
Dingle Creek.	French Broad River.	Lat 35°30'22", long 82°31'30", at U. S. Highway 25, 1.5 miles north of Skyland, Buncombe County, N. C.	1.05		12-11-58	0.73
North Indian Creek.	Nolichucky River.	Lat 36°10'35", long 82°17'36", at former gaging station, 900 ft upstream from Rocky Branch and 3.4 miles southeast of Unicoi, Unicoi County, Tenn.	15.9	1944-57*	9-17-58	*8.38
Cherokee Creek.	....do.....	Lat 36°14'12", long 82°27'50", at bridge on former State Highway 81, 5.5 miles southeast of Jonesboro, Washington County, Tenn.	9.7		8-16-58 9-17-58	10.6 *5.07
Little Lime-stone Creek.	....do.....	Lat 36°17'00", long 82°29'04", at bridge on State Highway 81, at Jonesboro Washington County, Tenn.	4.21	1950-54, 1957	9-17-58	*2.27
Sinking Creek	....do.....	Lat 36°10'23", long 82°43'09", at county highway bridge, 1.75 miles southeast of Afton and 2.25 miles east of Tusculum, Green County, Tenn.	-		6-16-58	12.3
Little Pigeon River.	French Broad River.	Lat 35°51'38", long 83°30'13", at Hodsader Bridge on U. S. Highway 411, 4.25 miles east of Sevierville, Sevier County, Tenn., and 4.5 miles above mouth.	110	1952-55, 1957	9-17-58	*33.7
East Fork Little Pigeon River.	Little Pigeon River.	Lat 35°51'55", long 83°29'17", at bridge on U. S. Highway 411, 1.3 miles upstream from mouth and 5.2 miles east of Sevierville, Sevier County, Tenn., at Harrisburg, Tenn.	64.1	1944, 1952-55, 1957	9-17-58	*9.92
West Fork Little Pigeon River.	....do.....	Lat 35°41'15", long 83°32'07", at bridge on U. S. Highway 441 (State 71), at Park headquarters, near Gatlinburg, Sevier County, Tenn.	24.0	1944, 1953-54	9-17-58	*7.54
Do.....	....do.....	Lat 35°48'21", long 83°34'28", at site of former gaging station on old State Highway 71, 1.6 miles northwest of Pigeon Forge and 4.3 miles south of Sevierville, Sevier County, Tenn.	76.2	1946-49*, 1952-55, 1957	9-17-58	*22.9
Laurel Fork..	Doe River....	Lat 36°17'15", long 82°10'18", at bridge on U. S. Highway 19E, at Hampton, Carter County, Tenn.	-	1948	9-17-58	*7.16
West Prong Little River.	Middle Prong to Little River.	Lat 35°39'21", long 83°42'37", 150 ft upstream from Middle Prong in Great Smoky Mountain National Park on Cades Cove Rd. and 3 miles southeast of Townsend, Blount County, Tenn.	16.6	1944, 1953-54, 1957	9-17-58	*6.72
Middle Prong Little River.	Little River.	Lat 35°39'26", long 83°42'34", 0.3 mile upstream from mouth, in Great Smoky Mountain National Park on Cades Cove Rd. and 3 miles southeast of Townsend, Blount County, Tenn.	27.3	1944, 1953-54, 1957	9-17-58	*11.6
Hesse Creek..	....do.....	Lat 35°42'44", long 83°49'09", at bridge on State Highway 73, 0.2 mile above mouth and 1.4 miles south of Walland, Blount County, Tenn.	27.6	1900, 1944, 1953-54, 1957	9-17-58	*10.8
Ellejoy Creek	....do.....	Lat 35°46'24", long 83°51'01", at bridge on county highway, 0.1 mile above mouth and 7 miles east of Maryville, Blount County, Tenn.	38.3	1943, 1953-55, 1957	9-17-58	*6.62

* Base flow.

† Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during the water year 1958--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Tennessee River basin--Continued						
Crooked Creek	Little River.	Lat 35°46'17", long 83°52'42", at bridge on county highway, 1.2 miles above mouth and 5 miles east of Maryville, Blount County, Tenn.	31.8	1944, 1953-54, 1957	9-17-58	*6.55
Cartoogechaye Creek.	Little Tennessee River.	Lat 35°09'31", long 83°23'39", at U. S. Highway 23, 1.8 miles south of Franklin, Macon County, N. C., and 1.9 miles above mouth.	57.1	1944, 1947, 1953-55	6-11-58 7- 3-58	89.1 63.7
Mill Creek...	Cullasaja River.	Lat 35°03'17", long 83°11'49", at U. S. Highway 64, 0.1 mile northeast of Highlands Post Office, Macon County, N. C., and 0.4 mile downstream from Satulah Branch.	1.15		6-11-58 7- 2-58 9-15-58	1.55 .91 .94
Cowee Creek..	Little Tennessee River.	Lat 35°15'54", long 83°24'12", at county highway bridge, 0.3 mile north of State Highway 28 and at Wests Mill Post Office, Macon County, N. C.	25.5	1944, 1953-55	6-12-58 7- 3-58 9- 4-58	31.0 27.0 21.9
Alarka Creek.	....do.....	Lat 35°23'30", long 83°29'17", at old U. S. Highway 19, 0.2 mile downstream from Robinson Gap Branch, 0.4 mile downstream from Frisbee Branch, and 3.0 miles southwest of Bryson City, Swain County, N. C.	27.2	1947	7-21-58	43.7
Cullowhee Creek.	Tuckasegee River.	Lat 35°14'57", long 83°11'08", at county highway bridge, 0.2 mile below Wolf Creek and 4.3 miles south of Cullowhee, Jackson County, N. C.	6.90		8- 8-58 9- 3-58	7.29 5.07
Tilley Creek.	Cullowhee Creek.	Lat 35°16'48", long 83°11'33", at county highway bridge, 100 ft below Pressley Creek, 0.1 mile above Bryson Branch, and 2.3 miles southwest of Cullowhee, Jackson County, N. C.	6.02		8- 8-58 9- 3-58	6.46 4.31
Scott Creek..	Tuckasegee River.	Lat 35°24'09", long 83°10'36", 50 ft above railroad trestle, 0.2 mile downstream from unnamed branch, 1.2 miles downstream from Buff Creek, and 3.4 miles northeast of Sylva, Jackson County, N. C.	37.6		8-13-58	47.6
Oconaluftee River.	....do.....	Lat 35°29'04", long 83°18'56", on State Highway 107 in Cherokee Indian Reservation, 0.6 mile north of Cherokee, Swain County, N. C., and 1.9 miles upstream from Sooco Creek.	131	1921-49*	6-19-58 7- 7-58 9-10-58	211 165 128
Tulula Creek.	Cheoah River.	Lat 35°19'15", long 83°48'38", at county highway bridge, 0.3 mile southeast of Robbinsville, Graham County, N. C., and 0.5 mile above mouth.	28.6	1944, 1947, 1953-55	6-30-58	18.7
Sweetwater Creek.	....do.....	Lat 35°19'30", long 83°47'36", at county highway bridge, 0.6 mile above mouth and 0.8 mile northeast of Robbinsville, Graham County, N. C.	13.6	1944, 1953-55	6-30-58 8- 1-58 9-26-58	12.8 12.6 8.15
Cheoah River.	Little Tennessee River.	Lat 35°19'45", long 83°48'36", at U. S. Highway 129, 0.1 mile above Long Creek and 0.5 mile northwest of Robbinsville, Graham County, N. C.	43.1		9- 5-58	26.7
Long Creek...	Cheoah River.	Lat 35°18'37", long 83°48'51", at county highway bridge, 0.1 mile east of Milltown, 0.5 mile upstream from Atoah Creek, and 0.9 mile southwest of Robbinsville, Graham County, N. C.	6.03		6-26-58	11.2
Do.....	....do.....	Lat 35°19'44", long 83°48'40", at county road bridge at mouth, 0.5 mile north of Robbinsville, Graham County, N. C.	11.8	1944, 1953-55	6-26-58 8-11-58 9- 5-58	23.6 13.5 9.20
Sweetwater Creek.	Tennessee River.	Lat 35°36'32", long 84°27'40", at U. S. Highway 11, 0.5 mile north of intersection of State Highway 68 and U. S. Highway 11, at Sweetwater, Monroe County, Tenn.	23.3	1932-33, 1950-52, 1954, 1956-57	9-17-58	*9.40
Paint Rock Creek.	....do.....	Lat 35°44'29", long 84°30'32", at bridge on State Highway 72, 0.5 mile southeast of Paint Rock, Roane County, Tenn.	25.7	1952, 1954, 1957	9-17-58	*8.27

* Base flow.

* Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during the water year 1958--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Tennessee River basin--Continued						
Brushy Fork a/.	Poplar Creek.	Lat 36°01'33", long 84°17'16", at bridge on relocated State Highway 61, 2 miles west of Oak Ridge and 4 miles east of Oliver Springs, Anderson County, Tenn.	23.2	1954-55, 1957	9-17-58	*3.85
Bear Creek...	East Fork Poplar Creek.	Lat 35°56'41", long 84°21'46", at bridge on Oak Ridge Turnpike, 0.5 mile above mouth and 8 miles southwest of Oak Ridge, Anderson County, Tenn.	7.15	1951-52, 1954-55, 1956	9-17-58	*.72
Crooked Fork Creek.	Emory River..	Lat 36°05'05", long 84°33'18", at bridge on U. S. Highway 27, 0.35 mile downstream from mouth of Flat Fork and 2.7 miles southeast of Wartburg, Morgan County, Tenn.	50.3	1952, 1957	8-17-58	*1.42
Little Emory River.	....do.....	Lat 35°58'53", long 84°28'56", at bridge on county highway, 1 mile north of State Highway 81, 1 mile north of DeArmond and 5.2 miles northeast of Harriman, Roane County, Tenn.	34.3		9-17-58	.17
Valley River.	Hiwassee River.	Lat 35°12'20", long 83°49'03", at county highway bridge, 300 ft below Tatham Creek and 0.7 mile northeast of Andrews, Cherokee County, N. C.	41.8	1946-47+	9-11-58	10.5
Do.....	....do.....	Lat 35°12'09", long 83°50'27", at bridge on U. S. Highways 19 and 129, 0.2 mile downstream from Town Branch and 0.9 mile northwest of Andrews, Cherokee County, N. C.	49.4		7-29-58 9-11-58	81.3 20.5
Do.....	....do.....	Lat 35°05'58", long 84°01'09", 200 ft east of U. S. Highway 19, 0.2 mile above Brittan Creek, and 1.2 miles northeast of Murphy, Cherokee County, N. C.	114		7-29-58 9-11-58	201 52.9
Cypress Creek Drainage Canal.	Tennessee River.	Lat 37°01'24", long 88°18'39", at southwest corner of Illinois Central RR. bridge abutment, 0.6 mile west of Gilbertsville, Ky.	-		9-16-58	0
East Fork Clarks River.	Clarks River.	Lat 36°34'52", long 88°18'53", at bridge on U. S. Highway 641, 1.8 miles downstream from Farley Branch and 1.4 miles south of city limits of Murray, Ky.	-		9-16-58	0
West Fork Clarks River.	....do.....	Lat 36°53'03", long 88°33'11", at bridge on State Highway 131, at Kaler, 2.1 miles upstream from Bear Creek and 3.0 miles southwest of Symposia, Ky.	-	1957	9-16-58	*10.2

* Base flow.

* Operated as a continuous-record gaging station.

a Published in WSP 1336 and 1386 as Brushy Creek.

In 1931, a minor drought year, a study was made of large springs in East Tennessee and the results published in WSP 713. From 1950 to 1954, a more detailed study, including some of those springs, was carried on in cooperation with the Ground Water Branch in connection with an investigation of the ground-water resources of the region. This study was made on a roving basis, the discharge of one group of springs being measured monthly for one year and then measurements made on another group for a year. During a round of measurements in June 1954, measurements were made at many springs where regular monthly measurements had previously been discontinued. The results of measurements made were published annually in WSP 1173, 1206, 1236, 1276, and 1336. As some of the springs were measured during the drought year 1931, comparisons might be made to determine probable minimum flow of springs which were not measured in 1931. Many of these springs are used for municipal or industrial water supplies. Others do not have well sustained flow during the dry season. Results of the discharge measurements show the characteristics of the springs and give good indication of the variation of the flow.

During the water years 1955-58 measurements were made at several springs, most of which were measured during the 1950-54 study. The results of discharge measurements during the 1958 water year, showing the yield and the water temperature, are given in the following table:

Discharge measurements, of springs in Loudon County, Tennessee, water year
October 1957 to September 1958

Spring	Location	Tributary to--	Date	Discharge (gallons per minute)	Temperature (degrees Fahrenheit)		Remarks
					Air	Water	
Kirkland.....	Lat 35°43'07", long 84°19'21", 2.0 miles southeast of Loudon, along State Highway 72.	Clear Branch to Tennessee River.	June 17	651	70	58	-
			Aug. 26	427	77	58	Clear
Lambert.....	Lat 35°42'45", long 84°19'02", 3.3 miles southeast of Loudon.	Clear Branch to Tennessee River.	Nov. 13	353	55	57	Clear

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