Surface Water Supply of the United States 1959

Part 3-B. Cumberland and Tennessee River Basins

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

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

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Alabama, Georgia, Kentucky, Mississippi, 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, succeeded by E. L. Hendricks, and F. J. Flynn, chief, Basic Records Section.

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F. F. Schrader ..... Louisville, Ky.
M. T. Thomson ..... Atlanta, Ga.
M. R. Williams, succeeded by L. E. Carroon ..... Montgomery, Ala.

CALENDAR FOR WATER YEAR 1959

OCTOBER 1958

S	M	T	W	T	F	S
			1	2	3	4
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NOVEMBER 1958

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JANUARY 1959

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FEBRUARY 1959

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MARCH 1959

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JUNE 1959

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AUGUST 1959

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SEPTEMBER 1959

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CONTENTS

	Page
Scope of work	1
Cooperation	1
Division of work	2
Definition of terms and abbreviations	2
Downstream order and station numbers	3
Explanation of data	4
Accuracy of field data and computed results	7
Publications	8
Records of discharge collected by agencies other than the Geological Survey	11
Hydrologic conditions	12
Gaging-station records	14
Cumberland River basin	
Poor Fork (head of Cumberland River) at Cumberland, Ky	14
Cumberland River near Harlan, Ky	15
Yellow Creek near Middlesboro, Ky	16
Cumberland River near Pineville, Ky	17
Cumberland River at Barbourville, Ky	18
Cumberland River at Williamsburg, Ky	19
Cumberland River at Cumberland Falls, Ky	20
Laurel River at Corbin, Ky	21
Rockcastle River:	
Wood Creek near London, Ky	22
Rockcastle River at Billows, Ky	23
Hughes Fork Beaver Creek:	
Cane Branch near Parkers Lake, Ky	24
Beaver Creek:	
Hurricane Fork:	
Helton Branch at Greenwood, Ky	25
Buck Creek near Shopville, Ky	26
New River (head of South Fork Cumberland River) at New River, Tenn	27
Clear Fork near Robbins, Tenn	28
South Fork Cumberland River near Stearns, Ky	29
Pitman Creek at Somerset, Ky	30
Cumberland River near Rowena, Ky	31
East Fork Obey River near Jamestown, Tenn	32
West Fork Obey River near Alpine, Tenn	33
Wolf River near Byrdstown, Tenn	34
Cumberland River at Celina, Tenn	35
Roaring River near Hilham, Tenn	36
Caney Fork:	
Calfkiller River below Sparta, Tenn	37
Collins River near McMinnville, Tenn	38
Caney Fork near Rock Island, Tenn	39
Cumberland River at Carthage, Tenn	40
Spring Creek near Lebanon, Tenn	41
Drakes Creek above Hendersonville, Tenn	42
Cumberland River below Old Hickory, Tenn	43
East Fork Stones River:	
Bradley Creek at Lascassas, Tenn	44
West Fork Stones River near Murfreesboro, Tenn	45
Stones River near Smyrna, Tenn	46
Stones River above Donelson, Tenn	47
Mill Creek near Antioch, Tenn	48
Harpeth River:	
West Harpeth River near Leipers Fork, Tenn	49
Harpeth River at Belleview, Tenn	50
Harpeth River near Kingston Springs, Tenn	51
Cumberland River below Cheatham Dam, Tenn	52
Red River near Adams, Tenn	53
Sulphur Fork Red River near Adams, Tenn	54
Yellow Creek near Shiloh, Tenn	55
Cumberland River at Dover, Tenn	56
South Fork Little River at Hopkinsville, Ky	57
Little River near Cadiz, Ky	58
Cumberland River at Smithland, Ky	59
Reservoirs in Cumberland River basin	60
Tennessee River basin	
French Broad River (head of Tennessee River) at Rosman, N. C	62
Davidson River near Brevard, N. C	63
French Broad River at Blantyre, N. C	64
Mills River near Mills River, N. C	65
French Broad River at Bent Creek, N. C	66
Hominy Creek at Candler, N. C	67
Swannanoa River:	
Beetree Creek near Swannanoa, N. C	68
Swannanoa River at Biltmore, N. C	69
French Broad River at Asheville, N. C	70
Ivy River near Marshall, N. C	71
French Broad River at Marshall, N. C	72
Big Laurel Creek near Stackhouse, N. C	73
French Broad River near Newport, Tenn	74
West Fork Pigeon River above Lake Logan, near Hazelwood, N. C	75

Gaging-station records--Continued
Tennessee River basin--Continued
French Broad River--Continued Page
West Fork Pigeon River below Lake Logan, near Waynesville, N. C. 76
East Fork Pigeon River near Canton, N. C. 77
Pigeon River at Canton, N C. 78
Richland Creek:
Allen Creek near Hazelwood, N. C. 79
Jonathan Creek near Cove Creek, N. C. 80
Pigeon River near Hepco, N. C. 81
Pigeon River at Newport, Tenn. 82
North Toe River (head of Nolichucky River):
South Toe River near Celo, N. C. 83
Cane River near Sioux, N. C. 84
Nolichucky River at Embreeville, Tenn. 85
Nolichucky River below Nolichucky Dam, Tenn. 86
Lick Creek at Mohawk, Tenn. 87
French Broad River below Douglas Dam, Tenn. 88
Little Pigeon River at Sevierville, Tenn. 89
French Broad River near Knoxville, Tenn. 90
South Fork Holston River at Riverside, near Chilhowie, Va. 91
Laurel Creek:
Beaverdam Creek at Damascus, Va. 92
South Fork Holston River at Vestal, Va. 93
Middle Fork Holston River at Sevenmile Ford, Va. 94
South Fork Holston River below South Holston Dam, Tenn. 95
Beaver Creek near Bristol, Va. 96
Watauga River near Sugar Grove, N. C. 97
Watauga River below Wilbur Dam, Tenn. 98
Doe River at Elizabethton, Tenn. 99
Watauga River at Elizabethton, Tenn. 100
South Fork Holston River at Kingsport, Tenn. 101
North Fork Holston River near Saltville, Va. 102
North Fork Holston River at Holston, Va. 103
Big Moccasin Creek near Gate City, Va. 104
North Fork Holston River near Gate City, Va. 105
Holston River at Surgoinsville, Tenn. 106
Big Creek near Rogersville, Tenn. 107
Mossy Creek:
Unnamed tributary:
Mossy Spring near Jefferson City, Tenn. 108
Holston River near Jefferson City, Tenn. 109
Mill Spring Creek:
Mill Spring near Jefferson City, Tenn. 110
Holston River near Knoxville, Tenn. 111
Tennessee River:
First Creek at Mineral Springs Avenue, at Knoxville, Tenn. 112
Tennessee River at Knoxville, Tenn. 113
Little River near Maryville, Tenn. 114
Little Tennessee River near Prentiss, N. C. 115
Cullasaja River at Highlands, N. C. 116
Cullasaja River at Cullasaja, N. C. 117
Little Tennessee River at Needmore, N. C. 118
Nantahala River near Rainbow Springs, N. C. 119
Nantahala River at Nantahala, N. C. 120
Tuckasegee River at Tuckasegee, N. C. 121
Scott Creek above Sylva, N. C. 122
Tuckasegee River at Dillsboro, N. C. 123
Oconaluftee River at Birdtown, N. C. 124
Tuckasegee River at Bryson City, N. C. 125
Noland Creek near Bryson City, N. C. 126
Little Tennessee River below Chilhowee Dam, Tenn. 127
Tellico River at Tellico Plains, Tenn. 128
Little Tennessee River at McGhee, Tenn. 129
Clinch River at Richlands, Va. 130
Cedar Creek near Lebanon, Va. 131
Clinch River at Cleveland, Va. 132
Guest River at Coeburn, Va. 133
Copper Creek near Gate City, Va. 134
Clinch River at Speers Ferry, Va. 135
North Fork Clinch River at Duffield, Va. 136
Clinch River above Tazewell, Tenn. 137
Powell River at Big Stone Gap, Va. 138
Powell River near Jonesville, Va. 139
Powell River near Arthur, Tenn. 140
Clinch River below Norris Dam, Tenn. 141
Bullrun Creek near Halls Crossroads, Tenn. 142
Clinch River near Scarboro, Tenn. 143
Whiteoak Creek below Oak Ridge National Laboratory, near Oak Ridge, Tenn. 144
Melton Branch near Oak Ridge, Tenn. 145
Emory River:
Obed River:
Daddys Creek near Hebbertsburg, Tenn. 146
Obed River near Lancing, Tenn. 147
Emory River at Oakdale, Tenn. 148
Sewee Creek near Decatur, Tenn. 149
Hiwassee River at Presley, Ga. 150
Hiwassee River below Chatuge Dam, near Hayesville, N. C. 152
Hiwassee River above Murphy, N. C. 153
Valley River at Tomotla, N. C. 154
Nottely River near Blairsville, Ga. 155

Gaging-station records--Continued
Tennessee River basin--Continued
Hiwassee River--Continued Page
Nottely River at Nottely Dam, near Ivylog, Ga.... 156
Turtletown Creek at Turtletown, Tenn.... 157
Hiwassee River near McFarland, Tenn.... 158
Toccoa River (head of Ocoee River) near Dial, Ga.... 159
Toccoa River near Blue Ridge, Ga.... 160
Ocoee River at Copperhill, Tenn.... 161
Fightingtown Creek at McCaysville, Ga.... 162
Davis Mill Creek at Copperhill, Tenn.... 163
North Potato Creek near Ducktown, Tenn.... 164
Ocoee River at Emf, Tenn.... 165
Ocoee River at Parksville, Tenn.... 166
Hiwassee River above Charleston, Tenn.... 167
South Chestuee Creek near Benton, Tenn.... 168
Oostanaula Creek near Sanford, Tenn.... 169
South Chickamauga Creek near Chickamauga, Tenn.... 170
Tennessee River at Chattanooga, Tenn.... 171
Chattanooga Creek near Flintstone, Ga.... 172
Tennessee River at Hales Bar, near Chattanooga, Tenn.... 173
Sequatchie River near Whitwell, Tenn.... 174
Town Creek near Geraldine, Ala.... 175
Paint Rock River near Woodville, Ala.... 176
Flint River near Chase, Ala.... 177
Tennessee River at Whitesburg, Ala.... 178
Flint Creek near Falkville, Ala.... 179
Elk River near Pelham, Tenn.... 180
Bradley Creek near Prairie Plains, Tenn.... 181
Mulberry Creek:
West Fork Mulberry Creek at Mulberry, Tenn.... 182
Elk River above Fayetteville, Tenn.... 183
Bradshaw Creek at Frankewing, Tenn.... 184
Richland Creek:
Weakley Creek near Bodenham, Tenn.... 185
Richland Creek near Pulaski, Tenn.... 186
Elk River near Prospect, Tenn.... 187
Sugar Creek near Good Springs, Ala.... 188
Big Nance Creek at Courtland, Ala.... 189
Shoal Creek at Iron City, Tenn.... 190
Tennessee River at Florence, Ala.... 191
Spring Creek:
Tuscumbia Spring at Tuscumbia, Ala.... 192
Bear Creek near Hackleburg, Ala.... 193
Bear Creek near Red Bay, Ala.... 194
Cedar Creek near Pleasant Site, Ala.... 195
Little Bear Creek near Halltown, Ala.... 196
Bear Creek at Bishop, Ala.... 197
Tennessee River at Savannah, Tenn.... 198
Duck River below Manchester, Tenn.... 199
Garrison Fork:
Wartrace Creek at Bell Buckle, Tenn.... 200
Duck River near Shelbyville, Tenn.... 201
Big Rock Creek at Lewisburg, Tenn.... 202
Duck River at Columbia, Tenn.... 203
Big Bigby Creek at Sandy Hook, Tenn.... 204
Piney River at Vernon, Tenn.... 205
Duck River above Hurricane Mills, Tenn.... 206
Buffalo River near Flat Woods, Tenn.... 207
Buffalo River near Lobelville, Tenn.... 208
Big Sandy River at Bruceton, Tenn.... 209
Tennessee River near Paducah, Ky.... 210
East Fork Clarks River at Murray, Ky.... 211
East Fork Clarks River near Benton, Ky.... 212
Reservoirs in Tennessee River basin.... 213
Discharge at partial-record stations and miscellaneous sites:
Low-flow partial-record stations.... 222
Crest-stage partial-record stations.... 226
Measurements at miscellaneous sites.... 231
Springs in Tennessee.... 237
Index.... 239

ILLUSTRATIONS

Page
Figure 1. Map of the conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply.... 9
2. Comparison of discharge at three key gaging stations during 1959 water year with median discharge for 25-year period.... 13

SURFACE WATER SUPPLY OF CUMBERLAND AND TENNESSEE RIVER BASINS, 1959

SCOPE OF WORK

This volume is one of a series of 20 reports presenting records of stage, discharge, and content, of streams, lakes, and reservoirs in the United States during the 1959 water year. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar records have been obtained at more than 15,200 gaging stations in the 50 States. On September 30, 1959, the Geological Survey and cooperating organizations were maintaining 7,110 gaging stations. Partial-record stations for low flow or for floodflow have been operated at many other points. In addition, discharge measurements are made at miscellaneous sites. The records for the 1959 water year 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.

Georgia: State Highway Department, J. L. Gillis, chairman.

Kentucky: University of Kentucky, F. C. Dickey, president, through State Geological Survey, W. W. Hagan, director and State geologist.

Mississippi: State Board of Water Commissioners, S. A. Thompson, chairman.

North Carolina: State Department of Water Resources, H. E. Brown, director; prior to Sept. 1, 1959, State Department of Conservation and Development, W. P. Saunders, director; State Highway Commission, W. F. Babcock, director; city of Asheville, Weldon Weir, city manager; city of Waynesville, W. H. Way, mayor.

Tennessee: State Department of Conservation and Commerce (formerly State Department of Conservation), E. B. Noles, commissioner, succeeded by J. B. McBride, 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 (formerly State Department of Highways and Public Works), W. M. Leech, commissioner, succeeded by D. W. Moulton, through H. M. Bates, highway engineer, succeeded by H. D. Long, and F. Greve, bridge engineer; city of Knoxville, Department of Public Service, R. I. Gentry, director; city of Chattanooga, P. R. Olgiati, mayor, and M. J. Hensley, city coordinator.

Virginia: State Department of Highways, S. D. May, commissioner.

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 97 gaging stations, of which 7 were in Alabama, 6 in Georgia, 1 in Kentucky, 19 in North Carolina, 49 in Tennessee, and 15 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 16 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.

State	District office	Address
Alabama	Montgomery	507 New Post Office Building.
Georgia a/	Atlanta	805 Peachtree St. Building.
Kentucky b/	Louisville	522 West Jefferson St.
Mississippi	Jackson	402 High St.
North Carolina c/	Raleigh	Federal Building.
Tennessee d/	Chattanooga	823 Edney Building.
Virginia	Charlottesville	Natural Resources Building, University of Virginia.

a/ Gaging stations in Tennessee River basin in Georgia operated by Chattanooga and Raleigh district offices; partial-record stations operated by Atlanta district office.
b/ Except for Tennessee River near Paducah.
c/ Including Hiwassee River at Presley, Ga., Nottely River near Blairsville, Ga., and Nottely River at Nottely Dam, near Ivylog, Ga.
d/ Including stations in the Ocoee River basin in Georgia and Bear Creek at Bishop, Ala., Chattanooga Creek near Flintstone, Ga., Paint Rock River near Woodville, Ala., Tennessee River at Florence and at Whitesburg, Ala., and Tennessee River near Paducah, Ky.

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 and some for Tennessee 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 selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of 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 (cfsm) 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 includes the part number, 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 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 1959 water year 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

Basic data for gaging stations are published in an annual series of reports consisting of 20 volumes, including one each for the States of Alaska and Hawaii. The area of the other 48 States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the annual series of reports on surface-water supply consisted of 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records for the 48 States were 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.

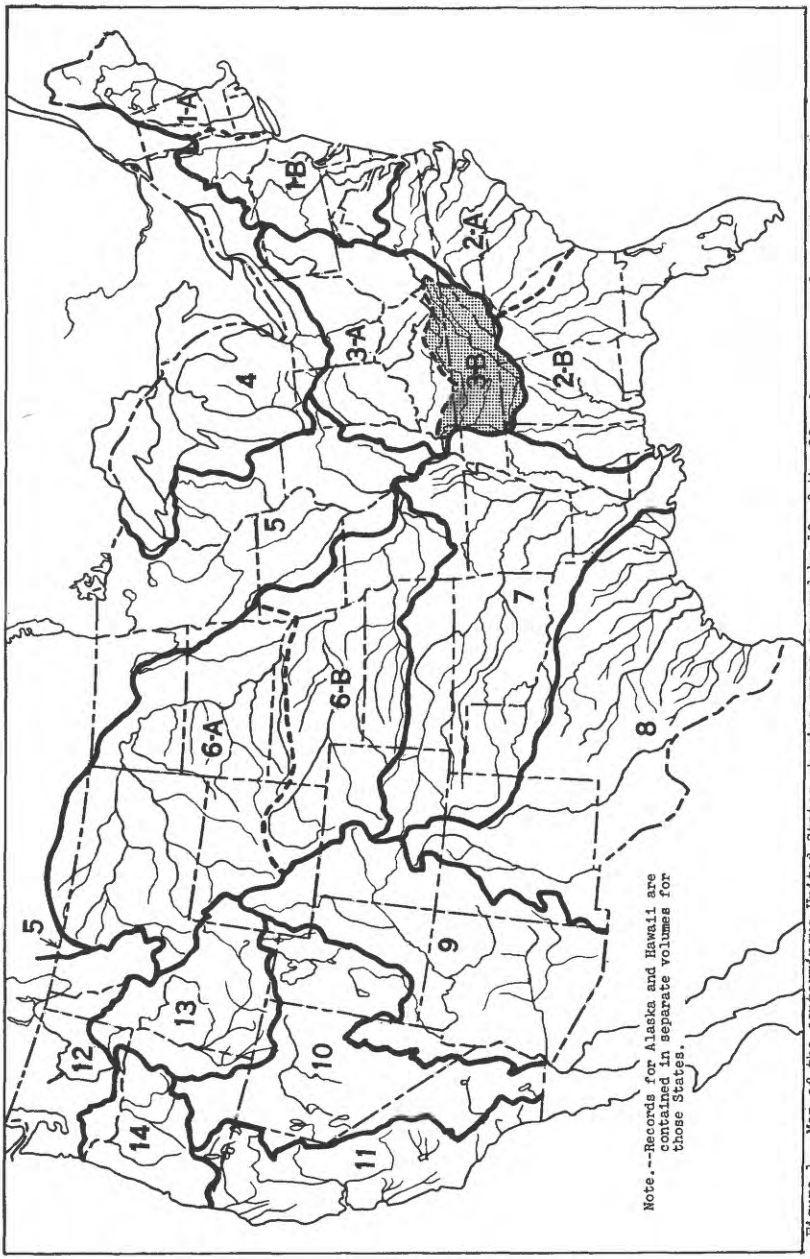

Figure 1.--Map of the conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply. The area covered by this report is shaded.

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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.

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, 1899-1959

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	128	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	1959	1626
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. A list of these reports follows:

	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 1260-F:	Summary of floods in the United States during 1952.
WSP 1320-E:	Summary of floods in the United States during 1953.
WSP 1370-C:	Summary of floods in the United States during 1954.
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 1959 water year 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.	1954-59	Tennessee Valley Authority.
Do.	Near Lexington, Tenn.	1953-59	Do.
Berea Creek	At State Highway 365, near Leedy, Miss.	1959	Do.
Birdsong Creek	Near Holladay, Tenn.	1940-59	Do.
Browns Creek	Near Chesterfield, Tenn.	1953-59	Do.
Cane Creek	Near Shady Hill, Tenn.	1953-59	Do.
Caney Creek	Near Grissom Chapel, Miss.	1959	Do.
Chambers Creek	Opposite Kendrick, Miss.	1939-59a/	Do.
Chestuee Creek	Zion Hill, Tenn.	1944-59	Do.
Do.	Dentville, Tenn.	1944-59	Do.
Clear Creek	Near Garth, Ala., at County Road.	1959	Do.
Do.	At State Highway 65, near Garth, Ala.	1959	Do.
Coke Creek	Near Chapel Hill, Miss.	1959	Do.
Cold Mill Creek	Near Cross Roads, Miss.	1959	Do.
Coweeta Creek basin b/.	Coweeta Hydrologic Laboratory near Franklin, N. C.	1934-59	U. S. Forest Service.
Cypress Swamp drainage ditch.	Near Gilbertsville, Ky.	1943-59c/	Tennessee Valley Authority.
Harmon Creek	Near Lexington, Tenn.	1953-59	Do.
Horse Creek	Near Savannah, Tenn.	1939-59	Do.
Indian Creek	Near Cerro Gordo, Tenn.	1939-59	Do.
Limestone Creek	U. S. Highway 72, near Athens, Ala.	1939-59	Do.
Little Dry Creek	Near Garth, Ala.	1959	Do.
Little Yellow Creek	At U. S. Highway 72, near Burnsville, Miss.	1959	Do.
Middle Creek	Below Highway 39, near Englewood, Tenn.	1944-59	Do.
Middleton Creek	Near Milledgeville, Tenn.	1939-59	Do.
Millican Creek	Near Douglas Dam, Tenn.	1942-59	Do.
Muddy Creek	Near Fort Loudon Dam Tenn.	1941-59d/	Do.
Parker Branch	Near Leicester, N. C.	1952-59	Do.
Persimmon Creek	At Persimmon Creek Dam, near Letitia, N. C.	1942-59	Do.
Pigeon River basin e/.	Near Waynesville, N. C.	1949-59	Do.
Pine Tree Branch	Near Lexington, Tenn.	1941-59	Do.
Piney Creek	At Highway 104 near Lexington, Tenn.	1953-59	Do.
Pond Creek No. 1	Near Wilson Dam, Ala.	1948-59	Do.
Pond Creek No. 2	....do.	1948-59	Do.
Poor Valley Creek	Near Spruce Pine School, Tenn.	1959	Do.
Snake Creek	Near Adamsville, Tenn.	1939-59	Do.
Turkey Creek (Beech River tributary).	Near Decaturville, Tenn.	1953-59	Do.
Turkey Creek (Tennessee River tributary).	Near Savannah, Tenn.	1939-59	Do.
Walker Switch Creek	At U. S. Highway 72, near Burnsville, Miss.	1959	Do.
West Flint Creek	Near Hartselle, Ala.	1941-59f/	Do.
White Creek	Near Sharps Chapel, Tenn.	1934-59	Do.
White Oak Creek	Near Milledgeville, Tenn.	1939-59	Do.
Yellow Creek	Near Burnsville, Miss.	1959	Do.
Do.	Near Cairo, Miss.	1959	Do.
Do.	At Moser Bridge near Doskie, Miss.	1937-59	Do.

a/ Records observed near Kendrick from November 1939 to May 1942 and opposite Kendrick from May 1942 to 1959.

b/ The Southeastern Forest Experiment Station of the U. S. Forest Service operates 17 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 six small watersheds ranging in area from 3.5 to 5.8 acres in the Pigeon River basin.

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

HYDROLOGIC CONDITIONS

During most of the 1959 water year, streamflow was deficient throughout the area, averaging 50 to 90 percent of median. Excessive streamflow and local flooding occurred in eastern Tennessee in March and August and in western North Carolina in September. In January and in September, several streams in North Carolina reached the highest stages since the flood of August 1940. In March, several streams in southeastern Tennessee reached the highest stages since about 1914.

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 discharge for the 1959 water year with the median discharge for the period 1921-45.

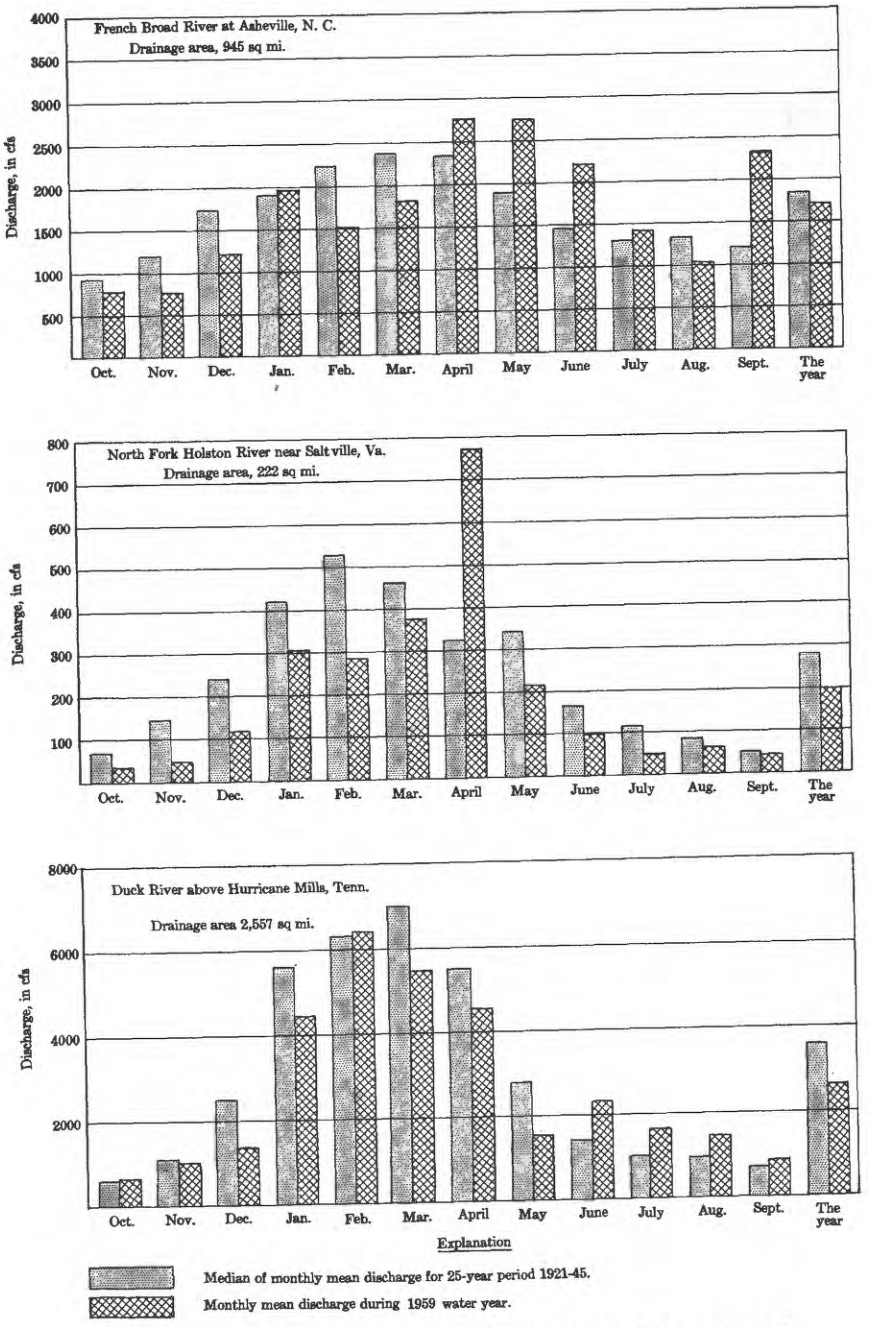

Figure 2. Comparison of discharge at three key gaging stations during 1959 water year with median discharge for 25-year period.

CUMBERLAND RIVER BASIN

4005. Poor Fork at Cumberland, Ky.

Location.--Lat 36°58'26", 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 1959.

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.--19 years, 140 cfs.

Extremes.--Maximum discharge during year, 4,640 cfs Jan. 21 (gage height, 6.83 ft); minimum, 9.5 cfs Sept. 26, 27, 28.

1940-59: 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 tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 14 to Nov. 7)

Oct. 1 to Nov. 7

-0.2	15
.2	34
.3	46

Nov. 8 to Sept. 30

-1.15	9.5	1.0	360
-1.1	12	2.0	740
-.8	31	3.0	1,230
-.4	70	4.0	1,820
0.0	132	5.0	2,720
.5	232		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	17	46	118	74	118	148	102	91	29	28	23
2	32	21	38	102	68	117	176	88	1,380	30	23	21
3	24	18	35	87	65	120	230	78	680	29	28	17
4	a21	18	37	74	92	117	424	71	280	28	29	16
5	a19	17	48	a64	99	122	339	65	182	a25	29	13
6	a18	17	47	a56	93	248	246	62	129	a21	29	12
7	a17	18	44	a50	87	272	192	55	101	a19	26	13
8	a16	25	43	60	92	214	158	52	81	*a18	27	14
9	a15	26	*43	53	90	186	134	49	65	22	27	22
10	a18	23	b36	47	96	156	122	48	58	22	23	55
11	a19	22	b32	a43	110	148	132	44	53	22	*17	115
12	a17	20	b30	a44	115	328	656	43	78	16	16	46
13	a16	20	b28	*46	140	285	825	122	117	15	15	30
14	16	20	b27	64	184	232	432	156	70	44	14	24
15	16	23	a26	125	656	210	322	118	55	29	13	*21
16	16	23	a35	268	444	172	260	93	49	30	13	19
17	*16	22	30	a220	270	148	212	77	44	79	12	18
18	15	21	28	a190	214	127	186	93	41	49	12	16
19	15	25	28	a170	160	115	174	90	38	30	12	14
20	16	23	28	186	122	107	168	77	37	33	12	13
21	15	22	25	1,260	104	105	162	77	35	30	21	13
22	15	22	b24	2,350	98	96	220	87	33	24	22	12
23	16	22	27	536	124	a3	464	88	33	22	12	11
24	15	21	30	302	127	76	345	70	35	22	10	12
25	15	21	31	222	*124	70	250	59	46	22	11	11
26	16	21	28	184	120	76	202	52	37	23	12	10
27	17	20	b26	146	110	*272	168	*64	34	76	18	9.5
28	17	55	139	120	102	255	148	124	a32	49	28	9.5
29	*16	96	536	105	-	222	124	78	30	35	37	20
30	16	58	237	94	-------	196	109	70	29	31	31	70
31	15	-------	136	83	-------	168	-------	59	-------	25	25	-------
Total	554	777	1,948	7,469	4,180	5,161	7,728	2,411	3,973	949	632	700.0
Mean	17.9	25.9	62.8	241	149	166	258	77.8	132	30.6	20.4	23.3
Cfsm	0.217	0.315	0.763	2.93	1.81	2.02	3.13	0.945	1.60	0.372	0.248	0.283
In.	0.25	0.35	0.88	3.38	1.89	2.33	3.49	1.09	1.80	0.43	0.29	0.32

Calendar year 1958: Max 3,460 Min 15 Mean 154 Cfsm 1.87 In. 25.46
Water year 1958-59: Max 2,350 Min 9.5 Mean 100 Cfsm 1.22 In. 16.50

Peak discharge (base, 1,600 cfs).--Jan. 21 (12 p.m.) 4,640 cfs (6.83 ft); June 2 (2:30 p.m.) 2,860 cfs (5.14 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

4010. Cumberland River near Harlan, Ky.

Location.--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 1959.

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.--19 years, 650 cfs.

Extremes.--Maximum discharge during year, 25,900 cfs Jan. 22 (gage height, 17.57 ft); minimum not determined.

1940-59: Maximum discharge, 37,900 cfs Jan. 8, 1946 (gage height, 22.81 ft); minimum, 3.0 cfs Oct. 9, 1953.

Floods 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 or doubtful or no gage-height record, which are fair.

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

Rating tables, water year 1958-59, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 1

0.3	40	3.0	1,380
.6	100	5.0	3,550
1.0	210	8.0	7,750
1.5	385	11.0	12,700
2.0	640	13.0	16,400
2.5	960		

June 2 to Sept. 30

0.1	23
.3	50
.6	107
1.0	210

Note.--Same as preceding table above 1.0 ft.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	55	a300	575	321	485	748	412	416	86	88	76
2	190	73	a220	542	291	462	814	365	7,280	80	75	73
3	134	73	a190	485	277	439	1,000	325	4,020	82	67	65
4	98	69	a250	430	448	416	1,730	298	1,530	80	103	53
5	79	a60	a280	a300	778	385	1,540	277	1,040	73	96	48
6	69	a56	a250	a220	718	558	1,130	255	796	71	84	41
7	63	a52	a210	a210	586	766	855	237	640	64	84	50
8	59	50	a190	313	530	694	700	219	470	62	75	57
9	57	52	*a185	270	490	646	592	199	369	58	65	47
10	65	50	b150	a250	475	616	536	190	305	64	62	103
11	71	50	b120	a240	536	604	a520	168	264	67	*60	190
12	59	52	b110	*a230	525	2,620	a2,200	174	240	58	52	150
13	54	a52	b105	228	700	1,910	a5,000	377	288	55	47	92
14	54	a54	b98	270	1,330	1,290	a2,400	580	252	69	44	67
15	50	a54	b64	561	3,500	1,070	a1,100	490	204	67	41	*57
16	48	a56	b63	2,110	2,360	883	a1,000	377	180	65	41	48
17	47	a60	b83	1,360	1,430	778	a900	305	160	84	38	42
18	47	a70	b80	a1,100	1,060	664	a780	501	150	107	37	37
19	48	a86	b74	a980	778	569	a850	778	140	103	46	34
20	47	a100	b82	925	598	525	a1,000	536	135	142	48	32
21	47	a92	b54	6,000	510	495	a1,300	490	130	112	44	30
22	45	a83	b67	15,300	460	452	a1,100	426	135	86	46	28
23	47	a76	73	2,740	598	385	a1,050	525	145	73	48	26
24	47	a68	98	1,470	*810	349	a1,000	640	174	84	52	27
25	42	a62	98	1,030	718	325	a880	448	237	105	48	26
26	42	a58	73	808	658	*a360	a720	345	190	130	47	24
27	45	a56	77	658	574	a2,250	a600	*284	150	123	60	22
28	47	a200	1,470	542	515	1,960	a540	294	110	185	107	20
29	*47	a550	3,720	470	-	1,320	510	267	96	125	123	19
30	43	a500	1,400	421	--------	1,050	439	380	90	109	101	60
31	45	--------	790	365	--------	862	--------	530	--------	116	78	--------
Total	1,965	2,969	11,024	41,403	22,574	26,188	33,534	11,692	20,336	2,785	2,007	1,644
Mean	63.4	99.0	356	1,336	806	845	1,118	377	678	89.8	64.7	54.8
Cfsm	0.170	0.265	0.952	3.57	2.16	2.26	2.99	1.01	1.81	0.240	0.173	0.147
In.	0.20	0.30	1.10	4.12	2.24	2.60	3.33	1.16	2.02	0.28	0.20	0.16

Calendar year 1958: Max 11,400 Min 42 Mean 660 Cfsm 1.76 In. 23.98
Water year 1958-59: Max 15,300 Min 19 Mean 488 Cfsm 1.30 In. 17.71

Peak discharge (base, 8,200 cfs).--Jan. 22 (5:15 a.m.) 25,900 cfs (17.57 ft); June 2 (5 to 5:45 p.m.) 11,900 cfs (10.55 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 3 discharge measurements, recorded range in stage when available, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.
Note.--Doubtful or no gage-height record Feb. 21, 22, 24, June 16-23, 26-28, Sept. 16-30; discharge estimated on basis of 2 discharge measurements, appearance of recorder chart, weather records, and records for stations on nearby streams.

4020. Yellow Creek near Middlesboro, Ky.

Location.--Lat 36°39'02", long 83°42'04" (corrected), 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 1959.

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.--19 years, 104 cfs.

Extremes.--Maximum discharge during year, 5,550 cfs Jan. 21 (gage height, 17.68 ft); minimum, 2.5 cfs Sept. 26, 27, 28, 29 (gage height, 0.98 ft).

1940-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.95	1.9	2.0	119
1.0	3.0	3.0	281
1.1	6.3	6.0	750
1.2	13	9.0	1,450
1.5	44	12.0	2,420

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	18	35	109	52	95	122	60	92	9.0	22	8.4
2	24	16	30	105	47	81	163	63	100	8.4	9.0	8.4
3	16	13	41	92	47	78	196	82	86	8.4	7.3	5.9
4	13	11	63	b77	97	72	220	60	64	7.8	9.7	4.5
5	10	9.7	50	b49	95	69	175	49	53	8.4	11	4.5
6	*9.7	9.0	37	b45	86	100	141	49	53	18	7.3	3.9
7	8.4	8.4	b29	50	76	93	116	43	41	8.4	7.3	6.3
8	7.8	7.8	*26	81	76	87	101	36	32	6.8	8.4	6.8
9	7.3	8.4	26	86	74	90	89	32	28	6.3	6.3	4.8
10	12	8.4	b19	b74	80	84	86	30	26	6.8	5.9	45
11	11	7.8	b17	b58	78	127	90	28	22	7.3	5.5	20
12	7.8	7.3	b15	*b54	70	412	496	26	24	6.8	4.8	7.8
13	7.3	7.3	b14	54	117	281	503	281	22	5.9	*5.1	5.9
14	7.3	7.3	b13	58	525	189	278	144	20	5.9	4.5	*5.1
15	6.8	9.0	b9.0	138	685	184	178	89	16	6.8	4.8	5.1
16	6.8	10	b9.5	281	359	148	141	68	16	16	4.8	4.5
17	6.8	9.0	b12	b170	228	134	117	53	14	6.8	4.5	3.9
18	7.8	9.0	b11	b117	167	113	126	92	14	10	7.3	3.9
19	9.7	30	b11	b100	119	100	172	70	13	10	6.3	3.3
20	7.3	24	b12	217	97	92	256	114	12	14	5.5	3.0
21	6.8	18	b9.0	2,330	81	87	254	134	11	7.3	5.9	3.3
22	6.3	14	b9.5	2,400	74	78	196	144	11	6.8	5.5	3.0
23	6.8	12	b11	428	189	66	148	122	9.7	6.8	4.5	3.0
24	6.3	12	*22	236	*194	62	119	90	39	29	4.5	3.0
25	5.9	11	14	158	153	56	103	74	32	26	4.5	3.0
26	6.3	11	9.7	126	129	*92	90	*62	26	28	4.2	2.7
27	6.3	10	39	103	109	766	80	54	16	36	4.5	2.5
28	*7.8	90	915	87	95	331	75	44	14	20	14	2.7
29	7.3	101	710	75	-	215	68	49	11	10	15	2.7
30	7.3	49	226	68	--------	165	58	97	9.7	11	6.3	5.1
31	6.8	--------	121	57	--------	139	--------	87	--------	16	6.8	--------
Total	307.7	558.4	2,565.7	8,083	4,199	4,686	4,957	2,426	928.4	374.7	223.0	192.0
Mean	9.93	18.6	82.8	261	150	151	165	78.3	30.9	12.1	7.19	6.40
Cfsm	0.171	0.320	1.42	4.48	2.58	2.59	2.84	1.35	0.531	0.208	0.124	0.110
In.	0.20	0.36	1.64	5.17	2.68	2.99	3.17	1.55	0.59	0.24	0.14	0.12

Calendar year 1958: Max 1,950 Min 5.5 Mean 106 Cfsm 1.82 In. 24.77
Water year 1958-59: Max 2,400 Min 2.5 Mean 80.8 Cfsm 1.39 In. 18.85

Peak discharge (base, 1,800 cfs).--Jan. 21 (10:30 p.m.) 5,550 cfs (17.68 ft).

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

4030 (revised). 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 1959.

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.--21 years, 1,312 cfs.

Extremes.--Maximum discharge during year, 36,000 cfs Jan. 22; maximum gage height, 41.91 ft Jan. 22; minimum discharge not determined.
1938-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor Dec. 28-30, Jan. 21-24, Feb. 15-20, Mar. 12-19, Mar. 27 to Apr. 1, Apr. 3-9, 13-27, June 3, 4)

4.9	16	7.0	450
5.2	39	9.0	1,380
5.4	63	13.0	3,800
5.6	94	15.0	5,300
6.0	176		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	78	727	1,390	709	1,150	1,640	830	1,990	158	209	118
2	270	114	502	1,200	624	1,040	1,810	768	4,650	147	169	99
3	300	136	418	1,050	574	970	2,180	895	10,300	136	126	94
4	238	139	514	925	745	925	3,180	722	3,460	130	132	91
5	185	126	586	a720	1,360	844	3,180	602	2,000	134	198	75
6	*150	118	558	a460	1,450	1,020	2,490	530	1,560	150	191	64
7	124	108	482	b440	1,250	1,320	1,950	490	1,220	136	154	58
8	108	101	412	646	1,140	1,390	1,590	432	940	107	134	60
9	98	94	377	a850	1,070	1,300	1,330	384	714	92	126	58
10	103	91	332	a740	1,080	1,280	1,200	356	574	92	105	150
11	114	86	*290	a640	1,170	1,220	1,190	335	474	91	86	213
12	116	83	252	a560	1,120	4,270	3,420	315	440	94	76	209
13	103	83	235	*538	1,230	4,750	10,100	966	404	*91	74	222
14	89	83	b220	554	2,660	3,030	5,190	1,490	415	78	*66	*156
15	83	83	b185	714	7,710	2,490	3,100	1,230	356	80	59	105
16	76	88	b160	3,350	6,020	2,090	2,460	920	302	108	55	84
17	74	91	156	a3,000	3,380	1,810	2,030	704	278	101	50	70
18	70	94	b165	a2,400	2,540	1,530	1,700	768	250	108	48	60
19	70	143	172	a2,100	1,870	1,310	1,770	1,540	230	132	47	53
20	70	211	169	2,020	1,410	1,200	2,090	1,300	211	167	59	a47
21	70	205	b160	8,860	1,160	1,140	2,630	1,180	196	196	68	a44
22	69	187	b130	32,400	1,020	1,050	2,470	1,040	183	174	58	a40
23	64	169	150	11,700	1,270	885	2,320	1,220	169	134	56	a34
24	63	152	174	3,760	1,920	781	2,350	1,200	312	128	72	a30
25	60	139	202	2,760	1,810	714	2,010	*975	490	248	69	a27
26	63	128	180	1,950	1,610	691	1,630	754	446	205	86	a24
27	64	122	167	1,560	*1,410	3,920	1,380	614	374	209	69	a22
28	62	244	2,910	1,270	1,220	4,560	1,240	490	270	230	64	a20
29	63	1,360	7,940	1,060	-	2,820	1,100	454	216	238	84	a18
30	64	1,200	3,690	925	--------	2,350	935	937	187	213	165	a25
31	63	--------	2,020	817	--------	*1,910	--------	1,460	--------	200	150	--------
Total	3,285	6,056	24,635	91,359	50,532	55,760	71,665	25,901	33,611	4,507	3,105	2,370
Mean	106	202	795	2,947	1,805	1,799	2,389	836	1,120	145	100	79.0
Cfsm	0.131	0.250	0.983	3.64	2.23	2.22	2.95	1.03	1.38	0.179	0.124	0.098
In.	0.15	0.28	1.13	4.20	2.32	2.56	3.29	1.19	1.55	0.21	0.14	0.11

Calendar year 1958: Max 19,300 Min 60 Mean 1,342 Cfsm 1.66 In. 22.52
Water year 1958-59: Max 32,400 Min 18 Mean 1,021 Cfsm 1.26 In. 17.13

Peak discharge (base, 16,000 cfs).--Jan. 22 (3 p.m.) 36,000 cfs (41.91 ft at 4 p.m.).

* 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.
b Stage-discharge relation affected by ice.

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 1959. 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.--20 years, 1,712 cfs.
Extremes.--Maximum discharge during year, 30,300 cfs Jan. 22; maximum gage height, 35.5 ft Jan. 23; minimum daily discharge, 20 cfs Sept. 29.
1922-31, 1948-59: 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, datum then in use).
Flood in January 1946 reached a stage of 42.8 ft, present datum.
Remarks.--Records fair except those for periods of ice effect, doubtful or no gage-height record, which are poor. Diversion above station by city of Barbourville for municipal water supply. Records of water temperatures for the water year 1959 are given in WSP 1641.
Revisions (water years).--WSP 603: 1923-24. WSP 1336: 1923(M), 1925(M), 1927, 1929, 1950-51. WSP 1436: Drainage area.

Rating tables, water year 1958-59, 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)

Oct. 1 to Nov. 29		Nov. 30 to Sept. 30			
1.5	45	1.2	21	2.5	480
1.6	65	1.3	29	3.0	830
1.8	125	1.5	54	4.0	1,620
2.0	215	1.7	95	6.0	3,300
3.0	840	2.0	195	8.0	4,700
4.0	1,620				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	137	75	996	a1,400	816	1,320	1,890	980	2,200	149	187	117
2	282	105	683	a1,300	788	1,230	1,900	886	4,120	136	172	95
3	366	153	564	1,220	662	1,140	2,440	a940	11,300	123	136	95
4	282	153	634	1,110	802	1,090	3,940	844	6,320	112	143	90
5	205	153	746	b800	1,300	996	4,230	697	2,540	191	200	95
6	161	129	718	b500	1,570	1,110	3,080	620	1,760	218	222	72
7	141	122	606	b440	1,520	1,430	2,270	550	1,460	156	172	68
8	118	115	522	746	1,280	1,540	1,850	473	1,110	121	146	65
9	102	112	466	1,030	1,240	1,430	1,570	445	844	103	130	61
10	108	118	410	948	1,290	1,440	1,410	380	676	95	117	a110
11	122	118	*338	732	1,730	1,460	1,450	314	578	106	106	a240
12	122	112	296	662	1,600	4,340	3,130	316	473	95	88	a220
13	118	112	270	*662	1,540	6,060	7,960	938	438	*95	77	226
14	99	115	250	697	2,470	3,910	7,800	1,690	438	90	*77	149
15	92	118	b190	774	7,490	2,780	4,710	1,460	386	81	70	a115
16	81	115	b175	2,690	7,880	2,390	3,000	1,140	302	101	68	*90
17	75	122	164	4,170	5,080	2,050	2,360	802	270	106	77	77
18	70	125	164	2,230	2,920	1,800	2,000	774	235	106	68	72
19	73	157	172	1,760	2,160	1,430	2,020	1,600	213	133	63	65
20	73	282	172	2,080	1,660	1,350	2,300	1,560	187	235	61	a60
21	78	237	b135	6,220	1,320	1,290	2,990	1,440	168	195	77	a53
22	76	270	b140	26,400	1,190	1,220	2,950	1,250	164	187	68	a46
23	81	195	164	21,400	1,350	1,060	2,660	1,280	156	160	68	a40
24	70	205	*183	10,100	1,990	932	2,660	1,430	179	136	70	a35
25	65	185	195	6,070	2,000	844	2,250	*1,240	627	231	74	29
26	63	175	195	2,510	*1,820	795	1,890	932	529	231	77	a25
27	59	175	176	1,710	1,590	3,240	1,600	788	386	195	81	a23
28	*68	253	1,780	1,440	1,370	5,520	1,450	613	290	231	72	a21
29	63	1,590	7,470	1,240	-	3,190	1,300	543	213	231	74	a20
30	63	1,650	5,610	1,080	-------	2,340	1,120	a840	179	231	130	a30
31	65	-------	1,740	948	-------	*2,120	-------	a1,500	-------	172	136	-------
Total	3,578	7,546	26,324	105,069	58,428	62,847	82,180	29,265	38,741	4,752	3,307	2,504
Mean	115	252	849	3,389	2,087	2,027	2,739	944	1,291	153	107	83.5
Cfsm	0.120	0.263	0.884	3.53	2.17	2.11	2.85	0.983	1.34	0.159	0.111	0.087
In.	0.14	0.29	1.02	4.07	2.26	2.43	3.18	1.13	1.50	0.18	0.13	0.10

Calendar year 1958: Max 23,400 Min 59 Mean 1,576 Cfsm 1.64 In. 22.27
Water year 1958-59: Max 26,400 Min 20 Mean 1,163 Cfsm 1.21 In. 16.43

Peak discharge (base, 18,000 cfs).--Jan. 22 (9 p.m.) 30,300 cfs (35.5 ft at 5:30 to 6:30 a.m. Jan. 23).

* Discharge measurement made on this day.
a Doubtful or 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.

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 1959. 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.--9 years, 2,663 cfs.

Extremes.--Maximum discharge during year, 26,900 cfs Jan. 23 (gage height, 24.20 ft); minimum, 29 cfs Sept. 29 (gage height, 1.87 ft).

1950-59: 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 or no gage-height record, which are fair. Records of chemical analyses, suspended sediment loads, and water temperatures for the water year 1959 are given in WSP 1641.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	32	6.0	2,250
2.0	45	10.0	6,400
2.3	108	15.0	12,600
2.5	188	20.0	19,900
3.0	345	24.0	26,500
4.0	900		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	132	2,080	2,900	1,400	2,050	*3,080	1,520	4,450	297	281	244
2	147	129	1,320	2,200	1,250	1,930	2,780	1,370	4,880	254	262	227
3	278	159	1,010	1,920	1,150	1,740	3,330	1,310	*9,090	224	254	192
4	395	208	912	1,680	1,180	1,650	4,890	1,400	11,900	208	227	162
5	350	*220	1,040	1,440	1,540	1,540	6,390	1,180	7,490	201	251	144
6	281	214	1,100	1,120	*2,070	1,560	5,800	1,010	3,200	293	350	138
7	230	201	1,030	834	2,190	1,910	4,260	906	2,420	490	425	129
8	204	186	888	942	1,970	2,120	3,150	802	1,820	325	485	108
9	186	174	780	1,340	1,840	2,120	2,560	726	1,400	*237	333	94
10	174	159	708	b1,560	1,770	2,050	2,310	636	1,130	198	254	132
11	162	150	618	b1,400	2,050	2,000	3,060	576	942	180	214	672
12	168	147	525	b1,230	2,490	4,240	4,610	546	798	168	177	420
13	177	144	460	1,210	2,210	9,030	11,600	642	720	159	147	321
14	177	141	415	1,140	2,980	7,940	14,200	1,490	690	153	129	309
15	168	141	b375	1,220	8,330	5,490	11,100	1,900	618	144	120	265
16	147	141	b335	2,780	13,100	4,420	6,140	1,560	540	132	123	201
17	135	144	b300	5,920	11,200	3,530	4,300	1,240	455	141	129	162
18	123	153	b280	5,020	a6,500	2,970	3,340	1,100	390	180	132	135
19	117	211	273	3,070	a4,000	2,490	3,250	1,320	350	171	117	111
20	114	285	281	2,850	a3,000	2,130	4,000	2,040	313	186	117	96
21	117	546	b265	5,310	a2,200	1,970	5,370	2,060	285	317	99	85
22	138	515	b250	19,200	a1,800	1,910	5,480	1,950	265	305	103	79
23	141	400	258	26,400	a2,000	1,720	4,740	1,900	248	269	117	71
24	132	333	258	23,400	2,970	1,510	4,070	1,870	254	227	99	65
25	129	285	289	20,000	3,390	1,370	3,650	1,870	425	289	117	61
26	123	262	b330	11,900	3,030	1,310	3,000	1,700	978	475	120	55
27	120	240	b315	3,980	2,630	3,540	2,490	1,590	876	515	111	45
28	117	258	1,030	2,540	2,270	8,330	2,170	1,450	684	425	138	38
29	120	790	6,500	2,060	-	7,080	1,950	1,140	485	386	162	32
30	120	2,490	8,630	1,750	--------	4,800	1,740	996	363	358	208	36
31	117	--------	5,760	1,560	--------	3,750	--------	2,860	--------	350	*201	--------
Total	5,245	9,558	38,615	159,876	92,510	100,200	138,810	42,660	58,459	8,257	6,002	4,829
Mean	169	319	1,246	5,157	3,304	3,232	4,627	1,376	1,949	266	194	161
Cfsm	0.105	0.199	0.775	3.21	2.06	2.01	2.88	0.856	1.21	0.166	0.121	0.100
In.	0.12	0.22	0.89	3.70	2.14	2.32	3.21	0.99	1.35	0.19	0.14	0.11

Calendar year 1958: Max 25,700 Min 112 Mean 2,538 Cfsm 1.58 In. 21.44
Water year 1958-59: Max 26,400 Min 32 Mean 1,822 Cfsm 1.13 In. 15.38

Peak discharge (base, 20,000 cfs).--Jan. 23 (2 p.m.) 26,900 cfs (24.20 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.

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 1959. 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.--49 years, 3,127 cfs.

Extremes.--Maximum discharge during year, 25,900 cfs Jan. 23 (gage height, 9.50 ft); minimum, 44 cfs Sept. 30 (gage height, 1.14 ft).
1907-11, 1914-59: 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.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.1	32	3.0	2,430
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	9.5	25,900

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	144	2,650	3,880	1,620	2,650	4,000	2,030	5,020	420	400	216
2	158	208	1,760	2,760	1,440	2,470	3,640	1,780	*6,090	343	350	272
3	165	200	1,270	2,370	1,280	2,260	3,980	1,620	8,790	298	320	256
4	325	200	1,110	2,050	1,300	2,110	5,560	1,640	11,800	264	298	216
5	420	256	1,110	1,740	1,570	2,000	7,060	1,540	9,120	240	272	179
6	370	264	1,220	1,360	2,200	1,960	6,790	1,280	4,350	240	334	165
7	298	256	1,180	1,030	2,490	2,280	5,340	1,140	3,060	430	580	151
8	248	232	1,060	966	2,320	2,530	4,120	1,020	2,410	492	616	144
9	216	216	928	1,300	2,140	2,670	3,360	940	1,850	352	580	124
10	200	193	832	1,800	2,140	2,590	3,200	832	1,440	264	420	246
11	186	179	748	1,620	2,450	2,490	5,530	772	1,180	224	325	464
12	165	165	*664	1,420	2,970	5,100	7,320	712	1,040	208	272	676
13	165	158	569	1,410	2,820	9,390	12,800	700	940	193	224	481
14	165	158	503	*1,330	3,520	9,320	15,200	1,080	856	186	186	370
15	172	151	470	1,390	12,600	6,670	12,800	2,140	784	172	165	343
16	165	158	430	2,800	*14,600	5,420	7,920	1,960	736	165	137	307
17	151	179	390	5,780	12,300	4,500	5,450	1,550	628	*186	151	232
18	137	186	343	5,620	8,050	3,830	4,350	1,330	525	186	165	186
19	124	248	316	3,780	5,260	3,240	4,050	1,330	470	256	186	158
20	118	400	298	3,520	3,830	2,800	5,210	2,050	420	380	172	137
21	118	514	290	5,420	2,930	2,570	6,530	2,490	380	256	*144	124
22	112	688	280	19,700	2,390	2,490	6,640	2,530	352	420	130	118
23	124	580	280	25,400	2,390	2,320	5,870	2,800	325	390	118	94
24	130	470	298	23,400	3,400	2,030	4,990	2,430	334	420	137	82
25	130	410	298	20,100	4,200	1,830	4,530	2,240	420	514	124	76
26	124	361	343	13,800	3,900	1,730	3,880	2,200	856	503	112	65
27	124	334	380	5,290	3,400	3,870	3,270	1,980	1,080	664	137	60
28	118	380	410	3,060	2,950	8,720	2,840	2,030	904	736	144	55
29	112	1,080	4,980	2,490	-	8,500	2,550	1,590	712	536	179	51
30	106	2,430	9,420	2,110	--------	*5,980	2,320	1,320	536	503	200	44
31	*106	--------	7,090	1,850	--------	4,760	--------	1,970	--------	503	232	--------
Total	5,410	11,398	41,920	170,546	112,460	121,080	171,100	51,026	67,408	10,944	7,810	6,092
Mean	175	380	1,352	5,501	4,016	3,906	5,703	1,646	2,247	353	252	203
Cfsm	0.089	0.192	0.684	2.78	2.03	1.98	2.88	0.833	1.14	0.179	0.127	0.103
In.	0.10	0.21	0.79	3.21	2.12	2.28	3.22	0.96	1.27	0.21	0.15	0.11

Calendar year 1958: Max 27,700 Min 106 Mean 2,934 Cfsm 1.48 In. 20.16
Water year 1958-59: Max 25,400 Min 44 Mean 2,129 Cfsm 1.08 In. 14.63

Peak discharge (base, 20,000 cfs, revised).--Jan. 23 (8 p.m.) 25,900 cfs (9.50 ft).

* Discharge measurement made on this day.

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 city limits 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 1959. Prior to October 1953, published as "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.--19 years, 341 cfs.

Extremes.--Maximum discharge during year, 3,520 cfs Jan. 22 (gage height, 9.08 ft); no flow Sept. 28, 29.

1922-24, 1942-59: 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 at times in some years.

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 no gage-height record, which are fair. 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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 12

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

Apr. 13 to Sept. 30

1.0	0	2.5	102
1.1	1.4	3.0	213
1.3	5.2	4.0	540
1.5	10	6.0	1,500
1.7	18	8.0	2,700
2.0	42		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	44	373	248	178	268	185	169	100	20	22	17
2	55	104	292	358	152	250	230	140	*981	120	16	14
3	44	96	298	310	146	215	331	115	947	56	11	9.2
4	33	74	385	265	524	205	469	94	309	31	54	7.3
5	29	64	349	165	650	182	475	79	254	22	122	6.3
6	*26	57	310	126	445	238	370	68	636	20	52	5.2
7	20	52	240	113	322	242	285	57	235	18	31	5.2
8	17	46	200	148	288	198	240	46	138	13	24	4.6
9	15	42	172	124	262	195	210	40	90	10	18	*4.2
10	20	41	*150	158	312	215	498	34	69	7.0	14	17
11	20	40	116	140	436	202	a1,000	30	58	a4	9.5	14
12	20	34	116	124	308	379	a2,000	28	65	a3	7.3	7.3
13	19	32	99	134	352	412	a2,500	111	69	a2.5	a5	8.1
14	16	30	87	*170	826	355	1,680	184	52	2.2	a4	6.6
15	14	31	74	346	2,220	337	880	96	34	2.8	a3	4.8
16	12	50	68	1,260	*1,540	285	580	62	24	34	a6	*4.2
17	11	240	66	885	780	232	430	52	20	*60	12	3.6
18	18	218	68	405	530	195	348	125	15	144	6.3	2.8
19	82	401	67	430	382	168	357	240	12	73	*4.8	2.0
20	66	510	68	1,040	285	160	665	186	9.8	58	8.8	1.8
21	46	316	64	1,480	230	165	580	360	8.1	32	29	1.6
22	34	222	59	3,010	205	180	430	423	7.3	35	7.3	1.1
23	30	165	53	1,930	406	146	327	285	6.3	56	5.2	1.0
24	29	134	92	835	542	126	261	235	52	46	3.6	1.0
25	32	111	140	498	400	115	213	260	200	78	3.0	1.0
26	30	100	68	406	337	120	179	306	104	76	3.0	.8
27	27	93	74	343	288	311	158	357	134	175	8.9	.2
28	24	260	102	313	258	305	244	294	78	122	12	0
29	23	1,030	260	270	-	238	348	172	46	48	9.0	0
30	20	642	248	235	--------	*230	226	140	28	42	8.4	.8
31	19	--------	222	205	--------	212	--------	124	--------	36	7.5	--------
Total	886	5,279	4,980	16,474	13,604	7,081	16,699	4,912	4,781.5	1,446.5	527.6	152.7
Mean	28.6	176	161	531	486	228	557	158	159	46.7	17.0	5.09
Cfsm	0.142	0.876	0.801	2.64	2.42	1.13	2.77	0.786	0.791	0.232	0.085	0.025
In.	0.16	0.98	0.92	3.05	2.52	1.31	3.09	0.91	0.88	0.27	0.10	0.03

Calendar year 1958: Max 5,170 Min 5.4 Mean 337 Cfsm 1.68 In. 22.79
Water year 1958-59: Max 3,010 Min 0 Mean 210 Cfsm 1.04 In. 14.22

Peak discharge (base, 3,600 cfs, revised).--No peak above base.

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage where available, and records for stations on nearby streams.
Note.--Discharge computed from twice-daily staff-gage readings Dec. 8-10, Dec. 21 to Feb. 6, July 14, 15, Aug. 24-26, and Sept. 17-30.

4060. Wood Creek near London, Ky.

Location.--Lat 37°09'40", long 84°06'43", or 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 1959.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,123.50 ft above mean sea level, unadjusted.

Average discharge.--6 years, 5.21 cfs.

Extremes.--Maximum discharge during year, 118 cfs Jan. 21 (gage height, 3.22 ft); minimum, 0.3 cfs Sept. 7-9.

1953-59: 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.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.15	0.3	1.5	5.1
1.2	.5	1.7	12
1.3	1.4	1.9	22
1.4	3.1	2.2	43

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	2.4	3.3	3.3	4.5	5.1	4.9	2.7	2.3	0.6	0.6	0.4
2	1.0	1.2	3.3	3.3	4.1	4.5	7.5	2.3	2.3	.7	.5	.4
3	.9	1.0	4.1	2.7	5.3	4.5	7.2	2.1	2.0	.7	.5	.4
4	.9	.9	3.7	2.3	12	3.9	6.9	1.8	1.6	.6	1.9	.4
5	.8	.9	3.5	1.8	8.2	4.1	6.0	1.8	1.5	1.8	.9	.4
6	*.8	.8	2.9	1.6	6.9	4.7	5.7	1.6	1.4	.7	.7	.4
7	.8	.7	2.5	1.5	6.0	4.1	5.1	1.5	1.3	.6	.6	.4
8	.8	.8	2.5	1.6	5.7	3.7	4.7	1.4	1.2	.5	.8	.3
9	.8	.9	2.3	*1.5	5.4	4.1	6.3	1.4	1.2	.5	.6	.3
10	1.0	.8	*1.8	1.2	5.7	3.9	23	1.4	1.1	.5	.5	1.2
11	.8	.7	1.8	1.2	4.7	4.8	21	1.3	1.2	.4	.5	.4
12	.7	.7	1.8	1.2	4.3	5.7	40	1.6	1.2	.4	.5	.4
13	.7	.6	1.5	1.4	6.8	5.1	31	3.5	1.2	.4	.5	.4
14	.7	.6	1.5	2.5	28	4.9	22	1.8	1.2	.4	.4	.4
15	.7	.9	1.4	6.0	28	4.7	16	1.5	1.3	*.7	.4	.4
16	.6	1.2	1.4	8.2	16	4.1	12	1.4	1.0	.5	.4	.4
17	.6	1.1	1.4	5.7	*12	3.9	9.9	1.4	.9	13	*1.0	*.4
18	1.0	1.4	1.3	4.5	10	3.5	8.2	3.6	.8	2.1	.5	.4
19	.9	4.7	1.3	5.1	8.2	3.5	7.5	1.8	.8	1.4	.5	.4
20	.8	2.7	1.3	18	6.6	3.3	6.6	3.6	.8	1.0	.5	.4
21	.7	2.1	1.2	41	5.7	3.5	6.0	2.9	.7	.8	.4	.4
22	.7	1.8	1.1	28	5.1	3.1	5.1	2.1	.7	.8	.4	.4
23	.8	1.5	1.4	15	9.5	2.9	4.7	2.0	1.0	.8	.4	.4
24	.8	1.4	1.8	11	6.9	*2.5	4.1	1.8	2.5	1.3	.4	.4
25	.7	1.2	1.4	9.1	6.0	2.5	3.9	2.0	1.2	1.2	.5	.4
26	.7	1.2	1.2	7.8	5.7	7.9	3.5	6.7	1.1	1.0	.4	.4
27	.7	1.2	1.2	8.2	5.1	9.9	3.5	6.7	.9	1.0	.5	.4
28	.6	11	1.5	6.6	4.9	6.9	4.3	*5.1	.8	.9	2.2	.4
29	.6	5.7	1.5	6.0	-	6.3	3.3	3.7	.8	.7	.7	.4
30	.6	3.9	1.4	5.4	--------	5.7	2.9	3.1	.6	.7	.5	.4
31	.6	--------	1.4	4.9	--------	5.1	--------	2.7	--------	.6	.5	--------
Total	24.1	56.0	59.7	217.6	237.3	142.4	292.8	78.3	36.6	37.3	19.7	12.6
Mean	0.78	1.87	1.93	7.02	8.48	4.59	9.76	2.53	1.22	1.20	0.64	0.42
Cfsm	0.201	0.481	0.496	1.80	2.18	1.18	2.51	0.650	0.314	0.308	0.165	0.108
In.	0.23	0.54	0.57	2.08	2.27	1.36	2.80	0.75	0.35	0.36	0.19	0.12

Calendar year 1958:	Max	84	Min	0.5	Mean	5.82	Cfsm	1.50	In.	20.32
Water year 1958-59:	Max	41	Min	0.3	Mean	3.33	Cfsm	0.856	In.	11.62

Peak discharge (base, 100 cfs).--Jan. 21 (6 p.m.) 118 cfs (3.22 ft).

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 802.90 ft above mean sea level, datum of 1929. Prior to Nov. 19, 1940, staff gage at same site and datum.

Average discharge.--23 years, 890 cfs.

Extremes.--Maximum discharge during year, 11,200 cfs Jan. 22 (gage height, 19.95 ft); minimum, 10 cfs Sept. 30 (gage height, 0.85 ft).

1936-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.8	7.5	3.0	340
1.0	20	4.0	710
1.4	55	10.0	3,580
2.0	128	19.0	10,300
2.5	220		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	50	818	160	694	773	738	489	320	54	285	248
2	85	70	626	371	614	746	876	468	310	45	214	182
3	91	105	*530	530	566	650	1,350	402	312	46	150	146
4	87	100	598	482	1,290	618	1,350	355	245	54	132	124
5	81	89	678	377	1,770	546	1,250	322	192	55	190	97
6	75	79	698	276	1,360	678	1,120	290	190	63	186	81
7	69	74	574	285	1,070	867	917	258	198	57	142	67
8	63	69	496	280	949	746	777	226	150	51	182	*57
9	58	68	447	*290	845	751	686	198	122	48	184	51
10	59	66	364	252	1,720	822	2,330	184	105	39	142	47
11	57	65	295	224	2,780	751	5,670	178	95	32	110	45
12	58	65	265	212	1,790	1,070	4,410	157	93	26	89	106
13	57	63	242	200	1,650	1,450	6,450	196	117	22	74	77
14	57	59	212	222	3,620	1,340	3,570	786	151	19	60	56
15	54	58	182	318	9,810	1,220	2,340	570	105	*16	52	45
16	49	59	174	2,360	4,940	1,010	1,730	408	81	14	45	39
17	44	64	158	2,180	*2,530	813	1,340	322	68	538	*49	*34
18	42	76	150	1,250	1,820	686	1,070	315	57	340	57	30
19	42	164	146	994	1,320	590	948	503	51	364	124	26
20	44	538	145	1,770	971	538	1,140	422	45	426	212	24
21	54	419	136	5,880	755	518	1,100	594	41	228	122	22
22	60	305	130	9,740	654	496	894	722	38	136	90	20
23	57	236	124	5,380	840	454	773	768	40	433	70	18
24	55	194	138	2,150	1,340	*367	666	682	48	340	59	16
25	52	168	172	1,520	1,160	340	586	518	87	886	50	15
26	52	155	151	1,210	1,040	335	514	594	136	526	45	14
27	53	153	134	998	917	1,580	461	1,160	174	346	72	13
28	56	202	130	998	796	1,620	472	*1,090	114	1,270	97	12
29	54	1,720	136	935	-	1,210	634	728	87	550	906	12
30	51	1,350	146	899	--------	1,050	522	506	68	330	690	11
31	*46	--------	145	814	--------	867	--------	388	--------	330	370	--------
Total	1,852	6,883	9,340	43,557	49,611	25,502	46,684	14,799	3,840	7,684	5,252	1,735
Mean	59.7	229	301	1,405	1,772	823	1,556	477	128	248	169	57.8
Cfsm	0.099	0.379	0.498	2.33	2.93	1.36	2.58	0.790	0.212	0.411	0.280	0.098
In.	0.11	0.42	0.58	2.68	3.05	1.57	2.87	0.91	0.24	0.47	0.32	0.11

Calendar year 1958 : Max 15,200 Min 34 Mean 908 Cfsm 1.50 In. 20.41
Water year 1958-59 : Max 9,810 Min 11 Mean 594 Cfsm 0.983 In. 13.33

Peak discharge (base, 10,000 cfs, revised).--Jan. 22 (4 p.m.) 11,200 cfs (19.95 ft); Feb. 15 (1 p.m.) 10,700 cfs (19.36 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 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 1959.

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, 30 cfs July 19 (gage height, 1.21 ft); minimum, 0.045 cfs July 13, 14 (gage height, 0.425 ft).
1956-59: 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 poor. Flow affected slightly by pumping of water from coal mine above station. Records of suspended sediment loads for the water year 1959 are given in WSP 1641.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.43	0.05	0.65	1.47
.45	.075	.7	2.18
.50	.20	.8	4.4
.55	.45	.9	7.4
.60	.86		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.14	0.41	0.34	1.09	0.34	0.91	0.76	0.48	0.18	1.50	0.10	0.11
2	.085	.12	.29	.76	.29	.67	1.69	.39	.77	.33	.085	.085
3	.085	.10	.36	.45	.45	.67	1.80	.34	.27	.16	.075	.075
4	.075	.068	.34	.31	a1.5	.56	1.73	.34	.14	.12	*.10	.068
5	.075	.068	.27	b.20	a1.0	.63	1.39	.27	.24	.10	.085	.068
6	.075	.060	.19	b.25	a.75	1.00	1.08	.20	.18	.085	*1.96	.088
7	.068	.055	b.15	.30	a.65	.67	*.86	*.19	.10	.075	.46	.068
8	.068	.071	b.14	b.25	a.60	.67	.76	.19	.085	*.060	.47	.060
9	.068	.075	b.13	b.23	.59	.76	.90	.25	.10	.055	.19	.055
10	.20	*.064	b.12	b.22	2.07	.67	2.4	.18	.085	.060	.13	2.3
11	.075	.050	b.11	b.23	1.94	1.15	3.2	.16	.075	.055	.10	.24
12	.075	.050	b.11	b.25	1.53	2.02	7.2	.29	.96	.050	.085	.13
13	.068	.050	b.10	b.30	1.59	1.66	*4.2	.71	.25	.050	.075	.10
14	.068	.050	b.10	.42	4.2	1.39	2.6	.29	.12	.050	.068	.10
15	.075	.090	b.10	1.24	4.9	1.33	2.1	.18	*.15	.19	.068	.085
16	.085	.78	.13	b.9	2.55	.91	1.33	.14	.10	.060	.068	.085
17	.085	.29	.16	b.7	1.73	.76	*1.02	.13	.085	.52	.46	.075
18	.12	.32	.13	b.5	1.39	.63	.96	*.76	.075	.13	.10	.075
19	.10	.85	.14	.73	.91	.56	.91	.25	.075	2.9	.075	.068
20	.085	.27	.14	2.09	.67	.59	1.06	.31	.068	.60	.068	.068
21	.085	.19	.10	4.4	.59	.67	.86	.22	.068	.18	.075	*.075
22	.10	.18	.12	3.6	.56	.52	.81	.18	.068	.23	.068	.075
23	.12	.16	.33	a2.0	1.69	.42	*.76	.14	.068	.18	.060	.075
24	.13	.14	.29	1.3	1.27	.39	.81	.12	.46	.45	.068	.075
25	.10	.13	.14	.86	1.14	.36	.59	.16	.31	.32	.060	.075
26	.12	.18	.14	.71	.96	1.03	.52	*.14	.14	.40	.055	.075
27	.33	.12	.18	.59	.81	1.72	.45	.13	.10	.25	.44	.075
28	.15	1.66	.48	.52	.81	1.20	1.01	.10	.085	.18	.15	.075
29	.068	.79	.34	.45	-	1.20	.63	.10	.085	.13	.085	.075
30	.068	.39	.27	.49	--------	.96	.52	.12	.068	.12	.075	.075
31	.068	--------	.27	.46	--------	.86	--------	.31	--------	.12	*.075	--------
Total	3.114	7.831	6.21	26.80	37.48	27.54	44.91	7.77	5.560	9.710	6.033	4.753
Mean	0.100	0.261	0.200	0.865	1.34	0.888	1.50	0.251	0.185	0.313	0.195	0.158
Cfsm	0.149	0.390	0.299	1.29	2.00	1.33	2.24	0.375	0.276	0.467	0.291	0.236
In.	0.17	0.43	0.34	1.49	2.08	1.53	2.49	0.43	0.31	0.54	0.33	0.26

Calendar year 1958: Max 20.9 Min 0.021 Mean 0.878 Cfsm 1.31 In. 17.79
Water year 1958-59: Max 7.2 Min 0.050 Mean 0.514 Cfsm 0.767 In. 10.40

Peak discharge (base, 40 cfs).--No peak above base.

* 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 Helton Branch at Greenwood.
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 1959.

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, 18.2 cfs June 2 (gage height, 0.98 ft); minimum, 0.12 cfs Aug. 22, 23 (gage height, 0.47 ft).
1956-59: 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 good except those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21

0.47	0.12	0.65	1.85
.50	.24	.70	2.8
.55	.55	.75	4.2
.60	1.12	.80	5.9

Jan. 22 to Sept. 30

0.47	0.12	0.70	2.4
.50	.24	.75	3.6
.55	.54	.80	5.4
.60	.92	.90	11.2
.65	1.5		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.24	0.32	0.51	1.02	0.46	1.16	a0.9	0.68	0.46	0.33	0.16	0.20
2	.20	.20	.43	1.06	.40	1.06	a1.7	.61	10.9	.29	.16	.24
3	.20	.20	.51	.76	.50	.96	a1.8	.58	4.8	.22	.16	.20
4	.20	.20	.47	.55	1.35	.84	a1.7	.50	1.95	.20	.16	.18
5	.20	.20	b.35	b.30	1.06	.84	a1.5	.43	2.4	.20	.18	.18
6	.20	.20	b.27	a.31	.84	1.16	a1.1	.40	2.8	.20	.37	.16
7	.20	.20	b.23	a.33	.80	.92	*.92	*.34	1.45	.18	.26	.16
8	.20	.20	b.21	b.35	.76	.88	a.8	.31	.92	*.16	.26	.16
9	.20	.18	b.19	b.33	.72	.88	a1.0	.29	.68	.16	.20	.16
10	.29	*.16	b.18	b.31	1.40	.84	a2.3	.26	.58	.16	.18	.97
11	.20	.18	a.17	b.32	1.60	.93	a3.5	.24	.50	.16	.16	.50
12	.20	.18	a.17	b.33	1.30	1.65	a8.0	.26	1.90	.16	.14	.34
13	.20	.18	a.16	b.35	1.45	1.50	*5.0	.61	1.85	.16	.14	.29
14	.18	.18	a.16	.40	4.9	1.30	2.8	.50	.96	.16	.14	.26
15	.20	.20	a.15	.99	7.0	1.10	a2.0	.37	*.68	.16	.14	.24
16	.20	.29	a.18	b.85	3.2	.92	a1.5	.31	.58	.16	.14	.22
17	.20	.26	a.22	b.75	2.1	.84	*1.16	.31	.46	.29	.14	.20
18	.22	.26	.20	b.65	1.60	.72	1.10	*.63	.37	.22	.14	.20
19	.20	.70	.22	.76	1.16	.64	1.06	.50	.31	.26	.14	.20
20	.20	.40	.22	1.92	.92	.68	1.16	.46	.29	.24	.14	.20
21	.20	.29	.18	5.7	.84	.76	1.06	.50	.26	.18	.14	*.20
22	.20	.26	.18	5.5	a.83	.64	1.01	.40	.24	.20	.14	.20
23	.22	.24	.24	2.0	a1.9	.61	.92	.37	.22	.20	.27	.20
24	.22	.24	.31	1.35	a1.4	.61	.80	.34	.40	.18	.20	.20
25	.20	.22	.24	1.06	1.06	.58	.72	.29	.34	.20	.18	.22
26	.20	.26	.22	.92	.96	.84	.68	.29	.29	.22	.16	.22
27	.20	.22	.22	.76	.84	a1.8	.64	.65	.24	.24	.37	.22
28	.18	1.02	.31	.68	.84	a1.4	.97	.61	.22	.20	.29	.20
29	.16	.97	.34	.64	-	a1.3	.84	.50	.20	.20	.20	.20
30	.16	.60	.31	.58	--------	a1.1	.76	.46	.20	.18	.20	.20
31	.16	--------	.29	.50	--------	a1.0	--------	.54	--------	.16	*.18	--------
Total	6.23	9.21	8.04	32.33	42.19	30.46	49.40	13.54	37.45	6.23	5.84	7.32
Mean	0.201	0.307	0.259	1.04	1.51	0.983	1.65	0.437	1.25	0.201	0.188	0.244
Cfsm	0.236	0.361	0.305	1.22	1.78	1.16	1.94	0.514	1.47	0.236	0.221	0.287
In.	0.27	0.40	0.35	1.41	1.85	1.33	2.16	0.59	1.64	0.27	0.26	0.32

Calendar year 1958: Max 18.5 Min 0.15 Mean 1.10 Cfsm 1.29 In. 17.49
Water year 1958-59: Max 10.9 Min 0.14 Mean 0.680 Cfsm 0.800 In. 10.85

Peak discharge (base, 50 cfs).--No peak above base.

* 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 Cane Branch near Parkers Lake.
b Stage-discharge relation affected by ice.

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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 1959.

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.--6 years (1953-59), 224 cfs.

Extremes.--Maximum discharge during year, 4,490 cfs Feb. 15 (gage height, 9.61 ft); no flow Sept. 27-30.
1952-59: Maximum discharge, 14,900 cfs Nov. 19, 1957 (gage height, 19.55 ft), from rating curve extended above 6,700 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

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

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet and discharge, in cubic feet per second)

1.5	0	2.3	17
1.6	.2	2.5	37
1.7	.6	2.7	75
1.8	1.3	3.0	155
1.9	2.7	4.0	560
2.0	4.5	5.0	1,090
2.1	7.2	8.0	3,200
2.2	11		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	14	a170	167	194	270	137	92	44	7.6	57	22
2	15	24	125	315	169	232	426	82	41	6.0	30	24
3	15	29	*131	218	162	208	371	71	41	5.8	21	19
4	14	24	183	166	384	197	331	61	32	4.1	133	13
5	13	21	186	a70	327	172	253	55	28	3.2	90	9.5
6	12	19	176	a100	253	432	211	51	117	3.2	41	6.9
7	11	17	131	*90	218	340	172	44	57	2.1	26	5.2
8	9.9	16	115	88	208	311	155	37	33	1.5	a20	3.9
9	9.9	a15	102	b80	200	281	270	35	24	1.3	a15	3.0
10	15	15	a80	b65	640	311	1,390	36	21	1.0	a12	2.6
11	16	15	a70	b60	587	270	877	35	19	.9	a10	2.6
12	14	15	a60	b60	376	542	1,020	30	22	.8	a8	1.8
13	13	15	a50	65	538	452	952	59	19	.6	a7	1.2
14	12	14	a45	82	2,450	407	690	118	15	.5	a6	.8
15	9.9	15	a40	622	2,960	315	484	73	11	.4	a5	.7
16	9.5	16	a38	1,200	1,070	253	376	55	8.7	.3	a20	.6
17	8.3	19	b38	a430	655	208	295	44	6.9	.3	a15	.5
18	8.3	23	b37	a270	*461	169	256	121	5.8	1.8	*30	*.4
19	a8	82	b36	a500	323	149	278	155	4.5	2.4	24	.3
20	a10	98	b38	a1,600	256	140	288	105	3.7	1.5	16	.3
21	a13	65	37	1,710	200	149	232	131	3.0	.8	10	.2
22	a12	50	36	1,890	186	146	190	118	2.4	.8	8.3	.2
23	a11	39	35	745	476	122	155	82	2.0	7.2	8.0	.1
24	a11	33	53	470	376	112	137	102	3.7	334	6.6	.1
25	a12	31	57	371	278	*102	120	80	11	82	5.8	.1
26	a11	30	46	274	242	185	110	65	61	37	5.8	.1
27	a11	32	46	299	211	336	102	51	46	55	5.8	0
28	a10	156	41	327	186	190	131	44	21	100	23	0
29	a10	a350	41	281	-	155	128	*36	14	110	37	0
30	*10	a300	41	260	--------	176	102	65	10	63	23	0
31	10	--------	39	222	--------	152	--------	59	--------	82	18	--------
Total	360.8	1,592	2,323	13,097	14,586	7,484	10,639	2,192	727.7	917.1	737.3	119.1
Mean	11.6	53.1	74.9	422	521	241	355	70.7	24.3	29.6	23.8	3.97
Cfsm	0.070	0.322	0.454	2.56	3.16	1.46	2.15	0.428	0.147	0.179	0.144	0.024
In.	0.08	0.36	0.52	2.95	3.29	1.69	2.40	0.49	0.16	0.21	0.17	0.03

Calendar year 1958: Max 3,660 Min 3.7 Mean 230 Cfsm 1.39 In. 18.88
Water year 1958-59: Max 2,960 Min 0 Mean 150 Cfsm 0.909 In. 12.35

Peak discharge (base, 3,500 cfs).--Feb. 15 (1:30 a.m.) 4,490 cfs (9.61 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.

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 1959. 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.--25 years, 708 cfs.

Extremes.--Maximum discharge during year, 31,600 cfs Jan. 22 (gage height, 27.19 ft); minimum, 6.7 cfs Oct. 30 to Nov. 1 (gage height, 1.46 ft).
1934-59: Maximum discharge, 44,300 cfs Feb. 3, 1939 (gage height, 33.58 ft); no flow part of each day Aug. 12-15, 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 (discharge, 74,700 cfs).

Remarks.--Records good.

Revisions.--WSP 1436: Drainage area.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.4	5.1	3.0	247
1.5	8.0	4.0	660
1.6	12	5.0	1,180
1.8	24	7.0	2,630
2.0	43	10.0	5,200
2.3	82	14.0	9,500
2.6	142	20.0	18,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	13	250	382	254	560	775	280	498	67	221	250
2	29	25	178	502	225	506	890	354	1,990	55	134	186
3	79	32	153	510	212	470	1,040	484	*1,060	46	84	171
4	54	33	228	398	454	454	1,190	362	546	42	62	125
5	41	33	326	287	1,210	410	1,050	*284	374	48	412	119
6	33	27	237	188	965	660	880	231	414	45	534	110
7	26	22	176	186	725	890	710	196	280	33	654	86
8	22	20	142	228	620	780	585	171	196	27	430	73
9	18	18	123	635	556	695	506	146	153	23	280	63
10	16	17	106	580	520	615	570	134	125	20	*188	58
11	14	16	87	458	520	630	1,470	121	104	17	138	132
12	12	*15	78	390	466	3,770	2,300	113	93	18	100	166
13	11	15	68	308	625	2,180	3,410	156	142	45	76	117
14	*10	14	64	284	9,750	1,290	1,740	370	113	44	59	84
15	10	15	54	364	7,770	1,140	1,110	247	80	40	632	68
16	10	17	50	1,820	3,030	*970	840	186	64	31	1,010	57
17	9.4	16	*44	1,160	*1,560	840	665	153	54	24	318	48
18	9.0	15	42	690	1,110	690	635	136	46	21	223	40
19	11	36	43	575	795	570	1,420	125	40	44	528	33
20	11	84	43	665	590	506	2,970	115	35	76	290	28
21	8.7	104	41	*7,780	470	520	2,380	132	31	*68	199	25
22	12	78	42	18,200	418	695	1,470	157	27	82	166	22
23	12	62	39	2,530	734	655	1,020	129	24	82	121	21
24	11	51	43	1,250	1,220	605	765	117	332	72	134	19
25	11	43	50	865	975	542	615	100	446	281	117	17
26	11	40	46	680	805	724	510	86	790	366	84	16
27	9.4	36	52	551	665	5,940	*434	82	326	225	68	14
28	8.3	104	485	450	556	2,690	386	86	186	140	68	13
29	7.7	890	1,680	378	-	1,460	346	87	123	96	1,410	12
30	7.0	442	805	326	-------	1,140	304	204	89	72	624	*10
31	6.7	-------	497	294	-------	920	-------	294	-------	432	346	-------
Total	545.2	2,333	6,272	43,914	37,800	34,517	32,986	5,838	8,781	2,682	9,710	2,183
Mean	17.6	77.8	202	1,417	1,350	1,113	1,100	188	293	86.5	313	72.8
Cfsm	0.046	0.204	0.529	3.71	3.53	2.91	2.88	0.492	0.767	0.226	0.819	0.191
In.	0.05	0.23	0.61	4.28	3.68	3.36	3.21	0.57	0.85	0.26	0.95	0.21

Calendar year 1958: Max 8,500 Min 2.5 Mean 520 Cfsm 1.36 In. 18.46
Water year 1958-59: Max 18,200 Min 6.7 Mean 514 Cfsm 1.35 In. 18.26

Peak discharge (base, 16,000 cfs).--Jan. 22 (5:30 a.m.) 31,600 cfs (27.19 ft).

* Discharge measurement made on this day.

4095. 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 1959. 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.--29 years, 458 cfs.

Extremes.--Maximum discharge during year, 9,320 cfs Feb. 14 (gage height, 10.35 ft); minimum, 4.7 cfs Sept. 30 (gage height, 0.99 ft).

1930-59: 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.

Revisions (water years).--WSP 1306: 1931(M), 1935-37(M), 1943(M), 1944(M). WSP 1436: Drainage area.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.0	5.0	2.0	130
1.1	8.9	2.5	270
1.2	15	3.0	485
1.4	31	4.0	1,070
1.6	52	6.0	2,700
1.8	85	9.0	6,960

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	15	177	229	217	445	770	211	1,100	22	45	39
2	23	25	135	251	194	440	746	230	1,780	20	41	47
3	25	38	120	232	183	390	740	240	*1,270	20	33	41
4	24	33	142	200	317	372	770	200	686	20	27	36
5	20	31	154	142	595	333	686	*164	412	25	210	33
6	19	29	130	164	529	566	595	147	317	29	390	35
7	17	25	104	130	412	668	485	130	260	39	274	30
8	16	21	89	147	368	556	417	113	194	28	202	29
9	14	20	80	317	333	496	372	100	147	20	157	28
10	13	18	74	321	329	455	663	91	118	16	*108	27
11	12	18	62	313	333	574	1,740	85	100	13	72	25
12	12	*17	58	277	277	3,210	2,020	80	122	12	54	23
13	14	17	58	200	405	1,830	2,260	104	217	14	42	20
14	15	16	51	188	6,340	1,190	1,430	157	147	16	36	19
15	*13	17	48	294	5,870	1,120	1,000	116	102	13	31	18
16	12	19	44	1,140	2,350	1,020	770	93	80	10	50	16
17	12	23	*40	788	*1,350	*818	600	80	64	8.9	98	13
18	10	32	38	445	974	634	529	74	54	9.4	111	12
19	9.9	39	39	485	698	512	866	71	45	30	204	10
20	9.4	71	39	455	518	440	1,250	69	38	56	125	9.9
21	9.4	74	37	*1,640	412	496	1,320	172	35	*44	78	8.9
22	9.4	55	37	4,670	354	920	1,000	629	32	35	55	8.0
23	9.9	46	37	1,770	708	794	770	800	29	35	45	7.1
24	9.9	40	45	974	1,020	650	584	354	28	32	42	6.7
25	9.4	36	55	692	782	534	470	226	48	113	56	6.4
26	9.4	35	44	540	628	684	390	175	61	220	64	6.1
27	9.4	34	52	440	512	5,900	*329	149	55	108	44	5.7
28	9.4	69	300	372	430	2,550	302	202	40	111	36	5.4
29	9.4	368	551	313	-	1,450	270	211	31	120	32	*5.0
30	9.4	277	368	277	--------	1,220	235	1,020	26	98	29	4.7
31	9.4	--------	264	248	--------	956	--------	1,300	--------	61	27	--------
Total	416.7	1,558	3,472	18,654	27,438	32,223	24,379	7,793	7,638	1,398.3	2,818	574.9
Mean	13.4	51.9	112	602	980	1,039	813	251	255	45.1	90.9	19.2
Cfsm	0.049	0.191	0.412	2.21	3.60	3.82	2.99	0.923	0.938	0.166	0.334	0.071
In.	0.06	0.21	0.47	2.55	3.75	4.41	3.33	1.07	1.04	0.19	0.39	0.08

Calendar year 1958: Max 6,670 Min 3.6 Mean 371 Cfsm 1.36 In. 18.53
Water year 1958-59: Max 6,340 Min 4.7 Mean 352 Cfsm 1.29 In. 17.55

Peak discharge (base, 6,500 cfs).--Feb. 14 (3 p.m.) 9,320 cfs (10.35 ft); Mar. 27 (9 a.m.) 7,720 cfs (9.45 ft).

* Discharge measurement made on this day.

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 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 1959.

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

Average discharge.--17 years, 1,730 cfs.

Extremes.--Maximum discharge during year, 39,600 cfs Jan. 22 (gage height, 28.58 ft); minimum, 45 cfs Sept. 30 (gage height, 1.88 ft).

1942-59: 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 for period of no gage-height record, which are fair.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

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	26.0	33,200
6.0	2,000		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	85	810	925	705	1,420	2,380	765	2,240	168	587	440
2	100	125	568	885	615	1,420	2,160	725	3,850	144	356	372
3	97	128	492	1,050	576	1,250	2,560	945	3,870	130	260	312
4	109	123	492	880	750	1,190	2,770	865	2,130	113	193	280
5	141	130	640	650	1,830	1,090	2,680	695	1,290	104	*256	220
6	121	118	615	468	2,120	1,490	2,270	584	1,080	153	1,150	196
7	*106	116	500	460	1,610	2,200	1,850	516	900	176	1,040	196
8	97	104	420	512	1,370	1,940	1,550	456	650	130	985	193
9	90	97	380	830	1,250	1,730	1,350	412	504	106	660	182
10	93	*93	336	1,290	1,180	1,580	2,000	372	416	98	480	165
11	97	90	300	935	1,210	1,450	4,830	348	360	93	360	150
12	83	87	272	855	1,100	7,540	6,360	324	332	102	280	162
13	79	83	256	775	1,180	6,020	8,450	360	420	82	216	240
14	76	82	236	675	14,600	3,750	5,100	538	460	70	165	179
15	72	85	208	775	20,600	3,140	3,450	615	340	82	135	144
16	71	98	*165	3,040	8,320	2,960	2,660	472	272	102	1,120	125
17	70	123	176	a2,500	4,570	2,430	2,060	400	220	93	745	109
18	68	123	182	a1,500	3,260	2,040	1,710	360	186	88	540	98
19	66	208	179	a1,200	2,380	1,610	2,260	332	156	125	568	90
20	66	264	176	1,600	1,720	1,410	4,410	312	135	179	670	83
21	65	280	172	3,830	1,370	1,400	4,980	356	123	232	432	77
22	65	300	162	32,400	1,180	1,930	3,710	650	111	162	340	72
23	64	244	156	13,100	1,520	2,000	2,810	1,870	*104	182	316	66
24	62	204	182	3,660	3,140	1,760	2,100	995	107	264	268	64
25	61	179	200	2,530	2,690	1,560	1,680	625	445	380	236	62
26	59	162	200	1,920	2,180	1,660	1,420	500	915	795	236	59
27	61	159	200	1,530	1,780	12,800	1,220	520	725	765	216	55
28	61	266	388	1,270	1,500	8,380	1,100	690	424	476	182	52
29	61	1,150	2,390	1,060	-	4,460	975	605	300	600	581	48
30	59	1,440	1,980	920	--------	3,600	860	1,030	220	416	1,240	47
31	59	--------	1,210	805	--------	2,910	--------	2,360	--------	328	556	--------
Total	2,472	6,746	14,643	84,830	86,306	90,120	83,715	20,597	23,285	6,938	15,369	4,538
Mean	79.7	225	472	2,736	3,082	2,907	2,790	664	776	224	496	151
Cfsm	0.084	0.236	0.495	2.87	3.23	3.05	2.92	0.696	0.813	0.235	0.520	0.158
In.	0.10	0.26	0.57	3.31	3.36	3.51	3.26	0.80	0.91	0.27	0.60	0.18

Calendar year 1958: Max 18,500 Min 31 Mean 1,292 Cfsm 1.35 In. 18.37
Water year 1958-59: Max 32,400 Min 47 Mean 1,204 Cfsm 1.26 In. 17.13

Peak discharge (base, 22,000 cfs, revised).--Jan. 22 (12 m.) 39,600 cfs (28.58 ft); Feb. 14 (10 p.m.) 30,000 cfs (24.65 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.

4125. Pitman Creek at Somerset, Ky.

Location.--Lat 37°07'01", long 84°35'31", 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 1959.

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.--6 years, 43.8 cfs.

Extremes.--Maximum discharge during year, 2,850 cfs Aug. 4 (gage height, 8.74 ft), from rating curve extended above 1,500 cfs; minimum, 0.3 cfs Sept. 29, 30 (gage height, 0.71 ft).

1953-59: Maximum discharge, that of Aug. 4, 1959; 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.7	0.3	1.5	22
.8	.8	1.7	41
.9	1.7	2.0	82
1.0	3.2	2.5	230
1.1	5.2	3.0	420
1.2	7.7	4.0	820
1.3	11		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	6.9	33	51	33	55	37	17	5.4	2.6	2.8	26
2	4.4	9.0	*27	53	28	42	222	15	6.4	2.4	1.6	15
3	4.2	7.0	a25	37	32	41	93	14	6.0	2.2	1.2	7.2
4	4.2	5.7	a40	a25	89	38	67	12	4.6	1.7	513	5.0
5	3.8	5.2	39	a15	58	37	56	11	6.3	17	80	4.0
6	3.4	5.0	29	a10	48	107	46	10	15	6.2	26	3.0
7	3.0	4.4	25	*17	41	64	41	9.0	6.4	2.8	15	2.6
8	2.8	4.2	23	20	40	53	36	8.4	4.8	2.1	19	2.1
9	2.6	4.0	20	16	38	58	103	7.7	4.0	1.5	10	1.7
10	14	4.0	16	12	274	50	226	9.4	3.6	1.2	7.2	1.7
11	7.7	4.0	14	12	130	56	160	7.7	a6	.9	5.4	2.1
12	5.2	3.4	14	12	86	86	244	7.0	7.7	.7	4.2	1.5
13	4.4	3.4	13	11	154	65	198	29	4.6	.6	3.6	1.3
14	4.0	3.2	11	14	628	57	125	19	2.8	.5	2.8	1.2
15	3.4	3.8	9.7	181	392	52	89	12	2.2	.5	2.4	1.1
16	3.2	5.2	9.4	178	181	42	68	9.7	2.0	.5	8.8	1.0
17	2.7	5.2	9.4	91	117	36	55	8.4	1.7	7.3	7.8	.8
18	9.4	5.7	9.4	82	*84	31	49	23	1.5	1.2	*9.5	*.8
19	7.2	39	8.7	80	61	27	48	16	1.4	.8	10	.6
20	5.0	20	9.4	306	49	27	49	12	1.2	.8	6.9	.6
21	4.2	14	7.4	336	42	31	39	14	1.2	.8	5.4	.6
22	3.8	12	7.4	234	38	26	33	12	1.2	5.4	4.2	.5
23	3.6	10	a7	107	121	22	27	9.0	1.2	5.2	3.0	.5
24	4.2	9.0	a15	75	70	21	24	8.0	24	24	2.8	.5
25	4.0	8.0	a10	61	57	*19	21	7.7	10	11	2.8	.5
26	3.8	10	a9	53	50	88	20	8.0	20	4.2	2.4	.4
27	3.6	9.4	a10	64	44	120	19	7.0	14	2.6	2.0	.4
28	3.4	76	a13	57	41	60	29	6.2	6.4	2.0	4.4	.4
29	3.2	64	a10	50	-	52	22	*5.4	4.4	1.8	7.2	.3
30	*2.8	42	8.0	44	--------	48	18	5.7	3.2	2.6	3.8	.4
31	2.8	--------	8.0	38	--------	41	--------	6.0	--------	9.6	2.6	--------
Total	138.4	402.7	489.8	2,342	3,026	1,552	2,264	346.3	179.2	122.7	777.8	83.8
Mean	4.46	13.4	15.8	75.5	108	50.1	75.5	11.2	5.97	3.96	25.1	2.79
Cfsm	0.142	0.428	0.505	2.41	3.45	1.60	2.41	0.358	0.191	0.127	0.802	0.089
In.	0.16	0.48	0.58	2.78	3.60	1.84	2.69	0.41	0.21	0.15	0.92	0.10

Calendar year 1958: Max 520 Min 0.7 Mean 39.9 Cfsm 1.27 In. 17.28
Water year 1958-59: Max 628 Min 0.3 Mean 32.1 Cfsm 1.03 In. 13.92

Peak discharge (base, 850 cfs).--Feb. 14 (7:30 p.m.) 992 cfs (4.43 ft); Aug. 4 (3 p.m.) 2,850 cfs (8.74 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.

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 1959. Monthly discharge only for 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.--20 years, 8,637 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 25,300 cfs Apr. 16, 17 (gage height, 20.20 ft); minimum daily, 60 cfs Sept. 15-20.
1939-59: 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 except those for period of no gage-height record, which are poor. Flow regulated by Lake Cumberland (see p. 60).

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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*12,600	3,030	3,840	2,000	538	217	*7,640	11,900	6,870	4,720	6,310	3,840
2	13,500	1,120	8,290	5,540	10,900	*5,880	7,260	8,760	7,740	4,960	514	3,000
3	14,500	5,000	8,120	5,420	4,160	2,040	2,500	3,890	1,130	701	3,540	2,020
4	9,840	2,160	7,720	10,200	12,100	3,570	3,480	5,240	4,570	132	3,120	1,380
5	6,820	110	8,040	15,200	2,720	800	2,080	4,830	*7,750	124	2,040	2,290
6	11,600	*241	7,800	*12,900	5,080	11,000	3,960	*6,920	9,990	1,670	4,680	4,700
7	11,600	301	5,440	8,980	4,470	755	4,180	5,100	10,700	*2,160	6,580	5,640
8	21,200	2,190	14,900	7,500	2,700	109	4,660	1,000	8,900	3,590	940	5,590
9	22,500	175	16,800	9,620	2,020	112	6,180	1,950	7,360	3,120	115	9,700
10	13,300	3,070	14,300	5,940	117	3,460	5,010	136	6,080	2,650	5,080	3,480
11	10,200	1,350	14,000	646	9,020	5,100	6,800	3,580	10,300	2,300	6,440	940
12	6,530	1,380	14,500	8,900	4,500	10,300	14,600	4,870	11,200	312	5,530	1,800
13	13,200	1,230	12,100	7,280	1,400	2,410	20,600	4,740	8,140	5,720	4,950	285
14	15,200	3,320	6,870	4,450	189	162	24,600	5,210	7,730	6,360	3,700	a70
15	6,800	3,300	9,780	9,060	130	128	24,600	5,260	11,400	1,240	4,050	a60
16	1,370	612	7,900	16,800	905	7,610	25,100	4,120	11,300	1,680	3,300	a60
17	1,140	3,140	6,160	7,200	130	2,450	24,700	4,260	13,200	2,880	6,540	a60
18	2,850	2,320	8,060	5,680	4,800	3,880	13,800	4,640	12,500	2,220	7,680	a60
19	1,920	1,090	5,630	8,600	7,900	4,180	4,080	4,340	11,000	1,380	5,500	a60
20	4,860	518	9,150	3,640	11,700	3,220	12,600	3,640	4,560	5,090	6,580	a60
21	5,200	518	6,350	1,460	7,220	7,000	14,200	3,160	3,520	8,460	5,520	7,140
22	6,140	2,400	8,630	8,220	3,460	4,540	14,400	2,060	4,820	4,260	4,740	8,010
23	3,240	225	11,500	10,600	215	4,280	14,300	1,420	5,520	2,320	3,320	8,540
24	4,040	5,870	6,960	5,350	105	5,280	13,700	334	4,670	1,900	5,780	6,640
25	4,660	3,760	3,220	270	101	4,330	11,400	3,050	5,250	2,120	7,700	7,960
26	4,060	7,780	5,040	760	100	3,520	7,210	3,000	290	386	10,700	2,990
27	6,960	5,860	6,770	6,980	101	5,630	13,500	2,620	870	2,860	10,500	1,790
28	4,620	12,100	2,930	775	101	5,080	14,900	726	412	4,040	12,400	4,730
29	6,090	5,900	8,220	456	-	1,910	15,300	315	4,040	2,460	5,620	4,680
30	4,140	2,290	2,810	111	--------	5,840	15,400	185	5,380	7,400	226	4,280
31	960	--------	1,040	4,010	--------	6,990	--------	640	--------	6,360	5,580	--------
Total	251,640	82,360	250,970	195,548	96,882	121,783	352,740	111,896	207,192	95,575	159,275	101,655
Mean	8,117	2,745	8,096	6,308	3,460	3,928	11,760	3,610	6,906	3,083	5,138	3,388

	Observed			Adjusted†		
Calendar year 1958:	Max 26,800	Min 100	Mean 10,580	Mean 8,487	Cfsm 1.47	In. 19.90
Water year 1958-59:	Max 25,100	Min 60	Mean 5,555	Mean 5,903	Cfsm 1.02	In. 13.84

* Discharge measurement made on this day.
† Adjusted for change in contents in Lake Cumberland; records furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of tailwater elevations at Wolf Creek Dam.

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 Cover Creek, 5.3 miles west of Jamestown, Fentress 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 1959. Prior to March 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.--17 years, 388 cfs.

Extremes.--Maximum discharge during year, 8,750 cfs Feb. 14 (gage height, 13.27 ft); minimum, 12 cfs July 9, 10, 13-18, Sept. 28-30; minimum gage height, 1.01 ft Oct. 23.
1942-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 13				Feb. 14 to Sept. 30			
1.0	16	2.5	320	1.0	8.0	2.5	320
1.2	29	3.0	478	1.1	14	3.0	478
1.4	54	4.0	910	1.2	22	4.0	910
1.6	92	6.0	2,180	1.3	33	6.0	2,180
2.0	186	8.0	3,650	1.5	66	10.0	5,350
				2.0	186	11.0	6,300

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	g61	331	228	202	410	548	196	312	17	21	93
2	61	51	259	284	181	417	568	209	326	20	16	77
3	54	51	225	267	169	384	626	199	*272	18	14	86
4	50	50	238	233	251	357	743	165	189	17	14	75
5	47	44	235	184	351	326	662	*148	141	16	84	55
6	41	38	199	143	342	478	556	136	181	16	86	76
7	37	34	162	148	303	489	464	122	186	16	93	81
8	34	32	145	191	284	430	404	105	129	13	98	75
9	31	32	136	326	272	404	357	93	93	12	79	77
10	31	33	121	314	270	375	684	88	73	19	*48	73
11	33	34	107	256	289	428	1,450	86	66	20	36	73
12	32	*32	101	235	256	2,300	1,510	77	66	14	28	88
13	28	30	94	217	391	1,180	1,440	95	79	13	21	68
14	*25	29	84	202	5,520	806	940	110	64	12	19	53
15	24	30	70	320	3,860	779	707	95	50	12	17	44
16	24	43	65	1,210	*1,510	*671	568	81	40	12	20	36
17	23	61	*68	730	925	580	475	70	34	12	21	31
18	23	63	67	500	694	471	434	64	30	13	21	25
19	22	114	63	410	518	407	510	61	25	13	76	21
20	g21	189	63	*441	413	369	738	55	23	*15	62	19
21	g20	160	61	1,720	348	400	734	64	22	18	48	17
22	g19	128	51	3,520	306	730	635	68	20	17	39	16
23	g18	105	53	1,200	500	614	522	73	20	21	39	15
24	g21	90	65	738	653	522	441	57	19	21	39	14
25	g36	80	72	556	541	427	378	48	21	32	38	13
26	g43	76	67	454	464	797	328	45	30	67	32	13
27	g46	86	82	391	400	4,170	*295	57	30	61	28	13
28	g74	170	259	337	357	1,510	270	73	25	53	28	12
29	g80	761	314	286	-	955	243	88	20	38	26	*12
30	g65	464	272	254	--------	792	215	306	19	24	26	12
31	g68	--------	233	225	--------	648	--------	289	--------	23	40	--------
Total	1,181	3,171	4,362	16,520	20,570	23,626	18,445	3,423	2,605	675	1,257	1,363
Mean	38.1	106	141	533	735	762	615	110	86.8	21.8	40.5	45.4
Cfsm	0.189	0.525	0.698	2.64	3.64	3.77	3.04	0.545	0.430	0.108	0.200	0.225
In.	0.22	0.58	0.80	3.04	3.79	4.35	3.40	0.63	0.48	0.12	0.23	0.25

Calendar year 1958: Max 5,720 Min 14 Mean 301 Cfsm 1.49 In. 20.24
Water year 1958-59: Max 5,520 Min 12 Mean 266 Cfsm 1.32 In. 17.89

Peak discharge (base, 8,000 cfs).--Feb. 14 (11:30 a.m.) 8,750 cfs (13.27 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 upstream from confluence with East Fork.

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

Records available.--October 1942 to September 1959. 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.

Average discharge.--17 years, 165 cfs.

Extremes.--Maximum discharge during year, 4,140 cfs Feb. 14 (gage height, 8.25 ft); minimum, 5.4 cfs Sept. 27, 28 (gage height, 0.41 ft).
1942-59: Maximum discharge, 15,100 cfs Mar. 21, 1955 (gage height, 16.30 ft); minimum, 2.6 cfs Sept. 13-19, 1954; minimum gage height, 0.38 ft 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 13				Feb. 14 to Sept. 30			
0.5	7.6	1.6	112	0.4	5.2	1.6	118
.6	10	2.0	230	.6	10	2.0	230
.8	18	4.0	1,050	.8	20	4.0	1,050
1.0	30	5.0	1,580	1.0	34	6.0	2,160
1.3	61			1.3	68	7.0	2,910

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	11	71	53	54	185	221	74	41	8.2	7.6	38
2	16	12	55	64	48	167	354	98	36	9.1	7.1	53
3	16	13	49	59	48	153	356	76	*33	8.5	6.6	53
4	15	14	51	53	100	135	378	64	27	8.2	7.1	32
5	14	12	50	42	130	125	310	*58	26	7.9	29	23
6	13	11	41	34	98	248	254	51	109	7.6	25	58
7	12	9.6	34	34	85	209	212	45	65	7.3	18	42
8	11	9.1	31	50	84	182	182	40	42	7.1	26	33
9	10	9.1	29	122	80	167	162	37	30	6.6	29	35
10	11	8.5	24	84	87	145	284	36	26	7.3	*17	35
11	11	8.2	22	65	90	244	402	34	25	7.3	12	87
12	11	*8.2	22	57	78	1,100	490	31	78	8.2	9.6	54
13	9.9	7.6	20	53	242	498	494	33	81	7.3	8.5	33
14	*9.4	7.6	18	49	2,590	342	356	30	42	6.8	7.6	25
15	9.4	8.5	17	217	1,520	321	276	28	29	6.6	7.6	19
16	8.8	13	16	504	*610	*265	230	26	23	6.8	7.6	16
17	8.8	22	*16	244	374	227	194	24	19	28	7.3	13
18	8.8	20	16	157	272	185	179	23	17	24	19	11
19	8.5	98	15	124	194	162	203	22	15	17	52	9.6
20	8.5	78	15	*206	148	148	272	20	13	*20	24	8.8
21	8.8	49	14	1,030	116	154	272	21	12	13	17	8.2
22	8.8	37	13	1,170	104	258	240	36	11	10	12	7.6
23	8.5	28	14	425	251	200	206	28	10	9.9	9.9	7.3
24	8.5	23	16	265	254	176	176	22	10	10	9.1	7.1
25	8.2	20	16	192	206	150	153	19	13	16	8.2	6.6
26	8.2	18	15	151	179	399	130	19	15	26	7.9	6.1
27	8.2	18	17	114	150	1,140	*112	20	12	17	7.8	5.6
28	8.2	97	78	89	130	570	104	21	9.9	13	7.6	5.8
29	7.9	286	90	75	-	374	92	24	9.1	9.9	7.6	*5.8
30	7.6	112	64	67	--------	307	81	59	8.8	8.8	9.1	5.8
31	7.6	--------	55	59	--------	258	--------	54	--------	7.9	26	--------
Total	317.6	1,068.4	1,004	5,908	8,322	9,194	7,375	1,173	887.8	351.3	449.6	744.3
Mean	10.2	35.6	32.4	191	297	297	246	37.8	29.6	11.3	14.5	24.8
Cfsm	0.089	0.310	0.282	1.66	2.58	2.58	2.14	0.329	0.257	0.098	0.126	0.216
In.	0.10	0.39	0.32	1.91	2.69	2.97	2.39	0.38	0.29	0.11	0.15	0.24

Calendar year 1958: Max 1,830 Min 4.8 Mean 132 Cfsm 1.15 In. 15.57
Water year 1958-59: Max 2,590 Min 5.6 Mean 101 Cfsm 0.878 In. 11.90

Peak discharge (base, 3,400 cfs).--Jan. 21 (9 p.m.) 3,490 cfs (7.63 ft); Feb. 14 (9:30 a.m.) 4,140 cfs (8.25 ft).

* Discharge measurement made on this day.

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 1959. 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.--17 years, 176 cfs.

Extremes.--Maximum discharge during year, 2,160 cfs Jan. 22 (gage height, 5.11 ft); minimum, 12 cfs Sept. 27-30; minimum gage height, 0.91 ft Sept. 30.
1942-59: 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 fair. Some regulation at low flow caused by small mills above station.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.9	12	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		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	19	99	82	84	193	208	92	415	22	58	21
2	22	22	80	116	76	178	379	84	516	37	40	27
3	22	24	73	104	73	165	388	74	364	33	31	38
4	21	22	73	88	137	147	498	69	*202	26	31	34
5	20	20	74	62	147	139	388	63	141	39	94	27
6	19	18	65	51	121	182	302	*59	117	34	65	24
7	18	17	54	54	112	168	235	53	95	32	46	22
8	17	16	49	66	108	153	196	48	74	26	38	35
9	17	16	47	119	104	151	175	45	60	22	34	58
10	24	16	43	106	121	143	376	43	53	28	30	68
11	21	16	38	90	155	157	590	42	49	30	*25	74
12	18	15	36	80	137	498	688	39	49	28	22	45
13	17	*15	35	74	178	404	698	41	51	22	21	34
14	17	15	32	72	1,190	313	480	45	45	20	19	30
15	*16	16	21	185	1,390	274	360	42	37	19	19	26
16	16	17	18	480	625	220	285	37	33	18	19	23
17	15	20	22	296	*412	*190	229	35	30	18	19	21
18	15	28	*26	190	332	163	199	34	27	19	20	19
19	14	93	25	157	235	145	185	31	25	19	19	18
20	14	86	24	249	182	137	241	33	23	18	18	17
21	14	59	24	*593	151	135	260	32	22	*17	17	16
22	14	45	22	1,170	137	125	232	46	21	17	17	16
23	14	38	24	480	241	112	199	161	21	48	17	14
24	14	33	28	320	288	104	172	93	58	90	28	14
25	14	30	32	244	238	99	153	65	86	119	28	14
26	14	31	28	196	202	188	137	51	85	69	20	13
27	14	30	31	161	172	710	123	47	49	48	18	12
28	14	83	66	139	157	444	*123	63	36	40	18	12
29	14	223	112	117	-	336	110	65	29	35	18	12
30	14	135	97	106	--------	292	99	106	25	34	20	*12
31	13	--------	80	93	--------	244	--------	193	--------	41	30	--------
Total	519	1,218	1,478	6,340	7,505	6,909	8,708	1,931	2,838	1,068	899	796
Mean	16.7	40.6	47.7	205	268	223	290	62.3	94.6	34.5	29.0	26.5
Cfsm	0.159	0.387	0.454	1.95	2.55	2.12	2.76	0.593	0.901	0.329	0.276	0.252
In.	0.18	0.43	0.52	2.24	2.66	2.45	3.08	0.68	1.01	0.38	0.32	0.28

Calendar year 1958: Max 2,320 Min 9.2 Mean 168 Cfsm 1.60 In. 21.66
Water year 1958-59: Max 1,390 Min 12 Mean 110 Cfsm 1.05 In. 14.23

Peak discharge (base, 3,600 cfs).--No peak above base.

* Discharge measurement made on this day.

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 1959. 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.--37 years, 11,220 cfs (unadjusted).

Extremes.--Maximum discharge during year, 26,500 cfs Apr. 15; maximum gage height, 17.48 ft Apr. 15; minimum discharge, 176 cfs Sept. 20, 21, 22 (gage height, 1.31 ft).
1922-59: Maximum discharge, 145,000 cfs Dec. 29, 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 except those below 2,000 cfs, which are fair. Flow regulated by Lake Cumberland and Dale Hollow Reservoir (see p. 60).

Revisions (water years).--WSP 893: 1923-38. WSP 1276: 1924. WSP 1306: 1943 (monthly runoff).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 7, 8, 10, 11, 14, 16, Nov. 30, Dec. 9, 25, Jan. 5, 8, 11, 13, 16-18, 25, Feb. 3, 5, 6, 12, 14, 22, Mar. 7, 22, 23, Apr. 4, 12, 13, 18, 19, 21, 26, 28, June 2, 21, July 23, 31, Aug. 30, Sept. 11)

1.3	170	4.0	3,050
1.4	225	10.0	11,800
1.6	360	18.0	27,600
2.0	740		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13,800	1,960	4,590	2,340	1,890	798	7,780	15,700	2,100	6,080	6,840	4,300
2	*14,900	2,030	4,640	2,610	4,000	958	9,220	12,500	6,650	6,270	5,940	6,220
3	15,500	2,740	7,260	5,700	8,230	3,570	9,300	9,500	8,550	4,400	4,940	5,040
4	14,900	3,820	*8,740	6,900	7,020	3,010	5,780	6,150	3,960	2,740	3,940	4,260
5	10,700	3,650	8,910	12,900	12,500	4,090	3,720	6,340	3,060	720	5,560	2,890
6	8,490	1,680	9,090	16,700	6,270	3,310	3,690	5,820	7,830	1,190	5,360	2,240
7	12,900	866	8,130	14,800	4,820	9,820	*5,850	8,200	10,100	1,190	4,220	5,960
8	16,000	1,600	7,890	9,760	5,080	5,000	8,430	7,050	10,200	2,430	6,210	7,980
9	23,500	2,530	17,700	8,500	3,630	1,520	7,200	2,760	8,850	3,370	2,760	6,960
10	20,600	1,860	19,400	9,750	3,360	958	11,800	1,660	8,440	4,040	2,590	9,510
11	13,400	1,580	18,200	7,150	2,740	1,920	10,000	3,750	8,840	3,480	4,220	5,780
12	10,400	2,330	17,600	3,010	7,700	6,820	10,200	4,430	9,780	2,630	8,060	2,150
13	9,420	1,610	16,100	6,650	6,580	10,200	19,500	7,420	10,800	2,360	7,800	1,370
14	14,400	1,500	12,500	8,060	7,680	5,670	24,000	7,920	8,730	4,290	7,160	2,610
15	14,700	2,090	10,700	6,760	10,800	2,050	26,300	8,040	8,130	7,120	5,200	700
16	7,970	3,270	12,400	17,300	4,900	2,110	26,300	5,910	10,800	3,940	4,030	531
17	4,170	2,550	10,700	18,300	2,460	5,080	26,100	4,330	11,800	2,510	4,300	*249
18	2,640	1,810	9,160	9,210	2,260	4,510	22,800	5,520	13,300	2,950	6,980	273
19	3,640	3,390	9,900	9,280	3,220	3,720	14,400	5,450	12,000	3,120	9,000	186
20	4,360	2,360	9,200	11,800	8,620	4,040	9,440	6,040	10,900	2,220	7,240	231
21	5,670	1,420	11,200	9,240	13,000	3,090	16,300	4,710	6,150	5,660	7,460	874
22	7,080	820	10,000	11,700	8,890	6,080	17,900	4,210	3,840	9,090	6,440	3,860
23	6,750	2,060	9,600	12,300	4,940	5,680	17,400	3,360	4,580	5,910	4,480	8,660
24	5,430	2,320	11,800	11,400	*3,720	4,450	16,400	3,220	7,170	2,800	4,990	8,920
25	4,520	3,690	7,940	7,090	1,730	5,000	14,900	2,990	4,200	3,090	7,160	7,620
26	4,200	5,900	5,110	2,580	1,100	4,680	11,400	4,610	5,530	2,290	8,740	7,530
27	5,900	7,920	4,480	1,180	866	5,490	9,210	4,580	2,650	3,810	*11,800	3,740
28	7,170	9,750	6,480	4,680	730	6,700	14,800	3,220	798	3,480	12,500	3,310
29	7,300	13,300	5,700	3,520	-	6,540	17,400	*2,500	1,660	4,000	13,400	3,960
30	7,200	8,230	7,020	1,220	--------	3,450	17,300	2,040	2,490	3,070	7,550	5,520
31	5,110	--------	4,070	866	--------	5,270	--------	3,790	--------	6,500	4,710	--------
Total	302,720	100,636	306,210	253,256	148,736	135,584	414,820	173,720	213,888	116,750	201,580	123,434
Mean	9,765	3,355	9,878	8,170	5,312	4,374	13,830	5,604	7,130	3,766	6,503	4,114

	Observed			Adjusted†		
Calendar year 1958:	Max 42,800	Min 470	Mean 13,080	Mean 10,640	Cfsm 1.45	In. 19.73
Water year 1958-59:	Max 26,300	Min 186	Mean 6,826	Mean 7,280	Cfsm 0.995	In. 13.50

* Discharge measurement made on this day.
† Adjusted for change in contents in Lake Cumberland and Dale Hollow Reservoir.

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 1959. 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). June 23, 1932, to July 24, 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.--28 years, 107 cfs.

Extremes.--Maximum discharge during year, 1,720 cfs Feb. 14 (gage height, 5.28 ft); minimum, 4.0 cfs Sept. 27, 28 (gage height, 0.76 ft).
1931-59: 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. Some diurnal fluctuation at low flows caused by mills above station prior to 1951.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.7	2.8	1.7	84
.8	5.2	2.0	135
.9	9.0	3.0	500
1.1	20	4.0	950
1.3	35	5.0	1,530

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	18	73	47	61	119	165	a74	49	14	9.0	19
2	26	17	62	50	56	107	328	a80	44	15	8.6	41
3	24	16	60	47	56	100	285	a76	39	14	8.2	77
4	23	15	61	44	89	90	251	a73	*35	13	9.0	33
5	21	14	55	36	87	87	204	a70	44	12	51	23
6	20	12	47	42	76	167	170	*67	95	14	27	26
7	19	12	40	39	67	141	145	61	65	12	20	19
8	18	11	39	44	67	126	130	55	48	11	21	16
9	17	10	37	65	67	119	130	53	38	11	17	15
10	20	10	34	57	74	107	204	48	34	10	*14	14
11	19	10	33	50	77	155	228	45	33	12	12	12
12	16	*10	32	47	69	544	280	43	33	10	10	12
13	15	10	30	46	167	324	314	40	44	10	10	11
14	*15	10	27	46	1,370	233	251	39	33	9.5	8.6	10
15	15	10	24	91	1,160	201	190	37	29	37	8.2	9.5
16	15	14	21	290	*532	*155	160	36	26	24	8.2	9.0
17	15	14	*22	168	366	133	139	33	24	15	11	8.2
18	14	16	23	121	270	114	130	33	22	32	17	7.9
19	14	68	23	108	178	102	130	31	21	24	10	7.5
20	14	57	22	*130	137	97	*145	29	19	*16	9.0	6.7
21	14	39	21	235	117	103	141	29	19	14	8.2	6.7
22	14	31	21	528	105	108	130	32	18	14	8.2	6.7
23	14	28	22	285	194	94	119	33	18	15	7.5	6.7
24	14	26	26	184	170	86	108	32	19	14	16	6.7
25	13	24	24	145	141	78	100	28	21	18	12	5.6
26	13	23	22	124	121	207	94	29	21	15	7.9	4.9
27	13	23	26	107	108	733	a90	32	18	12	7.1	4.3
28	12	74	54	92	98	366	a84	29	16	12	9.1	4.6
29	12	166	60	81	-	290	a81	60	15	11	13	*6.3
30	12	95	52	74	-------	238	a78	67	15	10	11	5.2
31	12	-------	47	66	-------	190	------	55	------	9.5	16	------
Total	510	883	1,140	3,489	6,080	5,714	5,004	1,449	955	460.0	404.8	434.5
Mean	16.5	29.4	36.8	113	217	184	167	46.7	31.8	14.8	13.1	14.5
Cfsm	0.210	0.374	0.468	1.44	2.76	2.34	2.12	0.593	0.404	0.188	0.166	0.184
In.	0.24	0.42	0.54	1.65	2.87	2.70	2.37	0.68	0.45	0.22	0.19	0.21

Calendar year 1958: Max 1,270 Min 5.6 Mean 95.6 Cfsm 1.21 In. 16.50
Water year 1958-59: Max 1,370 Min 4.3 Mean 72.7 Cfsm 0.924 In. 12.54

Peak discharge (base, 1,200 cfs).--Feb. 14 (1 p.m.) 1,720 cfs (5.28 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.

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 at mile 11.5.

Drainage area.--178 sq mi.

Records available.--August 1940 to September 1959.

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

Average discharge.--19 years, 366 cfs.

Extremes.--Maximum discharge during year, 3,930 cfs Jan. 21 or 22 (gage height, 9.62 ft, from floodmark); minimum, 32 cfs Oct. 31 (gage height, 1.21 ft).

1940-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.1	18	4.0	1,160
1.2	35	7.0	2,620
1.5	104	10.0	4,140
2.0	280		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	37	256	210	260	372	566	248	120	46	50	504
2	64	33	195	205	230	414	656	280	140	44	46	540
3	64	33	167	240	210	368	756	272	160	44	46	360
4	62	35	178	240	250	332	724	236	150	42	46	404
5	59	48	192	220	500	308	648	217	140	42	57	562
6	55	46	167	190	450	427	553	195	120	42	138	594
7	53	42	139	170	400	472	463	174	110	42	167	360
8	50	37	126	230	380	432	400	160	100	39	160	264
9	48	37	118	320	370	356	364	150	95	39	202	217
10	48	37	107	350	400	324	499	142	90	37	156	248
11	46	37	99	320	420	*320	940	136	85	37	99	332
12	44	37	94	300	450	1,490	944	129	90	35	80	328
13	44	37	90	270	900	1,130	1,040	129	95	35	66	248
14	42	35	82	280	2,300	778	796	*129	90	35	57	184
15	42	42	75	302	2,500	764	625	129	85	35	59	164
16	42	35	*73	1,300	1,800	706	522	121	80	55	64	136
17	39	*57	71	1,030	1,200	589	436	112	75	53	75	118
18	39	62	73	900	850	476	400	107	70	55	68	*104
19	37	78	71	750	602	400	535	102	66	55	241	92
20	35	153	68	800	463	368	900	102	62	48	*192	85
21	*35	124	66	2,500	384	409	828	99	60	44	139	80
22	37	97	64	2,700	336	818	670	99	58	44	90	75
23	37	82	62	1,500	380	684	540	99	55	46	75	73
24	37	68	62	1,100	558	553	450	97	53	98	66	71
25	35	62	64	800	454	454	384	94	51	202	64	66
26	33	59	68	650	*376	715	340	94	50	184	57	62
27	33	57	68	520	356	3,100	308	90	49	118	55	59
28	33	96	119	420	320	1,680	300	92	48	82	57	59
29	33	580	221	360	-	1,050	288	112	47	*68	80	57
30	33	392	225	310	--------	841	260	99	*46	62	107	55
31	33	--------	220	280	--------	684	--------	104	--------	55	268	--------
Total	1,358	2,575	3,680	19,767	18,099	21,814	17,135	4,349	2,540	1,863	3,127	6,501
Mean	43.8	85.8	119	638	646	704	571	140	84.7	60.1	101	217
Cfsm	0.246	0.482	0.669	3.58	3.63	3.96	3.21	0.787	0.476	0.338	0.567	1.22
In.	0.28	0.54	0.77	4.13	3.78	4.56	3.58	0.91	0.53	0.39	0.65	1.36

Calendar year 1958: Max 4,500 Min 28 Mean 330 Cfsm 1.85 In. 25.19
Water year 1958-59: Max 3,100 Min 33 Mean 282 Cfsm 1.58 In. 21.48

Peak discharge (base, 4,400 cfs).--No peak above base.

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 20, Dec. 30 to Jan. 14, Jan. 18 to Feb. 18, June 1-29; 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, 1¾ miles downstream from Barren Fork, 2½ miles northeast of McMinnville, Warren County, and at mile 19.3.

Drainage area.--624 sq mi.

Records available.--October 1924 to September 1959. 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.--35 years, 1,126 cfs.

Extremes.--Maximum discharge during year, 11,700 cfs Jan. 22 (gage height, 14.49 ft); minimum, 100 cfs Sept. 29 (gage height, 1.36 ft).

1924-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 25				July 26 to Sept. 30			
1.3	92	5.0	1,820	1.8	176	4.0	1,110
1.5	122	8.0	4,060	2.0	220	5.0	1,790
2.0	245	12.0	8,510	2.5	366	8.0	4,060
2.5	430	14.0	11,000	3.0	560		
3.0	670						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	178	117	1,030	374	700	1,020	1,550	705	896	151	377	730
2	170	119	758	366	630	1,090	1,680	797	1,680	153	392	1,140
3	165	122	620	398	590	973	2,020	680	1,440	151	381	1,130
4	165	147	555	398	720	918	1,720	595	978	170	332	2,080
5	165	144	530	374	1,300	858	1,520	530	690	178	1,550	3,020
6	160	138	466	318	1,240	1,570	1,330	480	585	170	2,800	1,860
7	153	127	402	290	1,070	2,100	1,180	434	520	196	1,970	1,180
8	151	124	354	326	962	1,700	1,050	398	426	259	1,120	838
9	144	133	322	610	907	1,400	951	374	350	210	816	1,110
10	144	133	298	705	918	1,200	1,130	354	308	185	628	1,190
11	133	127	276	650	1,190	*1,080	1,700	336	280	165	496	2,070
12	129	124	259	575	1,050	1,400	2,610	329	326	160	388	1,970
13	129	127	242	520	1,420	1,410	3,130	462	346	153	320	1,250
14	126	124	230	*498	4,910	1,230	2,500	475	294	144	281	860
15	126	133	215	545	7,270	1,300	*1,900	*410	262	144	253	655
16	122	127	*204	1,860	4,490	1,460	1,510	354	233	144	477	552
17	119	129	193	2,120	3,040	1,250	1,260	315	212	434	346	472
18	117	*149	188	1,500	2,370	1,100	1,140	294	199	370	290	*407
19	114	210	185	1,150	*1,850	968	1,610	280	191	245	373	335
20	114	280	183	1,200	1,480	896	4,520	284	183	210	*805	298
21	112	370	175	2,550	1,240	956	3,560	298	178	230	675	279
22	*111	343	172	10,400	1,100	1,510	2,710	410	172	398	520	259
23	109	294	162	6,400	1,140	1,240	2,150	951	170	284	452	245
24	106	245	162	3,030	1,380	1,050	1,730	605	172	340	377	232
25	106	215	160	2,110	1,190	940	1,430	625	178	3,330	326	222
26	105	210	172	1,660	1,060	1,170	1,220	710	172	3,550	290	213
27	103	204	183	1,370	973	6,180	1,060	550	170	2,040	259	205
28	103	315	191	1,160	902	5,550	940	502	167	944	245	198
29	102	1,130	262	990	-	3,150	852	418	165	582	373	194
30	102	1,500	378	868	--------	2,360	775	386	*158	429	366	187
31	105	--------	382	770	--------	1,880	--------	394	--------	399	564	--------
Total	3,988	7,660	9,909	46,085	47,092	50,909	52,438	14,735	12,101	16,518	18,842	25,381
Mean	129	255	320	1,487	1,682	1,642	1,748	475	403	533	608	846
Cfsm	0.207	0.409	0.513	2.38	2.70	2.63	2.80	0.761	0.646	0.854	0.974	1.36
In.	0.24	0.46	0.59	2.75	2.81	3.03	3.13	0.88	0.72	0.98	1.12	1.51

Calendar year 1958: Max 8,160 Min 102 Mean 941 Cfsm 1.51 In. 20.48
Water year 1958-59: Max 10,400 Min 102 Mean 837 Cfsm 1.34 In. 18.22

Peak discharge (base, 11,000 cfs).--Jan. 22 (1 p.m.) 11,700 cfs (14.49 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 1959. 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 different datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 2.00 ft higher.

Average discharge.--45 years (1914-59), 3,193 cfs (unadjusted).

Extremes.--Maximum discharge during year, 34,000 cfs Jan. 22 (gage height, 17.40 ft); minimum, 36 cfs Sept. 30 (gage height, -0.91 ft); minimum daily, 37 cfs Nov. 23.

1911-59: 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 10 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. 60).

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

-0.9	37	3.0	1,170
-.5	62	5.0	2,610
0.0	133	7.0	4,500
.5	225	10.0	9,180
1.0	338	13.0	17,200
2.0	654	15.0	24,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	632	40	1,050	48	3,420	3,440	4,180	3,400	2,270	548	3,350	1,520
2	312	39	1,440	1,800	3,380	3,420	4,610	3,380	2,890	550	3,310	2,040
3	240	853	1,470	48	3,360	3,420	5,860	3,380	3,360	43	2,990	3,080
4	1,510	1,040	1,460	200	3,330	3,420	4,640	3,360	3,380	43	2,810	2,440
5	618	489	1,470	2,010	3,310	3,400	4,300	3,350	3,370	43	1,680	2,480
6	2,630	502	1,470	1,380	3,320	3,380	4,130	3,330	3,350	551	2,780	3,310
7	55	500	1,460	1,160	3,320	3,400	3,740	3,310	3,340	803	3,310	3,320
8	45	39	1,450	830	3,310	3,420	3,500	3,270	3,330	780	3,330	3,310
9	45	39	1,440	1,160	3,290	3,420	3,480	3,200	3,290	872	3,330	3,310
10	45	758	1,630	1,480	3,260	3,410	3,450	2,080	3,270	968	3,310	3,310
11	45	841	1,480	52	3,260	*3,410	3,670	1,010	2,820	42	3,140	3,310
12	45	828	1,490	1,020	3,240	3,420	7,770	913	2,540	42	2,580	3,370
13	601	810	47	1,180	3,260	3,440	8,970	1,370	2,380	565	2,440	3,410
14	424	788	47	1,050	3,360	3,440	7,210	1,360	1,290	487	1,890	3,380
15	45	39	784	*2,160	22,700	3,460	4,830	*1,460	702	532	47	3,360
16	45	38	950	3,260	13,000	3,500	4,220	1,390	1,330	471	48	3,350
17	45	338	764	3,280	8,400	3,620	3,900	41	1,110	458	704	3,310
18	50	*372	761	3,340	6,720	3,500	3,560	1,390	1,140	43	1,010	*2,820
19	47	385	548	3,350	4,850	3,460	4,880	1,180	702	43	1,080	2,550
20	46	812	47	3,330	3,980	3,450	11,000	1,210	42	512	2,090	1,030
21	46	638	47	3,370	3,620	3,440	9,180	1,200	42	909	2,420	912
22	45	38	490	20,900	3,500	3,420	7,120	882	698	975	2,050	683
23	45	37	644	15,300	3,490	3,440	5,070	964	624	1,140	47	604
24	46	626	660	6,940	3,480	3,440	4,650	45	631	1,250	864	562
25	45	1,090	654	5,340	3,490	*3,450	3,910	928	936	2,450	1,300	531
26	45	1,060	648	3,880	3,490	3,460	3,640	2,650	1,250	3,500	1,420	452
27	45	114	48	3,720	3,480	19,000	3,490	3,240	43	5,030	1,490	441
28	272	1,020	48	3,530	3,460	14,700	3,430	3,200	43	3,500	1,480	488
29	264	47	422	3,500	-	8,970	3,440	3,170	682	*3,420	47	783
30	263	47	1,370	3,480	--------	6,710	3,440	66	544	3,420	48	726
31	38	--------	1,530	3,460	--------	4,710	--------	43	--------	3,380	1,540	--------
Total	8,679	14,267	27,819	105,558	134,080	143,570	149,270	59,772	51,399	37,370	57,935	64,192
Mean	280	476	897	3,405	4,789	4,631	4,976	1,928	1,713	1,205	1,869	2,140

	Observed			Adjusted†		
Calendar year 1958:	Max 22,100	Min 37	Mean 2,434	Mean 2,389	Cfsm 1.46	In. 19.77
Water year 1958-59:	Max 22,700	Min 37	Mean 2,339	Mean 2,333	Cfsm 1.42	In. 19.31

* Discharge measurement made on this day.
† Adjusted for change in contents in Great Falls Lake.

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 1959. 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.--37 years, 17,020 cfs (unadjusted).

Extremes.--Maximum discharge during year, 36,900 cfs Apr. 15; maximum gage height, 17.13 ft Apr. 16; minimum daily discharge, 2,000 cfs July 7; minimum gage height, 6.36 ft Jan. 31.

1922-59: 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. Flow regulated by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, and Center Hill Reservoir (see p. 60).

Revisions (water years).--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M). WSP 1306: 1943 (monthly runoff).

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,000	5,070	9,610	5,330	6,150	8,900	17,000	21,200	4,390	5,650	9,030	7,710
2	18,600	3,040	7,440	4,110	7,310	9,340	22,700	17,900	4,260	*7,460	10,300	7,500
3	16,900	3,330	8,830	4,560	10,300	6,790	22,800	12,800	8,820	6,610	*9,030	8,700
4	16,700	4,780	11,600	7,720	17,500	9,070	21,700	10,700	8,610	5,290	7,510	7,070
5	15,500	4,710	11,900	13,700	16,800	8,190	13,800	10,100	9,510	4,430	13,300	6,200
6	10,800	4,530	13,000	21,300	*18,100	11,300	8,600	11,300	13,000	3,060	12,700	5,630
7	*10,500	3,100	12,900	20,100	13,400	9,950	11,000	13,100	17,500	2,000	9,380	5,540
8	14,500	3,060	14,300	15,000	9,010	11,400	14,900	12,100	19,200	2,390	6,590	10,500
9	18,500	3,270	18,400	12,800	7,410	7,160	18,700	8,960	14,800	4,010	7,370	12,200
10	23,800	4,200	26,200	12,300	5,390	5,900	20,100	4,350	10,000	4,890	4,890	* 1,500
11	18,900	4,130	27,300	10,900	6,870	9,280	25,200	3,670	10,600	5,020	6,460	10,500
12	12,700	4,460	26,200	8,870	7,230	17,200	21,300	6,860	12,900	4,190	9,570	6,610
13	10,900	5,240	25,100	6,430	12,600	17,200	23,000	8,000	14,800	3,840	12,400	3,540
14	12,100	3,930	18,900	8,360	24,700	13,200	32,800	10,700	13,500	3,550	11,500	5,190
15	15,200	2,620	15,600	9,950	29,300	7,950	34,600	11,100	11,300	5,720	11,500	10,100
16	13,300	2,920	15,300	17,800	21,000	7,890	32,700	10,000	9,510	8,160	8,560	9,520
17	7,310	*4,000	15,200	25,600	10,000	9,060	31,900	6,040	11,700	5,110	8,920	6,860
18	4,920	3,870	13,600	20,300	7,570	10,500	31,400	5,570	13,100	3,750	10,300	5,620
19	4,220	4,450	12,300	14,200	10,800	7,590	26,700	9,100	13,900	4,340	13,000	6,000
20	5,000	5,540	12,500	15,600	13,500	7,270	19,700	9,230	12,500	5,700	14,200	5,500
21	*6,090	4,680	13,600	16,900	20,200	8,280	20,000	11,400	10,800	5,030	12,500	4,940
22	7,290	4,290	14,000	22,100	18,800	10,800	26,800	8,470	6,750	7,840	11,200	6,250
23	8,900	2,770	14,600	21,600	15,300	12,500	27,000	6,190	4,670	9,770	7,820	7,780
24	8,850	4,130	14,700	18,800	16,700	*11,200	23,700	5,320	6,510	7,860	5,670	10,000
25	7,430	4,910	13,400	13,100	12,700	8,890	21,800	*3,870	8,490	5,580	6,370	11,500
26	5,130	5,840	8,070	*8,200	8,290	13,000	17,600	5,590	5,660	4,260	10,400	9,360
27	5,910	11,500	6,270	7,180	8,650	22,800	14,200	6,150	8,680	5,090	13,200	9,020
28	9,500	13,700	8,220	8,620	8,530	16,900	16,700	6,490	8,020	8,830	14,500	7,630
29	10,100	17,700	*9,980	9,440	-	17,300	23,700	5,150	4,250	8,300	15,200	7,340
30	9,460	16,100	8,740	6,060	--------	17,300	*24,800	4,570	3,860	8,140	13,100	9,520
31	7,290	--------	7,670	5,350	--------	15,900	--------	3,290	--------	7,190	9,370	--------
Total	353,300	165,870	435,430	392,280	364,110	350,010	666,900	269,270	301,590	173,060	315,840	235,330
Mean	11,400	5,529	14,050	12,650	13,000	11,290	22,230	8,686	10,050	5,583	10,190	7,844

	Observed			Adjusted†		
Calendar year 1958:	Max 61,200	Min 2,620	Mean 17,970	Mean 15,160	Cfsm 1.42	In. 19.23
Water year 1958-59:	Max 34,600	Min 2,000	Mean 11,020	Mean 11,550	Cfsm 1.08	In. 14.65

* Discharge measurement made on this day.

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

4255. Spring Creek near Lebanon, Tenn.

Location (revised).--Lat 36°10'49", long 86°14'29", on downstream end of middle pier of bridge on Eastover Road, 0.6 mile downstream from Black Branch and 3.4 miles southeast of Lebanon, Wilson County.

Drainage area.--35.3 sq mi (revised).

Records available.--October 1954 to September 1959.

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

Average discharge.--5 years, 58.5 cfs.

Extremes.--Maximum discharge during year, 2,140 cfs Feb. 14 (gage height, 5.37 ft); minimum, 0.1 cfs July 12-15; minimum gage height, 0.25 ft July 14, 15.
1954-59: 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.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.2	0.04	0.9	29
.3	.3	1.2	67
.4	1.5	1.4	102
.5	3.4	1.6	160
.6	7.5	2.0	336
.7	13	4.0	1,300

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	1.5	40	57	17	66	43	10	3.4	0.6	2.7	3.1
2	2.2	2.7	33	60	16	46	134	9.5	2.9	.5	1.8	73
3	2.0	3.1	48	43	20	41	60	8.0	2.5	.4	1.3	42
4	1.8	2.7	61	33	167	35	46	6.5	*2.2	.3	1.0	11
5	1.8	3.9	46	29	70	109	37	5.6	1.8	.3	282	75
6	1.5	3.4	33	27	52	142	32	*4.3	1.6	.3	402	46
7	1.3	*1.2	26	21	40	64	28	3.4	1.3	.3	105	14
8	1.0	.9	22	148	36	50	24	3.4	1.3	.3	50	7.5
9	.9	.6	19	84	33	43	99	2.9	.9	.2	29	12
10	.9	.6	15	53	46	35	290	2.5	.7	.2	16	358
11	.9	.6	14	38	43	197	113	2.3	.7	.2	*10	76
12	.9	.6	12	32	36	131	179	2.2	.6	.1	7.0	38
13	.9	.6	11	29	117	67	92	3.4	.7	.1	4.7	21
14	.6	.6	9	27	943	50	63	3.9	.7	.1	3.4	14
15	*.6	.7	8	251	304	45	49	2.7	.7	33	2.7	11
16	.5	1.0	7	169	114	36	40	2.2	.5	19	2.3	8.0
17	.5	1.5	6.5	75	75	*32	34	2.2	.4	8.2	2.7	6.1
18	.5	3.6	*6	54	56	26	33	2.0	.3	9.8	4.7	4.7
19	.5	114	6.5	59	43	23	31	1.6	.3	9.0	3.1	3.9
20	.4	38	6.1	138	35	24	40	1.8	.3	5.6	2.3	3.4
21	.4	18	5.1	330	30	85	32	2.7	.3	*2.9	2.7	a3.0
22	.4	12	4.7	168	28	62	26	3.6	.3	2.0	4.3	a2.5
23	.4	8.9	5.1	75	195	43	22	17	.3	1.3	2.2	a2.2
24	.3	7.5	6.5	54	*70	35	19	5.1	4.9	107	2.0	a1.8
25	.3	6.1	6.1	44	52	30	17	3.1	9.5	41	1.8	a1.2
26	.3	5.6	4.7	*36	41	368	15	4.7	3.4	15	1.6	a1.0
27	.3	5.6	6.6	31	35	155	14	23	2.2	7.5	1.5	a.8
28	.3	246	39	27	42	70	*14	30	1.6	16	1.5	a.6
29	.3	106	40	24	-	63	12	12	1.2	13	6.0	a.5
30	.3	54	28	21	-------	57	10	7.0	.7	8.9	6.1	*.4
31	.4	-------	23	19	-------	48	-------	4.7	-------	4.3	3.1	-------
Total	25.7	651.5	597.9	2,256	2,756	2,278	1,648	193.3	48.2	307.4	966.5	841.7
Mean	0.83	21.7	19.3	72.8	98.4	73.5	54.9	6.24	1.61	9.92	31.2	28.1
Cfsm	0.024	0.615	0.547	2.06	2.79	2.08	1.56	0.177	0.046	0.281	0.884	0.796
In.	0.03	0.69	0.63	2.38	2.90	2.40	1.74	0.20	0.05	0.32	1.02	0.89

Calendar year 1958: Max 938 Min 0.1 Mean 49.6 Cfsm 1.41 In. 19.07
Water year 1958-59: Max 943 Min 0.1 Mean 34.4 Cfsm 0.975 In. 13.25

Peak discharge (base, 2,700 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 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 1959.
Gage.--Water-stage recorder. Datum of gage is 503.06 ft above mean sea level, datum of 1929.
Average discharge.--5 years, 25.2 cfs.
Extremes.--Maximum discharge during year, 935 cfs Feb. 14 (gage height, 5.00 ft); minimum, 0.2 cfs July 13, 14 (gage height, 0.98 ft).
1954-59: Maximum discharge, 3,370 cfs Nov. 18, 1957 (gage height, 10.56 ft); minimum, 0.02 cfs many days in September 1955 and Sept. 8, 1956; minimum gage height, 0.90 ft Sept. 12, 14, 1955.
Remarks.--Records fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for several days in the water year 1958, superseding those published in WSP 1556, are given herewith:

1957		1958-Con.	
Nov. 19	286	May 5	227
Dec. 7	442	May 6	256
Dec. 20	405	July 21	76
1958		July 25	77
Jan. 24	322	Aug. 24	78

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
November 1957	3,268.5	1,280	5.2	109	5.68	6.33
December	2,305	442	17	74.4	3.88	4.46
Calendar year 1957	-	1,280	.1	45.1	2.35	31.89
January 1958	1,234	322	11	39.8	2.07	2.39
May	1,403.9	256	5.2	45.3	2.36	2.72
July	486.0	77	.8	15.7	.818	.94
August	240.7	78	1.2	7.76	.404	.47
Water year 1957-58	-	1,280	.3	37.1	1.93	26.21

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.03	0.3	1.5	25	3.5	513
1.07	.6	1.8	55	4.0	607
1.1	1.2	2.0	90	4.5	770
1.2	3.8	2.4	175		
1.3	8.5	3.0	360		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	3.8	*11	28	12	40	22	8.5	19	0.6	1.4	24
2	1.4	2.8	9.2	26	11	35	22	7.1	27	.6	.6	9.1
3	1.2	2.2	11	20	12	34	20	5.6	15	.6	.3	5.6
4	1.4	2.0	12	15	20	28	17	5.2	10	.5	1.8	3.5
5	1.4	1.7	11	10	18	42	15	5.2	*17	.4	2.8	2.5
6	1.4	1.7	7.8	7.8	15	64	13	4.4	16	.6	17	2.0
7	1.4	1.4	6.5	7.8	14	43	11	4.1	10	.6	7.1	1.2
8	1.2	1.2	7.1	10	15	35	11	3.8	6.5	*.4	3.8	.8
9	1.2	1.7	5.6	9.2	16	32	18	3.5	5.2	.3	2.8	49
10	3.7	2.0	4.8	6.5	38	26	37	3.5	4.4	.3	2.0	14
11	2.2	2.0	4.1	6.0	36	27	31	3.3	6.0	.3	*1.4	6.5
12	1.4	1.7	3.8	6.0	31	25	36	3.8	5.2	.3	1.0	4.4
13	1.2	1.7	3.5	6.0	115	22	35	5.6	3.8	.3	.8	3.3
14	1.2	1.7	3.3	6.5	610	21	29	3.8	3.3	.3	.6	2.8
15	1.0	6.4	3.0	82	204	20	25	3.3	3.0	.3	.5	2.2
16	1.0	4.8	2.8	57	76	17	22	3.0	2.8	.3	.5	2.0
17	1.0	3.0	2.8	33	55	16	19	3.0	2.8	2.6	.5	1.4
18	1.0	5.0	3.0	24	43	14	18	2.8	2.2	2.0	1.2	1.2
19	1.0	16	3.0	20	32	12	17	*2.5	2.0	.8	1.2	1.0
20	*1.0	9.2	3.3	49	26	14	29	2.8	2.0	1.0	.6	1.0
21	1.0	6.0	2.8	*313	22	16	25	3.3	1.7	.4	.6	.8
22	1.0	4.8	2.5	128	21	14	21	9.7	1.7	3.2	1.2	.8
23	1.2	3.8	4.4	51	69	12	*18	5.2	1.7	3.0	.4	.6
24	1.4	3.0	7.1	36	51	*11	16	3.5	2.0	2.0	.6	.5
25	1.4	2.8	4.8	29	*40	11	14	3.0	2.2	1.7	.5	.5
26	1.2	3.0	4.4	25	34	41	13	16	2.0	1.2	.5	.4
27	1.2	3.0	4.4	23	27	41	11	21	1.2	.6	.4	.4
28	1.2	19	5.2	19	35	31	14	22	1.2	1.5	1.0	*.4
29	1.2	23	5.2	18	-	28	11	11	1.0	1.7	1.7	1.9
30	1.2	15	*5.2	15	-------	26	10	7.8	.8	.8	4.8	.8
31	1.2	-------	5.2	14	-------	24	-------	6.0	-------	.5	3.1	-------
Total	41.2	155.4	169.8	1,100.8	1,698	822	600	193.3	178.7	29.7	62.7	144.6
Mean	1.33	5.18	5.48	35.5	60.6	26.5	20.0	6.24	5.96	0.96	2.02	4.82
Cfsm	0.069	0.270	0.285	1.85	3.16	1.38	1.04	0.325	0.310	0.050	0.105	0.251
In.	0.08	0.30	0.33	2.13	3.29	1.59	1.16	0.37	0.35	0.06	0.12	0.28

Calendar year 1958: Max 322 Min 0.3 Mean 22.3 Cfsm 1.16 In. 15.76
Water year 1958-59: Max 610 Min 0.3 Mean 14.2 Cfsm 0.740 In. 10.06

Peak discharge (base, 1,000 cfs).--No peak above base.

* Discharge measurement made on this day.

4265. Cumberland River below Old Hickory, Tenn.

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.

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

Records available.--October 1931 to September 1942, October 1947 to September 1959. Prior to July 1953, published as "at dam 3, near Old Hickory."

Gage (revised).--Water-stage recorder. Datum of gage is 380.00 ft above mean sea level, datum of 1929. Prior to Nov. 16, 1933, Oct. 1-16, 1947, and July 1, 1953, to June 10, 1954, staff gage at site 6.1 miles upstream; Nov. 16, 1933, to Sept. 30, 1942, and Oct. 17, 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 staff gages at Old Hickory Dam. 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.

Average discharge.--23 years, 18,110 cfs (unadjusted).

Extremes.--Maximum discharge during year, 58,200 cfs Feb. 15 (gage height, 28.31 ft); minimum daily, 3,310 cfs July 11.

1931-42, 1947-59: 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 fair. Flow regulated by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake (see p. 60).

Cooperation.--Three discharge measurements and auxiliary gage-height record furnished by Corps of Engineers.

Revisions (water years).--WSP 923: 1932-39. WSP 1113: 1940(m).

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,000	5,480	13,400	7,950	3,920	9,610	16,600	24,200	5,210	5,960	8,800	13,500
2	17,500	4,240	13,900	6,580	5,770	9,790	28,000	20,300	11,000	*4,490	10,400	7,420
3	*16,000	4,040	9,880	7,870	18,700	13,400	21,900	7,900	11,200	4,130	9,640	7,970
4	14,700	3,720	9,640	9,420	17,900	13,300	21,300	8,690	8,530	4,260	7,240	8,390
5	13,300	3,820	10,200	18,100	18,500	12,200	15,800	10,800	11,000	4,110	14,500	7,540
6	14,400	4,720	21,600	28,300	21,400	13,100	11,500	13,500	15,900	3,400	19,800	6,150
7	15,800	4,670	12,400	16,600	14,900	12,200	14,500	10,800	15,400	3,690	*11,900	6,210
8	14,000	4,150	16,500	9,290	7,150	14,200	14,600	10,900	13,700	3,420	10,400	8,530
9	15,100	3,960	24,900	11,300	7,120	14,800	15,300	7,360	13,000	3,370	9,300	8,710
10	15,400	4,210	24,900	15,200	7,100	8,530	20,300	8,160	14,300	4,870	6,050	*9,220
11	15,200	5,300	23,700	13,100	5,650	9,770	19,100	7,760	11,700	3,310	5,030	12,800
12	16,500	4,540	19,600	11,000	9,530	12,000	31,700	*9,270	11,900	4,430	6,670	7,910
13	15,800	4,690	16,300	11,200	16,100	17,800	32,600	8,710	12,000	3,730	13,000	6,230
14	11,600	4,750	13,000	7,100	53,000	23,800	*33,000	9,030	11,900	4,920	10,000	7,560
15	13,600	3,660	18,400	11,200	47,600	13,200	26,900	8,560	11,900	5,330	8,650	8,520
16	16,100	4,450	18,300	22,400	35,700	9,850	29,200	6,960	11,900	5,880	9,690	6,530
17	7,890	3,480	16,400	22,900	16,200	8,190	33,900	5,030	12,100	5,250	6,950	6,300
18	*6,230	3,930	16,500	20,200	17,800	9,480	36,100	7,870	12,000	3,690	12,900	6,350
19	6,410	3,830	16,900	21,300	15,100	11,300	39,600	8,160	12,200	3,400	10,400	6,600
20	*6,370	*4,180	15,200	18,700	12,000	12,000	27,400	10,000	10,600	4,090	12,200	4,040
21	8,410	4,250	9,700	23,600	15,300	11,400	19,300	8,320	8,490	5,100	14,500	5,070
22	7,530	3,780	16,800	30,900	21,600	11,200	17,900	7,600	6,980	6,860	12,800	7,710
23	8,030	6,270	11,500	28,700	23,100	11,300	19,900	7,590	5,100	10,000	7,420	8,270
24	6,060	9,550	9,280	15,700	27,800	13,600	25,400	6,200	6,680	10,100	8,340	7,870
25	5,230	5,700	12,800	15,200	*6,320	*11,400	24,300	5,850	5,380	3,440	5,560	7,710
26	5,350	8,270	14,600	13,900	8,510	11,300	25,000	8,930	9,580	3,930	9,020	8,640
27	5,930	4,150	12,100	15,700	10,700	15,700	18,300	8,080	9,560	4,880	10,500	7,900
28	7,240	6,700	8,680	3,680	9,660	33,700	16,900	5,760	5,970	7,900	11,700	7,760
29	12,000	25,200	11,200	*10,500	-	27,500	16,400	10,500	5,810	8,970	14,000	7,990
30	9,060	18,500	*8,200	9,120	--------	16,200	24,100	4,570	6,290	11,300	14,100	8,030
31	4,850	--------	6,910	4,350	--------	12,600	--------	3,440	--------	7,790	10,300	--------
Total	348,590	178,190	453,390	461,060	474,130	424,420	696,800	280,800	307,280	166,000	321,760	233,430
Mean	11,240	5,940	14,630	14,870	16,930	13,690	23,230	9,058	10,240	5,355	10,380	7,781

	Observed			Adjusted†		
Calendar year 1958:	Max 64,000	Min 3,220	Mean 18,720	Mean 15,940	Cfsm 1.36	In. 18.50
Water year 1958-59:	Max 53,000	Min 3,310	Mean 11,910	Mean 12,460	Cfsm 1.06	In. 14.46

* 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.

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 8.0 miles northeast of Murfreesboro.

Drainage area.--38 sq mi, approximately.

Records available.--October 1954 to September 1959.

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

Average discharge.--5 years, 63.9 cfs.

Extremes.--Maximum discharge during year, 8,090 cfs Aug. 5 (gage height, 8.96 ft); minimum, 0.1 cfs Aug. 3-5; minimum gage height, 0.67 ft Sept. 30.
1954-59: 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.--One discharge measurement furnished by Corps of Engineers.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 26 to July 4, July 7 to Aug. 3)

0.6	0.09	1.4	90
.7	.6	1.7	170
.8	4.1	2.0	275
.9	11	2.5	485
1.0	21	3.0	785
1.2	51	4.0	1,510

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	5.2	43	29	13	34	41	13	13	0.3	0.3	0.6
2	3.6	8.5	32	37	10	28	193	13	16	.2	.2	.6
3	3.6	13	38	27	10	25	80	9.2	*11	.3	.2	11
4	3.1	8.5	*48	19	124	21	55	7.8	7.1	.2	.1	4.1
5	2.7	6.4	37	13	71	24	41	7.1	5.8	4.2	*1,150	2.3
6	2.3	5.2	25	10	46	79	34	6.4	5.8	9.2	525	1.8
7	1.8	3.6	18	9.2	37	41	27	5.2	4.6	*3.6	119	1.2
8	*1.5	2.7	14	194	34	34	22	4.6	3.1	1.5	53	*1.0
9	1.5	2.3	12	109	32	28	136	4.1	2.7	1.2	25	28
10	3.1	1.8	8.5	56	56	*22	244	3.6	2.7	.8	12	93
11	5.2	1.5	7.1	37	41	508	132	3.1	2.7	.8	6.4	30
12	3.6	1.2	6.4	29	37	218	224	3.6	3.1	.4	4.1	13
13	3.1	*1.0	5.2	24	133	98	120	5.8	3.1	.3	2.7	9.2
14	2.7	1.0	4.6	21	1,160	65	73	*4.6	2.7	.2	2.3	7.1
15	2.7	1.8	3.6	260	309	69	53	3.1	2.7	.2	59	6.4
16	2.7	2.3	3.1	194	140	48	41	2.3	2.3	.2	51	5.8
17	2.7	4.6	2.7	80	95	40	34	1.8	1.8	.2	13	4.1
18	3.6	7.8	2.7	48	*65	31	40	1.5	1.2	.2	7.8	3.6
19	5.2	206	2.3	45	45	27	59	1.2	.8	.2	5.8	3.1
20	5.2	55	2.3	132	34	25	334	2.0	.6	.2	4.1	2.3
21	4.6	31	1.8	459	27	212	*92	4.1	.6	.2	3.1	2.3
22	4.6	19	1.5	*214	25	134	60	4.1	.4	.3	3.1	1.5
23	3.6	13	1.8	95	79	71	45	7.0	7.0	.2	2.7	1.2
24	3.6	9.2	1.8	62	51	51	35	4.1	100	.4	2.3	1.0
25	3.1	7.8	1.5	46	40	38	29	173	30	1.0	1.8	.8
26	2.7	7.8	1.2	37	32	797	25	50	4.6	1.5	1.2	.6
27	2.7	7.1	1.8	31	27	326	21	111	1.8	1.8	.8	.4
28	2.7	336	32	24	24	120	31	129	1.0	2.3	75	.3
29	2.3	156	35	21	-	82	21	66	.4	1.8	17	.3
30	1.8	65	21	16	--------	64	16	28	.3	.8	1.8	.3
31	1.8	--------	15	13	--------	49	--------	18	--------	.6	1.0	--------
Total	98.0	991.3	429.9	2,391.2	2,797	3,409	2,358	697.3	238.9	35.3	2,150.8	236.9
Mean	3.16	33.0	13.9	77.1	99.9	110	78.6	22.5	7.96	1.14	69.4	7.90
Cfsm	0.083	0.868	0.366	2.03	2.63	2.89	2.07	0.592	0.209	0.030	1.83	0.208
In.	0.10	0.97	0.42	2.34	2.74	3.34	2.31	0.68	0.23	0.03	2.10	0.23

Calendar year 1958: Max 1,200 Min 0.06 Mean 43.9 Cfsm 1.16 In. 15.67
Water year 1959-59: Max 1,160 Min 0.1 Mean 43.4 Cfsm 1.14 In. 15.49

Peak discharge (base, 3,000 cfs).--Mar. 11 (7 p.m.) 3,060 cfs (6.06 ft); Mar. 26 (7:30 p.m.) 3,120 cfs (6.14 ft); Aug. 5 (10 a.m.) 8,090 cfs (8.96 ft).

* 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.--128 sq mi (includes 3 sq mi without surface drainage).

Records available.--October 1931 to September 1959. Prior to July 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.--28 years, 213 cfs.

Extremes.--Maximum discharge during year, 7,700 cfs Mar. 27 (gage height, 13.53 ft); minimum, 4.3 cfs Oct. 31; minimum gage height, 1.13 ft Sept. 30.

1931-59: 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. Some diversion for irrigation.

Revisions (water years).--WSP 783: 1932-34. WSP 1306: 1934(M), 1937-41(M). WSP 1556: Drainage area.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 25-27, May 2, June 3, 6, 7)

Oct. 1 to Apr. 24				Apr. 25 to Sept. 30			
1.1	3.5	2.4	140	1.1	4.4	2.7	135
1.3	8.0	3.0	300	1.3	9.0	3.0	195
1.4	12	4.0	674	1.5	18	4.0	600
1.6	23	6.0	1,660	2.0	58	6.0	1,660
1.8	42	9.0	3,400				
2.0	69						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	6.8	a260	51	89	148	218	61	362	22	14	13
2	33	7.2	a190	66	81	124	361	99	1,030	27	13	12
3	30	8.0	a150	63	78	112	252	64	*201	18	11	14
4	26	7.8	*124	55	332	100	198	54	116	14	9.8	14
5	22	8.0	102	46	285	97	162	48	166	51	*1,490	14
6	20	7.5	84	40	198	244	138	43	195	86	761	12
7	17	7.0	72	35	158	158	122	39	136	*38	640	11
8	*16	6.5	65	398	138	130	108	35	93	26	271	*11
9	16	6.2	58	368	140	116	358	32	74	21	140	43
10	15	6.0	48	210	217	*102	793	30	64	19	102	133
11	14	5.5	42	152	235	456	457	28	57	16	80	59
12	12	5.3	38	126	182	793	784	28	373	13	64	38
13	11	5.1	34	114	503	348	457	34	225	11	51	28
14	10	5.1	29	100	3,320	255	312	*31	180	9.0	40	23
15	9.8	6.0	26	1,050	1,550	530	235	27	70	8.0	36	19
16	9.0	8.0	23	800	616	294	192	24	51	7.0	110	16
17	8.4	*10	22	354	418	225	158	22	38	8.0	50	14
18	8.0	15	21	243	*315	182	160	20	30	8.0	95	13
19	7.8	358	20	238	238	150	584	18	25	8.0	49	11
20	7.2	190	18	704	198	138	429	18	23	8.2	38	10
21	7.0	120	17	*1,410	165	698	*261	18	21	8.8	31	9.0
22	6.8	87	16	970	148	514	212	18	18	8.0	38	8.5
23	6.5	69	16	425	315	297	170	18	16	7.2	28	8.0
24	6.0	55	15	315	228	228	138	16	23	31	23	7.2
25	5.8	46	14	246	178	185	102	16	18	222	19	6.5
26	5.5	42	14	202	150	2,210	91	16	15	88	17	6.1
27	5.1	47	16	170	130	2,670	82	21	14	52	16	5.7
28	4.9	1,240	26	142	120	603	78	32	12	36	14	5.4
29	4.7	a1,300	65	126	-	410	69	34	11	27	14	5.2
30	4.5	a500	52	110	--------	324	62	33	11	21	13	5.0
31	4.7	-------	47	97	--------	261	--------	40	--------	16	13	--------
Total	387.7	4,185.0	1,724	9,426	10,725	13,102	7,743	1,017	3,668	935.2	4,290.8	574.6
Mean	12.5	140	55.6	304	383	423	258	32.8	122	30.2	138	19.2
Cfsm	0.098	1.09	0.434	2.38	2.99	3.30	2.02	0.256	0.953	0.236	1.08	0.150
In.	0.11	1.22	0.50	2.74	3.12	3.81	2.25	0.30	1.07	0.27	1.25	0.17

Calendar year 1958: Max 2,460 Min 2.5 Mean 160 Cfsm 1.25 In. 16.94
Water year 1958-59: Max 3,320 Min 4.5 Mean 158 Cfsm 1.23 In. 16.81

Peak discharge (base, 7,000 cfs).--Mar. 27 (2 a.m.) 7,700 cfs (13.53 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and normal recession characteristics.

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 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 1959.

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.--34 years, 946 cfs.

Extremes.--Maximum discharge during year, 17,600 cfs Mar. 27 (gage height, 20.96 ft); minimum daily, 30 cfs Sept. 29, 30.

1925-59: Maximum discharge, 54,100 cfs Feb. 13, 1948 (gage height, 41.03 ft, from floodmark), from rating curve extended above 26,000 cfs on basis of slope-area measurement at gage height 36.5 ft, from profile and map prepared by Corps of Engineers; minimum observed, 0.8 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.--Two discharge measurements furnished by Corps of Engineers.

Revisions (water years).--WSP 853: 1929(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 1958-59, 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 Feb. 14, 15, Mar. 26, 27, Aug. 5, 6)

1.1	30	3.0	670
1.3	63	4.0	1,320
1.6	133	10.0	6,600
2.4	400		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	49	930	268	392	605	1,120	309	309	112	128	150
2	150	63	670	330	353	665	1,840	452	3,540	210	110	128
3	148	81	561	342	334	590	1,700	356	*1,110	265	97	117
4	139	83	*561	302	799	538	1,210	298	600	180	88	107
5	125	75	520	255	1,340	502	954	281	573	150	4,790	83
6	110	65	428	220	876	1,010	810	262	828	840	10,200	77
7	100	58	364	200	685	960	690	242	525	*342	4,910	130
8	*88	54	323	600	600	738	615	225	384	255	1,550	*93
9	81	50	292	2,500	556	640	610	213	323	204	792	400
10	81	47	262	1,300	600	*566	3,600	204	288	183	525	1,100
11	85	42	235	800	924	1,090	2,670	192	272	159	380	600
12	71	*42	213	650	732	6,140	2,830	192	252	145	298	350
13	75	38	201	550	1,130	2,360	2,860	333	691	115	252	250
14	61	34	183	500	10,300	1,540	1,820	*292	360	102	*219	180
15	63	42	162	1,200	9,130	1,780	1,310	242	278	97	189	130
16	54	45	150	4,500	3,740	1,470	981	213	235	90	432	110
17	50	65	139	2,000	2,330	1,080	792	192	207	83	295	90
18	49	85	133	1,200	*1,700	864	700	180	180	85	242	80
19	45	1,400	125	900	1,230	720	936	168	162	148	320	70
20	47	1,120	125	2,000	960	640	3,870	162	145	145	238	60
21	49	595	117	4,000	798	1,220	*2,090	168	139	117	189	50
22	45	420	110	*6,000	690	3,580	1,320	171	123	202	272	45
23	44	327	107	2,450	822	1,680	948	177	120	245	198	45
24	40	262	102	1,570	1,080	1,220	744	186	130	192	150	40
25	40	219	100	1,170	792	960	625	171	367	1,090	128	40
26	40	198	95	924	680	2,700	507	1,920	275	620	112	38
27	40	186	95	756	600	13,100	444	447	192	360	97	35
28	39	653	125	640	543	3,770	420	1,400	156	285	95	32
29	39	5,190	323	556	-	2,230	396	705	130	216	195	30
30	39	1,620	323	489	--------	1,770	342	396	112	177	195	30
31	34	--------	275	432	--------	1,380	--------	330	--------	153	139	--------
Total	2,239	13,208	8,349	39,604	44,716	58,108	39,754	11,079	13,006	7,567	27,825	4,690
Mean	72.2	440	269	1,278	1,597	1,874	1,325	357	434	244	898	156
Cfsm	0.131	0.797	0.487	2.32	2.89	3.39	2.40	0.647	0.786	0.442	1.63	0.283
In.	0.15	0.89	0.56	2.67	3.01	3.91	2.68	0.75	0.88	0.51	1.87	0.32

Calendar year 1958: Max 11,200 Min 14 Mean 692 Cfsm 1.25 In. 17.01
Water year 1958-59: Max 13,100 Min 30 Mean 740 Cfsm 1.34 In. 18.20

Peak discharge (base, 17,000 cfs).--Mar. 27 (10 a.m.) 17,600 cfs (20.96 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 6-21, Sept. 9-30; discharge estimated on basis of weather records, recorded range in stage when available, and records for station above Donelson and West Fork near Murfreesboro. Backwater from aquatic vegetation Oct. 1-16, Nov. 2-7, 17-19, Apr. 11 to Aug. 5, Aug. 8 to Sept. 8.

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 southeast of Donelson, Davidson County, and at mile 17.7.

Drainage area.--834 sq mi.

Records available.--October 1938 to September 1959. Prior to January 1939 monthly discharge only, 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 18.00 ft lower.

Average discharge.--21 years, 1,376 cfs.

Extremes.--Maximum discharge during year, 19,000 cfs Feb. 14 (gage height, 36.01 ft); minimum, 38 cfs Sept. 29, 30 (gage height, 11.04 ft).
1938-59: 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.--Two discharge measurements furnished by Corps of Engineers.

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

Rating tables, water year 1958-59 (gage height, in feet and discharge, in cubic feet per second)
(Shifting-control method used May 30 to June 1, June 4, 5, 7-16, 25-27, July 2-4, 7-9, 23, 24, 27-30; rate of change in stage used as a factor Nov. 29, Jan. 16, 22, Feb. 14-16, Mar. 12, 27, 28, Apr. 10, Aug. 5-7)

Oct. 1 to Nov. 19				Nov. 20 to Sept. 30			
11.0	30	13.0	490	11.0	34	14.0	890
11.4	77	14.0	930	11.4	80	16.0	2,040
12.0	185	15.0	1,440	12.0	184	21.0	5,500
12.5	300			13.0	465		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	221	56	1,390	444	560	1,000	1,600	472	418	137	165	265
2	197	64	990	728	504	1,140	1,980	588	2,870	244	142	229
3	185	89	822	665	468	975	2,500	629	1,810	254	125	335
4	175	107	920	528	1,000	868	1,700	468	822	210	111	234
5	159	102	872	424	2,120	814	1,320	409	*536	163	850	157
6	142	90	692	355	1,450	2,120	1,100	373	1,000	749	12,400	132
7	131	80	540	313	1,080	1,870	940	331	714	516	7,450	144
8	114	73	458	515	920	1,300	818	298	512	*281	2,480	*150
9	104	64	409	3,790	854	1,070	755	273	385	205	1,280	139
10	99	62	364	1,960	881	915	4,050	254	313	176	827	1,840
11	97	58	322	1,230	1,440	1,200	4,200	236	276	161	588	1,540
12	95	53	293	900	1,220	7,530	3,240	239	249	148	427	629
13	84	*53	270	755	1,410	3,820	4,490	458	606	135	334	376
14	84	48	244	665	11,700	2,380	2,730	508	504	111	*268	265
15	73	51	219	954	14,600	2,040	1,980	370	307	106	222	201
16	73	59	199	7,020	6,030	2,220	1,550	284	229	106	375	163
17	64	62	186	3,310	3,510	1,540	1,260	242	194	92	486	130
18	58	88	178	1,870	2,560	1,220	1,080	217	173	90	334	111
19	57	1,270	173	1,340	1,890	1,010	1,170	*190	156	106	370	97
20	55	2,150	165	2,290	1,460	900	3,820	182	144	173	358	88
21	*56	955	163	3,390	1,190	1,180	3,440	178	133	163	246	75
22	58	612	148	8,810	1,020	4,800	2,030	190	125	137	244	71
23	55	448	144	4,010	1,380	2,590	*1,510	493	120	242	284	63
24	51	364	142	2,440	1,890	1,810	1,190	296	137	262	192	62
25	48	298	135	1,770	*1,340	*1,420	975	219	308	1,320	146	52
26	47	262	132	1,420	1,100	2,360	832	1,770	376	1,220	128	52
27	48	236	132	1,170	940	15,200	724	898	229	576	121	50
28	48	602	205	970	836	6,110	647	2,070	178	394	142	46
29	46	6,410	*424	*832	-	3,130	620	1,440	150	298	263	41
30	44	2,540	520	732	-------	2,500	532	732	126	229	340	40
31	44	-------	427	638	-------	1,980	-------	486	-------	190	349	-------
Total	2,812	17,406	12,278	56,238	65,353	79,012	54,783	15,793	14,100	9,194	32,047	7,777
Mean	90.7	580	396	1,814	2,334	2,549	1,826	509	470	297	1,034	259
Cfsm	0.109	0.695	0.475	2.18	2.80	3.06	2.19	0.610	0.564	0.356	1.24	0.311
In.	0.13	0.78	0.55	2.51	2.91	3.52	2.44	0.70	0.63	0.41	1.43	0.35

Calendar year 1958: Max 13,400 Min 30 Mean 1,048 Cfsm 1.26 In. 17.07
Water year 1958-59: Max 15,200 Min 40 Mean 1,005 Cfsm 1.21 In. 16.36

Peak discharge (base, 16,000 cfs).--Feb. 14 (10:30 p.m.) 19,000 cfs (36.01 ft); Mar. 27 (3 p.m.) 18,200 cfs (35.21 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 8.2 miles southeast of Nashville.

Drainage area.--64.0 sq mi.

Records available.--October 1953 to September 1959.

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

Average discharge.--6 years, 90.5 cfs.

Extremes.--Maximum discharge during year, 2,880 cfs July 1 (gage height, 9.83 ft); minimum, 0.4 cfs Oct. 27-31; minimum gage height, 2.87 ft June 21, July 1, 16-18.
1953-59: Maximum discharge, 17,000 cfs Mar. 21, 1955 (gage height, 19.73 ft); no flow for many days each year 1953-56.
Maximum stage known since at least 1920, that of Mar. 21, 1955.

Remarks.--Records fair except those for periods of backwater, which are poor. Minor diversion from gage pool for industrial use.

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

Rating table, water year 1958-59, except periods of backwater (gage height, in feet, and discharge, in cubic feet per second)

2.8	0.6	4.0	160
2.9	2.8	4.5	280
3.0	7.2	5.0	435
3.2	28	6.0	830
3.5	71	8.0	1,850

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.0	1.4	29	32	32	99	88	25	28	320	1.4	61
2	4.1	1.4	23	48	29	74	81	27	24	98	1.6	42
3	3.7	1.6	24	37	29	70	71	20	*19	20	1.6	16
4	3.0	1.6	*27	32	108	60	64	18	15	11	1.4	7.9
5	2.8	1.6	24	31	76	146	56	17	13	8.7	*1.4	7.9
6	2.2	1.4	19	31	60	222	48	15	14	6.6	47	5.0
7	1.6	1.2	16	28	52	128	41	14	13	*5.0	28	3.7
8	1.6	1.0	15	104	50	102	38	13	9.5	3.7	5.5	*3.3
9	1.8	.8	13	92	48	88	50	12	7.9	3.3	3.0	208
10	2.0	.8	13	53	89	*73	162	12	7.2	3.3	2.0	129
11	1.6	.6	12	40	81	348	133	11	7.2	3.0	1.6	40
12	1.4	.6	11	36	70	244	155	11	6.6	2.8	1.0	21
13	1.2	.5	10	33	97	149	128	24	6.0	2.5	1.0	16
14	1.0	.5	10	31	1,520	120	99	*16	5.0	2.2	1.2	12
15	.8	1.0	10	186	584	147	83	13	4.1	2.5	1.4	9.5
16	.6	3.7	9.5	185	259	106	71	11	3.3	2.2	1.8	7.9
17	.6	*6.6	9.5	90	176	90	62	10	3.3	2.0	2.0	6.0
18	.6	5.0	8.7	64	*131	76	59	8.7	3.0	3.0	2.0	5.0
19	.6	*36	7.9	60	99	66	56	7.9	2.8	5.5	2.0	4.5
20	.6	13	7.2	129	80	64	120	13	2.2	7.9	1.8	4.1
21	*.6	5.0	6.6	716	68	392	*73	19	2.2	5.0	1.8	4.1
22	.6	2.8	6.0	*287	62	218	62	69	2.5	35	5.0	3.7
23	.6	2.2	5.0	149	153	138	54	40	2.8	12	4.5	3.7
24	.6	1.6	5.0	110	101	108	47	19	13	129	2.5	3.3
25	.5	1.2	5.0	86	81	90	42	14	18	23	1.4	2.8
26	.5	1.2	4.1	71	71	697	38	13	12	7.2	1.2	2.5
27	.4	1.0	5.5	60	64	334	36	409	5.5	3.7	1.0	2.2
28	.4	117	20	52	60	180	33	226	3.3	2.8	1.8	1.8
29	.4	84	28	44	-	147	31	62	3.0	2.2	3.0	2.0
30	.4	41	23	40	--------	124	27	41	2.5	1.6	47	3.3
31	.5	--------	19	36	--------	106	--------	36	--------	1.2	15	--------
Total	42.3	337.3	426.0	2,993	4,330	5,006	2,108	1,246.6	258.9	735.9	192.9	639.2
Mean	1.36	11.2	13.7	96.5	155	161	70.3	40.2	8.63	23.7	6.22	21.3
Cfsm	0.021	0.175	0.214	1.51	2.42	2.52	1.10	0.628	0.135	0.370	0.097	0.333
In.	0.02	0.20	0.25	1.74	2.52	2.91	1.22	0.72	0.15	0.43	0.11	0.37

Calendar year 1958: Max 1,240 Min 0.4 Mean 73.0 Cfsm 1.14 In. 15.48
Water year 1958-59: Max 1,520 Min 0.4 Mean 50.2 Cfsm 0.784 In. 10.64

Peak discharge (base, 3,000 cfs, revised).--No peak above base.

* Discharge measurement made on this day.
Note.--Backwater from downstream diversion dike, leaves, or debris Oct. 1 to Nov. 28, Apr. 20 to May 14, July 24 to Sept. 1, Sept. 20-30.

4325. 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.

Records available.--October 1954 to September 1959.

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

Average discharge.--5 years, 92.6 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Mar. 21 (gage height, 9.50 ft); minimum, 0.2 cfs Sept. 27-29 (gage height, 0.50 ft).
1954-59: 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.

Revisions (water years).--WSP 1436: 1955(P). WSP 1556: Drainage area.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 17-31, Nov. 4-14, 22-27)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
0.8	2.0	0.5	0.2	1.2	21
.9	4.7	.6	.7	1.6	53
1.0	8.5	.7	1.6	2.0	100
1.3	24	.8	3.4	3.0	267
1.5	41	.9	6.1	7.0	987
		1.0	10		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.1	12	16	22	46	85	118	19	104	2.6	12	33
2	5.1	8.5	*14	31	41	74	109	18	*76	4.4	7.8	12
3	5.1	5.1	14	26	45	71	92	17	37	2.8	6.4	6.1
4	4.7	4.1	14	20	*103	*63	79	16	24	2.2	*5.8	4.9
5	4.1	2.9	13	17	79	141	71	16	20	2.2	5.5	3.7
6	*3.5	3.2	11	16	68	198	64	15	19	2.2	9.8	3.7
7	3.2	2.9	11	*16	62	141	60	15	15	2.1	62	3.2
8	2.9	2.4	11	29	62	118	58	14	12	1.8	19	4.1
9	2.9	2.7	10	60	62	104	64	14	14	*1.5	12	4.7
10	3.8	2.4	9.4	44	85	89	117	13	14	1.3	8.2	5.8
11	3.8	3.5	8.9	35	84	230	109	13	14	1.1	6.7	3.4
12	3.5	3.5	8.9	30	80	222	121	16	12	.9	5.8	2.4
13	2.9	2.9	8.5	27	104	168	110	*27	10	.8	4.9	2.1
14	2.9	*2.0	8	25	969	142	96	19	7.8	.6	4.4	1.6
15	2.7	7.2	7	104	578	157	84	16	7.4	1.8	4.2	1.4
16	2.7	12	7.5	133	330	120	*75	14	6.7	2.1	7.0	1.2
17	2.7	7.6	8.0	87	236	102	67	14	6.4	1.8	4.7	1.1
18	2.4	7.2	7.6	67	176	86	66	13	5.8	4.4	4.9	*1.0
19	2.4	26	6.9	77	136	79	63	12	5.8	2.2	3.9	.9
20	2.4	12	7.2	177	112	75	63	14	5.5	2.1	3.4	.7
21	2.4	7.6	6.5	522	93	478	56	14	5.2	2.2	14	.7
22	2.4	5.4	6.1	343	86	307	50	17	4.9	68	6.1	.6
23	2.4	4.4	6.5	191	141	198	45	19	4.7	150	3.4	.4
24	2.7	4.1	6.9	142	106	153	40	12	5.8	122	2.8	.4
25	2.7	3.5	6.5	115	92	126	35	11	8.6	40	2.4	.3
26	2.9	3.5	6.1	94	84	514	30	10	5.5	26	2.1	.3
27	2.9	3.2	8.0	81	75	370	27	23	4.4	17	1.8	.2
28	2.9	31	12	72	74	240	30	24	3.9	14	1.8	.2
29	2.9	39	11	64	-	193	25	13	3.4	10	1.9	2.7
30	2.7	21	11	57	--------	158	21	12	2.8	9.1	14	4.0
31	3.2	--------	11	50	--------	134	--------	13	--------	24	5.2	--------
Total	99.9	252.8	293.5	2,774	4,209	5,336	2,045	483	465.6	523.2	253.9	106.8
Mean	3.22	8.43	9.47	89.5	150	172	68.2	15.6	15.5	16.9	8.19	3.56
Cfsm	0.048	0.126	0.142	1.34	2.24	2.57	1.02	0.233	0.232	0.253	0.122	0.053
In.	0.06	0.14	0.16	1.54	2.34	2.97	1.14	0.27	0.26	0.29	0.14	0.06

Calendar year 1958: Max 837 Min 0.1 Mean 65.8 Cfsm 0.984 In. 13.33
Water year 1958-59: Max 969 Min 0.2 Mean 46.1 Cfsm 0.689 In. 9.37

Peak discharge (base, 1,900 cfs).--No peak above base.

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 13-16, Jan 6, Apr. 22 to May 12, Sept. 15-17; discharge estimated on basis of weather records, recorded range in stage, and records for Harpeth River at Belleview.

4335. Harpeth River at Belleview, Tenn.

Location.--Lat 36°03'16", long 86°55'42", on right bank 46 ft upstream from bridge on State Highway 100, 0.1 mile downstream from Little Harpeth River, and 0.9 mile southeast of Belleview, Davidson County.

Drainage area.--408 sq mi.

Records available.--April 1920 to September 1959. Monthly discharge only from 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 2½ miles downstream at datum 7.85 ft lower.

Average discharge.--39 years, 556 cfs.

Extremes.--Maximum discharge during year, 6,210 cfs Feb. 14 (gage height, 11.59 ft); minimum, 12 cfs Sept. 28-30 (gage height, 1.01 ft).
1920-59: 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. Minor diversion for irrigation.

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

Revisions (water years).--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.9	4.1	2.0	255
1.0	14	2.5	470
1.2	42	3.0	755
1.4	76	5.0	1,950
1.7	150	9.0	4,450

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	28	217	80	244	514	706	179	197	84	80	275
2	36	39	160	133	217	470	658	179	842	60	70	232
3	36	47	138	192	206	420	602	172	388	36	55	116
4	33	44	130	156	402	384	498	147	*259	55	59	84
5	30	33	121	124	573	*416	430	133	192	58	48	72
6	28	27	109	102	425	1,160	375	121	189	48	248	58
7	25	24	95	*99	354	859	341	*107	160	173	629	70
8	24	24	84	124	329	682	309	99	124	78	498	52
9	23	24	78	512	325	585	358	91	107	*55	251	56
10	21	23	74	375	367	486	870	86	99	45	172	182
11	23	23	67	263	525	628	1,100	82	107	45	136	104
12	28	24	63	206	435	1,920	894	82	*99	65	*109	65
13	*24	25	60	179	450	1,170	996	197	86	62	93	53
14	20	25	50	166	3,990	894	755	278	124	48	76	47
15	19	34	*40	312	4,420	930	629	150	82	36	65	40
16	19	44	45	1,070	2,140	779	525	111	67	31	56	39
17	19	56	48	728	1,480	646	445	93	60	24	168	34
18	18	56	50	470	1,110	525	402	86	52	21	99	*31
19	18	70	48	375	854	445	411	80	48	27	99	28
20	18	214	48	755	*700	411	470	76	42	33	70	25
21	18	138	47	2,020	585	1,020	445	89	40	33	139	24
22	18	91	44	3,100	520	2,600	367	89	37	286	168	23
23	18	69	42	1,350	755	1,250	*325	99	34	363	72	21
24	19	*58	42	918	773	942	289	114	72	1,130	55	19
25	19	53	44	728	596	755	266	86	53	393	47	19
26	18	50	42	596	508	1,430	244	82	70	321	39	19
27	16	45	44	481	440	2,700	225	162	55	214	34	15
28	15	97	52	393	406	1,510	217	755	42	136	44	14
29	16	441	65	346	-	1,100	232	427	34	107	225	12
30	19	333	76	305	-------	960	200	210	31	89	350	13
31	20	-------	78	270	-------	815	-------	153	-------	80	124	-------
Total	695	2,259	2,301	16,928	24,129	29,408	14,584	4,815	3,792	4,236	4,378	1,842
Mean	22.4	75.3	74.2	546	862	949	486	155	126	137	141	61.4
Cfsm	0.055	0.185	0.182	1.34	2.11	2.33	1.19	0.380	0.309	0.336	0.346	0.150
In.	0.06	0.21	0.21	1.54	2.20	2.68	1.33	0.44	0.35	0.39	0.40	0.17

Calendar year 1958: Max 3,550 Min 5.6 Mean 398 Cfsm 0.975 In. 13.23
Water year 1958-59: Max 4,420 Min 12 Mean 300 Cfsm 0.735 In. 9.98

Peak discharge (base, 7,500 cfs).--No peak above base.

* Discharge measurement made on this day.

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 1959. 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.--35 years, 934 cfs.

Extremes.--Maximum discharge during year, 9,430 cfs Feb. 15 (gage height, 13.18 ft); minimum, 47 cfs Sept. 30 (gage height, 1.14 ft).

1924-59: 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.--Three 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 14				Feb. 15 to Sept. 30			
1.3	68	3.0	600	1.1	41	3.0	615
1.6	110	5.0	2,000	1.5	107	6.0	2,800
2.0	206	10.0	6,250	2.0	210	12.0	8,250
2.5	370			2.5	385		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	90	426	176	442	956	1,120	320	1,830	111	170	240
2	100	107	330	198	402	956	1,180	310	2,180	190	156	403
3	97	99	295	262	374	854	1,080	296	998	164	146	320
4	97	*102	268	285	500	775	907	278	645	114	125	198
5	96	100	250	228	840	787	770	254	506	145	198	164
6	*90	96	228	190	739	1,720	692	234	457	225	244	152
7	87	87	206	176	616	1,740	*625	219	403	158	881	131
8	83	81	182	237	545	1,270	570	205	*320	*225	942	144
9	80	81	171	448	540	1,090	590	195	286	158	524	164
10	91	81	156	679	745	942	1,190	188	296	133	342	185
11	87	81	148	486	957	854	1,820	183	403	114	264	261
12	79	80	142	382	866	2,070	1,490	185	314	105	*216	177
13	79	79	132	*337	794	1,950	1,560	234	268	120	188	142
14	80	80	118	298	5,740	1,410	1,300	385	222	121	170	123
15	78	104	*102	542	7,820	1,290	1,070	345	237	111	152	112
16	76	142	108	1,420	3,880	1,240	900	247	192	95	138	105
17	75	114	116	1,350	2,540	1,020	775	205	172	100	131	98
18	72	137	116	853	1,910	874	704	192	160	125	225	90
19	72	237	116	655	1,480	742	665	*179	150	95	216	88
20	72	217	116	691	1,190	682	714	183	138	92	188	80
21	72	333	110	4,220	998	912	748	195	133	95	152	71
22	70	231	104	5,700	874	3,790	640	216	127	285	190	68
23	70	182	110	2,640	1,280	2,210	570	272	121	543	213	67
24	70	*151	114	1,670	1,470	1,550	516	222	146	922	144	63
25	70	135	110	1,280	1,170	1,230	470	216	261	915	127	*60
26	69	128	102	1,060	*1,000	1,410	434	219	183	516	107	57
27	69	118	108	892	874	*3,620	403	a350	170	394	98	54
28	69	163	120	745	799	2,560	385	a1,200	150	292	95	54
29	68	390	124	628	-	1,740	361	a700	131	219	127	52
30	68	685	135	550	--------	1,490	361	a400	120	190	388	49
31	68	--------	148	490	--------	1,260	--------	a360	--------	168	310	--------
Total	2,464	4,711	5,011	29,768	41,385	44,994	24,610	9,187	11,719	7,240	7,567	3,972
Mean	79.5	157	162	960	1,478	1,451	820	296	391	234	244	132
Cfsm	0.116	0.229	0.236	1.40	2.15	2.11	1.19	0.431	0.569	0.341	0.355	0.192
In.	0.13	0.26	0.27	1.61	2.24	2.44	1.33	0.50	0.63	0.39	0.41	0.22

Calendar year 1958: Max 9,300 Min 58 Mean 723 Cfsm 1.05 In. 14.29
Water year 1958-59: Max 7,820 Min 49 Mean 528 Cfsm 0.769 In. 10.43

Peak discharge (base, 10,000 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 station at Belleview.

4350. Cumberland River below Cheatham Dam, Tenn.

Location.--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 1959.

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 used during periods of crest-wicket manipulation. 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.

Average discharge.--5 years, 22,680 cfs.

Extremes.--Maximum discharge during water year, 103,000 cfs Feb. 15 (gage height, 30.25 ft); minimum daily, 964 cfs Sept. 20; minimum gage height, 8.03 ft May 9 (base gage).
1954-59: 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, 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. 60), and by Cheatham Dam.

Cooperation.--One discharge measurement, lock B staff-gage readings, and record of wicket manipulation furnished by Corps of Engineers.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e15,600	e4,410	18,700	e7,220	e5,880	12,400	18,900	23,400	e9,160	e4,330	e9,780	13,800
2	e16,300	e5,640	15,000	e7,280	e5,850	12,200	25,500	22,200	12,900	e5,510	e9,730	e11,900
3	e16,200	e5,370	12,400	e7,360	e12,900	12,300	27,000	14,600	16,600	e4,600	e11,200	e10,300
4	e16,500	*e5,060	11,500	e8,180	19,600	13,900	24,800	12,000	e14,400	e4,270	*e7,640	e8,480
5	e16,600	e5,200	13,300	16,300	19,500	14,600	20,400	11,200	e14,600	e4,660	e11,800	e10,200
6	*e16,800	e4,950	13,700	25,500	21,500	15,300	14,800	11,600	e14,200	e5,080	24,300	e7,220
7	e13,500	e4,830	19,400	18,300	19,200	18,700	13,200	11,800	15,000	*e3,820	22,800	e7,130
8	e13,500	e4,860	12,600	12,900	12,200	18,500	16,500	e11,500	15,300	e4,020	14,300	e8,710
9	e14,300	e4,830	21,600	12,300	e9,810	16,900	16,500	e6,610	e14,000	e3,350	e14,400	e9,410
10	e16,900	e4,830	25,800	17,600	e9,900	14,800	19,400	e9,800	14,400	e2,990	e12,500	e10,300
11	e15,700	e4,830	25,400	16,300	e10,400	12,900	33,300	e10,200	e14,200	e4,250	e5,230	*15,000
12	e16,100	e4,860	19,900	*13,100	11,200	13,000	27,900	e10,500	e14,100	e3,010	e5,230	e10,500
13	e16,200	e4,730	15,800	10,600	13,900	25,300	42,000	e9,340	e14,100	e3,770	e12,500	e8,620
14	e16,200	e4,510	14,000	e10,100	64,700	25,300	37,100	e8,540	e13,900	e4,050	e12,900	e8,570
15	e10,600	e4,510	15,000	11,600	96,800	18,500	32,700	e9,240	e13,900	e4,340	e10,700	e8,430
16	e16,400	e4,600	18,200	24,200	61,300	14,100	29,100	e9,210	e13,800	e6,420	e11,100	e8,710
17	e16,400	e3,810	17,200	32,300	29,700	12,500	33,800	e7,130	e13,900	e8,330	e8,300	e8,480
18	e8,890	e4,630	15,400	22,500	23,300	12,600	36,100	e7,260	e13,900	e3,180	e12,000	e8,480
19	e6,980	e4,660	16,900	21,600	19,400	12,600	39,800	e7,840	e13,900	e5,430	e13,500	e7,540
20	e3,340	e6,680	16,000	22,400	17,600	12,600	40,300	e11,500	e12,100	e4,590	e13,500	e964
21	e4,310	e7,570	11,400	35,000	16,300	12,700	24,100	e10,000	e7,800	e3,790	e12,900	e6,460
22	e7,830	e5,720	11,900	52,300	20,100	14,900	21,700	e6,240	e11,000	e5,800	13,900	e7,580
23	*e7,180	e5,280	*12,900	41,100	24,300	19,100	22,400	e7,610	e5,090	e13,000	e10,600	e7,560
24	e7,280	e8,320	12,100	28,900	34,600	16,300	25,000	e6,610	e5,020	e13,200	e9,320	e7,560
25	e7,220	e10,200	12,100	17,800	15,500	16,400	25,400	e7,670	e9,200	e6,260	e6,980	e7,580
26	e7,540	e8,530	12,200	17,300	*12,900	13,200	24,700	e12,800	e12,000	e4,130	e11,200	e7,720
27	e8,170	e3,320	12,100	17,400	12,700	26,500	19,400	*e19,500	e7,880	e7,740	e10,800	e7,670
28	e8,020	e5,520	12,000	12,000	12,800	46,100	18,200	16,000	e6,170	e9,180	e11,300	e7,580
29	e6,940	24,000	11,900	11,600	-	38,100	*16,200	e15,300	e8,310	e10,100	14,400	e7,580
30	e10,100	22,100	e9,830	12,800	--------	*23,700	20,300	e13,600	e5,540	e12,200	14,800	e7,610
31	e6,260	--------	e7,240	e8,550	--------	15,500	--------	e7,500	--------	e9,910	14,300	--------
Total	363,860	198,360	463,470	572,390	633,840	551,500	766,500	348,300	356,370	185,310	373,910	257,644
Mean	11,740	6,612	14,950	18,460	22,640	17,790	25,550	11,240	11,880	5,978	12,060	8,588

	Observed			Adjusted†		
Calendar year 1958:	Max 85,700	Min 3,320	Mean 21,080	Mean 18,300	Cfsm 1.29	In. 17.49
Water year 1958-59:	Max 96,800	Min 964	Mean 13,890	Mean 14,450	Cfsm 1.02	In. 13.81

* 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 from auxiliary gage record by weir formulas plus leakage.

4355. Red River near Adams, Tenn.

Location.--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 1959.

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.--39 years, 972 cfs.

Extremes.--Maximum discharge during year, 8,990 cfs Feb. 15 (gage height, 16.56 ft); minimum, 74 cfs Sept. 29 (gage height, 1.82 ft).

1920-59: 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 period Nov. 15-30, which are fair, and those for periods of ice effect, which are poor.

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

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

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 29 to Dec. 5; rate of change in stage used as a factor Jan. 22, Feb. 14, 15)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
1.9	77	4.0	745	1.8	71	4.0	740
2.0	93	6.0	1,890	2.0	104	10.0	4,410
2.5	205	8.0	3,120	2.5	215	11.0	5,100
3.0	337			3.0	340		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*137	97	*158	105	772	1,170	586	*381	*526	146	116	*328
2	131	95	142	*105	695	1,180	821	350	1,280	139	142	772
3	124	97	153	126	655	1,070	772	318	900	133	116	470
4	120	97	158	170	667	1,020	655	299	646	131	104	323
5	120	101	167	b150	691	985	574	284	526	137	159	260
6	115	97	170	b135	614	1,600	530	272	522	142	280	215
7	113	91	149	b125	550	1,630	490	260	450	151	773	192
8	107	90	135	b115	510	1,300	474	245	377	139	606	169
9	105	88	124	b105	498	1,200	490	238	337	131	381	206
10	113	87	117	b100	510	1,120	570	236	315	122	274	538
11	105	85	109	b100	1,600	1,020	610	236	323	118	226	323
12	103	85	105	b110	910	985	570	289	323	118	197	238
13	101	88	101	111	840	920	570	262	312	118	174	197
14	99	90	b95	111	4,500	850	582	281	276	114	162	174
15	97	103	b90	135	6,190	803	530	276	252	108	146	158
16	95	107	b95	299	4,580	740	498	245	236	104	135	146
17	93	99	97	660	3,210	671	478	226	224	106	131	133
18	90	111	90	432	2,590	624	450	220	215	371	135	122
19	88	131	87	349	2,050	582	442	215	201	248	*169	112
20	88	117	87	390	1,700	562	510	215	192	178	162	104
21	88	113	87	2,950	1,430	558	767	213	187	151	139	102
22	88	120	87	7,480	1,260	554	598	275	180	135	124	97
23	91	111	90	3,310	1,470	522	526	276	174	180	124	93
24	93	101	97	2,220	1,900	486	474	272	174	208	148	88
25	91	91	95	1,790	1,490	466	430	243	190	210	171	86
26	88	88	99	1,520	1,320	474	403	340	215	213	126	83
27	88	83	105	1,330	*1,230	637	377	530	180	194	108	82
28	88	93	107	1,220	1,120	708	396	700	164	158	108	78
29	87	109	99	1,100	-	554	411	803	153	148	306	76
30	87	153	97	*985	--------	518	407	598	*146	*137	312	77
31	*87	--------	97	875	--------	*526	--------	486	--------	124	204	--------
Total	3,120	3,018	3,489	28,713	47,552	26,035	15,991	10,088	10,196	4,812	6,458	6,042
Mean	101	101	113	926	1,698	840	533	325	340	155	208	201
Cfsm	0.149	0.149	0.167	1.37	2.50	1.24	0.786	0.479	0.501	0.229	0.307	0.296
In.	0.17	0.17	0.19	1.57	2.61	1.43	0.88	0.55	0.56	0.26	0.35	0.33

Calendar year 1958: Max 4,890 Min 83 Mean 721 Cfsm 1.06 In. 14.43
Water year 1958-59: Max 8,190 Min 76 Mean 453 Cfsm 0.668 In. 9.07

Peak discharge (base, 8,000 cfs).--Jan. 22 (10 a.m.) 8,880 cfs (16.40 ft); Feb. 15 (12 m.) 8,990 cfs (16.56 ft).

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

4360. Sulphur Fork Red River near Adams, Tenn.

Location.--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 1959. Prior to February 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 upstream at same datum.

Average discharge.--21 years, 235 cfs.

Extremes.--Maximum discharge during year, 4,890 cfs Feb. 15 (gage height, 12.78 ft); minimum, 12 cfs July 15, 16 (gage height, 3.35 ft).

1938-59: 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 above 2.5 ft lower than that in June 1934.

Remarks.--Records fair.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 17-27, Mar. 1-3, 5-9, May 26, 28-30)

3.35	10	4.0	90
3.4	13	4.5	254
3.5	21	6.0	895
3.7	41	9.0	2,450
3.9	70	12.0	4,340

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*23	30	*46	29	136	290	161	*96	*162	24	130	307
2	23	34	39	*37	120	261	225	86	187	23	38	149
3	23	34	46	45	117	258	204	76	136	21	29	131
4	23	31	50	44	136	240	171	67	114	20	23	68
5	22	24	49	40	130	265	149	64	93	25	21	49
6	21	20	42	33	108	478	139	59	84	32	379	159
7	20	19	36	30	93	370	123	53	76	30	277	56
8	20	19	33	31	88	302	117	50	64	24	108	42
9	21	19	31	56	99	283	136	48	57	20	70	642
10	38	19	30	52	861	250	184	46	56	19	50	342
11	46	20	29	33	576	236	171	46	57	18	40	162
12	29	20	27	26	330	236	171	60	56	16	34	117
13	23	21	26	26	685	208	191	99	49	15	29	78
14	21	21	32	27	3,740	194	178	70	42	14	26	57
15	20	24	33	44	2,980	187	162	53	39	13	24	50
16	20	33	26	208	1,300	165	149	48	36	12	23	42
17	21	32	24	152	868	149	139	45	34	16	34	34
18	23	29	26	111	638	139	133	44	33	16	50	29
19	22	36	25	88	450	123	123	42	31	28	*36	27
20	22	42	24	146	362	123	181	41	29	21	31	24
21	22	38	23	2,630	302	136	178	64	28	18	26	23
22	21	31	22	1,620	265	123	149	54	28	19	29	21
23	21	29	23	638	426	111	133	98	42	*74	23	20
24	22	27	30	402	390	102	117	59	58	49	27	19
25	27	26	34	306	314	96	105	82	40	75	33	18
26	27	26	31	254	283	111	102	281	33	42	22	17
27	27	26	28	236	*258	152	96	201	29	31	19	17
28	27	28	28	208	243	133	136	306	27	28	26	16
29	27	57	28	191	-	120	139	258	24	26	31	15
30	27	64	28	*174	--------	120	117	265	*24	*23	29	14
31	*27	--------	27	152	--------	*114	--------	171	--------	56	125	--------
Total	756	879	976	8,069	16,298	6,075	4,479	3,032	1,768	848	1,842	2,745
Mean	24.4	29.3	31.5	260	582	196	149	97.8	58.9	27.4	59.4	91.5
Cfsm	0.132	0.158	0.170	1.41	3.15	1.06	0.805	0.529	0.318	0.148	0.321	0.495
In.	0.15	0.18	0.20	1.62	3.28	1.22	0.90	0.61	0.36	0.17	0.37	0.55

Calendar year 1958: Max 1,680 Min 11 Mean 183 Cfsm 0.989 In. 13.43
Water year 1958-59: Max 3,740 Min 12 Mean 131 Cfsm 0.708 In. 9.61

Peak discharge (base, 3,400 cfs).--Jan. 21 (8 p.m.) 4,520 cfs (12.25 ft); Feb. 15 (1 a.m.) 4,890 cfs (12.78 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 1959.

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, 3,400 cfs June 1 (gage height, 10.59 ft); minimum, 23 cfs Dec. 22; minimum gage height, 2.80 ft Sept. 25-30.
1957-59: Maximum discharge, 4,040 cfs Nov. 17, 1957 (gage height, 11.42 ft); minimum, 18 cfs Sept. 13-16, 1958 (gage height, 2.72 ft).

Remarks.--Records fair.

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

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 14

2.8	23	5.0	520
3.0	38	8.0	1,730
3.4	97	9.0	2,300
4.0	205		

Feb. 15 to Sept. 30

4.0	205
5.0	450
8.0	1,730

Note.--Same as preceding table below 4.0 ft and above 8.0 ft.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	26	50	31	92	148	100	90	1,250	64	63	47
2	26	27	50	32	85	140	111	85	742	63	56	48
3	26	26	56	31	82	136	119	80	408	58	50	50
4	26	*26	54	30	83	129	117	75	*290	56	*47	47
5	26	25	54	28	78	150	112	72	255	58	46	41
6	*25	26	48	27	74	252	109	67	233	57	48	47
7	25	28	43	27	69	237	102	64	195	53	90	46
8	25	32	41	31	67	207	100	61	163	*50	74	68
9	25	34	39	33	72	191	109	60	153	47	60	47
10	34	35	36	31	83	171	126	57	505	46	51	42
11	31	36	34	31	119	160	140	57	770	43	47	39
12	28	36	33	*31	*124	150	151	61	802	42	44	36
13	27	38	32	32	217	140	158	78	492	*41	42	35
14	26	41	31	31	2,010	131	156	72	338	40	41	34
15	26	53	29	57	1,610	122	148	64	268	39	41	32
16	*26	51	28	128	726	114	140	60	221	38	40	32
17	26	47	29	117	450	107	131	57	191	39	39	30
18	26	53	29	99	325	100	124	56	165	46	42	29
19	25	57	26	88	248	99	119	53	146	44	39	28
20	26	54	27	145	199	97	146	60	133	43	36	28
21	26	48	28	1,710	169	95	141	77	121	66	35	27
22	26	44	24	1,190	155	92	133	65	111	47	34	26
23	26	41	*28	513	185	85	122	70	100	261	34	26
24	26	39	41	320	209	*82	114	116	97	140	32	26
25	26	36	37	225	199	80	109	95	94	109	34	25
26	25	35	35	183	185	87	102	175	88	88	32	25
27	25	34	32	156	167	95	99	*640	80	75	32	25
28	25	41	32	136	156	97	107	1,370	75	70	41	25
29	25	53	31	122	-	97	*100	552	70	77	80	*25
30	25	54	29	111	--------	97	95	340	66	67	54	25
31	25	--------	29	100	--------	97	--------	260	--------	63	54	--------
Total	813	1,176	1,115	5,826	8,238	3,985	3,640	5,089	8,622	2,030	1,458	1,061
Mean	26.2	39.2	36.0	188	294	129	121	164	287	65.5	47.0	35.4
Cfsm	0.218	0.327	0.300	1.57	2.45	1.08	1.01	1.37	2.39	0.546	0.392	0.295
In.	0.25	0.36	0.35	1.81	2.55	1.24	1.13	1.58	2.67	0.63	0.45	0.33

Calendar year 1958: Max 768 Min 18 Mean 126 Cfsm 1.05 In. 14.21
Water year 1958-59: Max 2,010 Min 24 Mean 118 Cfsm 0.983 In. 13.35

Peak discharge (base, 2,200 cfs).--Jan. 21 (5 p.m.) 2,540 cfs (9.37 ft); Feb. 14 (8 p.m.) 2,760 cfs (9.69 ft); May 28 (3 a.m.) 2,340 cfs (9.06 ft); June 1 (about 10 a.m.) 3,400 cfs (10.59 ft).

* Discharge measurement made on this day.

4370. Cumberland River at Dover, Tenn.

Location.--Lat 36°29'26", long 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 1959.

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, 1939, 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.--22 years, 24,310 cfs (unadjusted).

Extremes.--Maximum discharge during year, 96,400 cfs Feb. 16; maximum gage height, 30.81 ft Feb. 16; minimum daily discharge, 3,620 cfs Oct. 21; minimum gage height, 9.99 ft Nov. 1.

1937-59: 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. Some regulation by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, and Old Hickory Lake (see p. 60), and by Cheatham and navigation dams B and C on Cumberland River.

Cooperation.--Lock gage readings, records of wicket manipulation, and seven 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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e16,700	e5,070	21,400	e7,900	e8,020	16,900	20,400	24,900	e11,900	e5,800	e9,920	e14,900
2	e17,600	e4,590	18,200	e7,980	e7,780	16,500	23,800	c24,700	e21,000	e5,530	e9,710	e15,100
3	e17,700	e5,440	14,200	e8,070	e10,600	16,500	c32,800	c19,800	e24,700	e6,410	e10,900	e12,200
4	e17,800	e5,140	13,600	e8,210	20,400	16,600	26,800	14,700	e18,600	e5,390	e9,900	e10,700
5	e17,900	e4,960	12,500	e13,600	c21,000	18,200	c25,000	13,400	e16,500	e5,200	e8,520	e10,300
6	e18,100	e5,100	15,800	22,000	c22,100	20,800	20,900	13,000	e15,900	e5,480	e22,600	e9,920
7	e16,600	e4,940	19,600	c23,600	23,900	23,900	15,900	13,000	e17,400	*e5,560	c33,000	e7,620
8	e12,900	e4,780	15,700	c16,300	17,800	22,500	17,600	e12,300	e19,600	e4,750	e24,000	e7,910
9	e15,500	e4,690	17,900	13,600	e11,600	c20,500	19,000	e8,310	e15,600	e4,210	e16,300	e9,810
10	e16,900	e4,680	25,900	14,800	e11,700	c20,900	19,800	e7,930	e19,600	e4,030	e14,200	e11,400
11	e17,100	e4,670	26,600	19,500	e13,200	17,200	30,000	e10,300	e19,500	e4,630	e9,390	e15,400
12	e17,200	e4,610	24,200	16,200	15,400	16,800	30,000	e10,600	e18,200	e4,210	e5,290	e14,800
13	e17,600	e4,680	18,400	e13,500	16,100	23,700	40,000	e10,900	e16,700	e4,160	e8,080	e9,010
14	e17,900	e4,530	16,200	e11,100	47,700	28,200	41,000	*e9,990	e15,800	e4,330	e13,200	e8,460
15	*e12,800	e4,520	15,400	e11,100	86,000	c24,300	38,400	e9,990	e15,100	e4,850	e11,800	e9,140
16	e15,100	e4,470	18,600	e16,900	c91,800	19,600	32,400	e9,870	e14,700	e5,220	e10,500	e8,020
17	e17,100	e4,450	19,000	35,400	c64,500	15,600	35,400	e9,050	e14,600	e7,260	e10,400	e8,300
18	e13,100	e4,590	16,900	c27,700	c39,300	15,300	38,100	e7,860	e14,500	e6,390	*e9,710	e8,010
19	e7,340	e4,960	18,100	c23,500	c28,100	15,200	40,300	e7,840	e14,400	e4,690	e13,700	e8,020
20	e5,910	e6,530	17,100	c25,000	c24,000	15,200	42,400	e9,570	e12,900	e5,510	e14,000	e4,330
21	e3,620	e8,400	e14,900	37,200	20,800	15,100	c31,400	e11,400	e10,900	e5,020	e12,600	e6,510
22	e8,140	e6,510	e11,700	61,700	c22,500	15,300	c24,300	e9,280	e9,510	e5,320	e16,200	e8,280
23	e7,520	e5,820	15,300	c57,900	28,000	*21,300	c22,700	e7,830	e8,170	e10,600	e13,100	e8,280
24	e7,060	e7,990	13,400	c44,800	39,700	19,400	c26,900	e8,290	e4,450	e14,800	e9,500	e8,190
25	e6,940	*e10,300	12,400	c25,600	c28,800	18,800	27,100	e7,600	e6,120	e11,700	e8,520	e8,250
26	e6,960	e9,910	12,500	23,300	c17,800	17,900	c26,600	e13,200	e11,800	e5,980	e8,420	e8,280
27	e7,330	e4,560	12,700	22,000	17,600	22,000	25,300	e18,000	e9,230	e6,280	e11,100	e8,390
28	e7,830	e5,160	12,600	c18,200	17,300	42,400	21,000	c29,500	e7,540	e8,900	e11,200	*e8,280
29	e7,490	e17,200	12,400	e13,300	-	43,000	20,000	e19,900	e7,690	e9,390	e14,400	e8,280
30	e7,460	c25,600	e11,300	c17,000	--------	c31,100	20,000	e19,100	e7,390	e11,400	e16,200	e8,220
31	e9,110	--------	e8,250	e12,000	--------	c20,800	--------	e12,900	--------	e12,500	e16,900	--------
Total	388,310	198,850	502,750	668,960	773,500	651,500	835,300	405,010	420,000	205,500	403,260	283,310
Mean	12,530	6,628	16,220	21,580	27,620	21,020	27,840	13,060	14,000	6,629	13,010	9,444

	Observed				Adjusted†			
Calendar year 1958:	Max 90,500	Min 3,620	Mean 23,870		Mean 21,090	Cfsm 1.28	In. 17.32	
Water year 1958-59:	Max 91,800	Min 3,620	Mean 15,720		Mean 16,270	Cfsm 0.984	In. 13.36	

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

e 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.--46.5 sq mi (revised).

Records available.--October 1949 to September 1959.

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.--10 years, 75.0 cfs.

Extremes.--Maximum discharge during year, 2,100 cfs Jan. 22 (gage height, 11.91 ft); minimum, 1.5 cfs Nov. 12-14.

1949-59: Maximum discharge, 9,320 cfs Nov. 18, 1957 (gage height, 21.51 ft); minimum observed, 0.1 cfs Oct. 22, 1949.

Maximum stage known, 20.4 ft in January 1937, from floodmark.

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

Rating table, water year 1958-59, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 28 to Dec. 5)

1.2	0.8	1.7	22
1.3	2.2	1.9	45
1.4	4.5	2.5	163
1.5	8.3	5.0	548
1.6	15	9.0	1,430

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	1.9	3.6	11	49	80	41	15	a40	7.0	8.3	8.3
2	3.2	1.9	3.6	20	42	63	68	15	a33	6.2	7.4	8.8
3	*3.3	1.9	3.6	16	42	61	50	13	a40	5.4	6.2	6.6
4	3.4	2.0	3.4	14	47	58	44	13	a30	5.1	5.8	4.8
5	3.2	1.9	a3.2	11	42	*91	38	12	a25	5.8	10	3.6
6	3.2	1.9	3.2	8.8	37	190	36	11	a30	5.4	212	3.4
7	3.0	1.7	3.2	b8.4	35	109	32	10	23	4.8	222	3.4
8	2.6	1.7	a3.2	b8.0	33	85	30	8.8	20	4.5	49	5.5
9	2.6	1.7	a3.2	b7.6	35	80	28	8.3	18	12	35	17
10	3.4	1.7	a3.1	b7.4	36	70	27	8.3	72	8.8	27	7.8
11	2.8	1.7	a3.1	b7.2	40	63	25	7.8	158	7.8	21	5.4
12	2.6	*1.5	a3.1	7.0	36	56	23	21	58	6.2	19	4.2
13	2.4	1.5	a3.0	7.0	220	52	24	20	41	5.4	16	3.4
14	2.4	1.7	a3.0	7.8	329	47	21	*14	30	4.5	14	3.2
15	2.4	4.2	a3.1	24	291	44	19	11	25	4.2	13	2.8
16	2.2	2.8	a3.2	52	184	40	*18	10	22	3.6	12	2.4
17	2.2	2.6	a3.5	29	143	37	18	8.8	19	4.8	17	2.2
18	2.2	9.2	a3.7	23	113	33	17	8.3	17	4.5	13	*2.2
19	2.0	7.4	*3.9	21	77	32	17	8.3	15	3.6	12	2.2
20	2.0	5.4	3.6	162	65	32	26	7.8	13	3.4	16	1.9
21	2.0	5.1	3.4	960	58	31	24	7.8	12	3.2	9.4	1.9
22	1.9	4.5	3.4	a1,300	56	29	20	7.8	11	14	8.3	1.9
23	2.2	4.2	6.2	a350	190	27	18	7.4	10	151	7.0	1.7
24	2.2	3.9	8.3	a150	121	25	17	7.0	11	260	7.4	1.7
25	2.0	3.9	9.4	a120	87	25	16	30	9.4	41	6.2	1.9
26	1.9	3.9	7.4	a100	73	40	15	38	*8.8	27	5.8	1.7
27	2.2	3.6	7.4	a90	65	63	15	183	8.3	20	5.1	1.7
28	1.9	3.8	7.4	a80	63	41	20	184	7.8	17	5.1	1.7
29	1.7	3.4	7.4	*73	-	38	20	239	7.0	13	4.8	1.9
30	1.7	3.6	7.4	65	--------	41	17	a150	6.6	*11	5.1	1.9
31	1.7	--------	7.0	56	--------	40	--------	a80	--------	10	5.4	--------
Total	76.1	96.2	141.2	3,796.2	2,609	1,723	784	1,165.4	820.9	680.2	805.3	117.1
Mean	2.45	3.21	4.55	122	93.2	55.6	26.1	37.6	27.4	21.9	26.0	3.90
Cfsm	0.053	0.069	0.098	2.62	2.00	1.20	0.561	0.809	0.589	0.471	0.559	0.084
In.	0.06	0.08	0.11	3.04	2.09	1.38	0.63	0.93	0.66	0.54	0.64	0.09

Calendar year 1958: Max 737 Min 1.5 Mean 54.2 Cfsm 1.17 In. 15.84
Water year 1958-59: Max 1,300 Min 1.5 Mean 35.1 Cfsm 0.755 In. 10.25

Peak discharge (base, 1,600 cfs).--Jan. 22 (4 a.m.) 2,100 cfs (11.91 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Little River near Cadiz.
b Stage-discharge relation affected by ice.

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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 8¾ miles southeast of Cadiz, Trigg County.

Drainage area.--244 sq mi (revised).

Records available.--February 1940 to September 1959.

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.--19 years, 345 cfs.

Extremes.--Maximum discharge during year, 5,970 cfs Jan. 21 (gage height, 15.28 ft); minimum, 24 cfs Oct. 29, 30.
1940-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

2.6	15	5.0	790
2.8	37	10.0	2,570
3.0	69	13.3	4,580
3.5	176		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	a26	65	45	310	470	176	98	213	75	a180	132
2	37	a26	65	48	276	455	314	92	179	75	a150	251
3	*37	a26	62	69	258	396	382	84	182	67	a130	272
4	36	a28	58	69	247	378	280	80	153	64	a110	213
5	36	a26	56	62	254	374	237	77	130	64	a100	141
6	35	a26	56	53	226	*678	209	73	137	60	a220	112
7	32	a25	53	50	200	626	191	69	150	58	988	92
8	32	a25	50	48	203	480	176	65	120	56	690	80
9	31	a30	45	47	200	430	163	64	110	51	287	168
10	33	a25	44	47	223	400	153	62	a300	51	216	198
11	32	a25	43	45	258	360	146	62	a1,000	82	171	120
12	31	*26	41	44	247	327	141	77	a900	65	143	92
13	31	26	38	43	396	295	139	112	440	56	122	77
14	30	26	36	41	1,480	272	139	139	306	53	112	64
15	29	32	35	62	1,690	254	132	*106	237	50	102	56
16	27	30	33	114	1,110	230	*122	88	197	48	94	53
17	27	43	33	188	890	209	118	75	171	44	90	50
18	26	44	32	126	754	191	114	71	148	53	84	*47
19	26	44	*31	106	630	179	108	65	135	48	84	45
20	25	73	31	204	532	173	114	65	126	45	78	45
21	25	65	31	2,910	455	168	120	65	118	43	78	43
22	25	50	31	4,530	400	163	122	62	110	62	71	43
23	26	43	35	1,520	766	155	112	64	104	466	65	40
24	26	41	36	958	874	146	104	60	100	3,200	62	38
25	27	37	40	770	618	141	100	58	98	878	62	38
26	31	37	47	662	550	150	94	129	*92	480	73	37
27	27	35	48	586	485	209	92	226	84	360	58	40
28	26	40	45	568	440	230	94	768	80	356	53	40
29	25	45	43	504	-	188	104	425	75	318	51	41
30	24	53	43	*420	-------	176	112	706	71	254	51	41
31	25	-------	44	360	-------	179	-------	284	-------	*203	53	-------
Total	920	1,078	1,350	15,299	14,972	9,082	4,608	4,471	6,266	7,785	4,828	2,709
Mean	29.7	35.9	43.5	494	535	293	154	144	209	251	156	90.3
Cfsm	0.122	0.147	0.178	2.02	2.19	1.20	0.631	0.590	0.857	1.03	0.639	0.370
In.	0.14	0.16	0.21	2.33	2.28	1.38	0.70	0.68	0.96	1.19	0.74	0.41

Calendar year 1958: Max 2,270 Min 24 Mean 293 Cfsm 1.20 In. 16.32
Water year 1958-59: Max 4,530 Min 24 Mean 201 Cfsm 0.824 In. 11.18

Peak discharge (base, 3,500 cfs).--Jan. 21 (3 p.m.) 5,970 cfs (15.28 ft); July 24 (1 a.m.) 5,850 cfs (15.12 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 1959 (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.--19 years (1940-59), 27,300 cfs (unadjusted).

Extremes.--Maximum discharge during year, 91,600 cfs Feb. 16; maximum gage height, 28.51 ft Feb. 2; minimum daily discharge, 4,160 cfs July 11.
1939-59: Maximum discharge, 201,000 cfs Feb. 18, 1950; maximum gage height, 43.10 ft Feb. 13, 1950; minimum daily discharge, 1941-59, 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 1959 are given in WSP 1641.

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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,800	7,010	24,000	8,440	16,400	28,400	22,100	25,100	14,700	8,210	12,300	17,100
2	18,000	4,370	22,600	8,070	16,100	26,400	24,500	27,700	18,200	6,860	11,500	16,500
3	18,300	5,020	18,000	8,070	18,700	25,200	31,300	26,000	22,900	7,850	11,900	15,700
4	18,200	5,580	16,300	8,070	27,300	23,800	32,000	20,000	23,500	7,530	12,300	13,100
5	18,300	5,360	15,500	12,300	30,300	24,200	30,000	*17,100	18,700	6,860	10,300	11,900
6	18,000	5,130	16,100	19,400	33,600	27,500	26,200	15,800	18,400	6,860	17,000	12,300
7	18,400	5,130	17,500	25,800	37,100	28,100	22,000	15,200	18,600	7,180	30,900	10,300
8	16,400	5,130	20,600	22,800	31,600	28,600	20,500	13,400	27,100	6,530	29,800	9,170
9	16,200	4,910	17,500	17,500	22,900	26,800	22,100	8,880	26,700	5,640	20,600	*10,700
10	16,800	4,680	23,600	16,500	21,500	26,300	22,400	7,140	26,600	5,350	17,600	11,700
11	18,200	4,910	27,700	18,900	19,600	22,500	26,200	11,200	*27,300	4,160	10,700	14,400
12	18,000	4,680	27,400	19,900	18,000	21,200	34,600	11,800	23,500	4,960	8,100	17,200
13	17,600	4,670	23,500	*16,800	17,900	22,500	35,700	13,100	20,100	4,210	7,780	12,300
14	18,600	4,920	20,700	14,400	35,600	30,000	42,900	12,200	19,100	*4,210	13,100	10,300
15	17,400	5,000	18,000	14,200	71,700	31,400	41,100	11,400	18,100	4,960	13,500	9,930
16	14,200	4,790	17,600	16,000	89,300	26,000	37,300	11,800	17,600	5,860	12,700	9,930
17	17,500	4,790	20,900	26,500	*89,400	21,100	35,600	10,900	17,400	7,420	12,300	9,540
18	18,000	4,790	20,300	33,300	70,800	19,200	38,400	9,410	17,400	9,170	11,900	9,540
19	10,600	5,000	18,900	27,400	45,900	19,700	39,900	8,660	16,900	6,750	14,000	9,540
20	8,050	6,700	19,500	29,200	33,400	20,700	43,200	9,790	16,700	6,150	15,300	8,100
21	5,520	9,040	18,800	42,500	27,600	21,100	42,300	12,600	15,600	6,150	15,800	6,700
22	7,970	6,590	15,200	63,500	27,200	20,600	33,200	13,100	11,800	6,450	16,100	8,800
23	8,380	6,190	15,500	67,700	34,500	23,300	29,300	10,200	11,800	9,930	16,200	8,450
24	7,560	7,840	17,000	59,900	41,200	24,800	30,500	9,410	5,120	17,400	12,300	8,450
25	7,300	*10,200	15,600	41,900	46,900	24,200	31,500	9,030	6,230	19,200	10,700	8,450
26	7,300	10,700	12,900	27,300	35,500	23,500	31,100	11,800	10,400	11,100	9,540	8,800
27	7,300	5,690	13,400	27,500	31,700	*23,500	30,700	18,200	12,800	8,100	11,900	8,800
28	7,940	4,980	13,400	25,900	30,200	34,200	27,500	28,000	10,000	9,930	12,300	8,450
29	7,940	13,200	12,900	19,200	-	45,800	24,100	25,200	8,910	11,500	14,400	8,800
30	7,620	24,400	11,700	21,700	--------	41,400	22,400	21,700	10,000	12,300	15,900	8,450
31	*8,900	--------	9,020	18,000	--------	30,800	--------	19,200	--------	14,000	17,300	--------
Total	417,280	201,400	561,620	778,650	‡1,021.9	812,800	930,600	465,020	512,160	252,780	446,020	323,400
Mean	13,460	6,713	18,120	25,120	36,500	26,220	31,020	15,000	17,070	8,154	14,390	10,780

	Observed			Adjusted†		
Calendar year 1958:	Max 89,600	Min 4,370	Mean 27,140	Mean 24,360	Cfsm 1.35	In. 18.29
Water year 1958-59:	Max 89,400	Min 4,160	Mean 18,420	Mean 18,980	Cfsm 1.05	In. 14.25

* 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

4135. 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. Records available, July 1950 to September 1959 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, 1,998,500 cfs-days June 6 (elevation, 722.39 ft); minimum contents, 1,002,500 cfs-days Jan. 15 (elevation, 676.73 ft). Maximum contents during period 1950-59, 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.

Revisions.--WSP 1556: Drainage area.

4165. 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 1959. 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, 666,800 cfs-days Apr. 21 (elevation, 649.88 ft); minimum, 447,700 cfs-days Jan. 7, 8 (elevation, 632.40 ft). Maximum contents during period 1943-59, 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 six 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 between elevations 663.0 ft (top of gates) and 651.0 ft (crest of spillway) is reserved for flood control, and 250,200 cfs-days 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.

4220. 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 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 1959. 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 Jan. 22 (elevation, 805.95 ft); minimum, 10,300 cfs-days Oct. 6 (elevation, 784.15 ft). Maximum 12 p.m. elevation during period 1916-59, 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 25 ft wide. Dam completed and storage began in 1916; dam redesigned and crest raised 35 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.

4240. 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 1959. 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, 661,500 cfs-days Aug. 11 (elevation, 647.04 ft); minimum, 443,800 cfs-days Jan. 7 (elevation, 620.88 ft). Maximum contents during period 1948-59, 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 eight taintor gates, 37 ft high by 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, of which 384,600 cfs-days 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.

4263. 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 1959. 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, 213,000 cfs-days Feb. 14 (elevation, 445.12 ft); minimum, 182,500 cfs-days Dec. 10 (elevation, 442.27 ft). Maximum contents during period 1954-59, 241,600 cfs-days Jan. 30, 1957 (elevation, 447.5 ft); minimum (after first filling to ordinary minimum pool), 179,400 cfs-days Oct. 22, 1957 (elevation, 441.96 ft).

Reservoirs in Cumberland River basin--Continued

4263. Old Hickory Lake.--Continued
Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, 41 ft high by 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.

4349. Cheatham Lake on Cumberland River, 9.4 miles west of Ashland City, Cheatham County, 16.0 miles (revised) 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 1958 to September 1959

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	700.27	1,477,800	-	639.32	529,100	-
Oct. 31	689.08	1,242,100	-235,700	635.98	488,900	-40,200
Nov. 30	687.61	1,212,500	-29,600	635.60	484,500	-4,400
Dec. 31	679.33	1,051,200	-161,300	632.64	450,400	-34,100
Calendar year 1958	-	-	-763,400	-	-	-127,300
Jan. 31	691.52	1,291,900	+240,700	635.10	478,700	+28,300
Feb. 28	705.94	1,604,300	+312,400	640.80	547,400	+68,700
Mar. 31	715.56	1,829,800	+225,500	646.35	619,000	+71,600
Apr. 30	720.34	1,947,100	+117,300	649.64	663,500	+44,500
May 31	720.74	1,957,100	+10,000	648.61	649,400	-14,100
June 30	717.08	1,866,700	-90,400	648.77	651,500	+2,100
July 31	714.98	1,815,800	-50,900	647.00	627,600	-23,900
Aug. 31	710.01	1,698,000	-117,800	644.08	589,100	-38,500
Sept.30	705.96	1,604,800	-93,200	642.43	567,900	-21,200
Water year 1958-59	-	-	+127,000	-	-	+38,800
	Great Falls Lake			Center Hill Reservoir		
Sept.30	789.92	14,000	-	637.69	578,900	-
Oct. 31	790.07	14,100	+100	634.15	549,000	-29,900
Nov. 30	791.88	15,400	+1,300	631.02	523,200	-25,800
Dec. 31	785.50	11,100	-4,300	622.08	452,800	-70,400
Calendar year 1958	-	-	-16,500	-	-	-120,700
Jan. 31	801.15	23,400	+12,300	629.67	512,300	+59,500
Feb. 28	802.84	25,200	+1,800	635.88	563,500	+51,200
Mar. 31	805.70	28,400	+3,200	643.65	630,900	+67,400
Apr. 30	801.61	23,900	-4,500	644.69	640,200	+9,300
May 31	792.96	16,200	-7,700	645.08	643,700	+3,500
June 30	785.80	11,300	-4,900	644.04	634,400	-9,300
July 31	799.00	21,300	+10,000	645.13	644,200	+9,800
Aug. 31	788.11	12,800	-8,500	643.01	625,200	-19,000
Sept.30	786.52	11,800	-1,000	640.99	607,400	-17,800
Water year 1958-59	-	-	-2,200	-	-	+28,500
	Old Hickory Lake					
Sept.30	443.82	198,600	-			
Oct. 31	444.55	206,600	+8,000			
Nov. 30	444.83	209,700	+3,100			
Dec. 31	444.68	208,000	-1,700			
Calendar year 1958	-	-	+12,500			
Jan. 31	443.88	199,200	-8,800			
Feb. 28	444.43	205,300	+6,100			
Mar. 31	443.27	192,800	-12,500			
Apr. 30	443.83	198,700	+5,900			
May 31	444.38	204,700	+6,000			
June 30	444.11	201,700	-3,000			
July 31	444.51	206,200	+4,500			
Aug. 31	444.47	205,700	-500			
Sept.30	444.77	209,000	+3,300			
Water year 1958-59	-	-	+10,400			

† Elevation at 12 p.m.

4390 (revised). 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 1959. 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.--25 years (1907-8, 1935-59), 230 cfs.

Extremes.--Maximum discharge during year, 3,530 cfs Jan. 21 (gage height, 9.12 ft); minimum, 62 cfs Dec. 15 (gage height, 1.71 ft), result of freezeup.

1907-9, 1935-59: 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 1959 are given in WSP 1641.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1938(M), 1939. WSP 1306: 1908(M), 1936(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 28				Dec. 29 to Sept. 30			
1.7	60	3.0	415	1.9	97	3.0	415
2.0	124	4.0	790	2.0	120	4.0	790
2.5	261			2.5	256	5.0	1,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	263	166	92	313	164	150	247	227	619	150	135	150
2	150	117	87	262	158	142	292	227	589	*186	132	*122
3	*127	96	*87	199	175	142	244	224	518	175	130	106
4	119	90	90	172	213	138	236	227	470	158	*132	106
5	110	87	83	b135	202	322	221	*219	415	145	130	185
6	100	*85	81	b130	*177	*584	*210	233	404	153	128	278
7	98	83	79	b125	167	313	199	219	363	142	122	1,170
8	94	81	79	142	164	262	194	205	331	130	120	529
9	92	81	79	132	164	*244	188	205	316	128	115	337
10	90	81	77	b110	161	227	183	242	295	122	113	268
11	87	79	77	b110	161	219	227	210	*286	128	111	256
12	85	79	75	*b115	161	244	907	326	274	128	113	230
13	85	79	75	111	457	213	577	328	262	153	108	202
14	85	77	81	108	280	202	401	280	250	145	104	183
15	85	79	b70	130	265	283	340	244	236	163	108	172
16	87	83	b70	b180	230	242	310	227	233	186	118	164
17	94	81	b72	b120	216	221	286	213	224	186	122	148
18	85	79	b65	b130	213	210	316	205	216	186	111	145
19	87	77	b65	b135	194	199	456	239	210	221	106	142
20	85	75	75	122	186	199	447	570	199	280	134	138
21	83	75	b70	772	175	196	363	1,080	194	452	118	130
22	87	73	b65	1,130	172	188	360	547	188	295	104	125
23	83	73	71	394	177	180	331	458	188	298	200	120
24	81	73	75	304	167	177	304	380	213	213	158	115
25	81	73	71	265	158	172	286	404	210	210	125	113
26	81	73	b70	236	156	186	274	664	194	194	120	113
27	79	71	b108	216	153	343	259	695	175	172	135	113
28	79	154	615	202	148	242	259	615	167	161	132	113
29	79	170	289	188	-	236	250	547	161	169	132	120
30	79	100	191	180	--------	304	239	458	153	156	140	230
31	79	--------	156	172	--------	259	--------	625	--------	142	140	--------
Total	2,999	2,690	3,340	7,040	5,414	7,239	9,406	11,543	8,553	5,747	3,896	6,323
Mean	96.7	89.7	108	227	193	234	314	372	285	185	126	211
Cfsm	1.42	1.32	1.59	3.34	2.84	3.45	4.62	5.48	4.20	2.72	1.86	3.11
In.	1.64	1.47	1.83	3.86	2.97	3.96	5.15	6.32	4.68	3.15	2.13	3.46

Calendar year 1958: Max 817 Min 65 Mean 224 Cfsm 3.30 In. 44.76
Water year 1958-59: Max 1,170 Min 65 Mean 203 Cfsm 2.99 In. 40.62

Peak discharge (base, 2,000 cfs).--Jan. 21 (10:30 p.m.) 3,530 cfs (9.12 ft); May 21 (3 a.m.) 2,150 cfs (6.81 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 1959. 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.--39 years, 126 cfs.

Extremes.--Maximum discharge during year, 2,880 cfs Jan. 21 (gage height, 5.98 ft); minimum, 28 cfs Dec. 9 (gage height, 0.47 ft).
1920-59: 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 table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	20	1.5	240
.6	46	2.0	385
1.0	117	3.1	865

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	178	85	45	164	88	77	144	137	361	93	72	90
2	93	57	43	146	84	74	160	146	323	*130	69	*72
3	*81	46	45	115	93	74	137	148	457	105	67	67
4	74	42	*45	97	111	70	132	141	406	93	*89	142
5	65	40	42	b74	105	150	121	*137	329	90	77	353
6	59	*40	39	b74	92	295	117	132	291	88	69	226
7	56	39	38	b76	86	157	111	130	260	84	65	821
8	52	39	38	79	84	130	*107	121	232	79	62	385
9	49	38	36	72	86	*119	103	124	213	76	59	257
10	48	39	36	b62	*86	109	99	137	200	74	56	210
11	45	36	36	b70	83	109	135	121	*184	76	59	197
12	43	36	b36	*b65	84	121	551	197	177	79	64	200
13	43	35	35	64	251	103	335	200	167	92	54	157
14	42	35	39	62	150	97	237	167	157	87	51	135
15	42	36	b35	79	135	158	200	144	150	107	54	124
16	42	42	b39	101	117	124	180	135	146	95	59	115
17	43	38	b39	b65	109	113	162	126	139	92	52	105
18	42	36	b31	b75	113	105	187	117	132	151	52	99
19	42	35	b32	b85	99	101	335	132	130	126	51	97
20	40	33	38	72	93	97	314	465	124	126	57	92
21	39	33	b36	559	88	97	240	592	121	230	52	86
22	42	33	b35	524	88	93	251	314	117	135	52	83
23	40	32	35	224	93	88	229	282	113	124	65	79
24	39	32	36	170	86	86	205	248	128	99	59	76
25	38	32	33	146	83	84	187	394	130	118	49	74
26	38	32	b32	128	81	106	172	535	117	103	46	72
27	36	32	46	117	79	252	162	413	107	90	80	74
28	36	80	469	109	77	155	160	340	103	90	83	72
29	36	81	216	101	-	141	153	300	97	93	72	83
30	36	51	124	97	-------	174	141	268	93	88	69	*205
31	35	-------	97	92	-------	150	-------	317	-------	81	81	-------
Total	1,594	1,264	1,926	3,964	2,824	3,809	5,767	7,160	5,704	3,194	1,946	4,848
Mean	51.4	42.1	62.1	128	101	123	192	231	190	103	62.8	162
Cfsm	1.27	1.04	1.54	3.17	2.50	3.04	4.75	5.72	4.70	2.55	1.55	4.01
In.	1.47	1.16	1.77	3.65	2.60	3.51	5.31	6.59	5.25	2.94	1.79	4.46

Calendar year 1958: Max 469 Min 31 Mean 115 Cfsm 2.85 In. 38.56
Water year 1958-59: Max 821 Min 31 Mean 121 Cfsm 3.00 In. 40.50

Peak discharge (base, 1,000 cfs).--Jan. 21 (9:30 p.m.) 2,880 cfs (5.98 ft); Apr. 12 (3:30 p.m.) 1,040 cfs (3.43 ft); May 21 (12:30 a.m.) 1,440 cfs (4.13 ft); Sept. 4 (12 p.m.) 1,740 cfs (4.60 ft); Sept. 7 (9:30 a.m.) 1,810 cfs (4.70 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, 3.5 miles (revised) downstream from Little River, and at mile 183.7.

Drainage area.--296 sq mi.

Records available.--October 1920 to September 1959. 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.--39 years, 929 cfs.

Extremes.--Maximum discharge during year, 3,900 cfs Apr. 13; maximum gage height, 15.45 ft Apr. 13; minimum discharge, 236 cfs Nov. 23, 24 (gage height, 3.27 ft).

1920-59: Maximum discharge, 26,500 cfs Aug. 16, 1928 (gage height, 22.9 ft), from rating curve extended above 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. Considerable diurnal fluctuation at low flow caused by powerplant above station. Records of chemical analyses for the water year 1959 are given in WSP 1641.

Revisions (water years).--WSP 923: 1921-23, 1929, 1933, 1935-36(M), 1938, 1940.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Dec. 28-30, Jan. 1, 2, 21-24, Feb. 13, 14, Mar. 5-7, 27, 28, 30, Apr. 2, 12-22, May 3, 9-13, 20-31, June 1-5, July 20, 21, 23, Aug. 31 to Sept. 2, Sept. 5-12, 30)

3.2	225	8.0	1,360
3.5	272	10.0	2,000
4.0	360	12.0	2,630
5.0	560	14.0	3,280
6.0	796	16.0	4,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	760	423	406	1,120	654	574	979	960	2,620	618	556	1,230
2	806	599	379	1,540	597	578	1,220	947	2,420	674	536	*1,270
3	581	435	368	1,030	618	549	1,080	1,130	2,620	806	519	825
4	489	381	*358	842	784	572	998	1,000	2,790	666	*588	719
5	411	364	319	722	858	859	910	990	2,050	597	657	1,370
6	423	358	304	627	736	2,860	868	934	1,860	*590	601	1,180
7	*419	*353	266	629	659	1,700	825	993	1,700	588	549	3,020
8	406	329	282	647	611	1,180	*796	*888	1,510	569	553	3,690
9	398	274	313	659	618	*1,020	777	1,030	1,390	536	521	2,620
10	390	294	308	565	*606	923	755	1,490	1,300	521	467	1,620
11	364	317	306	473	629	855	850	1,280	1,220	536	459	1,610
12	299	310	299	*483	647	960	2,350	1,260	*1,160	576	491	1,680
13	308	301	291	487	1,670	862	*3,780	1,480	1,100	802	459	1,230
14	338	298	262	473	1,390	803	2,550	1,380	1,050	726	435	1,060
15	337	294	282	487	1,150	1,020	1,670	1,160	982	734	423	969
16	333	267	266	796	1,000	1,070	1,440	1,050	952	770	423	908
17	324	287	294	659	908	910	1,270	979	918	764	447	832
18	310	299	311	525	872	848	1,260	923	888	1,060	453	789
19	280	286	294	507	810	803	1,970	908	840	915	471	760
20	286	279	292	549	760	789	1,980	1,420	828	823	449	736
21	315	270	253	1,020	724	791	1,610	3,020	820	1,690	507	710
22	322	266	262	3,450	710	748	1,530	2,400	798	1,210	427	683
23	328	238	280	2,390	700	686	1,590	2,030	774	1,180	421	643
24	313	248	289	1,350	650	719	1,380	1,750	848	925	743	578
25	298	269	284	1,100	613	705	1,270	1,830	868	808	485	562
26	258	269	264	955	594	712	1,190	2,870	852	801	429	551
27	269	269	299	870	604	1,250	1,120	2,940	774	707	497	547
28	292	356	2,280	810	618	1,010	1,070	2,690	688	714	652	613
29	289	862	2,430	765	-	828	1,070	2,300	678	659	556	618
30	289	487	1,100	736	--------	1,070	1,010	1,930	674	662	545	2,130
31	287	--------	810	707	--------	1,090	--------	2,180	--------	597	1,320	--------
Total	11,522	10,282	14,751	27,973	21,790	29,344	41,168	48,142	37,972	23,824	16,639	35,753
Mean	372	343	476	902	778	947	1,372	1,553	1,266	769	537	1,192
Cfsm	1.26	1.16	1.61	3.05	2.63	3.20	4.64	5.25	4.28	2.60	1.81	4.03
In.	1.45	1.29	1.85	3.51	2.74	3.69	5.17	6.05	4.77	2.99	2.09	4.49

Calendar year 1958: Max 3,820 Min 238 Mean 921 Cfsm 3.11 In. 42.23
Water year 1958-59: Max 3,780 Min 238 Mean 874 Cfsm 2.95 In. 40.09

Peak discharge (base, 4,300 cfs).--No peak above base.

* Discharge measurement made on this day.

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 1959. 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. Sept. 9, 1924, to Sept. 30, 1926, staff gage at site 500 ft upstream at datum 2.97 ft higher.

Average discharge.--28 years, 156 cfs.

Extremes.--Maximum discharge during year, 1,710 cfs Jan. 22 (gage height, 5.08 ft); minimum, 26 cfs Dec. 16 (gage height, 1.45 ft), result of freezeup; minimum daily, 32 cfs Dec. 26.

1924-26, 1933-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 21, Aug. 25 to Sept. 30				June 22 to Aug. 24			
1.5	30	2.5	243	1.8	65	2.5	243
1.7	52	3.0	447	2.0	102	3.0	447
2.0	107	4.0	1,030				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	91	56	193	123	105	196	190	385	123	109	135
2	92	86	54	207	118	101	220	201	355	*162	109	*96
3	76	62	54	168	123	96	193	243	334	143	100	86
4	73	55	*54	142	145	94	184	207	322	125	*104	94
5	64	52	52	b95	145	141	173	*193	287	118	109	195
6	60	52	50	b75	125	393	168	190	272	114	98	184
7	*56	*51	48	b100	118	226	*160	184	250	109	96	402
8	54	48	47	121	116	187	155	171	233	102	96	359
9	52	48	47	b100	116	*171	148	171	220	98	88	268
10	51	50	46	b65	*114	158	142	178	207	109	84	213
11	48	48	46	b80	107	150	173	168	*201	111	80	314
12	47	47	b35	*b90	105	160	597	184	196	107	82	376
13	47	46	b35	96	234	142	498	213	184	123	77	261
14	47	46	b40	88	173	138	359	196	176	147	74	210
15	47	46	b35	94	163	181	298	176	168	120	72	184
16	48	47	b35	b135	150	158	265	168	163	109	80	165
17	51	48	b37	b70	142	148	236	160	158	118	84	150
18	51	46	b37	b75	140	138	257	158	152	162	75	142
19	60	46	b37	b90	128	132	389	152	150	162	72	138
20	50	45	b45	b100	121	130	398	312	145	143	74	135
21	48	44	b37	334	b110	130	326	555	140	416	75	125
22	52	44	b35	814	b115	128	322	347	178	254	72	118
23	52	44	b40	338	123	118	306	330	138	194	74	114
24	50	44	47	254	116	116	272	363	151	159	86	109
25	47	44	b35	213	109	114	254	351	173	176	75	107
26	46	44	b32	187	107	123	236	535	154	168	69	105
27	46	42	b45	171	105	355	223	475	135	143	78	103
28	46	70	637	158	103	233	220	411	125	135	99	103
29	45	125	389	145	-	198	217	363	118	143	103	134
30	45	64	201	138	--------	230	201	322	114	128	119	586
31	45	--------	155	130	--------	210	--------	359	--------	123	101	--------
Total	1,754	1,625	2,543	5,066	3,594	5,104	7,786	8,226	5,984	4,544	2,714	5,711
Mean	56.6	54.2	82.0	163	128	165	260	265	199	147	87.5	190
Cfsm	0.849	0.813	1.23	2.44	1.92	2.47	3.90	3.97	2.98	2.20	1.31	2.85
In.	0.98	0.91	1.42	2.82	2.00	2.85	4.34	4.59	3.34	2.53	1.51	3.18

Calendar year 1958: Max 637 Min 32 Mean 162 Cfsm 2.43 In. 32.97
Water year 1958-59: Max 814 Min 32 Mean 150 Cfsm 2.25 In. 30.47

Peak discharge (base, 1,000 cfs).--Dec. 28 (5 p.m.) 1,320 cfs (4.44 ft); Jan. 22 (1 a.m.) 1,710 cfs (5.08 ft); Apr. 12 (5 p.m.) 1,010 cfs (3.97 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 1959. 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.--26 years, 1,584 cfs.

Extremes.--Maximum discharge during year, 8,650 cfs Sept. 30 (gage height, 7.46 ft); minimum, 485 cfs Dec. 26 (gage height, 2.52 ft).
1933-59: 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 of 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 1959 are given in WSP 1641.

Revisions.--WSP 823: Drainage area.

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 28, July 4 to Sept. 30				Dec. 29 to July 3			
2.5	440	5.0	3,880	2.5	540	5.0	3,920
3.0	960	6.0	5,690	3.0	1,060	6.0	5,700
3.5	1,580	7.0	7,680	3.5	1,680	7.0	7,680
4.0	2,300			4.0	2,370		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	724	801	1,840	1,140	972	1,620	1,560	3,780	1,030	902	1,940
2	1,450	1,150	746	2,740	1,050	972	2,010	1,540	3,710	1,120	914	2,140
3	1,050	948	724	1,980	1,040	928	1,880	1,680	3,390	1,280	845	1,420
4	914	779	714	1,560	1,230	917	1,680	1,620	3,950	1,080	845	1,150
5	779	724	662	1,350	1,460	1,060	1,540	1,520	3,230	937	1,090	1,610
6	704	714	610	1,140	1,310	4,230	1,470	1,480	2,730	902	948	1,650
7	714	693	580	1,110	1,180	3,520	1,450	1,540	2,500	902	902	3,640
8	693	672	540	1,120	1,110	2,080	1,400	1,430	2,230	856	845	4,890
9	682	620	570	1,170	1,080	1,710	1,350	1,400	2,060	834	845	4,670
10	672	590	590	b1,000	1,070	1,550	1,300	1,980	1,940	856	757	2,800
11	651	610	590	b850	1,050	*1,450	1,370	1,980	1,820	891	724	2,300
12	590	610	580	b850	1,060	1,520	3,510	1,680	1,730	891	724	2,800
13	550	600	600	873	2,080	1,450	6,080	2,090	1,670	1,060	735	1,970
14	580	590	600	*884	2,370	1,310	5,210	2,100	1,590	*1,240	682	1,610
15	*600	590	b520	895	1,920	1,520	3,180	1,740	1,510	1,200	651	1,480
16	600	570	b490	1,320	1,680	1,730	2,420	1,560	1,470	1,180	704	1,400
17	600	560	b500	b1,200	*1,500	1,500	2,120	1,500	*1,420	1,160	672	*1,270
18	600	*590	610	b960	1,430	1,370	1,980	1,410	1,380	1,400	704	1,200
19	630	580	*590	b900	1,350	1,290	3,040	*1,370	1,360	1,450	724	1,150
20	570	570	580	1,030	1,250	1,260	*3,470	2,100	1,300	1,300	779	1,120
21	580	560	560	1,400	1,180	1,260	2,780	4,340	1,290	2,640	845	1,080
22	630	550	512	5,920	1,160	1,260	2,540	3,950	1,360	2,280	757	1,030
23	651	530	540	4,820	1,160	1,140	2,640	3,140	1,250	1,690	714	994
24	620	512	560	2,670	1,120	1,130	2,290	3,020	1,350	1,500	880	926
25	600	530	560	1,980	1,030	1,130	2,060	2,620	1,430	1,270	1,080	880
26	570	540	521	1,680	994	1,140	1,910	4,340	1,400	1,260	*757	868
27	540	550	550	1,500	972	2,020	1,800	*4,820	1,280	1,140	746	856
28	560	590	3,650	1,410	994	1,880	1,720	4,360	1,160	1,110	1,050	880
29	570	1,370	5,470	1,340	-	1,500	1,720	3,810	1,070	1,090	1,020	926
30	560	1,090	3,200	1,250	--------	1,680	1,640	3,100	1,070	1,030	1,260	7,160
31	560	--------	1,740	1,220	--------	1,800	--------	3,080	--------	972	1,890	--------
Total	21,170	20,306	31,060	49,962	35,970	48,279	69,180	73,860	57,430	37,551	26,991	57,810
Mean	683	677	1,002	1,612	1,285	1,557	2,306	2,383	1,914	1,211	871	1,927
Cfsm	1.01	1.00	1.48	2.38	1.90	2.30	3.41	3.53	2.83	1.79	1.29	2.85
In.	1.16	1.12	1.71	2.75	1.98	2.66	3.81	4.06	3.16	2.07	1.48	3.18

Calendar year 1958: Max 7,170 Min 490 Mean 1,614 Cfsm 2.39 In. 32.40
Water year 1958-59: Max 7,160 Min 490 Mean 1,451 Cfsm 2.15 In. 29.14

Peak discharge (base, 6,000 cfs).--Dec. 29 (1 a.m.) 7,310 cfs (6.82 ft); Jan. 22 (6:30 a.m.) 6,310 cfs (6.32 ft); Apr. 12 (10:30 p.m.) 6,290 cfs (6.31 ft); Sept. 30 (2 p.m.) 8,650 cfs (7.46 ft).

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

4485. Hominy Creek at Candler, N. C.

Location.--Lat 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 1959.

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.--17 years, 86.8 cfs.

Extremes.--Maximum discharge during year, 1,850 cfs Dec. 28 (gage height, 5.10 ft); minimum, 29 cfs Aug. 15 (gage height, 1.02 ft).
1942-59: 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, which are good. Numerous small diversions for irrigation above station.

Revisions.--WSP 1113: Drainage area.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	27	2.0	240
1.1	39	2.5	425
1.3	73	3.2	770
1.6	136		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	91	41	106	75	64	95	104	138	55	47	119
2	59	81	39	97	69	62	104	101	153	101	42	64
3	52	59	39	87	69	60	93	95	127	68	*47	*99
4	55	50	*41	77	89	59	95	95	114	53	50	105
5	49	*49	39	b65	81	138	89	89	106	50	47	85
6	47	47	38	b75	71	*237	85	*87	104	55	44	114
7	45	44	37	b75	68	143	79	85	95	*52	44	206
8	45	44	37	73	68	118	*77	81	*89	44	49	146
9	*42	44	37	68	68	110	75	79	85	42	39	104
10	41	45	37	b60	66	99	73	81	81	56	38	85
11	39	44	37	b55	60	93	93	75	79	52	37	79
12	39	44	b35	b55	60	91	241	95	75	47	35	77
13	39	42	37	55	*97	83	219	104	73	44	34	68
14	39	42	38	*57	93	83	172	93	69	51	32	60
15	39	42	b33	87	93	99	146	81	68	75	46	59
16	39	41	b38	b105	85	83	132	75	66	59	47	57
17	41	41	b38	b80	83	79	121	71	62	53	41	52
18	41	41	b35	b80	83	73	143	71	62	92	39	52
19	44	41	b35	b82	73	73	235	69	60	81	53	49
20	42	39	38	73	69	73	208	125	59	64	132	47
21	41	39	b33	363	b65	73	175	192	57	60	62	45
22	47	39	b34	562	66	73	178	143	55	60	44	45
23	44	39	b34	205	75	69	175	179	52	55	84	44
24	41	39	37	153	68	68	155	165	68	49	65	42
25	39	39	b33	150	66	66	141	148	95	47	55	42
26	38	39	b33	112	64	75	132	165	73	52	44	42
27	39	38	b45	101	64	150	123	150	59	62	47	42
28	39	54	741	95	62	106	118	136	55	66	45	42
29	38	57	*255	87	-	101	116	125	52	57	44	68
30	38	42	138	83	-------	104	108	116	50	47	41	507
31	38	-------	104	79	-------	99	-------	136	-------	89	45	-------
Total	1,374	1,396	2,236	3,502	2,050	2,904	3,996	3,411	2,381	1,838	1,519	2,646
Mean	44.3	46.5	72.1	113	73.2	93.7	133	110	79.4	59.3	49.0	88.2
Cfsm	0.557	0.585	0.907	1.42	0.921	1.18	1.67	1.38	0.999	0.746	0.616	1.11
In.	0.64	0.65	1.04	1.63	0.96	1.35	1.86	1.59	1.11	0.86	0.71	1.23

Calendar year 1958: Max 741 Min 33 Mean 101 Cfsm 1.27 In. 17.23
Water year 1958-59: Max 741 Min 32 Mean 80.1 Cfsm 1.01 In. 13.63

Peak discharge (base, 900 cfs).--Dec. 28 (4 p.m.) 1,850 cfs (5.10 ft); Jan. 21 (12 p.m.) 1,710 cfs (4.87 ft); Sept. 30 (6 a.m.) 930 cfs (3.49 ft).

* Discharge measurement made on this day.
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 1959.

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.--33 years, 10.3 cfs.

Extremes.--Maximum discharge during year, 290 cfs Sept. 30 (gage height, 3.75 ft); minimum, 0.9 cfs Oct. 11-14 (gage height, 0.40 ft).
1926-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 28				Dec. 29 to June 3				June 3 to Sept. 30			
0.4	0.9	1.6	17	0.9	5.2	2.2	31	0.6	2.2	2.2	30
.6	2.2	1.9	23	1.0	6.6	2.5	40	.8	4.2	2.5	41
.8	4.2	2.2	31	1.3	11	2.8	58	1.0	6.8	2.8	66
1.0	6.8	2.5	40	1.6	17	3.1	97	1.3	11	3.1	109
1.3	11	2.7	50	1.9	23			1.6	17	3.3	148
								1.9	23		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	3.6	2.5	12	7.6	7.0	13	11	43	3.2	4.9	8.8
2	2.3	5.4	2.4	11	7.2	6.2	18	10	96	3.9	4.2	7.6
3	1.9	5.9	2.5	9.1	7.3	5.9	18	9.4	55	3.8	3.9	*7.5
4	2.2	4.4	*2.6	7.9	8.5	5.5	22	9.0	36	3.2	5.0	12
5	1.6	3.9	2.3	b5.8	8.2	7.0	18	8.3	29	3.0	13	11
6	1.4	3.8	2.2	b6.0	7.3	12	16	7.9	23	*3.1	*8.4	14
7	1.3	3.3	2.0	b6.0	6.9	9.4	14	7.3	19	2.8	6.8	51
8	*1.2	3.0	2.1	8.3	7.0	8.8	*13	6.9	16	2.5	5.9	35
9	1.1	2.8	2.0	7.2	*6.9	8.5	12	6.5	14	2.3	5.0	25
10	1.0	*2.8	1.9	b5.2	6.6	*7.9	11	6.7	13	2.3	4.3	18
11	1.0	2.6	1.9	b5.2	6.0	7.4	15	6.2	11	2.4	3.8	16
12	.9	2.5	1.8	b5.5	6.2	7.7	29	5.8	10	3.4	3.4	15
13	.9	2.3	1.8	*6.0	12	7.3	35	8.3	9.4	3.9	3.1	12
14	.9	2.2	1.9	6.2	17	7.3	27	*7.3	8.5	3.1	2.8	11
15	1.0	2.2	b1.5	8.4	19	9.6	22	6.3	7.8	3.8	4.1	9.4
16	1.0	2.2	b1.5	b10	16	8.5	19	6.0	7.0	4.3	5.4	8.4
17	1.0	2.2	1.8	b8.0	14	8.0	17	5.6	6.5	4.0	4.2	7.3
18	1.7	2.1	1.8	b7.6	13	7.6	17	5.5	*6.2	3.9	4.2	6.9
19	3.2	2.0	1.7	b8.0	11	7.3	29	5.3	5.7	5.8	3.3	6.2
20	1.5	1.9	1.8	8.2	10	7.2	35	62	5.2	4.4	10	5.8
21	1.3	1.9	1.6	37	b9.0	7.3	26	54	4.8	5.5	10	5.3
22	1.7	1.8	1.6	57	8.8	6.9	26	35	4.6	6.2	11	4.9
23	1.6	1.8	1.6	27	9.8	6.5	24	44	4.2	5.0	10	4.4
24	1.4	1.7	1.7	19	8.6	6.3	21	29	4.7	4.1	8.8	4.2
25	1.3	1.7	1.5	16	8.0	5.9	19	25	9.4	6.1	8.8	3.9
26	1.3	1.7	1.4	13	7.6	7.2	17	29	6.6	7.3	8.2	3.8
27	1.4	1.6	2.0	12	7.2	26	15	32	4.8	13	8.8	3.8
28	1.3	3.4	49	11	6.9	18	14	28	4.1	13	9.6	3.7
29	1.3	3.9	38	9.8	-	15	13	27	3.8	9.7	8.1	8.8
30	1.3	2.7	18	9.1	-------	16	12	28	3.3	7.2	7.0	129
31	1.3	-------	13	8.2	-------	14	-------	28	-------	6.2	6.5	-------
Total	47.7	83.3	169.4	370.7	263.6	285.2	589	560.3	471.6	152.4	202.5	459.7
Mean	1.54	2.78	5.46	12.0	9.41	9.20	19.6	18.1	15.7	4.92	6.53	15.3
Cfsm	0.282	0.509	1.00	2.20	1.72	1.68	3.59	3.32	2.88	0.901	1.20	2.80
In.	0.32	0.57	1.15	2.52	1.80	1.94	4.01	3.82	3.21	1.04	1.38	3.13

Calendar year 1958: Max 75 Min 0.7 Mean 8.69 Cfsm 1.59 In. 21.62
Water year 1958-59: Max 129 Min 0.9 Mean 10.0 Cfsm 1.83 In. 24.89

Peak discharge (base, 150 cfs).--Jan. 21 (8:30 p.m.) 158 cfs (3.43 ft); May 20 (12:30 p.m.) 194 cfs (3.60 ft); June 1 (10 p.m.) 166 cfs (3.47 ft); Sept. 30 (4:30 a.m.) 290 cfs (3.75 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 1959. 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.--32 years (1920-26, 1933-59), 153 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,760 cfs Sept. 30 (gage height, 8.40 ft); minimum, 11 cfs Dec. 16 (gage height, 1.20 ft), result of freezeup; minimum daily, 22 cfs Oct. 14, 17.

1920-26, 1933-59: 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 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. 218). 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: 1921(M), 1923(M), 1925(M). WSP 823: Drainage area. WSP 1306: 1921(M), 1924(M), 1926(M).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	22	3.0	540
1.5	48	4.0	1,080
1.7	85	5.0	1,650
2.0	157	7.0	2,850
2.5	320	9.0	4,150

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	62	a35	182	98	92	182	157	336	55	71	153
2	53	73	a30	174	89	83	272	147	793	67	81	126
3	44	50	a28	152	92	77	269	139	662	65	60	*103
4	40	38	*a29	129	105	75	269	131	458	58	69	171
5	41	34	30	b85	124	103	245	124	359	55	87	290
6	34	33	34	b80	107	266	209	114	302	*55	136	272
7	*33	*37	33	b90	96	185	*188	107	266	51	*103	666
8	32	37	30	100	94	154	165	*96	218	45	87	619
9	27	38	30	b100	94	*139	152	92	194	37	75	392
10	27	34	29	b80	*92	129	136	105	174	40	60	283
11	23	30	29	b80	87	114	179	96	157	42	51	225
12	28	29	24	b70	85	114	453	89	*139	42	45	255
13	27	29	b30	*75	185	105	612	121	129	83	41	197
14	22	29	b35	73	252	98	418	124	117	62	35	160
15	26	34	b25	85	255	134	320	105	107	65	55	141
16	24	37	b25	b150	232	124	269	96	98	53	83	124
17	22	38	b30	b110	194	114	232	92	87	65	63	105
18	27	a37	b25	b110	177	105	232	83	81	69	50	96
19	51	a37	b25	b105	149	98	479	83	79	100	47	87
20	33	a35	b32	96	129	94	640	406	77	209	45	85
21	30	a35	33	250	119	96	463	750	77	144	74	77
22	38	a32	30	766	112	103	418	653	67	107	69	71
23	35	a30	28	363	117	89	392	797	63	100	77	63
24	29	a30	32	245	109	83	328	427	67	75	87	62
25	28	a28	35	194	98	79	287	359	87	65	79	58
26	33	a28	32	163	94	85	252	404	136	75	67	58
27	28	a27	41	144	87	272	222	445	107	79	81	60
28	27	a55	657	126	85	276	206	536	85	92	112	58
29	27	a60	916	117	-	206	191	436	71	89	128	134
30	27	a40	355	107	--------	209	171	371	62	75	157	2,860
31	28	--------	215	103	--------	197	--------	367	--------	65	107	--------
Total	1,056	1,136	2,962	4,704	3,537	4,098	8,851	8,052	5,655	2,284	2,382	8,051
Mean	34.1	37.9	95.5	152	126	132	295	260	188	73.7	76.8	268
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 1,320 Min 18 Mean 145 Cfsm - In. -
Water year 1958-59: Max 2,860 Min 22 Mean 145 Cfsm - 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 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, 3.2 miles (revised) downstream from Swannanoa River, and at mile 145.8.
Drainage area.--945 sq mi.
Records available.--September 1895 to September 1959. Monthly discharge only for some periods, published 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.--64 years (1895-1959), 2,053 cfs.
Extremes.--Maximum discharge during year, 12,300 cfs Sept. 30 (gage height, 6.98 ft); minimum, 522 cfs Dec. 16 (gage height, 0.71 ft).
1895-1959: 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, 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 1959 are given in WSP 1641.
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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
0.7	510	3.0	3,620	1.0	785	4.0	5,390
1.0	875	4.0	5,390	1.5	1,380	5.0	7,470
1.5	1,500	5.0	7,470	2.0	2,070	6.0	9,790
2.0	2,140	6.0	9,790	2.5	2,810	7.0	12,400
2.5	2,840			3.0	3,590		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,250	825	962	2,100	1,330	1,130	1,990	1,870	4,190	1,150	1,070	2,360
2	1,740	1,400	888	3,080	1,240	1,110	2,380	1,820	4,640	1,320	1,080	2,540
3	1,290	1,220	862	2,440	1,200	1,060	2,360	1,970	4,170	1,460	987	1,970
4	1,120	938	825	1,960	1,380	1,020	2,130	1,940	4,410	1,340	1,010	1,720
5	975	838	775	1,610	1,730	1,170	1,930	1,790	3,810	1,180	1,250	2,030
6	838	825	712	b1,360	1,520	4,470	1,790	1,720	3,160	1,130	1,200	2,200
7	838	812	662	1,360	1,340	4,150	1,690	1,760	2,930	1,140	1,090	4,080
8	812	762	625	1,400	1,240	2,540	1,590	1,650	2,630	1,070	1,030	5,680
9	775	725	662	1,460	1,230	2,080	1,520	1,540	2,390	1,030	998	5,330
10	762	688	675	b1,220	1,210	1,890	1,470	2,080	2,240	1,020	895	3,510
11	725	688	688	b1,100	1,180	1,710	1,650	2,280	2,110	1,150	851	2,660
12	662	700	675	1,080	1,180	1,730	3,640	1,940	2,000	1,090	840	3,220
13	614	688	700	1,100	2,100	1,710	6,880	2,330	1,930	1,240	851	2,460
14	625	675	712	*1,090	2,920	1,510	5,920	2,400	1,820	*1,460	796	2,030
15	*675	675	662	1,110	2,360	1,720	3,860	2,040	1,720	1,460	818	1,800
16	675	675	602	1,680	2,100	*2,060	2,900	1,820	1,660	1,410	873	1,650
17	688	662	662	1,590	*1,870	1,750	2,540	1,680	1,610	1,350	818	*1,500
18	688	*675	712	b1,280	1,760	1,580	2,390	1,580	1,550	1,520	829	1,390
19	762	675	*688	b1,180	1,620	1,470	3,590	*1,550	1,520	1,760	829	1,320
20	675	650	675	1,290	1,470	1,430	4,440	2,330	1,440	1,660	918	1,280
21	650	638	662	1,710	1,380	1,440	3,530	5,120	1,420	2,580	1,080	1,210
22	738	625	602	7,280	1,340	1,460	3,190	4,800	*1,510	2,740	950	1,150
23	750	614	614	5,740	1,350	1,300	3,300	4,050	1,370	2,000	906	1,110
24	712	579	650	3,450	1,340	1,260	*2,900	3,710	1,460	1,780	976	1,050
25	675	602	638	2,480	1,200	1,250	2,620	3,050	1,680	1,430	1,340	987
26	650	625	590	2,080	1,150	1,280	2,390	4,730	1,720	1,440	*930	952
27	602	625	650	1,860	1,130	2,390	2,260	5,330	1,500	1,350	930	952
28	614	675	4,400	1,690	1,150	2,460	2,140	5,180	1,340	1,340	1,240	976
29	625	1,450	*7,970	1,580	-	1,900	2,130	4,460	1,230	1,340	1,200	1,130
30	625	1,340	*4,210	1,470	-------	2,010	2,000	3,680	1,210	1,190	1,520	9,870
31	625	-------	2,280	1,430	-------	2,200	-------	3,510	-------	1,180	1,960	-------
Total	24,455	23,569	37,690	61,260	42,020	56,240	83,120	85,710	66,370	44,310	32,045	70,117
Mean	789	786	1,216	1,976	1,501	1,814	2,771	2,765	2,212	1,429	1,034	2,337
Cfsm	0.835	0.832	1.29	2.09	1.59	1.92	2.93	2.93	2.34	1.51	1.09	2.47
In.	0.96	0.93	1.48	2.41	1.65	2.21	3.27	3.37	2.61	1.74	1.26	2.76

Calendar year 1958: Max 8,660 Min 579 Mean 1,920 Cfsm 2.03 In. 27.57
Water year 1958-59: Max 9,870 Min 579 Mean 1,718 Cfsm 1.82 In. 24.65

Peak discharge (base, 9,000 cfs).--Dec. 28 (10 p.m.) 10,300 cfs (6.23 ft); Sept. 30 (3 p.m.) 12,300 cfs (6.98 ft).

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

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 1959. 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.--26 years, 147 cfs.

Extremes.--Maximum discharge during year, 3,450 cfs Dec. 28 (gage height, 8.27 ft); minimum, 21 cfs Dec. 16 (gage height, 1.73 ft), result of freezeup.
1933-59: 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 table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	19	3.5	302
1.8	26	4.0	450
2.1	52	5.0	875
2.5	106	6.0	1,420
3.0	189		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	71	54	173	104	115	214	171	169	62	68	90
2	68	165	53	164	97	112	284	156	393	59	57	83
3	52	151	53	132	98	103	262	142	360	83	52	74
4	58	100	54	114	115	97	294	132	264	62	63	80
5	50	80	50	b65	132	98	257	123	218	57	329	73
6	43	73	48	b45	*110	223	229	115	189	78	180	84
7	40	69	b40	b55	98	180	204	110	168	69	118	265
8	38	60	b35	b65	100	161	182	103	140	53	97	245
9	37	57	b40	b75	98	151	164	96	123	48	83	176
10	36	56	44	b45	96	*139	*151	96	112	49	69	132
11	35	52	43	b55	97	129	224	96	102	58	62	121
12	33	50	b33	b70	88	134	705	91	91	62	56	108
13	33	49	b35	*b90	230	123	905	115	85	*66	52	91
14	33	48	44	94	658	118	568	142	80	69	*48	*80
15	33	47	b35	112	544	129	420	106	*73	115	45	74
16	33	46	b25	271	384	124	333	94	69	147	57	67
17	*34	*46	b40	b140	289	115	274	87	64	102	51	59
18	36	45	b40	b120	243	108	259	*84	60	109	57	54
19	106	45	b35	b120	198	104	432	80	60	92	54	52
20	54	44	b40	b150	164	102	612	274	57	81	90	51
21	45	44	b35	578	b130	103	520	308	53	94	69	49
22	45	43	b30	1,340	b125	106	602	240	52	109	72	46
23	45	42	*b40	450	166	92	776	334	50	80	91	43
24	42	42	45	294	162	88	520	212	63	65	105	42
25	40	42	43	231	144	85	390	180	347	62	120	40
26	40	42	b30	191	135	94	313	178	202	62	83	40
27	40	42	b35	168	126	766	262	178	116	92	108	39
28	41	44	1,020	147	118	432	231	162	91	125	136	39
29	40	100	925	131	-	297	216	168	76	106	92	41
30	38	62	322	121	--------	289	187	166	68	76	77	1,420
31	38	--------	214	114	--------	240	--------	185	--------	72	97	--------
Total	1,395	1,857	3,580	5,920	5,049	5,157	10,990	4,724	3,995	2,464	2,738	3,858
Mean	45.0	61.9	115	191	180	166	366	152	133	79.5	88.3	129
Cfsm	0.285	0.392	0.728	1.21	1.14	1.05	2.32	0.962	0.842	0.503	0.559	0.816
In.	0.33	0.44	0.84	1.39	1.19	1.21	2.59	1.11	0.94	0.58	0.64	0.91

Calendar year 1958: Max 1,330 Min 25 Mean 154 Cfsm 0.975 In. 13.20
Water year 1958-59: Max 1,420 Min 25 Mean 142 Cfsm 0.899 In. 12.17

Peak discharge (base, 2,700 cfs).--Dec. 28 (9 p.m.) 3,450 cfs (8.27 ft); Jan. 22 (1 a.m.) 3,130 cfs (7.96 ft); Sept. 30 (9 a.m.) 3,170 cfs (8.00 ft).

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

4535. French Broad River at Marshall, N. C.

Location (revised).--Lat 35°47'10", long 82°39'39", on right bank 0.7 mile upstream from Hayes Creek, 1.0 mile downstream from Ivy River, 1.5 miles southeast of Marshall, Madison County, and at mile 126.7.

Drainage area.--1,332 sq mi.

Records available.--October 1942 to September 1959.

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.--17 years, 2,236 cfs.

Extremes.--Maximum discharge during year, 18,000 cfs Dec. 28 (gage height, 7.35 ft); minimum, 700 cfs Dec. 23 (gage height, 1.08 ft); minimum daily, 740 cfs Nov. 25, Dec. 23.
1942-59: 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 22.0 ft (revised) and 16.6 ft (revised), 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 1959 are given in WSP 1641.

Revisions (water years).--WSP 1436: 1954(M).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	720	4.0	5,790
1.5	1,160	5.0	8,750
2.0	1,850	6.0	12,400
3.0	3,540		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	1,010	1,160	2,360	1,720	1,530	2,550	2,370	4,620	1,390	1,380	2,530
2	1,940	1,720	1,010	3,260	1,630	1,480	2,900	2,280	5,590	1,480	1,300	2,780
3	1,520	1,600	1,020	2,900	1,560	1,430	3,020	2,390	5,130	1,630	1,260	2,200
4	1,340	1,170	985	2,280	1,720	1,380	2,800	2,440	4,900	1,600	1,280	2,150
5	1,170	1,040	952	b1,850	2,090	1,460	2,550	2,230	4,560	1,420	1,690	2,030
6	996	1,010	875	b1,550	*1,940	4,610	2,360	2,170	3,720	1,380	1,600	2,440
7	985	996	831	b1,500	1,700	4,920	2,210	2,120	3,420	1,370	1,390	4,230
8	974	952	790	1,690	1,630	3,130	2,090	2,080	3,020	1,300	1,300	6,210
9	941	919	790	1,760	1,600	2,550	2,000	1,910	2,750	1,190	1,240	5,790
10	930	875	831	1,550	1,570	*2,330	*1,910	2,210	2,600	1,200	1,170	4,120
11	897	842	820	b1,400	1,530	2,120	2,120	2,660	2,440	1,390	1,040	2,920
12	853	864	820	b1,300	1,500	2,100	4,370	2,310	2,310	1,300	1,030	3,400
13	790	842	842	*1,330	2,220	2,140	8,920	2,600	2,210	*1,480	1,050	2,780
14	780	842	864	1,320	4,080	1,940	7,400	2,870	2,120	1,720	*985	*2,280
15	820	831	820	1,360	3,400	2,000	5,200	2,450	*1,970	1,850	941	2,040
16	831	842	b770	2,170	2,920	2,440	3,760	2,170	1,910	1,900	1,080	1,900
17	*831	*810	*b790	b2,000	2,530	2,180	3,240	2,040	1,850	1,690	1,030	1,740
18	853	810	831	b1,530	2,330	1,970	3,020	*1,940	1,780	1,730	1,050	1,640
19	1,050	810	831	b1,460	2,140	1,860	4,250	1,860	1,740	2,060	1,040	1,560
20	908	800	842	1,620	1,940	1,820	5,820	2,480	1,660	1,960	1,100	1,500
21	810	790	800	2,550	1,800	1,820	4,760	5,590	1,640	2,450	1,300	1,450
22	875	760	790	*9,860	1,740	1,850	4,420	5,520	1,690	3,100	1,170	1,380
23	919	760	740	7,100	1,780	1,670	4,850	5,160	1,600	2,330	1,080	1,340
24	886	750	820	4,580	1,800	1,590	4,080	4,380	1,630	2,060	1,220	1,290
25	842	740	810	3,150	1,630	1,570	3,500	3,520	2,210	1,720	1,660	1,200
26	820	770	750	2,630	1,550	1,590	3,130	4,920	2,140	1,760	1,220	1,160
27	790	770	770	2,360	1,520	3,710	2,880	5,790	1,820	1,670	1,140	1,150
28	780	790	6,000	2,170	1,500	3,520	2,720	5,640	1,600	1,720	1,630	1,150
29	790	1,380	10,600	2,040	-	2,610	2,650	5,080	1,460	1,820	1,450	1,220
30	800	1,600	5,750	1,900	--------	2,570	2,500	4,250	1,420	1,460	1,640	10,600
31	790	--------	2,920	1,840	--------	2,770	--------	3,930	--------	1,630	2,080	--------
Total	29,721	28,695	48,224	76,370	55,070	70,660	107,980	99,360	77,510	52,760	39,546	78,180
Mean	959	956	1,556	2,464	1,967	2,279	3,599	3,205	2,584	1,702	1,276	2,606
Cfsm	0.720	0.718	1.17	1.85	1.48	1.71	2.70	2.41	1.94	1.28	0.958	1.96
In.	0.83	0.80	1.35	2.13	1.54	1.97	3.01	2.77	2.16	1.47	1.10	2.18

Calendar year 1958: Max 10,900 Min 740 Mean 2,337 Cfsm 1.75 In. 23.83
Water year 1958-59: Max 10,600 Min 740 Mean 2,093 Cfsm 1.57 In. 21.31

Peak discharge (base, 10,000 cfs).--Dec. 28 (10:30 p.m.) 18,000 cfs (7.35 ft); Jan. 22 (9 a.m.) 11,100 cfs (5.88 ft); Sept. 30 (11 a.m.) 15,100 cfs (8.66 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 1959. 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.--26 years, 179 cfs.

Extremes.--Maximum discharge during year, 4,020 cfs Jan. 22 (gage height, 6.14 ft); minimum, 19 cfs Dec. 15 (gage height, 1.04 ft), result of freezeup.
1933-59: 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, which are good.

Revisions.--WSP 823: Drainage area.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	22	2.5	325
1.3	38	3.0	580
1.6	72	4.0	1,310
1.9	131	5.0	2,390
2.2	215		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	79	54	136	104	147	203	188	129	63	80	127
2	67	110	52	120	96	141	250	174	266	66	69	122
3	63	106	55	100	102	129	271	160	375	80	66	88
4	71	69	62	86	134	122	476	149	222	64	85	75
5	57	58	56	b50	174	122	366	141	168	93	337	82
6	50	66	52	b45	*152	203	285	134	139	198	182	67
7	48	58	b43	b60	131	185	232	126	126	108	126	127
8	46	51	b40	b70	131	168	*200	117	106	78	113	129
9	45	51	b44	b80	126	157	182	110	94	67	94	141
10	44	58	b44	b50	122	*147	165	115	88	77	82	119
11	44	50	47	b60	122	134	240	108	83	85	72	135
12	42	48	b38	b70	106	160	670	104	80	67	67	92
13	42	47	b40	*b105	239	139	1,060	136	78	*63	62	80
14	42	46	47	113	908	141	616	149	72	75	*57	*74
15	42	46	b30	139	774	165	481	117	*68	118	62	69
16	42	48	b25	278	525	157	390	108	66	138	123	66
17	*42	*49	*b45	b170	356	152	309	100	64	88	78	60
18	42	47	b45	b140	289	139	289	*98	63	78	72	58
19	49	46	b40	b140	218	129	613	94	62	82	69	56
20	45	45	b45	177	179	124	1,220	144	58	88	74	55
21	42	44	b40	633	b150	124	760	144	57	71	82	54
22	44	43	b35	1,930	b140	131	622	113	55	74	74	51
23	46	43	b50	558	215	113	879	124	63	66	77	50
24	43	43	63	317	226	106	610	100	90	66	69	48
25	42	48	54	236	203	102	425	92	392	67	62	48
26	42	47	b35	194	188	115	334	98	195	91	62	46
27	54	50	b55	168	168	1,230	282	98	108	156	92	45
28	54	48	624	144	152	652	250	100	85	162	102	47
29	46	80	675	126	-	380	246	94	72	188	78	49
30	44	58	271	122	-------	293	206	100	69	110	66	650
31	43	-------	177	113	-------	240	-------	134	-------	108	118	-------
Total	1,523	1,682	2,983	6,730	6,430	6,447	13,132	3,769	3,593	2,935	2,852	2,910
Mean	49.1	56.1	96.2	217	230	208	438	122	120	94.7	92.0	97.0
Cfsm	0.390	0.445	0.763	1.72	1.83	1.65	3.48	0.968	0.952	0.752	0.730	0.770
In.	0.45	0.50	0.88	1.99	1.90	1.90	3.88	1.11	1.06	0.87	0.84	0.86

Calendar year 1958 : Max 2,000 Min 25 Mean 192 Cfsm 1.52 In. 20.65
Water year 1958-59 : Max 1,930 Min 25 Mean 151 Cfsm 1.20 In. 16.24

Peak discharge (base, 1,500 cfs).--Dec. 28 (8 p.m.) 1,670 cfs (4.37 ft); Jan. 22 (12:30 a.m.) 4,020 cfs (6.14 ft); Mar. 27 (10 a.m.) 1,980 cfs (4.65 ft); Apr. 19 (10 p.m.) 1,710 cfs (4.41 ft).

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

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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 U. S. Highway 441 (renumbered) 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 1959. 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.--41 years (1903-5, 1920-59), 2,796 cfs.

Extremes.--Maximum discharge during year, 22,300 cfs Dec. 29 (gage height, 9.41 ft); minimum, 479 cfs Oct. 22 (gage height, 1.17 ft); minimum daily, 724 cfs Oct. 22.

1900-1901, 1902-5, 1907, 1920-59: 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.

Maximum stage known about 24 ft in March 1867. Floods in February 1902 and July 1916 reached stages of about 23.0 and 22.5 ft, respectively, from reports of the Tennessee Valley Authority.

Remarks.--Records good. Diurnal fluctuation during low flow caused by powerplants above station.

Revisions (water years).--WSP 783: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M). WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 29				Dec. 30 to Sept. 30			
1.4	670	5.0	8,600	1.7	1,000	5.0	8,500
2.0	1,420	8.0	17,100	2.0	1,400	8.0	17,100
3.0	3,430			3.0	3,250		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	940	892	1,560	2,990	2,100	2,010	3,430	3,070	5,000	1,550	1,740	2,620
2	1,770	1,420	1,170	3,160	1,970	1,970	3,430	2,880	6,510	1,580	1,500	2,950
3	*2,010	2,200	1,130	3,620	1,830	1,860	4,140	2,780	7,180	1,690	1,460	*2,720
4	1,550	1,610	*1,130	2,780	1,950	1,830	4,580	2,860	*5,860	1,780	1,550	2,410
5	1,400	1,260	1,080	2,260	*2,450	*1,780	4,140	2,720	5,860	1,630	*1,660	1,990
6	1,210	1,160	1,030	1,680	2,560	3,310	3,550	2,560	4,640	1,780	2,320	2,410
7	1,050	*1,140	940	1,760	2,240	6,430	3,140	*2,470	4,140	*1,710	1,780	2,700
8	1,050	1,090	904	2,080	2,080	4,580	2,880	2,470	3,650	1,500	1,570	6,960
9	1,010	1,040	880	2,280	1,990	3,340	*2,660	2,280	3,250	1,390	1,440	6,530
10	988	1,030	880	2,010	1,970	2,950	2,490	2,220	3,010	1,300	1,370	5,390
11	988	964	904	1,610	1,920	2,680	2,640	2,880	2,800	1,460	1,260	3,600
12	928	940	892	1,650	1,810	2,580	4,750	2,820	2,680	1,570	1,140	3,320
13	904	964	892	1,710	2,040	2,640	31,500	2,720	2,620	1,420	1,130	3,460
14	836	928	928	1,630	6,590	2,490	10,900	3,460	2,430	1,710	1,120	2,660
15	892	928	940	1,680	7,180	2,390	8,280	3,030	2,240	2,110	1,060	2,320
16	976	916	814	2,320	5,520	2,720	5,810	2,580	2,130	2,190	1,270	2,110
17	904	940	814	2,820	4,220	2,820	4,790	2,370	2,060	2,010	1,250	1,970
18	904	916	904	2,260	3,550	2,510	4,220	2,240	2,020	1,950	1,250	1,780
19	1,030	904	916	1,990	3,070	2,350	5,870	2,150	1,920	2,170	1,320	1,690
20	1,100	892	928	2,170	2,680	2,200	10,900	2,150	1,880	2,370	1,300	1,600
21	928	892	904	2,430	2,370	2,200	8,330	4,860	1,760	2,150	1,340	1,570
22	724	869	858	14,500	2,280	2,280	6,660	6,610	1,740	3,530	1,420	1,500
23	952	847	847	10,200	2,390	2,200	8,440	6,220	1,830	2,970	1,270	1,420
24	964	847	858	6,850	2,580	1,970	6,850	5,050	1,860	2,370	1,250	1,390
25	928	847	904	4,430	2,410	1,950	5,470	4,450	2,720	2,130	1,550	1,330
26	892	847	847	3,530	2,190	1,970	4,660	4,450	3,320	1,930	1,730	1,230
27	892	880	803	3,010	2,100	7,000	4,120	6,220	2,350	2,220	1,300	1,210
28	880	892	2,640	2,700	2,010	6,790	3,770	6,350	1,950	2,130	1,500	1,210
29	847	1,060	15,600	2,490	-	4,580	3,580	6,090	1,710	2,300	1,660	1,230
30	858	1,770	8,530	2,320	--------	3,700	3,320	5,340	1,570	1,950	1,520	8,660
31	869	--------	4,320	2,190	--------	3,650	--------	4,610	--------	1,920	1,950	--------
Total	32,174	31,885	56,747	99,110	78,050	93,730	161,300	112,960	92,690	60,470	44,980	81,940
Mean	1,038	1,063	1,831	3,197	2,788	3,024	5,377	3,644	3,090	1,951	1,451	2,731
Cfsm	0.559	0.572	0.985	1.72	1.50	1.63	2.89	1.96	1.66	1.05	0.781	1.47
In.	0.64	0.64	1.14	1.98	1.56	1.88	3.23	2.26	1.86	1.21	0.90	1.64

Calendar year 1958: Max 15,600 Min 724 Mean 2,972 Cfsm 1.60 In. 21.72
Water year 1958-59: Max 15,600 Min 724 Mean 2,592 Cfsm 1.40 In. 18.94

Peak discharge (base, 16,000 cfs).--Dec. 29 (4 a.m.) 22,300 cfs (9.41 ft); Jan. 22 (7 a.m.) 20,300 cfs (8.90 ft); Sept. 30 (6 p.m.) 18,200 cfs (8.33 ft).

* Discharge measurement made on this day.

4555. West Fork Pigeon River above Lake Logan, near Hazelwood, N. C.

Location.--Lat 35°23'46", 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 1959.

Gage.--Water-stage recorder. Datum of gage is 2,976.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years, 96.8 cfs.

Extremes.--Maximum discharge during year, 5,050 cfs Jan. 21 (gage height, 6.95 ft), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum, 19 cfs Aug. 14, 15 (gage height, 1.19 ft).
1954-59: Maximum discharge, that of Jan. 21, 1959; minimum, 9.4 cfs Sept. 29, 30, 1954.

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

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 28

1.2	17	2.0	162
1.3	26	2.5	345
1.5	54	3.0	620
1.7	88	3.5	960

Dec. 29 to Sept. 30

1.2	20	1.5	55
1.3	30	1.7	88

Note.--Same as preceding table above 1.7 ft.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	297	75	38	135	72	67	144	88	186	45	29	47
2	74	50	35	99	68	61	182	106	177	45	28	*38
3	65	40	42	75	77	60	130	101	165	43	*27	46
4	57	*34	42	67	103	56	130	88	146	41	29	54
5	46	30	*35	b50	84	171	112	83	132	42	28	96
6	*42	32	31	b60	*70	229	103	*106	128	*45	26	166
7	39	29	30	b70	b65	99	*95	97	112	40	25	386
8	36	27	30	*75	67	86	90	81	*106	36	24	256
9	35	29	29	b52	77	*83	84	79	99	35	23	128
10	32	30	27	b45	83	77	83	83	92	34	22	86
11	31	26	27	b47	75	79	144	77	86	34	23	86
12	30	26	b26	b50	77	95	*507	252	84	35	24	90
13	29	25	b24	52	295	75	214	185	81	38	21	67
14	29	25	b25	50	130	74	162	140	77	41	20	58
15	29	27	b22	140	130	179	143	110	72	45	25	54
16	29	46	b30	b85	103	101	130	99	70	46	25	54
17	27	31	b25	b75	92	86	118	88	67	45	22	47
18	30	29	b22	b85	110	81	174	88	66	51	23	45
19	31	27	b23	b85	86	77	299	113	64	99	26	42
20	27	26	24	70	79	77	205	590	60	58	25	41
21	26	25	b23	937	b72	75	165	584	60	52	*22	38
22	30	24	b22	371	b72	74	165	282	58	45	53	36
23	29	24	b22	168	92	68	157	218	56	41	46	35
24	26	24	35	140	77	67	138	189	95	37	47	34
25	25	23	b22	120	70	64	125	229	100	35	38	32
26	24	24	b22	*108	68	114	115	292	62	45	36	32
27	24	23	62	99	67	352	108	224	52	40	36	35
28	24	113	394	92	64	122	110	207	48	38	40	34
29	23	76	192	84	-	120	103	180	46	37	36	103
30	23	44	106	79	--------	148	92	165	46	32	31	573
31	23	--------	81	75	--------	118	--------	241	--------	30	36	--------
Total	1,292	1,064	1,569	3,740	2,525	3,235	4,527	5,465	2,693	1,330	916	2,839
Mean	41.7	35.5	50.6	121	90.2	104	151	176	89.8	42.9	29.5	94.6
Cfsm	1.51	1.29	1.83	4.38	3.27	3.77	5.47	6.38	3.25	1.55	1.07	3.43
In.	1.74	1.43	2.11	5.04	3.40	4.36	6.10	7.36	3.63	1.79	1.23	3.83

Calendar year 1958: Max 809 Min 18 Mean 83.5 Cfsm 3.03 In. 41.07
Water year 1958-59: Max 937 Min 20 Mean 85.5 Cfsm 3.10 In. 42.02

Peak discharge (base, 1,500 cfs).--Jan. 21 (7:30 p.m.) 5,050 cfs (6.95 ft); May 21 (1 a.m.) 2,930 cfs (5.46 ft); Sept. 30 (2:30 a.m.) 1,650 cfs (4.31 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 1959.

Gage.--Water-stage recorder. Datum of gage is 2,725.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years, 154 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 5,090 cfs Jan. 21 (gage height, 7.74 ft), from rating curve extended above 3,300 cfs by logarithmic plotting; minimum, 18 cfs Nov. 9 (gage height, 0.41 ft).

1954-59: 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 periods of ice effect, which are good. Considerable regulation at low flow at times caused by Lake Logan (capacity, 1,050 cfs-days).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	28	2.5	317
.8	43	3.0	487
1.0	60	4.0	990
1.5	121	5.0	1,720
2.0	204		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	377	102	*56	224	115	108	114	171	332	79	46	74
2	110	78	51	172	110	102	301	180	312	76	45	*59
3	90	58	56	130	118	100	233	193	290	76	*44	64
4	81	47	60	113	155	93	235	164	272	71	45	110
5	67	*45	50	b75	133	212	206	152	235	70	46	140
6	58	46	46	b87	111	396	193	164	227	*74	41	176
7	*55	41	44	95	103	191	179	*183	204	68	39	524
8	49	42	44	113	104	166	*171	142	*186	60	37	322
9	47	37	42	93	*114	*154	160	138	174	57	34	195
10	45	36	41	b60	118	149	152	141	150	57	34	134
11	43	35	41	b70	114	139	230	133	150	57	34	120
12	40	35	37	*76	106	166	678	339	144	58	35	139
13	40	35	40	76	390	130	413	277	138	64	32	102
14	40	34	43	73	206	127	309	229	128	64	29	86
15	40	35	36	171	200	266	270	183	121	72	32	79
16	39	55	44	210	169	178	243	166	115	71	43	76
17	39	43	46	b95	152	157	223	154	111	70	39	69
18	39	39	41	b95	169	144	276	150	107	76	56	66
19	45	36	44	b100	141	138	483	176	104	135	37	61
20	38	34	52	107	130	134	399	596	99	107	41	59
21	36	34	55	1,020	121	169	320	893	95	75	39	53
22	41	34	55	727	121	184	312	411	94	74	55	51
23	39	34	54	298	151	183	288	379	87	64	76	49
24	36	32	53	239	128	179	256	293	149	57	66	47
25	34	34	51	206	117	178	237	350	166	54	60	45
26	34	32	52	183	113	200	221	445	117	64	48	44
27	34	32	56	166	108	391	206	366	94	80	45	45
28	32	129	520	154	106	446	212	329	86	63	48	48
29	32	146	332	141	-	212	199	309	82	62	51	81
30	32	66	188	138	--------	199	179	275	78	52	46	923
31	32	--------	141	121	--------	110	--------	376	--------	49	61	--------
Total	1,764	1,486	2,471	5,628	3,923	5,701	7,898	8,457	4,647	2,156	1,382	4,041
Mean	56.9	49.5	79.7	182	140	184	263	273	155	69.5	44.6	135
(†)	-3	+2	+3	0	-1	-122	+124	+8	-11	-2	+2	+5

Adjusted for change in contents in Lake Logan

Mean	56.8	49.6	79.8	182	140	180	267	273	155	69.5	44.6	135
Cfsm	1.03	0.897	1.44	3.29	2.53	3.25	4.83	4.94	2.80	1.26	0.806	2.44
In.	1.18	1.00	1.66	3.78	2.64	3.75	5.39	5.69	3.12	1.45	0.93	2.72

	Observed			Adjusted		
Calendar year 1958:	Max 1,090	Min 27	Mean 132	Mean 133	Cfsm 2.40	In. 32.56
Water year 1958-59:	Max 1,020	Min 29	Mean 136	Mean 136	Cfsm 2.46	In. 33.31

* 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, 0.3 mile (revised) 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 1959.

Gage.--Water-stage recorder. Datum of gage is 2,674.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years, 129 cfs.

Extremes.--Maximum discharge during year, 4,920 cfs Jan. 21 (gage height, 6.88 ft), from rating curve above 3,600 cfs by logarithmic plotting; minimum, 15 cfs Dec. 15 (gage height, 0.81 ft), result of freezeup.

1954-59: 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, result of freezeup; minimum gage height, that of Dec. 15, 1958.

Remarks.--Records excellent except those for periods of ice effect, which are good. Records of water temperatures for the water year 1959 are given in WSP 1641.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	14	2.5	440
1.0	31	3.0	680
1.2	59	3.5	970
1.5	122	4.0	1,330
2.0	256		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	70	36	182	106	82	180	144	343	68	43	56
2	67	54	33	172	101	78	210	139	351	67	42	*46
3	53	38	*33	136	101	74	177	151	311	68	*42	53
4	49	*33	35	115	122	72	175	134	287	61	46	76
5	42	31	32	b75	117	142	159	124	244	59	45	286
6	*38	31	31	b90	*101	*406	151	*120	224	*59	42	184
7	37	30	29	b95	93	207	*141	120	207	57	41	667
8	35	29	29	91	93	172	136	110	*186	53	39	407
9	33	29	29	b75	93	151	129	110	172	53	37	275
10	32	31	28	b50	91	139	122	113	162	51	36	216
11	31	29	28	b60	86	127	151	106	151	51	36	199
12	30	28	b22	*b75	82	141	507	218	144	53	41	236
13	30	28	b21	65	208	117	394	213	134	53	36	177
14	30	27	b25	61	146	113	294	183	124	59	33	151
15	30	27	b20	84	141	172	250	159	117	59	35	136
16	30	30	b22	b110	129	136	224	146	113	54	56	122
17	31	29	b22	b65	122	122	202	139	108	54	43	108
18	30	28	b21	b65	124	115	224	132	101	76	37	99
19	30	27	b22	b80	110	110	351	162	99	72	38	95
20	30	27	b25	84	104	108	314	487	95	67	41	88
21	29	26	b22	762	b95	106	265	960	91	67	42	82
22	31	26	b20	892	95	101	256	475	88	70	37	76
23	31	26	b24	347	106	95	242	432	84	68	61	72
24	29	26	29	247	95	93	219	386	104	56	58	68
25	28	26	b22	205	88	88	199	469	122	51	41	65
26	28	26	b20	*167	88	109	183	608	97	53	41	63
27	27	26	b30	159	84	372	172	512	80	57	46	63
28	27	59	596	141	82	199	169	441	74	57	62	61
29	26	88	334	132	-	183	159	390	70	53	48	94
30	26	41	177	122	--------	219	146	325	67	48	45	1,050
31	26	--------	134	115	--------	194	--------	362	--------	51	49	--------
Total	1,155	1,026	1,951	5,119	3,003	4,543	6,501	8,570	4,550	1,825	1,339	5,371
Mean	37.3	34.2	62.9	165	107	147	217	276	152	58.9	43.2	179
Cfsm	0.724	0.664	1.22	3.20	2.08	2.85	4.21	5.36	2.95	1.14	0.839	3.48
In.	0.83	0.74	1.41	3.70	2.17	3.28	4.69	6.19	3.29	1.32	0.97	3.88

Calendar year 1958: Max 598 Min 20 Mean 113 Cfsm 2.19 In. 29.73
Water year 1958-59: Max 1,050 Min 20 Mean 123 Cfsm 2.39 In. 32.47

Peak discharge (base, 1,200 cfs).--Jan. 21 (10:30 a.m.) 4,920 cfs (6.88 ft); May 21 (4 a.m.) 2,100 cfs (4.84 ft); Sept. 30 (6 a.m.) 2,280 cfs (5.00 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 64.1 (revised). 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 1959. 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.--32 years (1907-8, 1928-59), 309 cfs (unadjusted).
Extremes.--Maximum discharge during year, 9,150 cfs Jan. 21 (gage height, 10.21 ft); minimum, 49 cfs Dec. 16 (gage height, 0.52 ft), result of freezeup; minimum daily, 61 cfs Nov. 25.
1907-9, 1928-59: 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). Records of chemical analyses for the water year 1959 are given in WSP 1641.
Revisions (water years).--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1908(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to May 21				May 22 to Sept. 30			
0.7	61	2.0	452	1.2	145	3.0	1,020	0.7	61	3.0	1,020
1.0	116	3.0	1,020	1.5	242	4.0	1,760	1.0	115	4.0	1,760
1.5	267	4.0	1,760	2.0	447	5.0	2,580	1.5	260	5.0	2,580
								2.0	450		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	517	158	112	408	235	194	314	347	765	170	104	167
2	218	165	101	394	221	185	560	334	741	170	97	132
3	162	114	105	302	221	178	456	385	657	167	95	132
4	148	90	116	b250	283	163	461	326	634	151	104	*253
5	124	*83	*101	b170	283	307	402	302	531	145	97	484
6	107	85	92	b190	224	*994	372	291	508	154	95	374
7	98	80	90	b210	201	461	347	*330	459	*143	91	1,300
8	90	76	89	221	204	380	326	272	*417	128	89	820
9	*89	74	87	212	*210	343	*310	260	390	122	82	545
10	87	73	85	b120	218	306	295	268	351	122	80	397
11	81	72	83	b140	214	*287	402	249	336	122	*79	343
12	78	70	76	b180	188	330	1,260	569	321	125	84	425
13	76	70	85	*159	651	268	984	514	306	128	77	317
14	76	68	90	151	402	253	699	447	284	138	72	267
15	76	72	76	214	380	460	590	363	267	154	71	240
16	76	83	78	432	326	343	526	330	257	138	104	224
17	76	83	103	b190	*298	298	475	306	244	143	95	199
18	74	73	83	b215	318	275	530	291	230	170	106	184
19	81	68	81	b250	272	264	1,020	347	227	199	80	173
20	74	66	94	221	246	253	906	931	215	227	102	167
21	72	66	92	1,500	228	275	681	2,290	205	156	100	154
22	74	64	94	2,320	228	298	657	960	199	167	80	145
23	78	64	94	759	272	291	628	928	184	156	163	138
24	72	62	98	550	242	283	540	741	253	130	135	132
25	68	61	90	465	214	275	498	862	328	120	122	128
26	67	62	83	402	207	306	461	1,170	260	125	104	125
27	67	62	101	355	197	835	429	954	199	151	102	122
28	64	120	1,250	318	191	765	420	836	184	151	122	125
29	66	328	804	295	-	434	411	798	170	135	111	132
30	64	134	421	272	--------	475	363	651	162	118	102	2,100
31	64	--------	316	253	--------	338	--------	817	--------	118	128	--------
Total	3,164	2,746	5,270	12,118	7,374	11,117	16,323	18,469	10,284	4,543	3,073	10,444
Mean	102	91.5	170	391	263	359	544	596	343	147	99.1	348
(†)	+15	+22	+21	+19	+17	-106	+142	+27	+10	+19	+24	+26

Adjusted for diversion and change in reservoir contents

Mean	103	92.3	171	392	264	355	549	597	343	147	99.9	349
Cfsm	0.774	0.694	1.29	2.95	1.98	2.67	4.13	4.49	2.58	1.11	0.751	2.62
In.	0.89	0.77	1.48	3.39	2.07	3.08	4.60	5.17	2.88	1.28	0.87	2.93

	Observed			Adjusted		
Calendar year 1958:	Max 1,820	Min 59	Mean 270	Mean 271	Cfsm 2.04	In. 27.68
Water year 1958-59:	Max 2,320	Min 61	Mean 287	Mean 288	Cfsm 2.17	In. 29.41

Peak discharge (base, 4,000 cfs).--Jan. 21 (12 p.m.) 9,150 cfs (10.21 ft); May 21 (5 a.m.) 4,300 cfs (6.72 ft).

* Discharge measurement made on this day.
† Diversion by city of Canton, and change in contents in Lake Logan, equivalent in cfs-days. Records of diversion furnished by city of Canton.
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 1959.

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.--10 years, 35.0 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,470 cfs Jan. 21 (gage height, 4.07 ft), from rating curve extended above 500 cfs by logarithmic plotting; minimum, 7.5 cfs Nov. 26; minimum daily, 9.0 cfs Nov. 23-27.

1949-59: Maximum discharge, that of Jan. 21, 1959; 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 tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 1				Nov. 2 to Sept. 30			
0.9	6.0	1.3	40	0.9	6.0	1.5	69
1.0	12	1.5	70	1.0	11	1.8	130
1.1	18			1.1	18	2.1	210
				1.3	39		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	26	*18	33	29	28	59	47	94	21	16	29
2	25	20	17	29	27	26	67	46	82	21	16	24
3	21	15	18	25	28	26	59	44	73	21	15	18
4	20	13	17	22	38	25	57	42	66	20	14	*18
5	16	*12	16	b16	31	38	51	39	62	23	17	16
6	15	14	14	b17	27	51	48	48	61	22	14	22
7	*14	12	14	b19	26	33	47	40	52	18	14	48
8	13	11	14	26	26	31	*44	38	48	*17	13	34
9	12	11	13	19	*28	30	43	37	*46	16	13	29
10	12	11	13	b16	33	*29	40	37	42	18	12	21
11	11	10	12	b18	29	30	64	33	40	17	*12	20
12	11	10	12	*b17	30	36	158	43	38	17	12	19
13	10	10	12	17	84	30	108	*69	37	24	12	17
14	10	10	12	17	52	28	80	54	34	18	11	15
15	10	10	b12	46	54	67	69	46	33	17	12	15
16	10	14	b11	b35	44	43	62	43	32	18	13	14
17	10	11	11	b20	39	39	56	40	31	18	13	13
18	10	10	11	b20	42	36	81	39	30	19	12	12
19	12	10	11	b25	34	33	159	37	29	24	12	13
20	11	10	11	25	32	33	123	72	28	*20	14	12
21	11	10	11	209	b31	32	100	124	27	17	12	12
22	11	10	10	*155	30	31	94	77	26	17	17	12
23	11	9.0	11	77	38	30	86	69	26	16	18	11
24	10	9.0	12	56	32	29	73	57	40	15	23	11
25	10	9.0	11	48	30	28	67	62	47	18	20	10
26	10	9.0	b10	43	29	55	62	77	31	28	17	10
27	10	9.0	13	39	28	143	57	91	26	20	15	11
28	10	55	78	37	27	66	59	84	24	28	14	10
29	10	34	62	33	-	62	52	87	23	22	14	24
30	10	27	37	32	-------	64	50	86	22	18	16	161
31	10	-------	29	30	-------	56	-------	108	-------	17	34	-------
Total	436	431.0	553	1,221	978	1,288	2,175	1,816	1,250	605	467	681
Mean	14.1	14.4	17.8	39.4	34.9	41.5	72.5	58.6	41.7	19.5	15.1	22.7
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 167 Min 8.2 Mean 30.5 Cfsm 2.12 In. 28.71
Water year 1958-59: Max 209 Min 9.0 Mean 32.6 Cfsm 2.26 In. 30.74

Peak discharge (base, 400 cfs).--Jan. 21 (7:30 p.m.) 1,470 cfs (4.07 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 1959. 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.--30 years, 125 cfs.

Extremes.--Maximum discharge during year, 3,200 cfs Jan. 21 (gage height, 7.51 ft); minimum, 35 cfs Dec. 16 (gage height, 0.87 ft), result of freezeup.
1929-59: Maximum discharge, 3,200 cfs Aug. 30, 1940, Jan. 21, 1959 (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 good. Slight diurnal fluctuation at low flow caused by small gristmill above station.

Revisions.--WSP 823: Drainage area.

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28, Sept. 1-30

0.9	36	2.5	301
1.2	58	3.0	450
1.6	105	3.5	623
2.0	180	4.0	843

Nov. 29 to Aug. 31

0.9	37	1.6	109
1.2	61	2.0	180

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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	100	64	130	119	125	198	172	260	76	74	102
2	67	71	59	123	112	117	264	170	252	95	72	84
3	61	67	63	103	114	115	225	162	200	82	93	*72
4	66	54	*66	94	147	109	227	153	170	75	79	91
5	54	52	58	b75	134	144	202	142	168	79	100	71
6	50	*62	55	b80	115	255	189	149	155	94	76	84
7	48	54	52	b85	108	162	176	139	139	75	74	153
8	*46	50	52	99	109	147	166	130	125	*70	70	128
9	45	51	50	b80	108	142	*158	127	*120	66	65	98
10	44	50	50	b68	123	*135	151	125	114	70	63	89
11	43	48	49	b80	*117	132	193	120	109	75	*62	85
12	42	47	b46	b80	109	172	561	134	109	68	60	78
13	42	46	47	*72	247	139	435	*176	103	98	58	71
14	42	45	50	72	220	134	316	153	98	78	56	67
15	42	45	b46	148	254	210	266	130	92	75	56	65
16	42	50	b48	176	204	164	237	122	90	75	61	61
17	43	47	b52	b105	184	153	214	115	86	83	63	59
18	50	46	b48	b100	191	142	266	114	85	75	71	58
19	77	45	b46	b100	162	135	405	109	82	72	62	57
20	49	43	49	b95	149	134	339	134	80	81	82	56
21	46	43	b45	786	140	135	293	149	78	166	67	54
22	46	43	b44	828	137	130	350	132	74	101	59	53
23	44	43	45	369	170	122	324	150	80	82	60	52
24	43	42	50	269	144	117	277	127	115	74	111	51
25	43	42	45	225	134	114	249	142	221	212	73	51
26	43	43	b42	198	130	165	227	142	144	181	71	50
27	43	42	b45	178	127	421	211	158	102	115	83	50
28	41	149	426	164	122	232	211	155	90	110	90	51
29	41	132	230	146	-	216	193	244	83	112	81	58
30	41	74	142	135	-------	230	178	254	79	91	96	266
31	41	-------	117	125	-------	202	-------	285	-------	81	114	-------
Total	1,534	1,726	2,281	5,388	4,130	5,050	7,701	4,714	3,703	2,887	2,302	2,365
Mean	49.5	57.5	73.6	174	148	163	257	152	123	93.1	74.3	78.8
Cfsm	0.758	0.881	1.13	2.66	2.27	2.50	3.94	2.33	1.88	1.43	1.14	1.21
In.	0.87	0.98	1.30	3.07	2.35	2.88	4.39	2.68	2.11	1.64	1.31	1.35

Calendar year 1958: Max 534 Min 39 Mean 119 Cfsm 1.82 In. 24.73
Water year 1958-59: Max 828 Min 41 Mean 120 Cfsm 1.84 In. 24.93

Peak discharge (base, 1,100 cfs).--Dec. 28 (5 p.m.) 1,190 cfs (4.62 ft); Jan. 21 (10:30 p.m.) 3,200 cfs (7.51 ft); July 25 (8:30 p.m.) 1,160 cfs (4.57 ft).

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

4595. Pigeon River near Hepco, N. C.

Location (revised).--Lat 35°38'07", long 82°59'22", on left bank 0.8 mile downstream from Jonathan Creek, 2.0 miles south of Hepco, Haywood County, 2.4 miles upstream from Fines Creek, and at mile 45.1.

Drainage area.--350 sq mi.

Records available.--July 1927 to September 1959.

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.--32 years, 649 cfs.

Extremes.--Maximum discharge during year, 14,100 cfs Jan. 22 (gage height, 10.27 ft); minimum, 145 cfs Nov. 1 (gage height, 1.08 ft).

1927-59: 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 periods 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 1959 are given in WSP 1641.

Revisions (water years).--WSP 823: Drainage area. WSP 893: 1928-31, 1932(M), 1933-36, 1937-39(M).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	149	4.0	1,890
1.5	265	5.0	3,000
2.0	470	6.0	4,440
3.0	1,020	7.0	6,190

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	728	271	284	626	540	492	774	642	1,960	370	314	461
2	470	430	255	758	520	484	1,110	637	1,720	448	287	374
3	341	318	255	570	515	461	968	681	1,330	395	310	*298
4	341	241	*272	502	615	448	981	714	1,180	353	287	610
5	295	222	251	395	670	486	871	681	1,010	341	337	669
6	269	*234	225	337	535	1,630	835	670	943	378	291	525
7	258	225	212	412	488	883	791	708	859	349	269	1,550
8	*225	206	212	448	492	742	752	626	774	*322	265	1,310
9	206	209	209	461	497	692	*725	595	*725	295	241	1,100
10	200	200	203	318	520	*637	698	595	676	310	231	943
11	192	195	200	298	*525	605	818	580	637	369	*225	835
12	184	192	195	b325	474	720	2,170	855	620	314	222	752
13	184	189	192	*353	1,130	615	2,290	*913	590	433	216	540
14	209	189	209	341	937	580	1,560	865	545	357	200	470
15	159	189	203	460	943	894	1,280	708	515	362	216	416
16	171	197	176	989	808	774	1,120	654	506	341	248	395
17	181	222	206	b490	736	676	1,060	615	484	345	284	362
18	195	197	212	b410	752	620	1,120	590	466	382	284	345
19	251	192	195	b450	664	595	1,980	615	456	370	262	333
20	200	184	203	502	600	585	2,040	1,060	443	448	302	322
21	184	178	203	2,090	550	595	1,570	2,670	425	446	295	314
22	186	178	200	5,750	555	620	1,870	1,740	412	395	258	302
23	195	176	200	1,720	637	590	1,810	1,630	404	357	306	295
24	186	178	212	1,180	610	580	1,540	1,220	506	310	391	280
25	176	176	203	968	540	560	1,290	1,190	824	420	405	231
26	173	181	184	853	520	624	1,000	1,640	692	651	302	228
27	192	176	200	764	506	1,930	1,010	1,470	474	448	287	225
28	222	339	2,430	698	488	1,420	925	1,380	425	658	329	231
29	206	757	1,820	642	-	1,010	747	1,610	399	544	306	251
30	149	349	877	610	-------	1,030	676	1,480	382	366	306	2,660
31	149	-------	642	575	-------	865	-------	1,630	-------	386	351	-------
Total	7,277	7,190	11,540	25,295	17,367	23,443	36,381	31,664	21,382	12,263	8,827	17,627
Mean	235	240	372	816	620	756	1,213	1,021	713	396	285	588
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 2,820 Min 149 Mean 583 Cfsm 1.67 In. 22.61
Water year 1958-59: Max 5,750 Min 149 Mean 603 Cfsm 1.72 In. 23.40

Peak discharge (base, 6,000 cfs).--Jan. 22 (2:30 a.m.) 14,100 cfs (10.27 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 1959. 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.--42 years, 1,222 cfs.

Extremes.--Maximum discharge during year, 9,240 cfs Jan. 22 (gage height, 6.60 ft); minimum, 102 cfs Dec. 21 (gage height, 0.10 ft); minimum daily, 168 cfs Dec. 21.

1900-29, 1944-46, 1948-59: 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.

Maximum stage known, 21.4 ft Feb. 28, 1902 (discharge, 50,000 cfs). Floods of Mar. 7, 1867, and June 17, 1876, reached a stage of 21.0 ft (discharge, 48,000 cfs). Flood of Aug. 30, 1940, reached a stage of 17.3 ft (discharge, 36,000 cfs), from reports of the 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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 28				Dec. 29 to Sept. 30			
0.3	150	1.5	860	0.5	224	2.0	1,400
.5	215	2.0	1,330	.7	312	3.0	2,580
.7	304	3.0	2,580	1.0	500	6.0	7,900
1.0	480						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	530	276	464	1,810	1,300	976	2,080	1,190	2,410	830	998	1,930
2	1,290	313	540	1,820	1,520	1,330	2,170	982	2,950	930	551	1,340
3	*591	411	519	1,720	882	1,130	2,220	638	3,260	694	539	*594
4	362	435	*512	1,380	1,140	1,000	2,250	872	*2,720	466	686	501
5	301	440	498	1,510	*1,760	*1,000	1,640	1,030	2,260	388	*852	434
6	341	456	599	*1,260	984	2,120	1,580	1,040	1,360	751	864	774
7	422	*462	514	952	631	1,760	1,570	*1,400	1,460	*824	755	1,480
8	416	324	554	856	694	1,250	1,480	1,530	1,260	794	547	2,040
9	393	263	658	1,140	849	1,420	*1,430	980	1,180	710	466	2,100
10	384	364	670	648	894	1,220	1,430	563	1,240	879	514	1,950
11	308	440	668	588	954	1,210	1,300	753	1,230	754	590	2,000
12	262	450	592	824	914	1,250	2,910	990	1,240	487	570	1,200
13	298	430	404	834	1,110	1,300	4,350	1,540	1,150	690	544	782
14	382	470	358	654	1,660	1,090	3,390	2,000	682	836	520	1,180
15	381	284	505	746	2,830	908	3,000	1,270	775	814	384	970
16	368	220	604	1,500	2,690	1,350	2,800	840	910	756	364	922
17	300	405	552	1,400	2,370	1,460	2,730	566	865	664	423	623
18	250	543	400	800	2,180	1,410	2,220	745	597	700	562	472
19	218	572	324	1,200	1,620	1,390	2,820	970	602	566	525	290
20	243	564	248	1,030	1,470	1,350	3,570	1,340	466	682	489	250
21	333	444	168	1,800	1,180	1,060	3,120	2,200	378	928	543	396
22	314	316	269	6,630	616	863	2,940	2,520	368	1,600	420	462
23	302	276	280	3,770	968	1,060	2,980	2,430	723	1,290	373	456
24	289	368	247	2,640	1,110	1,230	2,850	1,800	810	1,100	461	453
25	256	450	304	2,030	1,140	1,110	2,720	1,890	1,200	822	552	450
26	231	479	361	2,100	1,100	1,190	2,090	1,780	1,800	912	580	322
27	282	336	465	2,090	1,070	3,990	2,050	1,940	1,230	1,420	587	287
28	342	282	1,560	2,070	870	3,080	1,990	1,800	550	1,890	580	388
29	316	894	3,040	2,030	-	2,500	1,770	1,720	648	1,750	382	564
30	330	786	2,090	1,980	--------	2,300	1,410	2,270	743	1,310	632	4,970
31	314	--------	1,880	1,840	--------	2,290	--------	1,800	--------	1,210	777	--------
Total	11,349	12,751	20,847	51,652	36,506	46,597	70,860	43,389	36,867	28,447	17,630	30,580
Mean	366	425	672	1,666	1,304	1,503	2,362	1,400	1,229	918	569	1,019
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 5,280 Min 168 Mean 1,118 Cfsm 1.68 In. 22.79
Water year 1958-59: Max 6,630 Min 168 Mean 1,116 Cfsm 1.68 In. 22.75

Peak discharge (base, 7,500 cfs).--Jan. 22 (1 a.m.) 9,240 cfs (6.60 ft); Sept. 30 (2 p.m.) 8,450 cfs (6.25 ft).

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 2,658 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 10,600 cfs Sept. 30 (gage height, 8.64 ft), from rating curve extended above 1,600 cfs on basis of slope-area measurement at gage height 8.64 ft; minimum, 14 cfs Dec. 26 (gage height, 0.45 ft), result of freezeup.

1957-59: Maximum discharge, that of Sept. 30, 1959; minimum, that of Dec. 26, 1958; minimum gage height, 0.44 ft Sept. 8, 9, 1958.

Revisions.--The maximum discharge for the water year 1958 has been revised to 3,400 cfs Dec. 20 (gage height, 4.20 ft), superseding figure published in WSP 1556.

Remarks.--Records excellent except those for periods of ice effect, which are good, and those above 2,000 cfs, which are fair. Records of water temperatures for the water year 1959 are given in WSP 1641.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	10	2.0	645
.5	19	2.5	1,100
.6	30	3.0	1,700
.8	64	4.0	3,100
1.1	143	5.0	4,600
1.4	270		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	47	34	203	82	84	191	128	320	64	121	168
2	*38	64	33	178	77	79	379	121	403	77	104	150
3	30	64	33	131	82	77	240	121	308	77	99	141
4	33	53	34	109	121	73	260	121	260	66	99	293
5	28	44	32	b85	121	148	195	109	230	62	137	394
6	23	42	29	b80	99	407	171	107	199	60	107	478
7	21	39	28	b82	89	168	154	99	178	56	163	*836
8	20	36	28	99	89	140	140	94	160	53	115	516
9	*19	34	28	b85	86	128	131	91	146	51	99	403
10	18	34	27	b75	*86	115	124	91	*137	51	89	286
11	17	32	27	b65	86	107	178	86	128	68	82	240
12	16	*30	b25	b65	82	115	*636	86	115	77	77	235
13	17	29	26	66	404	99	403	137	109	125	*73	186
14	18	29	b26	*66	349	96	270	121	102	89	66	157
15	19	28	b25	89	245	124	225	99	96	79	82	143
16	26	28	b23	115	174	104	195	89	91	*128	146	128
17	26	28	b25	b65	150	94	174	84	86	212	99	118
18	24	27	b25	b65	140	89	191	82	84	157	86	109
19	173	27	b25	b70	121	84	381	79	82	328	82	102
20	44	26	26	b75	109	84	373	804	79	307	94	99
21	36	24	b23	407	b100	84	*260	*869	75	270	86	91
22	103	24	*b22	511	96	84	320	458	73	216	79	86
23	73	23	b22	195	131	77	286	439	73	160	89	82
24	47	23	23	157	109	75	235	276	75	128	86	77
25	38	23	b20	137	96	75	207	298	158	157	82	75
26	33	23	b16	124	91	94	186	478	96	182	77	73
27	32	23	b25	112	89	443	168	385	75	229	84	71
28	30	46	1,880	104	84	174	160	361	68	199	89	68
29	29	89	609	96	-	150	150	373	64	157	82	190
30	28	40	230	91	--------	281	137	308	60	128	82	*3,640
31	27	--------	154	86	--------	216	--------	314	--------	157	213	--------
Total	1,124	1,079	3,583	3,888	3,588	4,168	7,120	7,308	4,130	4,170	3,069	9,635
Mean	36.3	36.0	116	125	128	134	237	236	138	135	99.0	321
Cfsm	0.836	0.829	2.67	2.88	2.95	3.09	5.46	5.44	3.18	3.11	2.28	7.40
In.	0.96	0.92	3.07	3.33	3.07	3.57	6.10	6.26	3.54	3.57	2.63	8.26

Calendar year 1958: Max 1,880 Min 16 Mean 106 Cfsm 2.44 In. 33.17
Water year 1958-59: Max 3,640 Min 16 Mean 145 Cfsm 3.34 In. 45.28

Peak discharge (base, 2,800 cfs).--Dec. 28 (5:30 p.m.) 5,740 cfs (5.71 ft); Sept. 30 (5 a.m.) 10,600 cfs (8.64 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 and 1.5 miles east of Sioux, Yancey County.

Drainage area.--157 sq mi.

Records available.--October 1933 to September 1959. 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.--26 years, 242 cfs.

Extremes.--Maximum discharge during year, 18,400 cfs Sept. 30 (gage height, 14.15 ft); minimum, 47 cfs Dec. 26 (gage height, 1.89 ft), result of freezeup.
1933-59: Maximum discharge, 31,800 cfs Aug. 13, 1940 (gage height, 17.8 ft), from rating curve extended above 12,000 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 freeze-up; minimum daily, 27 cfs Sept. 14, 1953.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 25				July 26 to Sept. 30			
1.9	48	4.0	725	2.1	67	5.0	1,320
2.2	93	5.0	1,320	2.3	102	6.0	2,080
2.5	156	6.0	2,080	2.5	146	7.0	3,020
3.0	310	7.0	3,020	3.0	296	8.0	4,150
				4.0	720	9.0	5,480

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	104	99	303	180	199	345	292	419	112	221	167
2	133	239	95	328	160	194	519	272	616	112	154	144
3	102	223	97	245	180	177	443	262	558	159	139	119
4	106	154	102	208	200	169	483	242	423	125	162	130
5	95	129	93	b140	250	166	412	226	362	114	265	381
6	83	125	88	b110	200	536	370	214	320	127	240	348
7	78	122	b75	b140	180	366	328	202	278	116	197	516
8	74	110	b70	b180	180	300	300	191	239	102	169	480
9	*72	104	81	b200	175	275	275	179	217	95	146	347
10	70	104	79	b120	*174	252	255	179	*202	99	130	265
11	68	99	78	b130	191	230	362	174	185	114	119	227
12	67	*93	b65	b135	169	249	782	164	172	129	110	215
13	67	91	b70	b150	479	217	1,040	220	166	112	102	178
14	66	90	b75	*149	890	205	665	258	154	140	*96	151
15	67	88	b60	170	695	230	531	196	147	131	96	139
16	70	88	b50	400	503	223	455	177	142	*127	123	128
17	78	86	b75	230	404	199	*398	164	135	138	123	*112
18	76	84	b80	200	359	*188	390	159	131	194	104	110
19	175	83	b70	200	300	182	640	154	129	156	110	105
20	118	81	b75	250	252	177	863	445	125	220	134	105
21	90	79	b70	900	b220	179	680	*658	118	174	115	100
22	88	78	*b65	2,000	b205	194	745	427	114	185	128	95
23	120	76	b65	850	317	166	902	513	112	166	123	90
24	99	74	79	540	296	159	665	345	169	127	172	85
25	88	74	74	450	249	154	535	300	349	195	189	85
26	83	78	b50	350	230	174	459	352	316	200	201	82
27	88	76	b50	310	217	1,300	404	366	166	222	252	82
28	86	81	1,120	270	202	602	380	394	140	183	162	80
29	81	196	2,360	240	-	423	370	362	127	144	144	90
30	79	118	558	220	--------	455	320	345	120	151	121	*5,200
31	76	--------	370	200	--------	394	--------	390	--------	303	169	--------
Total	2,772	3,227	6,438	10,318	8,057	8,934	15,316	8,822	6,851	4,672	4,716	10,356
Mean	89.4	108	208	333	288	288	511	285	228	151	152	345
Cfsm	0.569	0.688	1.32	2.12	1.83	1.83	3.25	1.82	1.45	0.962	0.968	2.20
In.	0.66	0.76	1.53	2.44	1.91	2.12	3.63	2.09	1.62	1.11	1.12	2.45

Calendar year 1958: Max 2,360 Min 50 Mean 251 Cfsm 1.60 In. 21.69
Water year 1958-59: Max 5,200 Min 50 Mean 248 Cfsm 1.58 In. 21.44

Peak discharge (base, 2,600 cfs).--Dec. 29 (1:30 a.m.) 4,920 (8.60 ft); Jan. 22 (time unknown) 3,870 cfs (7.77 ft); Sept. 30 (9 a.m.) 18,400 cfs (14.15 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 15 to Feb. 9, Sept. 18-29; discharge estimated on basis of recorded range in stage, weather records, and records for Ivy River near Marshall and South Toe River near Celo.

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 1959. 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.--40 years (1919-59), 1,308 cfs.

Extremes.--Maximum discharge during year, 28,100 cfs Sept. 30 (gage height, 9.20 ft); minimum, 198 cfs Dec. 17 (gage height, 0.76 ft).

1900-1901, 1919-59: 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).

The May 1901 flood exceeded all other known floods at this location. High-water marks for the July 1916 flood about 9 miles upstream show it to have been about the same elevation as the Aug. 13, 1940, flood, from reports of the Tennessee Valley Authority.

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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.9	245	2.0	1,260	2.0	1,260	5.0	8,850
1.0	290	3.0	3,390	3.0	3,200	7.0	17,300
1.3	480	5.0	9,240	4.0	5,580		
1.6	750	6.0	13,000				

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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	410	390	512	1,420	886	977	1,750	1,520	2,070	480	951	772
2	614	720	*452	1,470	838	977	2,150	1,420	*3,180	480	700	886
3	536	990	445	1,230	*816	*912	2,410	1,290	2,020	587	596	772
4	504	*720	480	990	938	860	2,660	1,260	2,170	587	*735	761
5	488	578	466	783	1,290	827	2,390	*1,180	1,810	512	2,030	1,270
6	*417	544	438	560	1,130	2,710	*2,020	1,110	1,630	614	1,570	1,190
7	378	520	397	710	951	2,430	1,770	1,070	1,420	*560	1,060	1,920
8	358	480	371	990	912	1,730	1,570	1,020	1,230	480	951	*2,690
9	345	445	384	1,120	951	1,500	1,440	964	1,090	431	805	1,830
10	340	445	384	860	938	1,360	1,310	925	1,030	438	680	1,360
11	334	438	390	660	1,030	1,200	1,500	925	938	452	596	1,130
12	323	417	345	710	951	1,220	2,860	886	860	473	544	1,000
13	318	404	328	838	1,620	1,150	5,640	1,020	827	488	520	899
14	318	397	378	794	4,220	1,060	3,790	1,260	772	544	480	761
15	323	390	378	827	3,860	1,060	3,070	1,060	720	650	459	690
16	328	397	263	1,370	2,900	1,110	2,560	886	690	730	512	650
17	364	404	318	1,310	2,170	1,030	2,130	838	650	690	650	596
18	404	397	417	873	1,860	951	1,920	816	623	1,000	660	560
19	474	390	390	899	1,560	899	2,750	794	614	860	849	552
20	761	378	404	1,070	1,260	860	5,090	860	596	1,060	827	520
21	466	371	378	2,360	1,090	860	4,200	3,790	569	938	783	504
22	410	364	340	12,100	1,060	938	3,600	2,600	552	1,090	761	488
23	480	358	340	3,840	1,220	860	4,750	2,190	536	938	641	466
24	520	358	404	2,380	1,510	805	3,680	1,700	641	700	690	452
25	424	358	424	1,860	1,260	783	2,920	1,370	899	680	730	438
26	384	364	318	1,520	1,150	783	2,430	1,470	1,200	849	838	424
27	390	378	276	1,310	1,080	5,350	2,090	1,610	761	860	886	410
28	404	378	2,670	1,180	1,020	3,960	1,900	1,660	596	1,260	805	410
29	378	680	9,940	1,060	-	2,390	1,920	1,490	536	1,030	720	417
30	364	730	3,220	990	--------	2,150	1,680	1,810	504	816	614	13,200
31	352	--------	1,930	951	--------	2,110	--------	1,940	--------	925	690	--------
Total	12,909	14,183	28,180	49,035	40,461	45,812	79,950	42,734	31,734	22,202	24,333	38,018
Mean	416	473	909	1,582	1,445	1,478	2,665	1,379	1,058	716	785	1,267
Cfsm	0.517	0.588	1.13	1.97	1.80	1.84	3.31	1.71	1.31	0.889	0.975	1.57
In.	0.60	0.66	1.30	2.27	1.87	2.12	3.69	1.97	1.47	1.03	1.12	1.76

Calendar year 1958: Max 9,940 Min 263 Mean 1,384 Cfsm 1.72 In. 23.34
Water year 1958-59: Max 13,200 Min 263 Mean 1,177 Cfsm 1.46 In. 19.86

Peak discharge (base, 9,500 cfs).--Dec. 29 (3:30 a.m.) 15,800 cfs (6.66 ft); Jan. 22 (2 a.m.) 19,500 cfs (7.46 ft); Sept. 30 (2 p.m.) 28,100 cfs (9.20 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 Greeneville, 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 1959. Published as "near Greeneville" 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.--28 years, 1,842 cfs.

Extremes.--Maximum discharge during year, 19,700 cfs Sept. 30 (gage height, 11.95 ft); minimum, 24 cfs Oct. 14, 15, Sept. 22 (gage height, 0.93 ft); minimum daily, 26 cfs Oct. 15.

1902-9, 1918-25, 1945-59: 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.

The flood of May 1901 was the greatest known and reached a stage of about 38 ft, present site and datum, from profiles by the Tennessee Valley Authority.

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.9	23	3.1	460
1.4	54	3.5	840
2.0	108	4.0	1,540
2.5	188	6.0	5,150
2.8	280	9.0	11,800

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	622	434	897	2,530	1,170	1,400	2,660	2,590	2,080	880	921	1,120
2	567	482	567	1,450	1,020	1,300	2,620	2,530	*2,610	754	922	784
3	916	650	550	1,650	*1,490	1,620	2,550	1,900	3,470	778	687	992
4	824	*901	760	1,180	1,800	*1,610	3,450	1,610	3,111	654	*999	914
5	600	975	746	1,160	1,070	1,310	3,540	1,920	2,660	708	1,760	994
6	907	714	456	*1,460	984	1,440	*2,950	*1,740	2,610	624	2,550	1,380
7	561	995	420	860	1,540	2,750	2,640	1,420	2,050	*948	1,640	1,110
8	511	470	449	773	1,550	2,700	2,610	1,380	1,630	992	752	*2,110
9	299	562	498	1,420	1,190	2,590	2,570	1,620	1,420	902	774	2,180
10	356	530	421	1,480	1,200	1,870	1,720	1,750	1,220	376	769	1,920
11	670	660	409	1,170	1,330	1,970	2,010	1,090	1,300	466	880	1,900
12	436	686	406	818	1,520	1,980	2,530	1,040	1,400	571	921	1,790
13	379	564	650	434	1,520	1,330	6,230	1,230	1,120	594	894	940
14	455	458	642	984	2,820	1,620	5,830	1,860	956	688	882	941
15	26	554	408	1,050	5,670	1,650	4,470	1,570	1,000	800	767	604
16	*38	570	120	963	4,540	1,440	3,780	1,740	990	898	617	1,170
17	318	1,320	388	1,630	3,400	1,620	3,220	1,320	990	1,410	608	804
18	806	125	412	1,600	2,800	1,390	2,800	1,290	890	871	660	726
19	632	258	512	1,290	2,620	1,630	2,970	1,190	896	907	647	770
20	633	578	410	1,110	2,570	1,180	7,620	1,120	794	770	982	721
21	615	590	394	1,810	2,000	978	6,800	1,840	770	1,340	1,310	740
22	708	577	406	11,300	1,300	715	5,020	3,270	738	924	784	335
23	700	554	408	6,990	1,790	1,010	6,210	2,750	872	1,680	668	520
24	988	475	499	3,780	1,910	1,560	5,670	2,620	815	1,200	636	522
25	582	366	540	2,800	1,750	1,930	4,330	1,590	812	754	788	659
26	576	472	549	2,620	1,930	1,040	3,600	2,110	1,830	716	1,000	492
27	546	465	393	2,550	1,960	2,650	3,090	1,960	1,200	1,460	1,030	625
28	579	461	627	1,590	1,560	6,700	2,800	1,890	990	928	1,370	450
29	617	586	9,500	1,310	-	3,810	2,700	1,960	554	1,690	938	444
30	620	828	5,290	1,600	--------	2,930	2,620	2,390	581	1,180	944	4,880
31	623	--------	2,880	1,500	--------	2,770	--------	2,150	--------	884	708	--------
Total	17,710	17,860	31,607	62,862	56,004	60,493	111,610	56,440	42,358	28,347	29,808	33,537
Mean	571	595	1,020	2,028	2,000	1,951	3,720	1,821	1,412	914	962	1,118
Cfsm	0.482	0.503	0.861	1.71	1.69	1.65	3.14	1.54	1.19	0.772	0.812	0.944
In.	0.56	0.56	0.99	1.97	1.76	1.90	3.51	1.77	1.33	0.89	0.94	1.05

Calendar year 1958: Max 16,400 Min 26 Mean 1,817 Cfsm 1.53 In. 20.84
Water year 1958-59: Max 11,300 Min 26 Mean 1,503 Cfsm 1.27 In. 17.23

Peak discharge (base, 11,500 cfs).--Dec. 29 (time unknown) 14,100 cfs (9.90 ft); Jan. 22 (2 p.m.) 16,900 cfs (10.97 ft); Sept. 30 (11:30 p.m.) 19,700 cfs (11.95 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 1959.

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.--13 years, 237 cfs.

Extremes.--Maximum discharge during year, 4,640 cfs Mar. 28 (gage height, 14.22 ft); minimum, 10 cfs Sept. 28 (gage height, 1.63 ft).
1946-59: Maximum discharge, 10,700 cfs Jan. 31, 1950 (gage height, 16.24 ft), from rating curve extended above 5,000 cfs; maximum gage height, 16.25 ft 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 18 to Dec. 28, Jan. 7-9, 13-15, 19-21, Jan. 24 to Feb. 4, Feb. 6-13)

1.5	7	10.0	815
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		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	22	36	a200	103	158	243	*168	163	33	35	22
2	42	29	*29	a180	94	157	242	162	*238	51	29	22
3	38	32	30	a150	*90	*150	279	147	507	96	24	25
4	33	*29	51	a120	248	173	485	136	157	46	*26	20
5	33	26	57	a100	671	173	387	127	90	36	29	17
6	*30	26	40	*a80	408	531	*257	119	73	68	27	16
7	29	29	32	66	174	456	218	113	66	*45	25	16
8	28	30	27	103	137	207	196	107	60	37	24	*18
9	27	27	26	294	133	176	180	101	56	29	25	20
10	27	28	26	a250	125	170	168	100	53	29	24	35
11	27	29	25	a150	139	155	214	98	51	35	22	75
12	27	30	24	a80	108	315	906	94	50	35	21	43
13	27	30	23	71	276	324	1,930	283	52	29	20	23
14	27	30	24	*70	1,190	194	1,590	505	48	26	19	16
15	27	30	23	165	2,130	175	504	235	44	24	18	14
16	27	30	18	668	1,640	166	312	117	44	26	18	14
17	26	30	22	506	634	138	261	99	42	50	29	14
18	26	31	24	a150	330	124	239	91	41	43	26	13
19	26	31	24	125	264	115	377	88	40	32	21	12
20	26	29	26	110	208	112	702	84	38	43	52	12
21	26	29	24	403	181	112	703	106	38	44	37	12
22	26	29	23	2,040	168	131	413	94	37	35	33	12
23	26	27	23	2,090	381	118	519	82	36	30	22	12
24	26	27	29	601	572	104	431	75	39	38	24	12
25	26	27	36	231	295	99	289	73	84	40	24	12
26	25	27	32	190	212	102	247	68	78	33	24	12
27	25	27	27	165	185	2,100	219	67	47	37	26	11
28	26	35	631	154	169	3,480	208	68	39	33	25	10
29	24	70	a1,000	136	-	1,100	203	80	36	30	27	12
30	23	63	a450	122	--------	384	178	64	35	27	25	20
31	22	--------	a260	116	--------	296	--------	128	--------	27	40	--------
Total	862	939	3,122	9,886	11,265	12,195	13,100	3,879	2,382	1,187	821	572
Mean	27.8	31.3	101	319	402	393	437	125	79.4	38.3	26.5	19.1
Cfsm	0.126	0.142	0.459	1.45	1.83	1.79	1.99	0.568	0.361	0.174	0.120	0.087
In.	0.15	0.16	0.53	1.67	1.90	2.06	2.21	0.66	0.40	0.20	0.14	0.10

Calendar year 1958: Max 7,850 Min 18 Mean 250 Cfsm 1.14 In. 15.46
Water year 1958-59: Max 3,480 Min 10 Mean 165 Cfsm 0.750 In. 10.18

Peak discharge (base, 3,000 cfs).--Mar. 28 (4 a.m.) 4,640 cfs (14.22 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 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 1959. 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.--41 years, 6,509 cfs (unadjusted).

Extremes.--Maximum discharge during year, 18,300 cfs Sept. 30 (gage height, 9.12 ft); minimum, 13 cfs Dec. 25 (gage height, 1.40 ft); minimum daily, 14 cfs Dec. 26.

1918-59: 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.

The greatest known flood at Dandridge reached a stage of 25.2 ft (corrected) on March 1867. The February 1875 flood reached practically the same stage as the flood of March 1867. The flood of 1901 reached a stage of about 22 ft (corrected) at Dandridge, from investigations of the Tennessee Valley Authority.

Remarks.--Records good. Flow completely regulated by Douglas Lake (see p. 213).

Revisions (water years).--WSP 1306: 1920(M).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.4	13	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	9.0	17,800

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*10,600	6,030	1,690	12,400	9,840	10,400	892	2,980	*1,640	10,300	6,920	*7,140
2	7,360	3,740	2,800	12,900	9,670	9,800	914	1,350	3,300	9,790	83	2,710
3	6,200	*3,020	*3,210	12,500	10,300	6,960	1,090	4,600	2,880	5,800	*4,790	7,100
4	5,120	4,760	3,300	8,910	*10,200	*6,450	824	8,620	1,170	4,650	6,620	2,100
5	5,830	2,940	2,880	12,200	7,580	8,800	1,070	*8,340	1,940	4,300	7,480	5,460
6	6,840	4,830	2,410	*7,060	7,380	3,200	3,040	7,740	9,330	*9,620	2,180	5,620
7	14,000	5,960	2,380	7,250	3,390	982	961	9,200	9,820	10,600	415	9,510
8	11,000	3,860	6,640	4,500	34	1,260	1,140	10,200	10,300	9,410	3,250	8,560
9	12,200	3,760	5,340	4,680	4,380	5,860	2,150	4,690	9,980	10,100	600	8,040
10	10,400	5,240	4,260	5,680	3,860	4,460	4,530	4,650	10,100	10,300	7,290	5,500
11	6,830	3,960	2,280	3,920	4,390	4,710	2,180	6,440	10,300	11,200	5,250	1,900
12	3,130	2,470	1,610	5,540	4,050	4,960	1,650	8,900	7,240	11,800	4,920	6,350
13	4,760	4,660	2,500	750	2,150	2,490	4,820	5,770	1,820	9,760	7,760	4,100
14	5,860	2,840	1,890	2,040	1,030	2,840	2,250	6,590	1,700	7,330	6,640	10,300
15	4,570	34	3,000	2,590	1,060	1,370	1,880	8,220	6,360	10,300	7,130	9,910
16	5,930	1,270	2,500	6,780	1,360	7,150	1,450	2,740	7,680	10,600	3,420	10,500
17	5,280	4,320	2,000	418	929	137	1,370	1,920	6,020	6,910	7,940	10,900
18	4,790	1,490	3,190	2,070	6,870	802	37	5,470	6,530	3,580	9,240	10,600
19	5,470	1,330	3,680	725	4,260	34	32	5,750	7,050	3,920	9,390	11,400
20	6,800	1,410	2,520	1,720	3,970	4,390	351	7,720	9,200	1,860	5,060	11,000
21	6,130	3,660	1,540	1,400	9,140	150	32	3,000	9,530	5,010	2,650	11,200
22	5,500	1,450	5,220	6,350	11,700	21	27	3,110	12,700	5,480	4,920	9,060
23	6,200	1,560	66	14,100	11,800	6,830	470	2,340	7,570	3,040	5,000	9,440
24	3,440	4,650	19	10,600	15,200	4,450	1,020	1,570	12,300	1,510	10,300	11,500
25	4,740	2,380	15	11,100	11,500	1,390	891	3,620	6,240	4,070	9,470	11,200
26	4,770	3,650	14	11,100	11,700	1,970	1,040	9,940	2,730	1,280	8,380	7,910
27	5,940	3,880	16	14,400	11,900	615	1,360	10,200	12,100	2,530	4,500	10,500
28	6,070	3,350	1,530	14,300	11,700	26	2,900	6,160	7,180	1,460	6,800	13,000
29	5,950	1,440	5,030	14,200	-	21	1,470	640	10,200	4,380	5,820	10,700
30	5,760	2,660	10,600	13,900	--------	531	4,170	1,260	9,550	7,970	2,800	10,500
31	6,850	--------	12,300	13,500	--------	1,020	--------	1,020	--------	7,440	8,500	--------
Total	204,320	96,604	96,430	239,583	191,343	104,079	46,011	164,750	214,460	206,300	175,518	253,710
Mean	6,591	3,220	3,111	7,728	6,834	3,357	1,534	5,315	7,149	6,655	5,662	8,457

	Observed			Adjusted†		
Calendar year 1958:	Max 17,900	Min 14	Mean 6,775	Mean 6,754	Cfsm 1.49	In. 20.18
Water year 1958-59:	Max 15,200	Min 14	Mean 5,461	Mean 5,753	Cfsm 1.27	In. 17.19

* Discharge measurement made on this day.
† Adjusted for change in contents in Douglas Lake.

4700. Little Pigeon River at Sevierville, Tenn.

Location.--Lat 35°52'34", long 83°34'36, on left bank 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 1959. Prior to December 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.--39 years, 550 cfs.

Extremes.--Maximum discharge during year, 19,000 cfs Jan. 22 (gage height, 12.65 ft); minimum, 58 cfs Dec. 16 (gage height, 0.63 ft), result of freezeup; minimum daily, 68 cfs Dec. 16.

1920-59: 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. Discharge measurements generally made twice a month. Some regulation at low flow caused by powerplants on forks.

Revisions (water years).--WSP 783: 1921-34. WSP 1336: 1921(M), 1922, 1923(M).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 21				May 22 to Sept. 30			
0.7	68	4.0	2,340	0.7	63	2.0	615
1.0	141	8.0	6,680	0.9	102	3.0	1,300
1.3	260	9.0	8,020	1.2	195	6.0	4,380
2.0	660			1.6	385		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	135	98	183	527	275	345	640	415	826	215	315	285
2	238	168	155	688	270	330	898	426	917	615	231	320
3	155	148	144	426	246	315	974	371	878	440	192	235
4	177	144	158	330	447	310	1,440	340	603	310	215	227
5	165	126	148	242	765	285	1,090	320	456	335	422	211
6	126	186	132	168	536	1,210	845	310	549	310	374	181
7	112	256	115	228	426	808	681	290	567	227	271	174
8	102	158	110	599	393	602	588	270	440	188	235	336
9	95	138	107	1,050	366	518	512	256	346	164	199	253
10	90	135	105	595	355	454	470	246	290	339	174	346
11	88	124	100	415	442	398	716	233	258	358	157	280
12	84	112	93	355	355	500	3,470	228	244	262	145	368
13	80	107	90	320	955	442	3,560	351	429	215	136	266
14	80	102	98	320	3,580	404	1,880	667	290	181	122	211
15	78	100	88	572	3,970	482	1,310	410	231	324	116	181
16	76	100	68	1,350	2,020	524	1,030	320	199	285	136	160
17	76	105	90	751	1,210	448	845	280	188	262	130	142
18	76	98	90	614	912	393	845	251	167	258	224	133
19	86	93	88	582	681	345	1,670	238	160	244	480	127
20	90	93	93	478	543	330	3,560	220	151	305	424	119
21	80	88	84	2,800	459	330	1,750	320	136	394	341	110
22	78	88	82	7,090	420	420	1,330	699	133	1,040	280	102
23	78	88	82	1,600	550	355	1,100	627	130	543	305	100
24	76	86	88	959	530	325	905	358	204	320	207	95
25	76	84	100	706	442	310	765	285	2,880	271	315	91
26	76	88	82	562	410	346	660	290	1,260	358	320	84
27	80	98	86	476	371	6,020	582	266	615	374	248	80
28	84	133	1,420	410	350	1,970	536	290	429	434	330	80
29	82	666	2,740	355	-	1,130	500	262	320	290	341	77
30	78	285	1,750	330	--------	890	448	412	253	240	276	3,890
31	78	--------	569	305	--------	751	--------	418	--------	299	325	--------
Total	3,075	4,295	9,338	26,203	22,279	22,290	35,600	10,669	14,549	10,400	7,986	9,264
Mean	99.2	143	301	845	796	719	1,187	344	485	335	258	309
Cfsm	0.281	0.405	0.853	2.39	2.25	2.04	3.36	0.975	1.37	0.949	0.731	0.875
In.	0.32	0.45	0.98	2.76	2.35	2.35	3.75	1.12	1.53	1.10	0.84	0.98

Calendar year 1958: Max 6,900 Min 68 Mean 538 Cfsm 1.52 In. 20.66
Water year 1958-59: Max 7,090 Min 68 Mean 482 Cfsm 1.37 In. 18.53

Peak discharge (base, 7,000 cfs).--Jan. 22 (1 a.m.) 19,000 cfs (12.65 ft); Mar. 27 (9:30 a.m.) 10,300 cfs (10.34 ft); Apr. 12 (7 p.m.) 7,200 cfs (8.40 ft); June 25 (4:30 p.m.) 8,350 cfs (9.22 ft); Sept. 30 (4 p.m.) 11,300 cfs (10.72 ft).

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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.

Drainage area.--5,101 sq mi.

Records available.--October 1945 to September 1959. Prior to January 1946 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.--14 years, 7,364 cfs (unadjusted).

Extremes.--Maximum discharge during year, 25,400 cfs Sept. 30 (elevation, 823.80 ft); minimum, 148 cfs Dec. 27 (elevation, 813.79 ft); minimum daily, 150 cfs Dec. 26.
1945-59: 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.
Maximum stage known, 855.0 ft in March 1867 from floodmarks (discharge, 160,000 cfs, estimated), from investigations by Tennessee Valley Authority.

Remarks.--Records good. Flow regulated by Douglas Lake (see p. 213), 24.6 miles upstream.

Rating table, water year 1958-59 (elevation, in feet, and discharge, in cubic feet per second)

813.8	150	816.0	1,600
814.0	205	816.5	2,280
814.5	405	817.0	3,240
815.0	695	819.0	8,300
815.5	1,070	822.0	18,400

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,000	6,350	3,050	13,000	10,300	11,300	1,800	4,560	2,450	10,700	9,770	8,550
2	8,210	3,970	2,130	13,600	9,900	10,200	1,550	1,770	2,990	11,400	1,970	4,380
3	6,470	3,640	3,180	13,200	10,200	8,310	2,110	3,850	5,640	7,340	3,120	5,650
4	6,960	4,370	3,480	9,400	10,700	7,500	2,320	7,100	1,880	5,840	6,480	5,760
5	4,890	3,890	2,940	12,600	9,230	7,690	2,230	9,750	1,790	4,420	7,700	3,390
6	6,860	3,550	2,530	9,030	10,500	7,210	3,030	8,120	7,790	8,530	4,950	5,980
7	12,300	6,640	2,330	6,190	4,590	2,190	2,970	*9,400	10,500	10,900	869	9,410
8	11,300	4,340	6,450	6,420	991	1,970	1,720	10,900	10,800	*10,300	2,450	9,020
9	11,600	3,520	5,570	5,680	2,900	4,590	2,660	7,390	10,400	10,400	1,880	9,660
10	12,300	*4,460	*4,710	6,290	4,190	6,160	4,320	4,350	10,600	10,400	4,940	7,500
11	7,890	5,360	3,070	6,070	5,600	5,060	3,580	6,880	10,700	11,700	6,010	3,340
12	3,640	2,530	1,130	4,660	*4,150	5,410	5,280	9,020	9,800	13,500	5,200	4,630
13	6,150	3,200	2,890	2,540	4,020	2,920	10,800	6,980	2,400	9,070	7,950	5,890
14	4,860	4,550	2,000	2,140	6,250	4,760	5,740	6,610	2,340	8,930	7,000	8,750
15	4,360	*759	2,850	*3,030	6,760	2,000	*3,030	8,870	4,890	9,440	6,980	10,700
16	5,840	643	2,800	6,310	4,480	5,590	3,460	6,140	7,610	11,000	4,570	10,400
17	4,660	2,790	2,180	3,960	2,630	3,310	2,510	1,290	6,880	8,760	7,260	11,200
18	5,780	3,160	2,230	2,410	5,580	*957	1,350	3,960	6,580	3,700	9,530	11,000
19	4,730	1,400	3,770	1,400	7,180	963	2,130	7,040	6,970	4,880	10,100	11,200
20	6,450	1,400	3,430	1,960	4,100	2,260	5,760	8,360	9,120	2,310	7,860	11,100
21	6,290	2,220	1,570	2,690	8,200	3,150	2,720	2,990	9,620	4,640	3,560	12,000
22	6,610	2,880	4,110	13,300	11,300	612	1,870	3,850	12,300	6,200	4,180	11,200
23	5,430	1,540	2,100	15,500	12,400	4,870	1,830	4,420	10,200	4,870	5,230	7,680
24	4,520	2,870	260	11,900	16,100	6,890	2,110	1,650	9,760	3,080	8,540	*12,100
25	3,540	4,120	162	11,300	12,200	1,950	1,890	3,370	10,100	3,160	9,280	11,400
26	5,410	2,630	150	11,400	11,800	2,060	1,880	7,700	5,810	2,060	10,000	9,510
27	*4,130	3,330	155	14,900	12,100	9,310	1,810	10,400	11,100	2,260	4,820	9,840
28	7,020	4,230	1,880	14,700	12,000	3,860	3,400	7,770	9,020	2,350	6,000	12,700
29	6,210	2,800	7,600	14,500	-	1,760	2,760	3,030	10,100	3,330	9,010	12,000
30	5,680	1,750	10,100	14,300	--------	1,490	3,430	1,410	8,940	6,460	2,180	12,700
31	6,790	--------	13,100	13,900	--------	1,710	--------	1,860	--------	6,720	8,320	--------
Total	208,880	98,892	103,907	268,280	220,351	138,012	92,050	180,790	229,080	218,650	187,509	268,640
Mean	6,738	3,296	3,352	8,654	7,870	4,452	3,068	5,832	7,636	7,053	6,049	8,955

	Observed			Adjusted†		
Calendar year 1958:	Max 20,100	Min 150	Mean 7,444	Mean 7,423	Cfsm 1.46	In. 19.75
Water year 1958-59:	Max 16,100	Min 150	Mean 6,069	Mean 6,361	Cfsm 1.25	In. 16.93

* Discharge measurement made on this day.
† Adjusted for change in contents in Douglas Lake.

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 1959. 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 miles 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.--28 years, 108 cfs.

Extremes.--Maximum discharge during year, 1,420 cfs Jan. 22 (gage height, 5.10 ft); minimum, 19 cfs Sept. 25, 26 (gage height, 1.22 ft).
1920-31, 1942-59: 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 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.2	17	3.0	445
1.4	37	4.0	850
1.6	61	5.0	1,360
2.0	146		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a45	35	34	a80	a60	67	173	132	a62	a36	34	a33
2	a40	42	34	a70	a55	67	184	117	a220	a40	34	a32
3	*36	45	*35	a55	a58	*64	216	108	a180	a44	33	a30
4	38	44	37	a45	a70	60	509	396	a110	a38	34	*a27
5	37	35	a33	a37	*a82	60	337	a250	a80	a35	33	30
6	37	36	a30	a35	74	262	243	a200	a70	a38	*32	29
7	35	*34	a26	a38	69	260	184	a170	a60	a37	30	31
8	34	33	a30	a43	71	192	149	*a150	*a56	a35	31	30
9	34	34	a33	a38	69	160	*124	a130	52	a34	32	30
10	34	34	a27	a40	67	135	112	a110	51	a35	31	27
11	34	32	a26	a42	66	112	119	a100	47	a43	30	26
12	34	32	a28	*a47	61	114	271	a90	46	a37	29	25
13	34	32	a26	a50	69	105	645	a110	a46	a35	28	24
14	33	31	a25	a60	88	101	396	a170	a45	a34	28	24
15	34	31	a25	a70	211	103	293	a130	a44	*a34	27	24
16	33	32	a27	a100	240	101	249	a110	a42	35	28	24
17	32	33	a30	a80	195	98	214	a100	a44	41	32	23
18	32	32	a26	a70	162	90	186	a90	a41	42	36	23
19	32	32	a28	a65	132	85	222	a85	a40	38	30	22
20	33	33	a26	a70	103	83	545	a75	a38	40	a28	22
21	33	32	a25	a200	90	81	400	a70	a38	36	a30	21
22	34	31	a25	a1,000	86	81	372	a66	a42	39	a27	21
23	34	31	a26	a400	92	72	521	a62	a38	47	a30	21
24	34	30	a30	a200	86	69	400	a60	a39	41	a32	21
25	33	30	a28	a150	77	66	296	a60	a70	41	a28	21
26	33	30	a28	a120	74	64	240	a58	a84	39	a25	20
27	37	30	a30	a110	71	282	208	a60	a68	38	a37	20
28	37	32	a120	a95	67	325	184	a64	a50	41	a30	21
29	34	44	a640	a80	-	238	162	a62	a45	38	a33	24
30	33	37	a200	a75	--------	203	141	a60	a40	36	a30	272
31	32	--------	a120	a68	--------	189	--------	a58	--------	37	a35	--------
Total	1,075	1,019	1,858	3,633	2,645	3,989	8,295	3,503	1,888	1,184	957	998
Mean	34.7	34.0	59.9	117	94.5	129	276	113	62.9	38.2	30.9	33.3
Cfsm	0.456	0.447	0.787	1.54	1.24	1.70	3.63	1.48	0.827	0.502	0.406	0.438
In.	0.53	0.50	0.91	1.78	1.29	1.95	4.05	1.71	0.92	0.58	0.47	0.49

Calendar year 1958:	Max 1,000	Min 25	Mean 128	Cfsm 1.68	In. 22.78
Water year 1958-59:	Max 1,000	Min 20	Mean 85.1	Cfsm 1.12	In. 15.18

Peak discharge (base, 650 cfs).--Dec. 29 (time unknown) 1,050 cfs (4.42 ft); Jan. 22 (time unknown) 1,420 cfs (5.10 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 South Fork Holston River at Vestal and Middle Fork Holston River at Sevenmile 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 1959 (discontinued).

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.--12 years, 100 cfs.

Extremes.--Maximum discharge during year, 1,920 cfs Jan. 22 (gage height, 4.06 ft); minimum, 7.0 cfs Aug. 13 (gage height, 0.24 ft).
1947-59: 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 or no gage-height record, which are fair. Plant diverts about 0.5 cfs 800 ft above station.

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.2	5.0	1.5	240
.3	10	2.0	415
.6	42	3.0	895
.8	72	3.5	1,280
1.0	112	4.0	1,850

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	19	30	106	58	69	135	89	53	18	a25	20
2	*23	41	27	87	53	67	222	78	76	20	a21	20
3	18	48	*26	72	53	62	336	70	95	23	a19	17
4	18	27	36	62	72	59	620	66	70	18	a20	17
5	18	23	33	a54	112	58	387	59	56	17	18	19
6	16	23	32	a45	97	87	246	55	45	20	13	17
7	14	23	30	a40	85	87	175	53	40	18	13	24
8	13	21	30	a41	91	78	142	49	*36	18	31	28
9	12	27	28	a45	76	76	*119	46	31	12	24	18
10	12	28	26	a43	69	72	104	46	30	14	16	16
11	13	22	26	a39	64	67	124	43	29	17	13	16
12	13	22	b23	a40	55	85	378	41	27	17	10	15
13	13	21	b21	a42	91	76	665	64	27	15	8.5	13
14	12	20	b20	a44	140	76	372	78	29	13	7.5	10
15	12	21	b19	a48	407	83	258	53	26	a14	7.5	10
16	12	22	a20	a97	340	80	208	49	22	a14	7.5	10
17	13	23	a20	a70	219	76	170	45	20	a16	8.0	9.5
18	14	22	a21	a60	165	70	152	43	19	a18	8.0	9.5
19	15	21	22	a65	121	66	234	43	19	a17	22	9.0
20	15	22	24	108	95	64	715	40	19	a25	31	9.0
21	13	20	22	260	82	64	415	46	19	a22	16	9.5
22	15	20	a22	1,320	74	74	322	43	17	a24	13	9.0
23	15	20	b23	455	99	59	354	40	15	a26	15	9.0
24	16	20	b27	231	95	56	294	35	16	a21	14	8.5
25	16	18	b25	160	83	52	219	33	70	a22	12	8.5
26	17	19	b21	124	80	55	172	33	49	a25	9.5	8.5
27	19	21	39	104	76	654	140	33	27	a31	33	9.0
28	18	27	360	87	70	503	124	33	23	a40	20	9.0
29	16	66	598	74	-	274	106	31	21	a25	26	10
30	15	38	258	69	-------	202	91	33	19	a21	19	99
31	15	-------	142	64	-------	160	-------	50	-------	a32	22	-------
Total	474	765	2,051	4,156	3,122	3,611	7,999	1,520	1,045	633	522.5	487.0
Mean	15.3	25.5	66.2	134	112	116	267	49.0	34.8	20.4	16.9	16.2
Cfsm	0.273	0.455	1.18	2.39	2.00	2.07	4.77	0.875	0.621	0.364	0.302	0.289
In.	0.31	0.51	1.36	2.76	2.07	2.40	5.31	1.01	0.69	0.42	0.35	0.32

Calendar year 1958: Max 715 Min 12 Mean 97.3 Cfsm 1.74 In. 23.57
Water year 1958-59: Max 1,320 Min 7.5 Mean 72.3 Cfsm 1.29 In. 17.51

Peak discharge (base, 600 cfs).--Dec. 29 (3 a.m.) 742 cfs (2.73 ft); Jan. 22 (3 a.m.) 1,920 cfs (4.06 ft); Mar. 27 (4 p.m.) 960 cfs (3.12 ft); Apr. 4 (7 a.m.) 742 cfs (2.76 ft); Apr. 12 (10 p.m.) 862 cfs (2.95 ft); Apr. 20 (6 a.m.) 928 cfs (3.04 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 nearby stations.
b Stage-discharge relation affected by ice.

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 1959. 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.--28 years, 457 cfs.

Extremes.--Maximum discharge during year, 5,360 cfs Jan. 22 (gage height, 9.37 ft); minimum, 71 cfs Sept. 27 (gage height, 2.31 ft); minimum daily, 75 cfs Sept. 25-27.
1931-59: 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. Some diurnal fluctuation caused by powerplant above station.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1932-33(M).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 4-28)

2.3	70	5.0	1,050
2.6	110	6.0	1,770
3.0	200	9.0	4,800
4.0	545		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	136	160	527	302	320	665	500	261	132	158	126
2	*172	208	150	442	282	313	865	442	334	134	130	122
3	148	225	*150	376	273	*292	1,140	408	366	146	118	116
4	148	138	188	330	320	282	2,400	690	302	130	136	*106
5	142	122	178	249	*418	276	1,590	690	276	122	140	118
6	138	122	172	b220	383	604	1,080	545	240	132	*118	102
7	132	*118	146	b210	344	690	840	464	220	132	114	114
8	128	110	146	b220	344	545	690	*418	*205	114	144	124
9	126	126	150	255	330	488	*590	380	192	107	136	104
10	126	132	136	220	324	450	514	358	185	116	116	98
11	126	120	134	b200	310	404	568	334	175	142	106	98
12	124	112	118	*b210	270	439	1,440	313	168	126	98	95
13	122	107	b110	218	358	408	2,760	400	165	116	96	89
14	124	106	b100	240	476	390	1,680	418	172	118	92	90
15	120	107	b95	310	1,170	408	1,200	355	155	*118	90	88
16	120	112	b100	400	1,200	397	990	330	148	114	92	86
17	122	114	b110	344	865	383	840	310	144	122	114	83
18	120	110	b120	b280	715	362	740	302	140	160	120	82
19	118	108	130	b300	568	341	962	292	140	130	150	79
20	120	110	132	390	453	334	2,670	267	134	160	138	78
21	120	106	120	1,150	390	327	1,770	279	132	138	118	82
22	124	104	120	4,320	372	352	1,460	285	130	160	100	79
23	126	101	114	1,860	422	302	1,770	264	122	170	102	77
24	126	101	150	1,020	411	282	1,420	246	124	132	120	77
25	122	100	140	740	366	273	1,420	225	271	130	114	75
26	124	100	110	590	355	270	890	222	255	134	100	75
27	134	101	126	504	341	2,180	765	228	243	200	148	75
28	144	108	1,060	442	327	1,900	665	220	188	240	120	77
29	132	270	2,670	390	-	1,110	590	210	155	152	126	84
30	124	190	1,140	358	-------	890	522	218	140	132	118	770
31	122	-------	715	334	-------	765	-------	255	-------	218	138	-------
Total	4,054	3,824	9,190	17,649	12,689	16,777	35,496	10,868	5,882	4,377	3,710	3,469
Mean	131	127	296	569	453	541	1,183	351	196	141	120	116
Cfsm	0.435	0.422	0.983	1.89	1.50	1.80	3.93	1.17	0.651	0.468	0.399	0.385
In.	0.50	0.47	1.14	2.18	1.57	2.07	4.39	1.34	0.73	0.54	0.46	0.43

Calendar year 1958: Max 3,520 Min 95 Mean 516 Cfsm 1.71 In. 23.29
Water year 1958-59: Max 4,320 Min 75 Mean 351 Cfsm 1.17 In. 15.82

Peak discharge (base, 3,000 cfs).--Dec. 29 (5 a.m.) 3,330 cfs (7.72 ft); Jan. 22 (4 a.m.) 5,360 cfs (9.37 ft); Apr. 12 (2 to 3 a.m.) 3,230 cfs (7.56 ft).

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

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 Mead Creek and 3.3 miles downstream from Walker Creek.

Drainage area.--132 sq mi.

Records available.--July 1942 to September 1959.

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.--17 years, 159 cfs.

Extremes.--Maximum discharge during year, 2,540 cfs Apr. 12 (gage height, 6.65 ft); minimum, 17 cfs Sept. 19, 20, 21, 23, 25, 27 (gage height, 2.08 ft); minimum daily, 23 cfs Sept. 25, 27.
1942-59: 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 1958-59 (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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	38	40	96	79	90	183	159	73	40	35	45
2	76	55	43	82	73	88	211	144	267	43	33	50
3	*73	55	*40	68	73	*82	302	132	262	50	32	36
4	73	42	43	62	96	79	790	330	144	36	33	*32
5	68	38	42	45	*168	76	460	275	111	35	36	32
6	68	35	38	45	147	230	306	253	93	40	*30	30
7	68	*38	32	47	117	262	222	410	82	35	35	29
8	68	36	36	50	114	186	192	*200	*73	35	33	30
9	68	40	40	48	108	159	*162	159	68	33	36	27
10	64	40	33	43	99	144	150	141	64	33	30	32
11	36	40	30	42	93	126	189	126	62	35	29	30
12	30	38	35	*43	79	141	1,060	114	59	38	27	27
13	35	36	32	47	108	150	1,340	135	59	38	29	29
14	36	36	30	57	171	150	620	211	57	35	27	25
15	33	33	30	73	450	150	415	174	57	35	27	29
16	33	40	30	129	360	138	330	141	52	*33	30	25
17	33	40	38	96	244	129	262	123	55	50	33	25
18	29	43	33	82	192	117	222	117	52	42	33	26
19	35	38	35	82	153	102	252	108	50	33	30	26
20	38	38	33	88	123	99	735	96	48	35	30	26
21	36	36	27	216	105	96	480	96	48	32	32	25
22	42	36	32	1,460	99	93	625	85	50	47	29	27
23	38	30	32	455	123	82	872	79	48	38	32	25
24	36	40	38	244	123	76	560	73	48	40	43	27
25	38	32	35	177	111	73	385	73	85	38	47	23
26	33	33	35	147	108	73	293	68	99	36	36	27
27	42	30	29	132	102	1,100	230	71	105	40	32	23
28	45	45	293	117	96	647	211	73	52	50	33	25
29	35	64	725	102	-	350	186	79	43	40	38	73
30	36	47	211	93	--------	262	168	79	38	38	35	262
31	36	--------	129	85	--------	215	--------	73	--------	36	73	--------
Total	1,463	1,192	2,299	4,553	3,914	5,765	12,413	4,397	2,404	1,189	1,058	1,148
Mean	47.2	39.7	74.2	147	140	186	414	142	80.1	38.4	34.1	38.3
Cfsm	0.358	0.301	0.562	1.11	1.06	1.41	3.14	1.08	0.607	0.291	0.258	0.290
In.	0.41	0.34	0.65	1.28	1.10	1.62	3.50	1.24	0.68	0.33	0.30	0.32

Calendar year 1958: Max 1,600 Min 27 Mean 162 Cfsm 1.23 In. 16.75
Water year 1958-59: Max 1,460 Min 23 Mean 115 Cfsm 0.871 In. 11.77

Peak discharge (base, 2,000 cfs).--Jan. 22 (5 a.m.) 2,370 cfs (6.37 ft); Apr. 12 (10 p.m.) 2,540 cfs (6.65 ft).

* Discharge measurement made on this day.

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 1959.

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.--8 years, 917 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,250 cfs Aug. 19 (gage height, 37.32 ft); minimum, 5.0 cfs Apr. 22, 24 (gage height, 32.38 ft); minimum daily, 5.5 cfs Apr. 21, 22. 1951-59: Maximum discharge, 8,270 cfs Feb. 12, 1957 (gage height, 40.45 ft); no flow for part of day Oct. 27, 1954; minimum daily discharge, 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. 213).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 8				Dec. 9 to Sept. 30			
32.4	5.1	34.0	295	32.4	5.5	34.0	300
32.5	7.9	34.5	500	32.5	8.3	34.5	525
32.7	16	35.0	770	32.7	17	35.0	820
32.9	30	36.0	1,620	32.9	32	36.0	1,700
33.1	53	38.0	4,140	33.1	57	37.0	2,840
33.4	113			33.4	118		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,040	1,980	1,510	518	1,620	6.3	8.0	48	454	1,090	7.9	1,250
2	2,170	1,030	1,270	1,420	2,050	768	228	6.9	1,110	969	6.3	348
3	2,150	1,420	*1,640	2,010	100	1,520	312	6.9	*716	803	728	308
4	2,670	611	990	2,050	372	*803	167	26	178	6.9	419	681
5	2,620	*1,470	7.1	2,780	8.3	757	8.3	8.0	9.4	389	*200	382
6	2,790	1,690	2,110	2,720	279	1,970	201	*738	8.7	669	8.7	6.3
7	25	2,060	1,860	*2,220	31	200	*8.0	1,770	7.7	731	816	7.5
8	*7.6	1,510	2,350	2,000	6.9	6.6	8.0	2,070	740	*719	214	7.7
9	204	71	2,760	2,200	6.9	406	8.0	526	696	1,410	6.9	*2,050
10	2,140	1,690	2,730	1,980	6.9	7.8	8.0	6.9	842	1,630	411	1,500
11	2,010	2,170	2,730	666	6.9	9.2	19	1,510	956	1,740	643	931
12	2,590	900	2,790	1,750	6.9	353	639	1,340	1,500	1,870	588	7.5
13	2,840	1,910	2,070	1,500	759	7.7	1,260	148	1,380	1,460	1,930	6.6
14	2,720	1,310	1,170	1,860	7.7	6.9	190	574	14	1,450	2,020	135
15	2,610	414	1,520	2,000	20	7.5	9.1	837	2,010	929	2,080	8.3
16	2,080	139	1,800	2,600	694	7.7	8.5	141	838	1,060	1,200	9.1
17	2,720	2,230	1,910	2,640	160	103	8.0	6.9	1,920	1,360	1,220	8.0
18	18	1,860	1,750	353	1,510	7.7	422	350	1,260	625	1,750	8.0
19	953	1,320	2,140	11	9.1	7.7	8.3	460	2,120	659	1,720	8.7
20	2,180	2,210	1,840	56	1,990	7.7	12	8.0	729	888	846	8.7
21	2,100	1,860	2,190	9.5	1,560	7.2	5.5	114	7.2	2,170	1,520	711
22	2,100	1,660	1,910	682	6.9	6.9	5.5	8.0	1,530	908	960	9.4
23	2,120	960	1,830	888	7.7	7.7	6.6	1,930	889	7.5	876	7.7
24	2,620	2,240	1,790	7.2	217	6.9	27	14	834	272	1,390	203
25	18	21	1,240	6.9	7.5	6.9	8.3	876	1,340	379	1,720	93
26	7.9	1,820	1,120	6.9	6.9	7.7	7.5	519	1,970	448	1,700	6.9
27	1,730	2,840	1,660	6.9	6.6	272	8.3	1,760	31	518	1,480	6.6
28	2,910	2,310	14	6.9	6.1	783	618	1,880	6.9	1,380	2,320	8.0
29	2,310	2,360	468	6.6	-	8.3	881	1,520	868	720	837	669
30	1,330	360	614	6.9	--------	8.3	1,050	8.6	1,930	7.7	496	9.4
31	2,030	--------	7.7	6.6	--------	95	--------	303	--------	1,230	1,860	--------
Total	56,813.5	44,426	49,790.8	34,968.4	11,463.3	8,172.7	6,149.9	19,514.2	26,894.9	28,498.1	31,973.8	9,395.4
Mean	1,833	1,481	1,606	1,128	409	264	205	629	896	919	1,031	313

	Observed						Adjusted†				
Calendar year 1958:	Max 2,910	Min 4.0	Mean 1,375	Mean 1,087	Cfsm 1.55	In. 20.99
Water year 1958-59:	Max 2,910	Min 5.5	Mean 899	Mean 711	Cfsm 1.01	In. 13.72

* Discharge measurement made on this day.
† Adjusted for change in contents in South Holston Lake.

4784. Beaver Creek near Bristol, Va.

Location.--Lat 36°37'54", long 82°08'02", on right bank 50 ft upstream from private bridge 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 1959.

Gage.--Water-stage recorder. Datum of gage is 1,780.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 310 cfs Mar. 27 (gage height, 4.76 ft); minimum, 9.5 cfs Sept. 28 (gage height, 2.64 ft).
1957-59: Maximum discharge, 795 cfs May 6, 1958 (gage height, 6.98 ft); minimum, that of Sept. 28, 1959.
Flood in 1936 reached a stage about 5 ft higher than that of May 6, 1958.

Remarks.--Records good.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-31)

Oct. 1 to Apr. 12				Apr. 13 to Sept. 30			
2.7	11	3.5	95	2.6	8.0	3.0	36
2.8	16	4.0	174	2.7	13	3.5	95
3.0	34			2.8	20	4.0	174

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*21	18	15	18	25	30	49	45	26	16	14	11
2	18	20	*15	18	*24	*29	60	43	28	16	14	11
3	18	17	15	17	24	28	58	43	26	16	14	*11
4	18	16	16	16	32	28	66	*40	24	16	15	11
5	17	14	15	15	36	28	61	38	24	16	14	10
6	17	*16	15	15	31	43	57	38	24	17	14	12
7	16	17	14	14	29	37	53	37	23	16	16	21
8	16	17	14	15	28	34	*50	35	22	15	17	14
9	16	18	14	*15	27	33	48	34	22	15	15	12
10	16	17	13	14	26	32	47	34	22	15	14	11
11	16	16	13	14	25	31	55	33	22	15	14	11
12	16	16	13	13	24	36	105	35	21	14	*13	11
13	15	16	13	14	29	33	98	35	22	16	12	11
14	15	15	13	16	42	31	80	33	25	16	12	10
15	15	16	13	18	71	31	71	32	24	*15	12	10
16	15	16	13	24	54	31	64	31	21	14	11	10
17	15	16	13	21	49	30	61	31	21	16	11	10
18	15	15	13	18	46	28	58	33	20	15	11	10
19	15	16	13	18	42	28	58	30	*19	15	11	10
20	15	15	13	21	38	27	56	31	19	16	11	10
21	15	15	13	61	36	28	53	30	18	27	11	10
22	15	15	13	91	36	28	62	30	17	24	11	10
23	14	15	13	53	42	26	64	29	17	21	12	10
24	14	15	15	43	35	25	60	27	18	17	14	10
25	14	15	13	41	33	24	56	27	21	16	11	10
26	14	15	13	37	32	26	53	26	19	16	12	10
27	14	15	13	35	31	140	52	26	18	15	12	10
28	14	19	37	33	30	71	50	26	17	15	12	10
29	13	22	34	31	-	61	48	26	16	15	12	12
30	13	16	23	28	-------	56	47	26	16	14	11	16
31	13	-------	20	26	-------	53	-------	26	-------	16	11	-------
Total	478	489	483	813	977	1,166	1,800	1,011	632	506	394	335
Mean	15.4	16.3	15.6	26.2	34.9	37.6	60.0	32.6	21.1	16.3	12.7	11.2
Cfsm	0.556	0.588	0.563	0.946	1.26	1.36	2.17	1.18	0.762	0.588	0.458	0.404
In.	0.64	0.66	0.65	1.09	1.31	1.57	2.42	1.36	0.85	0.68	0.53	0.45

Calendar year 1958: Max 530 Min 13 Mean 43.5 Cfsm 1.57 In. 21.28
Water year 1958-59: Max 140 Min 10 Mean 24.9 Cfsm 0.899 In. 12.21

Peak discharge (base, 300 cfs).--Mar. 27 (4:30 a.m.) 310 cfs (4.76 ft).

* Discharge measurement made on this day.

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 1959. 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.--20 years, 160 cfs.

Extremes.--Maximum discharge during year, 6,420 cfs Sept. 30 (gage height, 10.60 ft), from rating curve extended above 2,100 cfs as explained below; minimum, 8.2 cfs Dec. 25 (gage height, 1.18 ft), result of freezeup.

1939-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 22

1.4	22	4.0	800
1.6	42	5.0	1,260
1.8	70	6.0	1,880
2.0	108	7.0	2,650
2.5	232	8.0	3,590
3.0	407		

July 23 to Sept. 30

1.6	41	2.0	103
1.8	67	2.5	232

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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	48	b37	177	92	92	226	155	372	45	95	564
2	46	77	40	177	86	88	422	142	492	78	66	262
3	42	70	40	139	88	84	350	130	318	90	86	141
4	51	51	41	b115	108	81	380	132	241	55	251	118
5	41	45	40	b90	110	132	300	148	206	47	217	99
6	35	42	35	b75	90	773	248	126	175	47	120	109
7	33	40	b27	b80	81	354	206	117	148	47	103	653
8	32	38	b38	b85	84	235	182	106	130	41	103	450
9	*31	38	b40	b80	86	198	163	98	117	39	79	251
10	30	40	b30	b70	90	167	148	102	*108	40	69	182
11	28	36	b30	b80	*102	146	218	98	100	41	66	148
12	26	*35	b35	b90	90	151	423	90	94	50	57	126
13	27	34	b35	92	228	137	546	112	90	52	*53	109
14	27	33	b35	*81	215	128	392	110	84	52	51	97
15	27	34	b35	90	212	132	303	92	77	62	49	90
16	30	36	b30	b120	185	121	260	86	72	*56	56	84
17	31	40	b40	b80	167	112	*223	81	68	58	53	*76
18	31	36	b40	b80	153	*102	212	79	66	64	60	74
19	77	34	b40	b90	b125	100	296	77	66	67	67	67
20	42	32	b30	b130	b105	98	445	162	62	81	81	63
21	38	31	b40	439	b95	98	365	310	60	66	101	61
22	46	31	*b35	1,620	b90	96	418	*232	56	214	67	59
23	48	31	b35	407	b140	88	523	163	56	164	84	54
24	41	31	36	254	123	84	396	130	62	100	94	52
25	35	31	b27	195	104	83	300	117	119	174	108	51
26	34	33	b30	167	100	90	248	128	79	134	90	48
27	35	33	b35	146	96	472	218	132	61	90	70	48
28	35	38	1,340	132	92	286	218	119	55	90	78	48
29	33	83	1,030	119	-	215	200	121	48	82	92	119
30	32	b45	307	110	--------	289	170	117	46	64	124	3,390
31	30	--------	193	102	--------	260	--------	187	--------	157	148	--------
Total	1,146	1,226	3,826	5,712	3,337	5,492	8,999	3,999	3,728	2,447	2,838	7,693
Mean	37.0	40.9	123	184	119	177	300	129	124	78.9	91.5	256
Cfsm	0.407	0.450	1.35	2.03	1.31	1.95	3.30	1.42	1.37	0.869	1.01	2.82
In.	0.47	0.50	1.57	2.34	1.37	2.25	3.69	1.64	1.53	1.00	1.16	3.15

Calendar year 1958: Max 1,340 Min 26 Mean 165 Cfsm 1.82 In. 24.62
Water year 1958-59: Max 3,390 Min 26 Mean 138 Cfsm 1.52 In. 20.67

Peak discharge (base, 2,000 cfs).--Dec. 28 (7:30 p.m.) 4,420 cfs (8.82 ft); Jan. 22 (1 a.m.) 4,650 cfs (9.03 ft); Sept. 30 (8:30 a.m.) 6,420 cfs (10.60 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 1959. 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.--17 years, 707 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,080 cfs Nov. 6 (gage height, 35.52 ft); minimum, 28 cfs May 18 (gage height, 31.32 ft); minimum daily, 30 cfs May 19-21.
1902-8, 1948-59: 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 discharge, 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 except those for periods of no gage-height record, which are fair. Flow completely regulated by Watauga Lake (see p. 213).

Revisions (water years).--WSP 1276: 1906(M). WSP 1306: 1905(M). WSP 1386: 1950.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

31.3	26	33.0	475
31.5	46	33.5	820
31.7	73	34.0	1,280
32.0	132	36.0	3,700
32.5	265		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,430	1,410	1,230	116	61	1,250	75	67	58	496	53	158
2	848	67	101	885	2,170	2,070	247	66	58	70	52	70
3	568	743	1,040	701	118	2,520	198	64	*60	68	52	70
4	1,420	851	360	2,090	*462	*2,620	316	62	60	68	52	662
5	1,480	*966	271	2,790	70	1,520	64	62	60	68	*52	73
6	1,500	1,020	2,070	2,910	447	1,990	93	*268	60	68	52	315
7	*99	1,010	2,060	*2,400	202	704	*61	1,030	58	67	202	276
8	68	486	2,540	2,090	349	148	60	1,530	58	*66	53	1,020
9	67	184	2,430	1,960	67	270	60	159	58	1,330	52	*2,750
10	1,390	814	2,120	1,360	66	450	60	67	60	1,680	52	1,690
11	962	1,260	2,150	758	66	62	60	66	58	1,110	52	1,320
12	1,390	506	2,280	1,860	808	1,150	760	306	151	954	52	530
13	1,840	337	1,870	1,470	774	795	312	66	101	600	52	510
14	2,080	1,100	698	1,610	67	66	67	64	58	456	52	660
15	948	939	1,390	2,090	74	62	66	66	121	77	51	260
16	638	68	1,570	2,700	801	397	62	64	292	52	51	450
17	879	474	1,890	2,370	365	406	56	62	64	527	52	430
18	66	1,440	1,780	1,230	1,630	1,010	58	43	341	51	1,180	510
19	194	1,460	1,430	2,270	2,520	1,850	60	30	64	51	770	590
20	1,470	1,350	2,160	1,750	2,300	68	214	30	62	330	536	810
21	1,640	274	2,140	428	1,960	66	90	30	60	1,630	620	1,280
22	1,470	406	1,940	1,960	1,490	66	61	125	60	186	73	720
23	1,390	479	2,050	1,200	195	810	83	464	256	52	72	1,440
24	1,270	1,350	1,940	786	164	911	61	61	61	52	710	1,610
25	1,470	564	489	64	98	1,330	60	58	1,020	52	777	1,870
26	906	1,130	1,460	62	88	914	60	53	1,640	52	619	780
27	2,320	1,830	1,040	61	67	1,180	58	562	83	52	958	910
28	2,240	1,840	427	61	67	855	238	638	67	436	2,020	1,100
29	2,250	2,230	649	111	-	61	91	78	514	191	378	850
30	2,220	1,210	460	62	--------	330	1,290	60	732	52	72	73
31	900	--------	68	61	--------	105	--------	58	--------	453	858	--------
Total	37,413	27,798	44,103	40,266	17,546	26,036	5,043	6,359	6,395	11,397	10,677	23,787
Mean	1,207	927	1,423	1,299	627	840	168	205	213	368	344	793

	Observed			Adjusted†		
Calendar year 1958:	Max 2,970	Min 57	Mean 954	Mean 719	Cfsm 1.53	In. 20.71
Water year 1958-59:	Max 2,910	Min 30	Mean 704	Mean 585	Cfsm 1.24	In. 16.86

* Discharge measurement made on this day.
† Adjusted for change in contents in Watauga Lake.
Note.--No gage-height record Oct. 31, Sept. 10-29; discharge estimated on basis of records for station at Elizabethton and Wilbur Dam powerplant records.

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 1959. 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.--44 years (1911-16, 1920-59), 217 cfs.

Extremes.--Maximum discharge during year, 7,000 cfs Jan. 22 (gage height, 6.58 ft), from rating curve extended as explained below; minimum, 35 cfs Dec. 16, 26 (gage height, 0.43 ft), result of freezeup.

1911-16, 1920-59: 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 1959 are given in WSP 1641.

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.5	41	2.0	510
.7	73	3.0	1,140
1.0	140	4.0	2,190
1.5	299	5.0	3,870

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	96	101	244	173	197	306	310	248	68	116	90
2	121	185	*96	217	162	188	424	282	362	73	92	86
3	103	204	105	185	162	182	402	261	*299	105	88	75
4	118	*136	112	167	*207	*173	571	244	227	75	*460	68
5	103	118	103	101	254	170	470	*230	204	71	571	75
6	92	121	94	*88	214	414	386	214	182	96	285	68
7	*86	114	79	133	188	310	*324	204	162	*90	200	71
8	81	103	81	191	194	268	288	191	143	68	176	*77
9	79	103	88	185	200	250	264	185	130	62	151	68
10	81	103	81	128	200	233	244	182	128	68	126	71
11	81	96	77	116	282	207	317	170	121	71	109	112
12	77	98	64	133	240	220	430	164	112	75	96	81
13	75	94	90	164	457	197	664	214	109	66	88	68
14	75	90	86	162	576	191	588	233	107	68	79	62
15	75	90	68	197	712	204	540	185	98	64	75	60
16	75	88	55	288	576	185	460	170	92	71	101	59
17	75	94	84	220	442	176	390	162	88	73	103	55
18	102	90	79	197	369	164	350	154	86	107	140	52
19	162	86	75	207	303	162	526	145	86	94	109	51
20	103	84	90	265	257	162	1,200	148	81	103	112	49
21	88	92	66	560	223	162	842	220	77	75	92	49
22	90	88	73	3,090	220	185	706	191	75	90	81	48
23	90	84	71	766	292	159	855	164	71	79	75	47
24	88	79	112	464	268	151	670	148	86	154	73	45
25	79	77	98	356	237	145	525	135	188	277	73	45
26	81	81	57	296	223	154	433	140	133	126	69	44
27	94	90	81	264	214	1,050	373	140	98	133	81	42
28	96	92	681	237	200	664	377	154	86	185	79	42
29	84	176	940	207	-	451	386	133	77	123	114	47
30	79	114	424	197	--------	411	335	159	73	109	86	1,150
31	77	--------	299	188	--------	346	--------	486	--------	154	105	--------
Total	2,831	3,168	4,610	10,213	8,045	8,131	14,646	6,118	4,029	3,073	4,205	2,957
Mean	91.3	106	149	329	287	262	488	197	134	99.1	136	98.6
Cfsm	0.666	0.774	1.09	2.40	2.09	1.91	3.56	1.44	0.978	0.723	0.993	0.720
In.	0.77	0.86	1.25	2.77	2.18	2.21	3.98	1.66	1.09	0.83	1.14	0.80

Calendar year 1958: Max 1,590 Min 55 Mean 252 Cfsm 1.84 In. 25.02
Water year 1958-59: Max 3,090 Min 42 Mean 197 Cfsm 1.44 In. 19.54

Peak discharge (base, 1,700 cfs).--Dec. 28 (9:30 p.m.) 2,380 cfs (4.13 ft); Jan. 22 (3 a.m.) 7,000 cfs (6.58 ft); Mar. 27 (9:30 a.m.) 1,890 cfs (3.76 ft); Sept. 30 (10 a.m.) 2,120 cfs (3.95 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 1959. 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 tape gage and Feb. 21 to Oct. 4, 1926, staff gage, on Southern Railway bridge 10 ft upstream at same datum.

Average discharge.--29 years (1925-48, 1953-59), 1,051 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,420 cfs Jan. 22 (gage height, 9.15 ft); minimum, 127 cfs Oct. 8 (gage height, 2.07 ft); minimum daily, 141 cfs Aug. 15.

1925-49, 1953-59: 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. Flow partly regulated by Watauga Lake, 10 miles upstream (see p. 213).

Revisions (water years).--WSP 758: 1932(M). WSP 823: Drainage area. WSP 1336: 1927-28(M), 1930, 1931-32(m).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
2.1	133	4.0	1,260	2.0	121	4.0	1,200
2.5	260	6.0	3,310	2.4	225	6.0	3,280
3.0	515	7.0	4,700	3.0	480	7.0	4,700
3.5	835	9.0	9,000				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,510	1,800	1,450	530	306	1,470	535	513	388	636	233	549
2	1,020	342	*261	1,220	2,260	2,240	878	450	535	167	160	175
3	880	882	1,120	1,030	475	*2,710	701	411	*496	191	150	160
4	1,540	*1,080	627	2,120	*722	2,870	1,450	388	397	165	542	740
5	1,720	1,230	385	3,110	455	1,880	934	*365	348	162	*712	162
6	1,720	1,050	2,100	*3,150	753	2,480	737	548	310	180	357	400
7	402	1,260	2,270	2,680	460	1,300	*583	1,350	283	*172	354	365
8	*158	494	2,700	2,440	663	494	502	1,850	253	153	306	1,020
9	153	438	2,700	2,290	361	583	450	480	236	1,400	219	*2,870
10	1,470	897	2,200	1,590	343	776	416	310	225	1,710	191	2,100
11	1,130	1,510	2,330	1,060	416	339	513	298	216	1,320	172	1,460
12	1,480	640	2,400	2,010	955	1,450	1,400	532	280	1,190	162	680
13	2,080	459	2,140	1,750	1,430	1,030	1,950	370	255	682	153	614
14	2,150	1,210	972	1,880	899	411	1,150	397	200	536	148	743
15	1,240	1,070	1,490	2,300	1,300	357	1,010	339	258	282	141	337
16	934	232	1,740	3,270	1,850	634	845	314	441	153	160	528
17	1,030	616	1,940	2,840	1,090	699	688	294	189	630	162	460
18	208	1,510	2,040	1,680	1,950	1,110	614	271	426	189	1,320	538
19	372	1,460	1,480	2,410	3,070	2,200	914	236	227	157	1,020	606
20	1,500	1,600	2,280	2,290	2,710	441	2,200	236	172	470	665	804
21	1,790	440	2,450	1,450	2,530	306	1,560	306	167	1,610	759	1,190
22	1,740	410	2,020	6,700	1,680	331	1,220	355	162	492	172	724
23	1,550	738	2,180	2,600	765	1,020	1,590	576	350	160	160	1,110
24	1,580	1,380	2,080	1,610	514	1,100	1,220	384	183	214	778	1,520
25	1,400	833	902	647	506	1,670	931	239	1,260	369	884	1,780
26	1,150	1,190	1,410	524	411	1,170	751	239	1,730	189	733	821
27	2,400	2,130	1,330	460	370	3,400	634	727	379	186	932	780
28	2,500	1,910	1,720	411	348	2,240	798	851	183	565	2,170	1,000
29	2,360	2,480	2,490	435	-	875	654	278	602	416	740	1,020
30	2,520	1,670	1,240	348	--------	1,010	1,780	279	840	183	172	1,450
31	1,220	--------	587	327	--------	668	--------	361	--------	600	778	--------
Total	42,907	32,961	53,034	57,162	29,592	39,264	29,608	14,547	11,991	15,529	15,605	26,706
Mean	1,384	1,099	1,711	1,844	1,057	1,267	987	469	400	501	503	890

	Observed			Adjusted†			
Calendar year 1958:	Max 3,500	Min 153	Mean 1,358	Mean 1,123	Cfsm 1.62	In. 22.03	
Water year 1958-59:	Max 6,700	Min 141	Mean 1,011	Mean 892	Cfsm 1.29	In. 17.50	

* Discharge measurement made on this day.
† Adjusted for change in contents in Watauga Lake.

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 at Kingsport, Sullivan County, 1¼ miles upstream from Reedy Creek, and 3¾ miles upstream from confluence with North Fork Holston River.

Drainage area.--1,935 sq mi.

Records Available.--September 1925 to September 1959.

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.--34 years, 2,519 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,650 cfs Aug. 14 (gage height, 4.95 ft); minimum, 291 cfs Feb. 7 (gage height, 0.53 ft); minimum daily, 672 cfs Feb. 6.
1925-59: 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. Flow regulated by South Holston, Watauga, Boone, and Fort Patrick Henry Lakes (see p. 213). Some diversion upstream by the city of Kingsport, Tennessee Eastman Corporation, and Holston Ordnance Works.

Revisions (water years).--WSP 823: Drainage area. WSP 1033: 1930(M). WSP 1306: 1933(M).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 5				Jan. 6 to Sept. 30			
0.9	690	2.0	2,180	0.9	610	2.0	2,330
1.0	800	3.0	4,080	1.0	720	4.0	6,920
1.5	1,400	5.0	9,300	1.5	1,420		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,750	885	3,670	970	838	1,440	830	1,750	864	1,930	845	1,240
2	2,930	764	1,310	1,720	4,540	2,220	873	2,340	3,410	1,990	828	768
3	3,280	2,420	2,020	2,480	964	4,560	892	2,550	2,080	876	791	776
4	3,030	3,690	*1,610	5,540	1,830	4,770	1,040	1,060	794	866	780	1,330
5	2,530	3,060	2,100	7,710	*736	*2,330	862	1,020	838	890	1,330	857
6	3,060	*4,010	2,900	6,460	672	5,660	853	1,000	820	926	*1,440	870
7	3,760	5,000	3,630	*6,250	718	3,020	3,130	*3,960	875	895	1,000	881
8	*3,780	3,660	5,470	5,660	826	772	1,800	4,820	819	932	2,440	1,640
9	3,800	1,700	7,380	5,530	774	855	1,540	2,020	850	*4,530	951	*5,730
10	3,800	2,160	6,390	3,800	793	1,230	1,680	1,010	772	4,030	1,610	5,840
11	3,300	3,920	5,980	1,730	779	834	872	4,180	738	2,970	873	5,580
12	2,170	3,720	5,950	4,570	764	1,010	1,030	3,360	2,070	3,010	1,870	994
13	5,830	4,870	5,560	3,140	2,700	680	5,130	867	1,680	3,270	2,900	846
14	6,390	1,900	2,740	2,760	1,010	776	6,400	824	810	1,420	4,290	850
15	6,380	2,340	2,870	3,510	735	838	2,300	930	3,400	848	3,840	944
16	4,880	1,220	4,180	5,800	1,670	818	2,300	828	3,820	873	2,500	846
17	4,200	3,330	4,040	5,460	1,400	864	805	798	2,250	919	944	851
18	1,510	3,110	4,280	3,080	2,960	2,110	900	792	947	906	2,360	854
19	1,770	3,520	4,020	2,430	4,010	789	4,350	1,080	826	778	2,600	866
20	4,250	3,570	4,870	2,530	6,020	854	4,520	1,450	774	3,490	2,200	869
21	4,600	2,390	4,640	1,510	6,830	852	4,810	864	848	3,830	1,980	3,050
22	5,600	3,980	5,160	2,030	2,960	833	1,340	873	922	1,280	853	965
23	4,080	2,980	5,860	5,730	1,150	838	1,680	3,400	905	960	888	g986
24	2,750	3,030	5,690	1,820	588	838	2,860	982	931	964	1,530	g1,010
25	4,320	1,420	1,980	784	842	831	2,740	1,650	983	894	2,700	g2,050
26	3,050	4,620	3,240	3,790	1,100	795	822	1,730	5,680	846	2,390	g922
27	5,970	6,040	3,400	3,640	710	1,910	1,010	2,380	1,180	877	4,120	g969
28	4,550	5,260	1,650	2,200	791	3,850	1,610	4,490	828	1,580	6,290	g1,160
29	3,920	5,740	1,900	1,930	-	4,960	1,650	743	1,640	1,370	1,810	g5,380
30	3,840	2,220	3,940	1,500	--------	4,310	2,820	828	1,940	836	814	g5,530
31	3,260	--------	2,580	1,150	--------	1,180	--------	894	--------	1,270	3,230	--------
Total	119,340	96,529	121,010	107,214	49,710	57,627	63,449	55,473	45,294	51,056	62,997	55,454
Mean	3,850	3,218	3,904	3,459	1,775	1,859	2,115	1,789	1,510	1,647	2,032	1,848

	Observed			Adjusted†		
Calendar year 1958:	Max 9,270	Min 536	Mean 3,330	Mean 2,793	Cfsm 1.44	In. 19.60
Water year 1958-59:	Max 7,710	Min 672	Mean 2,425	Mean 2,104	Cfsm 1.09	In. 14.76

* Discharge measurement made on this day.
† Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.
g Discharge computed from hourly Telemark gage-height readings furnished by Tennessee Valley Authority.

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 1959. 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.--40 years, 294 cfs.

Extremes.--Maximum discharge during year, 4,640 cfs Apr. 13 (gage height, 6.04 ft); minimum, 24 cfs Dec. 26 (gage height, 0.46 ft).
1907-8, 1920-59: 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: 1907(M), 1921-22(M), 1924-30(M), 1932-34(M), drainage area at site used 1907-8.

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 29				Dec. 30 to Sept. 30			
0.5	28	1.5	272	0.4	18	1.5	285
.7	51	2.0	500	.6	40	2.0	520
1.0	108	3.0	1,200	.8	73	3.0	1,200
1.2	160	5.0	3,340	1.0	118	5.0	3,340

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	38	65	250	133	190	388	266	202	46	46	104
2	50	56	57	215	124	180	495	232	229	44	40	77
3	48	90	59	177	113	167	819	212	316	46	36	68
4	43	78	62	151	145	158	1,460	339	219	44	39	55
5	39	59	69	113	229	142	1,050	316	177	43	46	49
6	37	51	65	b100	243	367	687	262	142	50	55	46
7	36	47	53	b110	206	593	495	308	118	46	42	43
8	35	43	42	124	193	430	398	254	104	42	38	43
9	34	46	b41	136	186	352	339	209	90	38	36	43
10	34	51	b40	111	170	308	290	196	84	36	33	40
11	34	51	38	b100	164	258	375	177	79	39	32	44
12	33	48	b37	b90	142	321	1,640	164	73	49	30	57
13	32	43	b38	106	170	384	3,340	222	68	42	28	44
14	32	42	41	111	303	366	1,420	402	64	42	27	39
15	32	41	b40	124	1,050	362	910	357	60	40	26	36
16	31	41	b37	219	945	334	680	277	57	50	25	35
17	31	41	b38	190	599	290	531	229	54	49	25	33
18	32	39	b42	b150	455	254	450	212	52	60	26	32
19	31	38	53	b150	348	222	425	196	50	66	26	30
20	32	38	41	212	254	202	485	a170	49	68	29	29
21	33	37	44	318	206	196	505	a150	48	75	38	29
22	35	36	44	2,910	196	186	805	a180	46	59	38	28
23	36	35	46	1,090	229	164	1,370	a170	43	57	39	28
24	36	35	47	558	285	148	1,050	a150	43	49	302	27
25	35	35	46	388	262	139	721	a140	52	49	164	27
26	35	35	b42	308	239	133	548	a130	101	46	94	26
27	34	35	b40	258	*222	1,710	445	a130	121	44	111	26
28	35	*38	69	219	202	1,370	411	a135	77	48	84	26
29	36	76	1,330	186	-	749	*334	*a140	60	43	92	*28
30	*37	96	654	*167	--------	558	281	158	*52	43	106	75
31	37	--------	*357	148	--------	*455	--------	206	--------	*52	*130	--------
Total	1,108	1,439	3,677	9,489	8,013	11,688	23,147	6,689	2,930	1,505	1,883	1,267
Mean	35.7	48.0	119	306	286	377	772	216	97.7	48.5	60.7	42.2
Cfsm	0.161	0.216	0.536	1.38	1.29	1.70	3.48	0.973	0.440	0.218	0.273	0.190
In.	0.19	0.24	0.62	1.59	1.34	1.96	3.88	1.12	0.49	0.25	0.32	0.21

Calendar year 1958: Max 4,020 Min 31 Mean 310 Cfsm 1.40 In. 18.98
Water year 1958-59: Max 3,340 Min 25 Mean 200 Cfsm 0.901 In. 12.21

Peak discharge (base, 3,000 cfs).--Jan. 22 (10 a.m.) 4,380 cfs (5.76 ft); Apr. 13 (2 to 3 a.m.) 4,640 cfs (6.04 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, records for Holston and Middle Fork Holston River at Sevenmile Ford.
b Stage-discharge relation affected by ice.

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 1959 (discontinued).

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.--8 years, 524 cfs.

Extremes.--Maximum discharge during year, 6,940 cfs Apr. 13 (gage height, 9.11 ft); minimum, 44 cfs Sept. 26, 27 (gage height, 1.97 ft).

1951-59: 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, Sept. 26, 27, 1959.

Remarks.--Records good.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 18-20)

Oct. 1 to Jan. 22

2.0	55	4.0	1,000
2.2	110	5.0	1,840
2.5	220	7.0	4,200
3.0	450	9.0	6,800

Jan. 23 to Sept. 30

1.9	30	3.0	410
2.2	100	4.0	1,010
2.6	230		

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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*101	86	192	475	223	310	710	458	*315	121	106	154
2	124	128	*159	405	206	*302	1,130	405	350	112	92	127
3	117	196	156	336	188	282	1,800	365	512	109	82	109
4	110	162	200	282	274	274	2,770	560	380	98	80	92
5	101	131	204	224	536	246	2,040	608	298	98	88	112
6	92	114	192	212	506	698	1,300	464	254	124	92	85
7	86	104	166	173	400	1,100	950	434	220	121	100	80
8	83	92	145	220	360	830	740	390	195	98	103	86
9	83	98	131	208	335	674	620	320	174	90	88	72
10	83	104	131	176	315	578	542	286	160	103	80	78
11	83	101	114	162	298	482	860	270	151	98	70	78
12	78	98	107	145	258	602	3,160	250	148	90	68	82
13	78	92	104	142	320	740	5,890	360	160	95	60	90
14	75	89	114	173	674	692	2,650	602	148	88	55	75
15	72	86	104	248	2,040	692	1,660	608	136	92	55	65
16	72	89	95	525	1,990	638	1,220	458	127	92	75	62
17	72	89	95	490	1,180	554	980	370	124	98	58	58
18	72	86	104	400	890	476	830	335	118	95	55	55
19	70	86	101	350	698	400	800	325	115	124	55	52
20	70	83	98	400	524	360	800	270	106	151	58	48
21	70	80	107	788	395	340	830	254	106	133	55	50
22	75	80	86	5,370	360	335	1,110	335	106	148	68	50
23	80	78	95	2,190	395	294	2,290	440	103	157	70	52
24	78	78	120	1,040	488	258	1,840	350	112	118	114	46
25	78	75	128	740	446	238	1,260	270	154	109	390	46
26	78	75	104	560	410	226	950	238	258	115	167	44
27	80	72	92	458	375	3,500	800	226	446	100	133	44
28	83	80	222	375	335	2,980	680	223	220	92	142	46
29	80	208	1,620	315	-	1,480	590	238	157	95	136	46
30	80	208	1,160	278	--------	1,040	500	262	136	95	151	100
31	83	--------	660	250	--------	860	--------	262	--------	106	184	--------
Total	2,587	3,148	7,126	18,110	15,419	22,481	42,302	11,236	5,989	3,365	3,130	2,186
Mean	83.5	105	230	584	551	725	1,410	362	200	109	101	72.9
Cfsm	0.208	0.261	0.572	1.45	1.37	1.80	3.51	0.900	0.498	0.271	0.251	0.181
In.	0.24	0.29	0.66	1.68	1.43	2.08	3.91	1.04	0.55	0.31	0.29	0.20

Calendar year 1958: Max 8,220 Min 70 Mean 601 Cfsm 1.50 In. 20.30
Water year 1958-59: Max 5,890 Min 44 Mean 376 Cfsm 0.935 In. 12.68

Peak discharge (base, 4,000 cfs).--Jan. 22 (2 p.m.) 6,150 cfs (8.54 ft); Mar. 27 (6 p.m.) 4,720 cfs (7.43 ft); Apr. 13 (5 to 6 a.m.) 6,940 cfs (9.11 ft).

* Discharge measurement made on this day.

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 1959 (discontinued).

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.--7 years, 107 cfs.

Extremes.--Maximum discharge during year, 1,830 cfs Jan. 22 (gage height, 6.48 ft); minimum, 8.0 cfs Sept. 25 (gage height, 1.15 ft).
1952-59: Maximum discharge, 3,570 cfs May 6, 1958 (gage height, 8.84 ft); minimum, 3.0 cfs Sept. 11, 1954 (gage height, 1.04 ft).

Remarks.--Records good.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 16-18, Jan. 6, 7, 10, 11)

1.1	5.0	2.5	225
1.2	11	3.0	360
1.4	26	4.0	700
1.7	62	6.0	1,550
2.0	113		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*24	22	31	67	52	67	140	92	54	24	24	24
2	25	26	24	58	*48	65	144	88	54	22	20	23
3	28	30	*25	52	46	*62	262	75	52	22	16	19
4	25	29	32	44	85	64	336	*70	49	21	14	20
5	21	26	34	30	195	62	278	65	44	21	14	17
6	20	*23	33	26	153	214	210	59	42	22	13	15
7	18	20	28	28	109	278	166	134	37	22	12	17
8	17	21	24	*35	92	170	*135	86	36	21	14	24
9	17	22	23	29	83	137	119	67	35	20	17	20
10	20	22	19	27	78	119	108	58	34	19	24	17
11	19	21	18	26	68	102	195	54	33	19	17	20
12	17	21	18	24	59	157	731	51	32	38	14	17
13	17	20	20	30	75	170	1,110	109	32	22	14	13
14	17	20	20	37	191	137	508	191	32	22	12	14
15	17	22	14	69	525	123	327	131	32	17	12	12
16	19	21	15	265	405	108	252	95	29	16	12	12
17	19	20	16	184	255	93	200	78	28	17	11	11
18	20	19	17	102	193	85	170	80	28	18	15	10
19	23	19	19	86	146	75	159	88	*25	19	16	10
20	19	19	20	106	111	73	148	73	25	21	14	11
21	17	15	17	282	93	72	127	70	25	24	14	9.2
22	18	17	18	1,320	81	72	153	76	24	24	12	9.2
23	20	17	20	420	115	65	336	121	23	19	12	9.8
24	20	17	25	222	121	59	262	90	29	32	15	9.2
25	21	17	25	155	97	56	195	78	34	24	23	8.6
26	21	17	17	121	86	52	162	68	35	22	24	9.2
27	20	17	22	102	80	828	140	61	40	21	38	9.2
28	19	20	113	88	72	522	127	59	30	24	33	9.2
29	19	30	330	75	-	262	113	55	26	18	27	9.2
30	20	42	162	67	-------	210	99	54	24	20	32	21
31	20	-------	88	59	-------	170	-------	54	-------	19	25	-------
Total	617	652	1,287	4,236	3,714	4,729	7,412	2,530	1,023	670	560	429.8
Mean	19.9	21.7	41.5	137	133	153	247	81.6	34.1	21.6	18.1	14.3
Cfsm	0.250	0.273	0.521	1.72	1.67	1.92	3.10	1.03	0.428	0.271	0.227	0.180
In.	0.29	0.30	0.60	1.98	1.74	2.21	3.46	1.18	0.48	0.31	0.26	0.20

Calendar year 1958: Max 2,820 Min 14 Mean 132 Cfsm 1.66 In. 22.60
Water year 1958-59: Max 1,320 Min 8.6 Mean 76.3 Cfsm 0.959 In. 13.01

Peak discharge (base, 1,200 cfs).--Jan. 22 (3:30 p.m.) 1,830 cfs (6.48 ft); Mar. 27 (8:30 p.m.) 1,280 cfs (5.45 ft); Apr. 13 (4 a.m.) 1,550 cfs (6.01 ft).

* Discharge measurement made on this day.

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 southeast of Gate City, Scott County.

Drainage area.--672 sq mi.

Records available.--October 1931 to September 1959. 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.--28 years, 852 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs Apr. 13 (gage height, 9.05 ft); minimum, 49 cfs Sept. 29 (gage height, 1.26 ft).
1931-59: 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.

Revisions (water years).--WSP 783: 1932(M). WSP 823: Drainage area. WSP 1276: 1932-34.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 26, 27)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30			
1.3	60	4.0	1,880	1.2	40	2.0	275
1.6	155	5.0	2,900	1.3	55	2.5	570
2.0	310	6.0	4,240	1.5	95	3.0	940
3.0	1,020	9.0	10,200	1.7	150		

Note.--Same as preceding table above 3.8 ft.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*141	117	274	860	427	574	1,340	780	372	147	171	250
2	155	148	237	658	*378	525	1,340	724	432	126	138	270
3	172	190	*211	546	345	*504	2,580	651	*480	112	112	*197
4	172	245	225	441	518	497	3,470	*594	582	108	102	150
5	162	225	257	345	1,180	455	3,640	828	444	108	100	129
6	144	*204	249	218	1,140	1,180	2,430	740	378	110	93	126
7	130	176	225	208	916	1,980	1,780	958	286	115	100	135
8	117	158	197	288	764	1,680	*1,380	700	240	126	115	126
9	114	152	180	340	679	1,300	1,180	576	213	112	147	135
10	111	148	162	301	630	1,100	1,020	492	189	98	138	112
11	111	152	152	265	574	940	1,380	438	171	91	118	115
12	108	148	141	225	511	1,100	4,120	420	157	157	*100	123
13	108	144	124	241	567	1,300	9,790	716	150	112	89	95
14	105	141	127	237	1,220	1,260	5,670	1,120	160	*108	83	100
15	102	138	102	325	3,470	1,180	3,120	1,020	154	112	77	102
16	102	134	84	1,140	3,500	1,100	2,280	828	138	100	73	89
17	99	134	108	1,180	2,280	980	1,830	644	126	112	100	79
18	99	134	114	844	1,640	868	1,480	582	118	105	95	71
19	105	130	117	630	1,260	748	1,340	588	115	129	85	69
20	102	124	138	609	980	672	1,340	528	110	154	79	63
21	99	120	105	1,340	756	623	1,260	480	105	201	75	61
22	99	114	120	6,860	623	609	1,440	468	100	182	71	59
23	102	111	114	5,430	756	560	3,090	665	100	235	71	59
24	108	111	144	2,230	940	490	3,240	618	129	245	102	59
25	111	108	138	1,460	876	441	2,330	498	150	178	168	55
26	108	108	120	1,100	772	427	1,780	396	182	144	486	54
27	108	105	110	924	686	4,820	1,440	360	292	141	366	50
28	111	117	586	772	623	6,240	1,210	342	474	168	225	50
29	114	190	1,460	658	-	3,010	1,040	308	250	126	221	50
30	114	288	2,330	560	--------	2,080	884	319	178	115	197	85
31	111	--------	1,300	490	--------	1,640	--------	366	--------	132	245	--------
Total	3,644	4,514	9,951	31,725	29,011	40,883	70,224	18,747	6,975	4,209	4,342	3,118
Mean	118	150	321	1,023	1,036	1,319	2,341	605	232	136	140	104
Cfsm	0.176	0.223	0.478	1.52	1.54	1.96	3.48	0.900	0.345	0.202	0.208	0.155
In.	0.20	0.25	0.55	1.76	1.61	2.26	3.89	1.04	0.39	0.23	0.24	0.17

Calendar year 1958: Max 16,800 Min 84 Mean 1,057 Cfsm 1.57 In. 21.35
Water year 1958-59: Max 9,790 Min 50 Mean 623 Cfsm 0.927 In. 12.59

Peak discharge (base, 6,000 cfs).--Jan. 22 (5:30 p.m.) 9,160 cfs (8.54 ft); Mar. 27 (10 p.m.) 8,110 cfs (8.05 ft); Apr. 13 (9 a.m.) 10,200 cfs (9.05 ft).

* Discharge measurement made on this day.

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 118.8 (corrected). Records include flow of Surgoinsville Creek.

Drainage area.--2,874 sq mi, includes that of Surgoinsville Creek.

Records available.--October 1940 to September 1959. 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.--19 years, 3,481 cfs (unadjusted).

Extremes.--Maximum discharge during year, 18,200 cfs Apr. 13 (gage height, 7.97 ft); minimum, 670 cfs Sept. 28 (gage height, 1.81 ft).
1940-59: 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 Fort Patrick Henry Lakes (see p. 213).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second (shifting-control method used May 2 to Sept. 30)

1.6	840
2.0	1,380
3.0	3,220
5.0	8,440
8.0	18,300

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,690	1,860	2,920	2,850	1,460	2,140	2,500	3,050	1,520	2,430	1,360	3,720
2	3,440	1,010	2,890	2,140	2,730	2,160	2,350	2,560	3,180	1,540	1,020	1,240
3	3,090	1,460	1,060	2,540	3,330	4,090	3,030	2,780	2,810	1,800	999	1,190
4	3,570	3,600	*2,810	4,400	1,590	4,900	4,360	2,330	*1,850	924	973	1,210
5	2,880	3,500	1,980	8,210	*3,220	*4,500	5,100	1,640	1,400	936	1,010	1,490
6	2,540	*3,380	2,480	6,890	2,260	4,090	3,840	*1,870	1,300	973	*1,550	1,150
7	3,870	4,840	3,760	5,970	1,870	7,110	4,520	3,590	1,240	986	1,380	1,170
8	3,840	4,100	4,740	5,370	1,750	2,860	*3,540	4,690	1,200	*948	1,200	1,160
9	*3,910	3,730	7,400	6,100	1,720	2,330	2,540	3,920	1,170	2,190	2,340	3,510
10	3,890	1,660	6,380	5,340	1,590	2,360	2,880	1,600	1,150	3,840	1,290	6,130
11	3,370	3,120	6,120	2,610	1,510	1,900	2,240	2,770	1,040	4,220	1,470	5,840
12	3,010	4,220	6,370	3,250	1,440	2,080	4,620	4,250	1,010	2,520	986	3,770
13	3,740	4,070	5,720	3,730	1,840	2,260	12,800	2,760	2,250	1,900	3,210	999
14	6,940	3,210	4,400	3,340	3,870	2,150	15,000	2,020	1,740	2,700	2,160	936
15	6,750	2,120	3,550	3,300	5,180	2,040	7,110	2,010	2,020	1,290	4,040	936
16	5,260	1,950	3,350	5,840	6,300	2,020	4,500	1,800	3,670	876	4,420	999
17	4,610	2,410	3,810	7,340	4,600	1,900	3,460	1,540	2,780	876	1,050	924
18	2,610	2,820	4,870	4,460	3,780	2,760	2,780	1,460	2,390	924	1,520	924
19	1,260	4,160	4,210	2,780	5,500	1,790	3,630	1,680	1,030	936	2,650	888
20	3,460	3,240	4,050	3,380	5,890	1,590	7,370	1,960	960	1,820	1,700	912
21	4,950	3,580	5,510	3,510	7,570	1,570	5,330	1,350	900	3,590	2,650	1,020
22	4,780	2,770	4,200	9,050	4,860	1,540	4,950	1,340	948	2,800	1,460	2,860
23	4,500	3,700	6,140	11,200	3,510	1,560	4,910	2,610	1,010	1,150	960	1,150
24	3,580	3,230	5,740	6,680	2,040	1,350	5,410	2,800	1,060	1,090	1,050	1,040
25	2,810	1,980	4,070	2,500	1,840	1,360	5,460	1,840	1,160	1,220	2,300	1,660
26	4,180	2,380	2,680	3,890	2,090	1,380	3,640	2,090	2,940	999	3,550	1,290
27	4,780	6,890	3,150	4,320	1,730	6,820	2,620	1,950	3,950	973	2,010	1,040
28	5,540	5,060	4,050	3,480	1,560	11,300	2,780	3,040	1,190	973	5,490	1,020
29	4,320	6,000	4,980	2,720	-	8,090	2,600	3,450	1,310	1,700	5,100	*2,240
30	3,880	4,240	5,090	2,060	--------	7,110	3,010	1,150	1,580	1,430	1,380	5,130
31	3,660	--------	4,750	1,990	--------	4,270	--------	1,280	--------	973	1,440	--------
Total	121,710	100,290	133,230	141,240	86,630	103,380	138,880	73,180	51,758	51,527	63,718	57,548
Mean	3,926	3,343	4,298	4,556	3,094	3,335	4,629	2,361	1,725	1,662	2,055	1,918

	Observed			Adjusted†		
Calendar year 1958:	Max 37,500	Min 1,010	Mean 4,624	Mean 4,088	Cfsm 1.42	In. 19.31
Water year 1958-59:	Max 15,000	Min 876	Mean 3,077	Mean 2,756	Cfsm 0.959	In. 13.02

* Discharge measurement made on this day.
† Adjusted for change in contents in South Holston, Watauga, Boone, and Fort 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, 2.0 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 1959.

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.--9 years (1941-48, 1957-59), 55.8 cfs.

Extremes.--Maximum discharge during year, 1,740 cfs Apr. 12 (gage height, 5.19 ft); minimum, 2.4 cfs Aug. 15 (gage height, 1.34 ft).
1941-49, 1954-59: Maximum discharge, 3,280 cfs Mar. 19, 1955 (gage height, 6.83 ft).
1941-49, 1957-59: Minimum discharge, that of Aug. 15, 1959; minimum gage height, 1.32 ft Sept. 19, Oct. 2, 1941.
Maximum stage known, 7.14 ft Jan. 31, 1950 (discharge, 3,610 cfs), date determined by comparison with other stations, from high-water mark in gage well.

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

Revisions (water years).--WSP 1436: 1945.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.3	1.6	2.3	64
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

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	6.4	7.9	32	29	a50	68	40	201	8.3	5.5	9.6
2	8.3	6.4	6.1	27	27	a50	78	37	167	7.5	4.5	6.1
3	8.3	7.1	6.7	24	26	a45	98	34	98	7.1	4.2	4.5
4	7.5	6.7	*12	20	65	*39	135	31	*61	7.1	4.2	3.9
5	6.4	*6.1	13	16	*146	38	105	29	46	7.9	4.8	3.6
6	5.8	5.8	9.6	13	76	138	82	*27	38	9.6	*5.2	3.6
7	5.5	5.5	7.5	12	53	109	67	24	32	11	4.5	6.7
8	5.2	5.5	6.1	*16	46	73	*56	23	27	*8.3	4.2	4.5
9	*5.0	5.8	5.5	28	42	62	50	21	24	6.7	3.9	5.2
10	4.8	5.5	5.2	26	38	54	47	21	22	6.7	3.9	*20
11	4.5	5.8	4.8	22	34	48	50	20	21	7.5	3.6	29
12	4.5	5.8	4.5	17	29	92	646	19	19	7.9	3.2	9.6
13	4.5	5.5	4.5	16	42	90	431	30	18	8.8	2.8	6.1
14	4.5	5.5	4.8	16	223	70	193	37	16	8.8	2.6	4.5
15	4.5	5.5	4.2	20	392	64	133	26	14	6.7	2.6	3.9
16	5.2	5.8	3.9	101	179	54	104	21	14	6.1	2.6	3.6
17	5.2	6.1	3.6	56	119	48	85	19	13	6.1	2.8	3.4
18	5.8	6.7	3.9	47	92	42	77	20	12	6.4	2.8	3.2
19	9.3	6.1	3.9	32	69	39	104	25	11	8.3	2.8	3.0
20	6.1	5.8	4.2	30	55	38	173	21	11	12	3.2	2.8
21	5.5	5.5	4.4	169	a50	37	123	28	10	13	4.2	2.8
22	5.5	5.2	3.9	692	a45	36	110	30	10	8.3	3.6	2.8
23	5.5	4.8	3.9	148	a50	30	93	30	9.6	7.1	3.4	2.8
24	5.2	4.8	4.5	93	a100	29	77	27	11	6.4	4.2	2.6
25	5.2	4.8	5.8	70	a70	27	67	21	24	7.1	4.2	2.6
26	5.8	5.2	5.2	58	a60	28	60	18	20	7.1	5.2	2.6
27	5.5	5.2	5.6	50	a55	667	53	16	14	6.4	4.8	2.8
28	5.5	7.0	166	45	a55	214	50	15	11	6.4	4.5	2.8
29	5.5	20	189	40	-	127	46	15	10	6.4	4.8	3.0
30	5.5	14	62	36	-------	100	42	52	9.2	6.1	5.2	5.8
31	5.5	-------	40	32	-------	81	-------	90	-------	6.7	30	-------
Total	178.2	195.9	612.2	2,004	2,267	2,619	3,503	867	993.8	239.8	148.0	167.4
Mean	5.75	6.53	19.7	64.6	81.0	84.5	117	28.0	33.1	7.74	4.77	5.58
Cfsm	0.122	0.138	0.416	1.37	1.71	1.79	2.47	0.592	0.700	0.164	0.101	0.118
In.	0.14	0.15	0.48	1.58	1.78	2.06	2.75	0.68	0.78	0.19	0.12	0.13

Calendar year 1958: Max 1,370 Min 3.6 Mean 61.8 Cfsm 1.31 In. 17.74
Water year 1958-59: Max 692 Min 2.6 Mean 37.8 Cfsm 0.799 In. 10.84

Peak discharge (base, 1,500 cfs).--Jan. 22 (3 a.m.) 1,620 cfs (5.05 ft); Apr. 12 (6:30 p.m.) 1,740 cfs (5.19 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 Lick Creek at Mohawk.

4925. Mossy Spring near Jefferson City, Tenn.

Location.--Lat 36°07'17", long 83°28'22", in spring pool, 15 ft upstream from waterplant intake, 300 ft south of city waterplant, 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 1959 (discontinued).

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.--9 years, 43.8 cfs.

Extremes.--Maximum discharge during year, 123 cfs Mar. 27 (gage height, 1.69 ft); minimum daily, 12 cfs Dec. 21-27, Sept. 22-30.
1950-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 11-30)

0.6	12
.8	25
1.0	42
1.5	98
2.0	166

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*18	15	16	43	42	61	83	74	36	22	21	17
2	18	15	15	*38	39	59	78	72	*34	22	21	*16
3	18	15	15	35	38	56	74	70	32	22	20	16
4	18	*14	*15	31	42	55	73	68	31	22	19	16
5	17	14	15	28	*53	*54	71	65	31	22	*19	17
6	17	14	14	27	48	55	69	*62	30	22	18	16
7	17	14	14	25	44	54	66	60	30	*21	17	16
8	17	14	14	27	40	53	*64	59	30	21	17	16
9	17	14	14	38	39	52	62	58	29	21	17	16
10	17	14	14	31	40	49	60	57	29	20	17	16
11	17	14	14	27	44	48	59	55	28	20	17	27
12	16	14	14	26	43	50	89	54	29	19	17	19
13	16	14	14	24	49	50	111	54	28	19	17	16
14	16	14	14	24	88	48	102	57	27	19	17	14
15	16	14	14	27	112	47	97	53	27	19	17	14
16	16	14	13	47	106	46	92	51	27	21	17	13
17	16	14	13	41	98	45	88	49	26	21	17	13
18	16	14	13	35	92	44	84	48	26	20	17	13
19	16	14	13	31	86	42	85	46	25	22	17	14
20	17	14	13	29	81	41	94	45	25	22	18	13
21	17	14	12	46	77	41	94	45	24	26	18	13
22	17	14	12	95	72	41	90	44	24	28	17	12
23	16	14	12	83	74	40	88	42	24	24	18	12
24	16	14	12	75	74	38	85	42	24	23	17	12
25	16	14	12	68	72	38	83	40	24	22	17	12
26	16	14	12	61	69	39	79	39	24	22	17	12
27	16	14	12	57	65	114	77	38	24	22	17	12
28	16	14	56	54	64	111	78	38	24	26	17	12
29	15	18	77	50	-	99	81	37	22	22	17	12
30	15	16	62	47	-------	93	77	37	22	22	18	12
31	15	-------	52	45	-------	86	-------	37	-------	22	17	-------
Total	511	429	612	1,315	1,791	1,749	2,433	1,596	816	676	547	439
Mean	16.5	14.3	19.7	42.4	64.0	56.4	81.1	51.5	27.2	21.8	17.6	14.6
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 137 Min 12 Mean 47.5 Cfsm - In. -
Water year 1958-59: Max 114 Min 12 Mean 35.4 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 1959. 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.--23 years, 4,078 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,300 cfs Oct. 10 (gage height, 29.24 ft); minimum, 36 cfs May 10 (gage height, 20.17 ft); minimum daily, 37 cfs May 16.
1936-59: 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. Flow regulated by South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes (see p. 213,214).

Revisions (water years).--WSP 923: 1939-40(m).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

20.1	25	21.5	830
20.2	40	22.0	1,340
20.4	95	23.0	2,740
20.7	220	25.0	6,580
21.0	420	28.0	13,900

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*10,600	8,850	4,620	1,680	99	2,810	74	95	62	7,700	2,940	2,520
2	5,890	5,640	3,410	*5,140	8,600	9,860	80	89	*65	5,210	1,440	*3,260
3	7,340	7,610	3,880	12,100	1,210	3,080	77	80	65	3,850	2,160	3,310
4	6,640	*6,970	*3,570	12,000	52	2,280	80	8,930	60	48	1,560	1,840
5	6,170	6,490	9,700	11,200	1,680	*2,040	80	6,300	65	45	*2,260	3,520
6	8,770	7,240	9,090	11,000	580	1,490	3,210	*5,280	65	5,870	1,550	2,960
7	10,900	7,920	10,100	10,800	2,940	55	3,870	3,510	65	6,160	4,880	4,340
8	12,600	6,430	10,700	8,450	48	55	*4,510	5,350	89	5,200	2,070	4,120
9	10,700	6,570	11,900	7,640	3,410	9,670	5,370	1,280	2,740	3,070	1,460	3,160
10	10,300	7,040	11,700	7,910	52	6,600	5,330	2,950	2,100	1,030	3,150	2,860
11	9,480	9,090	8,990	5,740	4,940	6,280	2,700	4,130	622	3,220	1,620	2,060
12	5,390	9,520	4,430	7,820	50	3,890	77	2,740	716	4,450	1,740	62
13	7,580	10,100	4,860	3,880	48	1,280	1,650	1,860	48	5,130	1,500	965
14	9,110	9,100	7,450	48	65	52	516	2,080	48	3,930	3,240	2,320
15	6,510	1,660	5,570	3,840	65	55	70	1,840	50	6,090	3,630	3,400
16	7,630	1,650	3,830	7,090	60	7,000	156	37	58	5,400	1,650	2,340
17	6,980	8,520	2,450	256	*58	3,600	1,310	40	60	5,480	3,380	2,220
18	6,350	7,070	5,640	1,990	60	4,610	3,300	1,310	55	952	3,660	2,180
19	5,510	6,290	5,970	680	60	7,380	60	4,510	55	4,500	3,410	1,260
20	9,520	5,860	2,280	48	228	*5,920	65	2,850	55	4,880	1,990	60
21	10,600	6,950	1,240	58	185	4,570	94	38	1,620	3,360	1,020	8,970
22	9,040	3,240	4,640	60	50	8,400	68	40	9,260	3,920	1,040	6,680
23	8,980	5,540	7,610	58	55	8,600	65	193	5,220	668	942	8,730
24	8,330	7,190	6,880	55	52	4,580	74	38	5,480	712	2,200	9,200
25	8,960	5,660	2,280	52	662	3,770	80	40	1,290	980	2,170	8,760
26	6,150	8,470	3,230	55	312	6,900	83	3,400	582	180	2,600	2,970
27	9,920	7,680	3,210	334	52	77	86	2,150	3,520	50	1,030	4,910
28	9,480	7,610	3,880	70	1,060	65	95	1,320	3,340	1,540	2,070	9,010
29	10,400	1,290	5,640	50	-	60	95	52	5,860	1,310	65	7,800
30	9,640	2,210	63	55	--------	65	95	58	3,840	2,320	65	4,760
31	9,120	--------	45	2,440	--------	80	--------	60	--------	1,400	5,720	--------
Total	264,590	195,460	168,858	122,599	26,733	115,174	33,420	62,650	47,155	98,655	68,212	120,547
Mean	8,535	6,515	5,447	3,955	955	3,715	1,114	2,021	1,572	3,182	2,200	4,018

	Observed			Adjusted†		
Calendar year 1958:	Max 15,200	Min 45	Mean 5,698	Mean 4,853	Cfsm 1.42	In. 19.21
Water year 1958-59:	Max 12,600	Min 37	Mean 3,628	Mean 3,266	Cfsm 0.952	In. 12.93

* Discharge measurement made on this day.
† Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

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 1959 in reports of Geological Survey (discontinued). 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.--8 years, 5.07 cfs.

Extremes.--Maximum discharge during year, 10 cfs Apr. 29 (gage height, 0.99 ft); minimum daily, 2.0 cfs Dec. 15-27, Sept. 13-30.
1951-59: Maximum discharge, 26 cfs Feb. 1, 1957 (gage height, 1.70 ft); minimum daily, 1.7 cfs Nov. 18-20, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Records do not include diversion, averaging about 0.05 cfs, for the domestic water supply of Cherokee Dam.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 22 to Feb. 5, Mar. 27 to May 9)

0.2	1.3
.4	3.4
.9	11

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2.9	2.4	2.2	2.2	2.9	6.1	7.8	9.3	4.7			
2	2.9	2.5	2.2	*2.2	2.9	6.0	7.6	8.8	*4.7			(*)
3	2.8	2.5	2.2	2.2	2.8	5.9	7.4	8.5	4.6		3.0	
4	2.8	*2.4	*2.2	2.2	3.0	5.7	7.3	8.1	4.6			
5	2.8	2.4	2.2	2.1	*3.4	*5.6	7.2	7.8	4.5	3.2	(*)	
6	2.8	2.5	2.2	2.1	3.2	5.6	7.0	*7.6	4.4			
7	2.8	2.4	2.2	2.1	3.2	5.4	6.9	7.4	4.4	(*)		2.5
8	2.8	2.2	2.2	2.2	3.2	5.3	*6.7	7.0	4.2			
9	2.8	2.2	2.1	2.2	3.1	5.3	6.6	6.9	4.2			
10	2.8	2.2	2.1	2.2	3.1	5.2	6.6	6.4	4.1			
11	2.7	2.2	2.1	2.1	3.1	5.2	6.4	6.3	4.1			
12	2.7	2.2	2.1	2.1	3.1	5.2	7.9	6.1	4.0			
13	2.7	2.2	2.1	2.1	3.5	5.0	9.3	6.3	4.0			
14	2.7	2.2	2.1	2.1	6.1	5.0	9.2	7.0	4.0			
15	2.7	2.2	2.0	2.2	8.4	5.0	9.0	6.7	3.8			
16	2.7	2.2	2.0	2.5	8.2	5.0	8.8	6.4	3.8			
17	2.7	2.2	2.0	2.4	7.9	5.0	8.7	6.3	3.7			
18	2.6	2.2	2.0	2.4	7.8	4.9	8.5	6.3	3.7			
19	2.5	2.1	2.0	2.2	7.4	4.9	8.7	6.3	3.6		2.5	
20	2.5	2.2	2.0	2.2	7.2	4.9	9.3	6.1	3.6	3.0		
21	2.5	2.2	2.0	3.4	6.9	4.9	9.8	6.0	3.6			
22	2.5	2.2	2.0	4.5	6.7	4.9	9.8	5.9	3.5			2.0
23	2.4	2.2	2.0	4.0	6.7	4.7	9.8	5.6	3.5			
24	2.4	2.2	2.0	3.7	6.6	4.7	9.7	5.4	3.5			
25	2.4	2.2	2.0	3.7	6.4	4.7	9.5	5.3	3.4			
26	2.4	2.2	2.0	3.6	6.3	4.9	9.3	5.3	3.4			
27	2.4	2.2	2.0	3.5	6.3	8.8	9.2	5.2	3.4			
28	2.4	2.2	2.8	3.4	6.1	8.2	9.3	5.0	3.2			
29	2.5	2.2	3.0	3.2	-	8.1	10	5.0	3.2			
30	2.4	2.2	2.5	3.1	--------	7.9	9.7	4.9	3.2			
31	2.4	--------	2.4	3.0	--------	7.9	--------	4.7	--------			
Total	81.4	67.6	66.9	83.1	145.5	175.9	253.0	199.9	116.6	94.8	80.0	66.0
Mean	2.63	2.25	2.16	2.68	5.20	5.67	8.43	6.45	3.89	3.06	2.58	2.20
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 19 Min 2.0 Mean 5.61 Cfsm - In. -
Water year 1958-59: Max 10 Min 2.0 Mean 3.92 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 16-18, July 3 to Sept. 30; discharge estimated on basis of 4 discharge measurements and records for station at Mossy Spring near Jefferson City.

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 1959. 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.--29 years, 4,449 cfs (unadjusted).

Extremes.--Maximum discharge during year, 16,800 cfs Oct. 11 (gage height, 7.63 ft); minimum, 172 cfs Aug. 31 (gage height, 1.48 ft); minimum daily, 205 cfs June 20, 21.
1930-59: 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 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 p. 213,214).

Revisions (water years).--WSP 893: 1935(M). WSP 1336: 1939.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 3 to Sept. 22)

1.2	180	3.0	2,580
1.5	360	4.0	4,920
2.0	890	7.0	14,500
2.5	1,640		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,300	9,500	3,730	329	2,470	1,320	606	440	450	6,400	1,750	4,260
2	10,300	6,620	3,360	*1,710	2,410	6,420	595	432	368	6,080	2,830	3,210
3	6,870	6,890	3,490	10,500	7,430	8,710	573	400	325	5,010	2,050	2,660
4	5,960	6,790	3,860	12,500	1,440	2,630	540	2,050	290	3,090	*2,020	3,310
5	7,160	6,780	6,000	11,800	686	2,220	490	8,540	284	490	1,890	2,070
6	6,620	6,320	9,320	11,400	2,350	2,530	*450	4,930	272	1,360	2,420	3,580
7	10,100	7,650	9,960	11,200	833	1,540	3,940	4,820	266	5,440	2,340	3,370
8	12,200	7,290	10,800	8,790	3,150	530	3,370	3,700	254	*6,960	4,190	4,400
9	11,600	6,420	*12,200	8,050	2,230	3,450	5,200	4,540	493	4,670	2,240	4,440
10	10,200	6,330	12,000	8,120	2,210	9,150	5,970	1,600	2,540	2,050	2,080	3,160
11	11,400	8,150	9,470	9,960	2,190	6,820	5,140	3,120	2,100	1,440	2,730	2,940
12	7,230	9,340	6,630	3,990	3,730	5,710	3,970	3,680	902	4,180	1,880	2,100
13	7,040	9,860	5,650	6,960	746	2,670	2,320	3,220	939	4,600	1,880	408
14	7,700	9,050	5,010	3,170	1,790	1,470	1,720	1,850	368	3,910	2,000	1,360
15	7,590	6,780	7,780	1,380	2,930	480	1,160	2,820	*248	5,170	3,300	2,940
16	7,700	1,480	5,090	4,760	1,640	3,480	674	1,460	230	6,370	3,510	*2,940
17	8,120	3,670	3,960	5,860	*1,080	5,970	606	392	225	5,510	1,980	1,850
18	5,540	8,060	3,210	854	890	4,230	2,420	284	220	4,030	3,630	2,220
19	6,030	5,960	5,310	1,990	734	*5,190	2,820	2,110	215	1,540	3,900	2,190
20	6,270	6,430	5,360	964	606	6,740	1,410	4,220	205	5,230	3,400	1,410
21	10,600	6,110	1,730	1,070	686	4,260	1,130	2,320	205	4,330	2,170	2,710
22	10,300	6,100	2,720	2,740	617	6,520	942	*470	3,950	3,360	1,370	7,720
23	8,320	4,180	5,580	1,250	650	9,560	782	290	7,950	3,710	1,230	6,920
24	8,450	*4,790	6,990	698	595	8,230	650	297	5,440	936	1,450	9,460
25	8,670	7,240	6,200	530	500	*5,090	573	468	4,720	890	2,060	8,900
26	9,590	6,510	1,910	440	1,040	4,060	520	836	1,500	1,100	2,740	7,140
27	*5,590	7,570	3,320	400	782	8,500	480	2,800	1,450	346	2,400	2,270
28	9,940	8,390	4,750	362	490	1,900	552	2,380	3,080	400	1,320	7,390
29	9,180	5,480	4,710	*530	-	1,030	722	1,530	4,680	1,530	2,220	8,970
30	10,800	1,590	5,130	353	--------	818	490	573	5,590	1,840	400	6,000
31	7,980	--------	637	290	--------	686	--------	424	--------	2,160	*1,670	--------
Total	266,350	197,330	175,867	132,950	46,905	131,914	50,815	66,996	49,759	104,132	71,050	122,298
Mean	8,592	6,578	5,673	4,289	1,675	4,255	1,694	2,161	1,659	3,359	2,292	4,077

	Observed				Adjusted†			
Calendar year 1958:	Max 16,000	Min 432	Mean 6,046		Mean 5,201	Cfsm 1.39	In. 18.84	
Water year 1958-59:	Max 12,500	Min 205	Mean 3,880		Mean 3,519	Cfsm 0.939	In. 12.75	

* Discharge measurement made on this day.
† Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

4960. First Creek at Mineral Springs Avenue, at Knoxville, Tenn.

Location.--Lat 36°00'53", long 83°55'18", on right bank at Mineral Springs Avenue Bridge in Knoxville, Knox County, 0.3 mile downstream from Whites Creek and 5.9 miles upstream from mouth.

Drainage area.--15.7 sq mi, includes 3.8 sq mi without surface drainage.

Records available.--April 1945 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 940.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years, 22.3 cfs.

Extremes.--Maximum discharge during year, 262 cfs Mar. 27 (gage height, 6.02 ft); minimum, 2.6 cfs Dec. 26 (gage height, 1.75 ft).

1945-59: Maximum discharge, 1,310 cfs Nov. 18, 1957 (gage height, 8.88 ft), from rating curve extended above 850 cfs; minimum, 1.8 cfs Sept. 26, 1948; minimum gage height, 1.32 ft Sept. 21, Oct. 1, 1945.

Flood in September 1944 reached a stage of 10.0 ft, from report by Tennessee Valley Authority.

Remarks.--Records good. Discharge measurements generally made twice a month.

Revisions.--WSP 1276: Drainage area.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Jan. 8, Jan. 22-25, May 5, 13-20)

Oct. 1 to Jan. 8		Jan. 9 to Sept. 30			
1.5	2.4	1.7	1.7	4.0	58
1.7	4.2	1.9	4.1	5.0	92
2.0	8.6	2.2	9.7	5.3	107
2.4	19	2.5	17	5.5	132
2.8	32	3.0	30	5.7	177
3.4	51				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	4.9	4.0	8.8	11	17	26	22	17	4.7	3.7	2.8
2	3.9	3.4	3.4	8.1	9.7	16	28	20	38	11	3.4	3.1
3	4.0	3.2	6.2	6.4	9.7	17	24	18	24	5.9	3.6	3.2
4	3.8	3.4	4.8	5.5	35	15	23	17	16	5.1	4.4	2.9
5	3.5	3.2	3.7	4.7	24	16	20	16	14	4.9	5.9	2.8
6	3.4	3.0	3.4	4.3	17	23	19	14	14	5.2	4.3	2.8
7	3.4	3.0	3.2	4.2	14	16	18	12	12	4.9	4.6	2.9
8	3.3	3.3	3.3	21	14	15	17	12	11	4.4	4.4	3.1
9	3.3	2.8	3.2	12	14	15	16	12	9.9	4.0	4.1	3.1
10	3.4	2.7	3.0	7.8	41	14	16	12	9.5	9.4	3.8	3.4
11	3.2	2.9	3.0	6.3	26	15	26	11	9.1	6.8	3.4	3.3
12	3.0	2.8	3.1	6.1	20	23	82	11	8.4	5.5	3.4	3.1
13	2.9	2.7	3.0	6.1	35	16	52	16	8.2	5.1	3.6	2.8
14	2.9	2.7	3.0	6.3	87	15	34	12	7.4	4.6	3.4	2.8
15	2.8	2.7	2.8	23	85	20	28	11	7.2	9.1	3.6	2.8
16	3.0	2.8	2.8	24	48	16	25	9.7	6.6	5.1	3.4	2.8
17	2.8	2.7	3.0	12	43	14	23	9.3	6.5	4.4	3.2	2.8
18	2.8	2.7	2.9	9.7	33	14	29	11	6.3	5.7	3.1	2.8
19	2.9	4.6	2.8	9.3	26	12	52	9.1	5.9	17	2.8	2.8
20	3.0	3.5	2.9	10	23	12	77	24	5.7	12	2.9	2.7
21	3.1	3.2	2.7	98	20	17	56	14	5.4	9.9	2.8	2.7
22	3.0	3.3	2.9	110	19	16	44	11	4.9	7.4	2.8	2.7
23	3.2	3.2	2.9	33	33	13	35	9.7	4.9	6.1	2.7	2.9
24	3.2	3.5	3.0	24	24	12	31	8.9	7.6	5.4	2.9	2.8
25	3.1	3.4	2.8	20	21	12	28	8.6	9.3	5.2	2.8	2.7
26	3.0	3.4	2.6	18	20	37	26	8.4	6.6	4.7	2.7	2.7
27	2.9	3.2	8.4	17	18	166	24	24	5.7	4.4	2.7	2.8
28	2.8	19	49	15	18	54	24	17	5.4	4.1	3.1	2.8
29	2.8	7.3	19	14	-	42	27	10	5.2	4.0	3.1	2.7
30	2.8	4.6	8.4	13	--------	36	22	33	4.9	4.0	2.8	3.1
31	2.8	--------	6.7	12	--------	29	--------	29	--------	3.8	3.6	--------
Total	99.3	117.1	175.9	569.6	788.4	755	952	452.7	296.6	193.8	107.0	86.7
Mean	3.20	3.90	5.67	18.4	28.2	24.4	31.7	14.6	9.89	6.25	3.45	2.89
Cfsm	0.204	0.248	0.361	1.17	1.80	1.55	2.02	0.930	0.630	0.398	0.220	0.184
In.	0.24	0.28	0.42	1.35	1.87	1.79	2.26	1.07	0.70	0.46	0.25	0.21

Calendar year 1958: Max 202 Min 2.6 Mean 16.8 Cfsm 1.07 In. 14.51
Water year 1958-59: Max 166 Min 2.6 Mean 12.6 Cfsm 0.803 In. 10.90

Peak discharge (base, 300 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 1959. 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.--60 years, 12,770 cfs (unadjusted).

Extremes.--Maximum discharge during year, 30,400 cfs Oct. 8; maximum gage height, 17.74 ft Oct. 1; minimum daily discharge, 1,440 cfs June 5, 14; minimum gage height, 9.79 ft Dec. 22.

1899-1959: Maximum discharge observed, 195,000 cfs 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, which are fair. Flow regulated by Douglas, South Holston, Boone, Fort Patrick Henry, Cherokee, and Watauga Lakes (see p. 213,214).

Revisions (water years).--WSP 583: 1902(M). WSP 823: Drainage area.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25,100	17,700	8,420	14,500	13,900	13,900	2,410	6,230	3,630	18,200	13,700	14,800
2	20,500	13,800	6,420	16,400	13,500	17,400	2,440	3,680	3,630	19,300	5,970	7,840
3	14,300	12,300	7,570	21,800	18,900	19,800	2,490	6,140	6,180	14,100	5,280	7,940
4	13,400	13,000	8,880	23,300	14,200	12,000	2,800	11,300	1,460	9,740	9,740	9,990
5	12,200	12,700	10,600	26,100	12,000	11,900	3,210	19,400	1,440	4,110	10,200	6,160
6	14,400	10,500	13,500	21,500	14,000	12,600	3,620	15,000	8,330	10,300	8,490	10,000
7	23,100	17,400	13,600	27,100	7,230	4,950	7,530	15,700	10,200	17,600	3,320	13,700
8	24,600	13,900	17,600	16,900	4,890	2,390	5,760	15,800	11,800	18,400	6,700	14,700
9	24,500	12,500	19,200	15,300	6,640	9,940	8,700	4,410	12,000	17,300	4,220	15,500
10	24,100	12,600	17,700	16,000	8,810	17,200	11,600	9,930	13,900	15,000	8,050	11,100
11	21,100	15,700	*13,900	17,600	9,160	13,400	10,500	11,300	13,700	14,300	*8,530	5,050
12	12,100	13,400	9,620	8,170	9,710	13,200	9,700	14,800	11,500	18,300	6,600	7,810
13	14,700	14,900	9,930	12,700	5,280	7,570	14,900	11,800	3,500	15,100	10,800	6,500
14	14,200	15,500	8,130	6,440	9,630	7,620	8,180	9,740	1,440	14,700	9,990	12,100
15	13,500	9,520	11,700	6,100	11,000	3,520	3,860	12,900	5,440	15,700	14,000	15,600
16	14,900	3,280	9,330	12,900	7,670	10,800	4,460	8,300	7,990	19,000	9,010	15,300
17	14,600	8,430	6,650	13,800	4,070	13,200	3,890	2,690	7,120	17,000	8,400	15,000
18	12,800	13,500	5,950	4,690	8,570	5,990	4,550	4,060	7,090	10,200	14,300	14,700
19	11,000	9,150	10,600	4,230	10,000	7,130	7,040	8,830	7,560	7,440	15,100	14,900
20	12,800	9,690	10,600	3,440	6,030	10,900	8,000	13,700	9,270	7,760	12,000	14,100
21	18,300	10,200	3,930	5,420	10,800	10,500	4,490	5,520	10,300	9,510	5,640	15,000
22	*19,400	11,000	8,460	17,600	13,300	7,410	3,650	4,780	17,700	*10,400	6,160	20,200
23	16,200	7,140	9,420	18,000	14,600	15,000	4,190	4,930	20,000	9,440	7,410	16,900
24	17,200	9,240	8,510	14,700	17,500	*16,900	3,560	2,190	16,400	3,330	12,300	19,500
25	14,400	13,200	7,250	13,700	14,000	9,560	3,610	4,240	15,700	3,910	13,400	21,700
26	17,300	11,100	1,740	13,800	*14,300	7,470	4,260	8,970	7,900	3,460	14,500	18,800
27	12,900	12,700	3,120	16,700	14,200	19,700	4,880	14,500	13,800	3,500	9,060	13,600
28	19,500	14,300	7,620	16,400	13,900	5,820	6,140	10,400	11,300	2,760	7,710	21,000
29	17,500	11,100	13,200	*16,100	-	3,200	4,320	5,610	15,400	5,760	12,300	22,000
30	18,000	4,180	16,500	15,800	--------	2,460	5,540	2,900	*15,800	10,800	2,820	20,700
31	16,500	--------	17,200	15,400	--------	2,820	--------	2,180	--------	11,100	12,400	--------
Total	525,100	353,630	316,850	452,590	307,790	316,250	170,280	271,930	291,480	357,520	288,100	422,190
Mean	16,940	11,790	10,220	14,600	10,990	10,200	5,676	8,772	9,716	11,530	9,294	14,070
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 31,800 Min 1,280 Mean 14,800 Cfsm 1.66 In. 22.49
Water year 1958-59: Max 27,100 Min 1,440 Mean 11,160 Cfsm 1.25 In. 16.96

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 850.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years, 498 cfs.

Extremes.--Maximum discharge during year, 9,350 cfs Jan. 22 (gage height, 16.27 ft); minimum, 50 cfs Oct. 31 (gage height, 7.05 ft).

1951-59: 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. 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 21 to May 22)

7.1	59	8.5	740
7.3	114	9.0	1,180
7.6	210	12.0	4,200
8.0	380	14.0	6,500

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	91	203	326	290	355	620	380	355	*245	207	316
2	*197	139	*177	*422	*285	*345	*708	355	*1,420	545	194	*273
3	142	*117	167	321	269	330	708	335	788	340	171	234
4	151	117	187	273	468	326	973	*312	461	281	171	220
5	142	94	171	220	692	308	829	298	370	249	180	194
6	120	139	155	174	482	772	676	281	386	238	174	261
7	108	187	139	200	398	668	566	269	335	224	180	214
8	100	136	133	356	375	545	482	261	277	197	167	321
9	94	130	130	668	360	496	422	249	242	180	151	249
10	94	130	120	422	370	434	386	245	220	214	139	245
11	91	120	114	321	524	340	700	238	207	238	133	422
12	91	111	111	294	398	573	2,450	231	200	314	123	316
13	85	105	108	273	915	503	2,790	294	238	238	114	261
14	85	105	108	265	2,480	475	1,500	422	190	207	111	228
15	80	100	102	428	3,110	580	1,070	303	174	210	105	203
16	82	102	80	1,480	1,890	588	847	265	164	214	136	187
17	82	108	94	780	1,180	531	700	245	158	200	145	171
18	82	100	102	540	937	468	724	238	151	200	207	158
19	85	100	91	428	700	416	2,060	228	145	259	*409	151
20	91	94	97	447	566	386	3,020	220	139	380	210	145
21	80	91	94	1,330	475	375	1,670	281	136	265	171	136
22	82	88	85	5,200	428	392	1,240	379	130	496	199	130
23	82	85	85	1,730	524	335	1,000	503	136	321	313	126
24	77	85	91	1,040	503	316	812	273	288	257	174	120
25	72	80	108	756	416	303	700	238	2,110	366	410	117
26	77	85	88	596	380	330	612	249	1,380	380	187	111
27	80	97	88	503	370	5,610	545	231	716	428	174	105
28	77	131	630	428	350	2,130	496	261	454	684	148	102
29	*80	640	1,290	370	-	1,180	454	217	340	683	207	102
30	75	265	596	340	--------	910	410	228	281	249	174	394
31	75	--------	386	316	--------	732	--------	238	--------	220	242	--------
Total	2,985	3,972	6,130	21,247	20,135	22,052	30,170	8,767	12,591	9,475	5,826	6,212
Mean	96.3	132	198	685	719	711	1,006	283	420	306	188	207
Cfsm	0.358	0.491	0.736	2.55	2.67	2.64	3.74	1.05	1.56	1.14	0.699	0.770
In.	0.41	0.55	0.85	2.94	2.78	3.05	4.17	1.21	1.74	1.31	0.81	0.86

Calendar year 1958: Max 5,060 Min 72 Mean 471 Cfsm 1.75 In. 23.76
Water year 1958-59: Max 5,610 Min 72 Mean 410 Cfsm 1.52 In. 20.68

Peak discharge (base, 4,800 cfs).--Jan. 22 (2:30 a.m.) 9,350 cfs (16.27 ft); Mar. 27 (10 a.m.) 9,200 cfs (16.15 ft); Apr. 12 (8 p.m.) 5,150 cfs (12.86 ft); June 25 (5 p.m.) 5,100 cfs (12.82 ft).

* Discharge measurement made on this day.

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 1959. 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.--16 years, 366 cfs.

Extremes.--Maximum discharge during year, 2,520 cfs Jan. 22; maximum gage height, 7.51 ft Jan. 22; minimum discharge, 104 cfs Nov. 24-26; minimum gage height, 1.49 ft Dec. 16, result of freezeup.

1943-59: 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, which are good.

Revisions (water years).--WSP 1236: 1949(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor Jan. 21-23, May 31, June 1)

Oct. 1 to Nov. 28		Nov. 29 to Sept. 30			
1.5	95	1.5	110	3.5	870
1.6	113	1.7	147	4.0	1,200
2.0	198	2.0	216	5.0	1,750
2.5	350	2.5	381	6.1	2,300
		3.0	610		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	300	216	151	248	257	245	389	355	1,730	239	165	211
2	237	186	*143	309	*248	245	*438	344	1,040	264	163	245
3	189	142	143	245	260	236	389	366	805	254	157	176
4	180	130	149	216	292	230	377	334	730	233	167	165
5	164	*126	139	185	326	279	348	326	*645	222	178	178
6	153	122	134	b170	276	*785	337	312	685	219	163	178
7	*149	119	130	b170	254	483	323	306	620	228	157	836
8	142	115	130	183	248	393	312	292	550	206	159	575
9	138	115	128	*198	245	359	302	286	501	198	147	389
10	134	111	126	167	251	334	292	296	470	195	143	*323
11	128	109	124	b160	306	316	374	286	442	195	139	344
12	124	109	124	159	276	393	828	279	420	216	181	306
13	124	109	123	161	958	337	1,040	359	400	200	147	257
14	124	109	130	159	645	316	665	309	381	245	136	230
15	124	111	128	181	560	496	555	276	362	233	139	222
16	122	124	b120	320	460	465	492	267	351	230	157	248
17	122	122	126	211	408	400	447	260	337	242	141	203
18	122	115	126	b195	389	362	447	*251	326	330	*134	190
19	122	113	123	b190	351	337	695	245	320	381	138	183
20	122	109	124	190	326	323	655	487	309	366	138	178
21	121	108	123	611	306	316	560	926	299	306	138	169
22	121	108	121	*2,270	296	309	520	580	289	279	138	163
23	119	108	119	946	309	289	506	474	279	264	145	159
24	117	106	124	565	302	279	460	404	306	242	157	155
25	115	104	121	460	289	273	434	679	334	216	132	151
26	113	106	117	389	270	296	412	1,060	296	206	128	149
27	113	106	126	348	257	580	400	951	273	*236	128	151
28	113	132	549	320	248	412	393	715	264	198	130	159
29	111	294	348	299	-	374	393	635	248	183	128	149
30	111	169	245	286	--------	483	370	570	239	176	134	163
31	111	--------	206	273	--------	416	--------	1,100	--------	169	343	--------
Total	4,285	3,853	4,820	10,784	9,613	11,361	14,153	14,330	14,251	7,371	4,750	7,205
Mean	138	128	155	348	343	366	472	462	475	238	153	240
Cfsm	0.986	0.914	1.11	2.49	2.45	2.61	3.37	3.30	3.39	1.70	1.09	1.71
In.	1.14	1.02	1.28	2.86	2.55	3.02	3.76	3.81	3.79	1.96	1.26	1.91

Calendar year 1958: Max 1,640 Min 104 Mean 353 Cfsm 2.52 In. 34.23
Water year 1958-59: Max 2,270 Min 104 Mean 293 Cfsm 2.09 In. 28.36

Peak discharge (base, 1,500 cfs).--Jan. 22 (12 m. to 1 p.m.) 2,520 cfs (7.51 ft at 5 a.m.); June 1 (10 a.m.) 1,960 cfs (5.51 ft).

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

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 1959. Except for figures of momentary maximum discharge, records prior to Aug. 29, 1931, have been found to be unreliable and should not be used. Prior to October 1949, published as Cullasaja Creek at Highlands.

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.--28 years (1931-59), 58.5 cfs.

Extremes.--Maximum discharge during year, 1,080 cfs Jan. 21 (gage height, 3.60 ft); minimum, 2.6 cfs Nov. 10 (gage height, 0.22 ft); minimum daily, 2.8 cfs Nov. 9.
1927-59: 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 no gage-height record, 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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.2	2.2	1.3	72	0.6	17	1.7	145
.4	7.0	1.7	140	.8	30	2.0	217
.6	16	2.0	212	1.0	44	2.5	395
.8	28	2.5	394	1.2	63	3.0	687
1.0	42			1.4	89		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a37	8.2	15	99	48	41	67	51	199	43	36	47
2	a21	4.8	*14	68	*44	37	*89	49	163	44	35	50
3	a15	4.2	15	46	52	38	71	49	133	36	34	33
4	a15	4.0	16	36	78	36	69	47	116	30	34	32
5	a15	*4.0	14	29	68	81	61	46	*106	27	33	37
6	a14	3.6	13	28	52	*167	59	*44	123	27	31	45
7	*16	3.4	12	27	47	81	54	41	103	26	31	163
8	19	3.2	12	32	46	64	49	39	89	*25	29	110
9	18	2.8	12	*30	46	60	46	41	83	24	27	85
10	18	6.1	12	23	54	56	45	42	75	23	26	*75
11	18	8.6	12	23	57	56	67	40	68	44	25	96
12	18	9.4	11	22	56	70	248	52	67	38	25	74
13	18	9.0	12	24	190	56	154	89	62	50	25	58
14	18	9.0	13	23	96	52	112	54	58	42	23	50
15	18	9.8	11	35	96	91	89	47	55	44	27	49
16	11	12	12	57	76	68	83	44	52	39	39	46
17	6.7	11	12	29	69	60	75	39	48	36	31	39
18	6.3	9.8	11	27	68	55	85	38	45	65	*28	36
19	6.0	9.8	11	26	58	52	145	41	42	161	27	35
20	9.4	9.0	12	28	55	51	108	347	42	114	32	34
21	18	9.0	11	330	51	49	91	223	40	276	54	32
22	18	8.6	11	410	51	48	89	149	39	99	33	31
23	18	8.6	11	152	52	44	86	119	37	83	37	*29
24	18	8.6	13	104	48	44	75	101	50	65	32	27
25	18	9.4	12	89	44	41	69	270	52	56	32	27
26	18	9.0	9.8	78	42	54	64	283	38	65	*31	26
27	18	9.0	27	69	41	123	60	217	35	52	37	29
28	18	38	124	63	40	69	70	184	33	46	27	27
29	17	48	46	58	-	67	62	156	32	42	25	26
30	15	18	32	56	-------	94	52	141	29	42	27	38
31	13	-------	28	52	-------	71	-------	280	-------	39	54	-------
Total	506.4	307.9	578.8	2,173	1,725	1,976	2,494	3,363	2,114	1,803	987	1,486
Mean	16.3	10.3	18.7	70.1	61.6	63.7	83.1	108	70.5	58.2	31.8	49.5
Cfsm	1.09	0.691	1.26	4.70	4.13	4.28	5.58	7.25	4.73	3.91	2.13	3.32
In.	1.26	0.77	1.44	5.42	4.31	4.93	6.22	8.39	5.28	4.50	2.46	3.71

Calendar year 1958: Max 375 Min 2.8 Mean 51.9 Cfsm 3.48 In. 47.23
Water year 1958-59: Max 410 Min 2.8 Mean 53.5 Cfsm 3.59 In. 48.69

Peak discharge (base, 550 cfs).--Jan. 21 (10 p.m.) 1,080 cfs (3.60 ft); July 21 (3 a.m.) 562 cfs (2.80 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 Cullasaja.

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 1959. 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.--41 years, 221 cfs.

Extremes.--Maximum discharge during year, 3,630 cfs Jan. 21 (gage height, 11.66 ft); minimum, 29 cfs Dec. 16 (gage height, 0.51 ft), result of freezeup.

1907-9, 1920-59: 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 table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	42	3.0	487
1.0	69	4.0	780
1.5	134	5.0	1,080
2.0	226	6.0	1,430

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	184	120	62	176	142	136	238	191	738	119	96	a130
2	119	72	*59	180	*134	125	*333	187	586	153	92	a150
3	87	58	60	128	142	124	264	178	484	130	91	a100
4	80	52	63	111	183	122	260	174	418	112	92	a95
5	70	*51	58	b80	199	233	230	169	*395	105	92	a105
6	64	49	54	b80	165	*565	216	*162	426	106	86	a130
7	*61	47	53	b90	137	295	201	155	362	100	85	a300
8	64	46	53	106	136	239	187	147	315	*96	85	a250
9	63	46	52	*104	135	216	178	150	290	93	78	a220
10	62	46	52	b72	142	197	171	152	266	97	74	*204
11	60	49	51	b70	158	187	235	145	244	96	73	222
12	59	51	49	b70	143	224	674	171	233	122	77	183
13	59	50	51	b80	520	185	608	262	220	105	73	144
14	59	49	54	80	308	174	418	207	203	136	72	126
15	59	51	b47	114	318	283	338	165	193	156	70	119
16	59	56	b50	187	253	228	302	155	183	150	93	128
17	50	54	b53	b105	228	205	273	147	172	124	85	106
18	49	52	b47	b100	222	189	290	140	165	164	*90	100
19	50	50	b48	b100	191	178	499	134	158	279	85	95
20	50	48	b50	b100	178	174	429	564	153	187	74	92
21	56	48	b47	824	165	171	351	841	148	460	106	88
22	59	47	b45	1,340	162	165	323	510	142	203	131	84
23	59	48	b46	475	172	153	300	415	140	176	139	82
24	59	48	54	323	158	148	271	333	193	144	130	80
25	57	47	50	264	147	144	253	659	209	128	88	78
26	57	48	b43	226	142	169	239	816	158	163	a80	76
27	57	48	60	201	134	370	226	658	137	167	a100	80
28	57	79	335	183	130	239	228	586	128	125	a80	81
29	56	161	158	167	-	226	233	530	122	118	a70	77
30	56	73	112	158	--------	302	201	472	116	118	a80	120
31	54	--------	95	150	--------	248	--------	904	--------	104	a170	--------
Total	2,035	1,744	2,111	6,444	5,244	6,614	8,969	10,479	7,697	4,536	2,837	3,845
Mean	65.6	58.1	68.1	208	187	213	299	338	257	146	91.5	128
Cfsm	0.758	0.672	0.787	2.40	2.16	2.46	3.46	3.91	2.97	1.69	1.06	1.48
In.	0.87	0.75	0.91	2.77	2.25	2.84	3.86	4.51	3.31	1.95	1.22	1.65

Calendar year 1958: Max 1,180 Min 43 Mean 192 Cfsm 2.22 In. 30.11
Water year 1958-59: Max 1,340 Min 43 Mean 171 Cfsm 1.98 In. 26.89

Peak discharge (base, 2,000 cfs).--Jan. 21 (11 p.m.) 3,630 cfs (11.66 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 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 1959. 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.--16 years, 1,007 cfs.

Extremes.--Maximum discharge during year, 7,960 cfs Jan. 22 (gage height, 6.95 ft); minimum, 233 cfs Oct. 20 (gage height, 1.80 ft); minimum daily, 280 cfs Dec. 19.

1944-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	233	4.0	2,340
2.0	338	5.0	3,960
2.3	535	6.0	5,880
2.6	780	7.0	8,080
3.0	1,120		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	740	466	424	581	686	706	1,200	992	3,670	624	463	646
2	764	623	374	916	664	702	1,440	976	2,730	*770	463	548
3	534	398	374	680	*659	662	1,300	958	2,050	694	456	464
4	496	362	392	b580	799	670	1,260	933	1,630	598	463	536
5	503	332	386	b490	940	728	1,150	890	1,410	580	470	508
6	418	350	350	b420	804	2,180	1,110	865	1,470	823	456	438
7	392	*332	327	b400	713	1,490	1,040	840	1,420	619	444	1,040
8	356	310	332	513	678	1,130	992	806	1,230	551	444	1,350
9	386	316	327	b580	687	1,040	*942	780	1,160	543	418	992
10	350	322	322	b490	730	967	916	797	1,090	521	392	810
11	350	305	310	b440	848	899	1,020	772	1,040	575	380	866
12	332	305	316	b400	782	958	1,970	763	1,010	612	450	814
13	332	305	310	430	2,190	942	3,220	*890	976	514	450	660
14	*327	310	322	437	1,940	865	2,040	976	950	569	386	546
15	327	305	b325	506	1,590	1,110	1,590	788	890	669	368	543
16	357	322	b285	1,140	1,340	1,210	1,380	763	867	844	392	598
17	329	362	b285	b765	1,160	1,060	1,280	730	846	685	424	492
18	340	332	b300	b540	1,120	984	1,260	692	802	782	386	492
19	316	316	b280	b500	1,030	916	2,310	681	*792	969	*404	444
20	332	300	305	*b520	942	908	2,630	999	767	1,040	404	450
21	330	300	316	1,190	865	899	1,930	2,530	746	1,050	398	418
22	323	300	294	6,610	840	874	1,630	1,680	708	954	411	398
23	328	288	305	3,290	856	818	1,460	1,350	715	788	436	386
24	327	283	316	1,590	876	784	1,340	1,150	930	688	526	*374
25	322	294	327	1,240	789	764	1,240	1,590	1,040	612	424	368
26	322	294	b290	1,070	750	818	1,170	2,860	921	628	362	350
27	310	294	b300	984	727	2,000	1,130	2,610	755	731	386	350
28	316	394	1,160	890	695	*1,520	1,090	2,130	712	628	404	374
29	305	899	1,140	814	-	1,220	1,110	1,840	679	551	380	368
30	305	535	706	780	--------	1,480	1,040	1,480	652	543	356	398
31	300	--------	572	758	--------	1,300	--------	2,300	--------	499	578	--------
Total	11,769	10,854	12,372	30,524	26,700	32,604	43,190	38,411	34,658	21,254	13,174	17,021
Mean	380	362	399	985	954	1,052	1,440	1,239	1,155	686	425	567
Cfsm	0.872	0.830	0.915	2.26	2.19	2.41	3.30	2.84	2.65	1.57	0.975	1.30
In.	1.00	0.93	1.06	2.60	2.28	2.78	3.68	3.28	2.96	1.81	1.12	1.45

Calendar year 1958: Max 5,010 Min 280 Mean 973 Cfsm 2.23 In. 30.32
Water year 1958-59: Max 6,610 Min 280 Mean 801 Cfsm 1.84 In. 24.95

Peak discharge (base, 5,000 cfs).--Jan. 22 (3 p.m.) 7,960 cfs (6.95 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 1959.

Gage.--Water-stage recorder. Datum of gage is 3,072.97 ft above mean sea level, datum of 1929.

Average discharge.--19 years, 194 cfs.

Extremes.--Maximum discharge during year, 2,690 cfs Jan. 21 (gage height, 5.58 ft); minimum, 45 cfs Oct. 30, 31 (gage height, 0.67 ft).

1940-59: 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, and those for period of no gage-height record, which are fair. Occasional regulation caused by fishtrap.

Revisions (water years).--WSP 973: 1941(M).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	34	1.6	272
.8	67	2.0	424
1.0	105	2.5	642
1.3	177	3.0	910

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	291	101	83	127	156	170	273	209	564	137	78	93
2	89	67	78	109	149	160	316	250	503	146	78	87
3	81	64	87	97	167	160	276	235	424	125	76	78
4	74	*57	85	91	206	155	265	203	373	118	80	78
5	64	55	76	b80	183	170	245	197	350	114	80	83
6	62	62	72	b80	161	350	235	189	346	112	80	87
7	60	55	69	b80	154	230	222	183	301	112	78	245
8	58	53	67	*b135	154	205	216	174	272	101	74	169
9	60	60	65	105	149	200	203	172	255	97	71	144
10	60	53	64	b100	245	190	200	172	241	95	69	134
11	58	52	64	b95	232	*186	279	167	232	93	69	149
12	57	50	b61	b90	*194	222	495	167	222	99	99	134
13	57	50	60	89	600	186	404	216	212	101	74	118
14	57	50	b62	85	500	180	335	174	197	95	81	107
15	55	53	b60	233	550	324	*294	159	189	99	126	105
16	55	101	b55	241	400	241	272	154	180	112	109	116
17	*53	67	b58	b150	340	222	255	146	174	103	81	97
18	53	60	b58	b140	320	209	308	*144	169	144	99	91
19	57	58	b57	b130	270	200	453	139	*164	173	91	89
20	55	55	b60	b130	230	194	384	451	159	156	114	87
21	53	53	b59	764	210	192	342	432	154	127	87	83
22	53	52	b58	688	200	183	319	308	146	123	78	81
23	53	50	*b57	396	240	172	294	269	144	129	146	80
24	52	52	83	304	210	169	272	262	194	103	114	*78
25	52	52	b62	255	200	164	258	452	172	99	87	76
26	48	55	b60	232	190	246	245	473	146	110	87	74
27	48	53	88	209	180	436	238	424	137	112	97	93
28	47	170	241	194	170	265	252	380	132	*91	85	80
29	47	155	139	180	-	265	228	338	127	87	87	74
30	45	95	109	177	--------	272	216	346	120	85	98	80
31	52	--------	95	164	--------	245	--------	760	--------	81	*114	--------
Total	2,006	2,010	2,392	5,950	6,960	6,763	8,594	8,345	6,999	3,479	2,787	3,090
Mean	64.7	67.0	77.2	192	249	218	286	269	233	112	89.9	103
Cfsm	1.25	1.29	1.49	3.70	4.80	4.20	5.51	5.18	4.49	2.16	1.73	1.98
In.	1.44	1.44	1.71	4.26	4.99	4.85	6.16	5.98	5.02	2.49	2.00	2.21

Calendar year 1958: Max 930 Min 45 Mean 158 Cfsm 3.04 In. 41.33
Water year 1958-59: Max 764 Min 45 Mean 163 Cfsm 3.14 In. 42.55

Peak discharge (base, 1,500 cfs).--Jan. 21 (8:30 p.m.) 2,690 cfs (5.58 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 13 to Mar. 10; discharge estimated on basis of recorded range in stage and records for Valley River at Tomotla and Little Tennessee River near Prentiss.

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 northeast of Nantahala, Swain County, 2.3 miles downstream from Rowlin Creek, 2.8 miles (revised) downstream from Nantahala Dam powerhouse, and at mile 10.8.

Drainage area.--144 sq mi.

Records available.--May 1942 to September 1959.

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.--17 years, 479 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,520 cfs Jan. 21 (gage height, 5.16 ft); minimum, 16 cfs Dec. 16 (gage height, 1.25 ft); minimum daily, 28 cfs Nov. 15.
1942-59: Maximum discharge, 7,510 cfs Feb. 10, 1946 (gage height, 8.15 ft); minimum, 16 cfs Nov. 9, 1953, Dec. 16, 1958; minimum gage height, 1.19 ft Nov. 9, 1953; minimum daily discharge, 17 cfs Nov. 8, 16, 1952, Oct. 25, 1953.

Remarks.--Records excellent. Flow regulated by Nantahala Lake (see p. 214) and Queens Creek Lake (capacity, about 300 cfs-days).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.3	20	2.5	290
1.5	42	3.0	520
1.7	73	3.5	850
2.0	136	4.0	1,250

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	518	112	272	393	298	348	154	*356	441	610	610	486
2	504	228	41	422	502	440	168	107	501	622	182	514
3	452	444	338	342	*363	508	414	98	262	396	432	485
4	120	376	452	412	404	398	291	89	126	55	462	483
5	212	285	436	616	385	476	100	86	134	130	500	344
6	349	350	452	616	407	572	218	84	124	756	502	262
7	404	*486	430	484	456	628	105	81	115	679	604	418
8	378	290	533	549	359	534	100	452	410	640	90	416
9	582	52	587	541	174	474	*244	71	434	628	48	586
10	563	318	384	364	73	582	90	202	438	473	82	592
11	136	528	426	331	452	460	471	378	448	622	116	490
12	108	396	457	416	448	646	310	184	449	601	73	178
13	227	282	394	428	504	532	659	99	401	496	72	48
14	540	166	146	344	154	298	320	79	526	616	74	456
15	604	28	262	498	184	188	206	72	364	616	80	334
16	598	189	388	712	330	546	120	68	514	616	77	456
17	598	248	458	666	233	653	111	66	585	480	76	353
18	532	372	453	238	494	640	120	66	604	492	69	432
19	416	300	320	434	554	640	260	64	592	459	*300	71
20	469	338	340	*133	480	164	265	102	554	519	534	36
21	444	152	580	762	606	136	458	116	233	635	458	428
22	406	108	369	1,050	530	172	173	460	598	646	306	586
23	510	240	*462	540	200	404	200	381	594	622	414	580
24	471	298	414	272	155	388	141	70	684	476	504	*580
25	347	31	322	131	428	538	131	494	682	404	586	580
26	348	302	394	313	202	442	122	161	504	362	586	249
27	*598	432	356	370	77	518	118	528	541	478	592	518
28	598	533	87	100	294	295	272	472	529	527	570	568
29	520	578	60	164	-	107	556	432	604	539	580	586
30	440	284	198	88	--------	220	248	128	598	610	330	577
31	374	--------	144	430	--------	198	--------	155	--------	610	620	--------
Total	13,366	8,746	10,955	13,159	9,746	13,145	7,145	6,201	13,589	16,415	10,529	12,692
Mean	431	292	353	424	348	424	238	200	453	530	340	423
(†)	-8,607	-3,802	-5,356	+1,540	+4,497	+2,039	+13,679	+11,498	+1,004	-6,597	-3,998	-6,404

Adjusted for change in contents in Nantahala and Queens Creek Lakes

Mean	154	165	181	474	509	490	694	571	486	317	211	210
Cfsm	1.07	1.15	1.26	3.29	3.53	3.40	4.82	3.97	3.38	2.20	1.47	1.46
In.	1.23	1.28	1.45	3.80	3.68	3.92	5.38	4.57	3.77	2.54	1.69	1.62

	Observed			Adjusted		
Calendar year 1958:	Max 1,010	Min 28	Mean 499	Mean 410	Cfsm 2.85	In. 38.63
Water year 1958-59:	Max 1,050	Min 28	Mean 372	Mean 370	Cfsm 2.57	In. 34.93

* 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.

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, 1.1 miles (revised) downstream from West Fork Tuckasegee River, and at mile 48.5.

Drainage area.--143 sq mi.

Records available.--June 1934 to September 1959.

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.--25 years, 386 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,610 cfs May 23 (gage height, 5.07 ft); minimum, 8.5 cfs Nov. 9 (gage height, 0.63 ft); minimum daily, 10 cfs Nov. 23.
1934-59: 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. Flow regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, and Tennessee Creek project lakes (see p. 214,219).

Revisions (water years).--WSP 823: Drainage area. WSP 1053: 1943.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.6	7.0	2.0	317
.8	21	2.5	585
1.0	44	3.0	920
1.3	93	3.5	1,310
1.6	173		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	41	224	450	378	182	370	500	770	212	253	110
2	190	48	128	430	381	420	318	384	749	312	52	136
3	116	118	*164	390	224	*350	520	44	777	44	274	266
4	50	200	262	152	466	403	428	347	*673	324	204	317
5	26	218	302	388	342	572	55	269	594	502	181	38
6	*21	*211	198	358	*518	853	406	247	702	243	194	35
7	170	281	186	294	270	682	178	358	498	42	430	368
8	26	95	315	399	376	389	67	443	378	30	220	399
9	144	14	350	436	395	519	226	50	359	334	25	579
10	160	178	264	172	186	544	326	48	428	*525	128	495
11	40	224	287	117	327	529	248	326	358	516	149	386
12	36	160	294	285	287	475	656	545	618	660	180	352
13	86	184	174	276	604	414	891	465	507	212	266	326
14	209	182	76	202	518	468	652	374	568	158	145	209
15	390	71	204	383	290	337	513	321	424	84	146	222
16	346	101	244	530	414	444	398	348	458	182	34	130
17	379	213	286	358	343	445	411	80	365	192	179	151
18	50	228	278	135	414	484	251	157	653	188	296	415
19	20	156	220	295	321	436	618	318	336	139	274	67
20	258	173	147	206	514	318	606	442	344	190	199	24
21	294	168	239	470	549	286	574	1,230	154	360	136	234
22	257	40	253	1,010	200	80	516	900	155	384	28	126
23	240	10	292	766	256	556	378	788	209	318	75	142
24	279	118	265	586	205	283	402	695	453	369	356	180
25	125	120	214	522	338	317	372	702	342	164	128	381
26	28	283	255	618	238	384	93	707	435	194	273	82
27	260	194	156	607	312	740	269	836	36	204	154	156
28	364	338	213	232	82	490	312	786	50	316	138	221
29	320	181	128	312	-	88	414	793	324	311	50	496
30	299	48	319	300	--------	450	474	706	388	306	28	322
31	232	--------	331	296	--------	453	--------	770	--------	398	138	--------
Total	5,611	4,596	7,268	11,975	9,748	13,391	11,942	14,979	13,105	8,413	5,333	7,365
Mean	181	153	234	386	348	432	398	483	437	271	172	246
(†)	-2,222	-1,238	-3,216	-58	-330	-987	+4,415	+6,234	+807	-527	+8	+554

Adjusted for change in lake contents

Mean	109	112	131	384	336	400	545	684	464	254	172	264
Cfsm	0.762	0.783	0.916	2.69	2.35	2.80	3.81	4.78	3.24	1.78	1.20	1.85
In.	0.88	0.87	1.05	3.10	2.45	3.23	4.25	5.52	3.62	2.05	1.39	2.06

	Observed			Adjusted			
Calendar year 1958:	Max 1,030	Min 10	Mean 400	Mean 356	Cfsm 2.49	In. 33.74	
Water year 1958-59:	Max 1,230	Min 10	Mean 312	Mean 321	Cfsm 2.24	In. 30.47	

* 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.

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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, 0.7 mile (revised) 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 1959.

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.--18 years, 105 cfs.

Extremes.--Maximum discharge during year, 2,120 cfs May 29 (gage height, 7.10 ft); minimum, 27 cfs Dec. 16 (gage height, 1.94 ft), result of freezeup.

1941-59: 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 good except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 1053: 1942-44(M).

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	91	63	84	92	98	132	146	328	93	69	77
2	62	67	59	80	89	94	171	152	306	109	66	64
3	60	62	*62	70	92	*91	*154	136	262	89	66	73
4	65	53	62	66	117	87	149	*132	*223	82	65	90
5	53	49	56	b52	104	96	136	129	223	112	*75	68
6	*49	*53	53	b50	*92	179	129	124	217	101	66	63
7	48	48	52	b65	87	124	122	117	191	82	62	110
8	46	46	51	83	87	111	113	113	174	74	61	*117
9	45	46	50	70	89	106	109	113	160	71	58	103
10	44	46	50	b52	94	102	104	113	150	*72	57	103
11	42	44	50	b55	92	98	136	106	150	75	57	112
12	41	42	47	b60	87	117	385	142	141	79	57	92
13	41	42	48	62	226	104	293	165	131	93	52	75
14	41	41	51	*60	176	98	231	136	122	77	51	66
15	41	41	b43	126	210	165	201	115	118	77	54	64
16	41	51	b40	158	165	136	184	111	116	77	56	59
17	41	45	b43	83	149	120	168	104	111	77	54	53
18	49	42	b40	78	154	113	216	104	109	74	59	50
19	61	41	b40	84	126	106	*462	96	107	77	57	48
20	45	41	47	88	117	104	304	136	101	84	72	46
21	42	41	b40	454	106	102	260	157	99	75	62	44
22	42	40	b40	467	106	100	240	124	95	75	96	42
23	42	39	44	231	134	94	219	111	93	74	137	42
24	41	39	51	176	120	92	198	132	177	69	84	42
25	41	39	44	152	109	89	187	162	216	69	69	40
26	41	40	b40	132	104	104	176	146	136	74	65	39
27	41	39	b45	120	100	279	168	160	111	89	92	44
28	40	152	218	113	98	171	176	154	101	151	74	44
29	40	112	146	106	-	142	162	429	95	118	65	44
30	40	70	90	102	--------	152	149	340	91	91	88	264
31	39	--------	76	96	--------	139	--------	366	--------	79	115	--------
Total	1,502	1,602	1,841	3,675	3,322	3,713	5,834	4,771	4,654	2,639	2,161	2,178
Mean	48.5	53.4	59.4	119	119	120	194	154	155	85.1	69.7	72.6
Cfsm	0.957	1.05	1.17	2.35	2.35	2.37	3.83	3.04	3.06	1.68	1.37	1.43
In.	1.10	1.18	1.35	2.70	2.44	2.72	4.28	3.50	3.41	1.94	1.59	1.60

Calendar year 1958: Max 480 Min 36 Mean 95.8 Cfsm 1.89 In. 25.64
Water year 1958-59: Max 467 Min 39 Mean 104 Cfsm 2.05 In. 27.81

Peak discharge (base, 900 cfs).--Jan. 21 (9 p.m.) 1,870 cfs (6.60 ft); Apr. 19 (6:30 p.m.) 1,140 cfs (5.40 ft); May 29 (7 p.m.) 2,120 cfs (7.10 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 1959 (prior to October 1933 monthly discharge only, published in WSP 1306; figures of daily discharge published in WSP 663, 683, 698, 713, 728, 743, are unreliable).

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.--31 years, 752 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,280 cfs Jan. 21 (gage height, 7.63 ft); minimum, 104 cfs Nov. 20 (gage height, 1.98 ft); minimum daily, 184 cfs Nov. 23.
1928-59: 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. 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 p. 214,219). Records of chemical analyses for the water year 1959 are given in WSP 1641.

Revisions (water years).--WSP 823: Drainage area. WSP 923: 1940(M). WSP 1306: 1929-33. See also Records available.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 19				Aug. 20 to Sept. 30			
2.3	180	4.0	1,130	2.4	203	3.5	745
2.5	242	5.0	2,000	2.7	308	4.0	1,120
3.0	467	6.0	3,050	3.0	445		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	720	420	406	724	719	477	856	874	1,670	606	478	377
2	464	316	369	687	684	614	974	1,030	1,590	610	370	388
3	348	342	*328	646	564	658	*902	530	1,480	572	405	424
4	375	368	478	420	670	718	1,120	*632	*1,340	467	504	624
5	262	387	421	524	827	868	551	714	1,290	922	414	360
6	252	*398	377	562	655	1,480	745	706	1,320	799	448	250
7	321	418	356	508	665	1,150	722	656	1,200	346	480	574
8	288	286	474	607	670	780	491	876	832	306	602	791
9	274	242	505	684	632	841	568	520	875	432	218	854
10	346	322	428	512	532	904	620	434	893	*815	278	802
11	313	356	412	338	517	884	865	594	820	798	366	786
12	220	342	444	365	590	946	1,740	930	1,010	930	388	634
13	231	332	376	510	1,260	686	2,030	996	903	595	434	742
14	316	322	316	*441	1,120	928	1,560	868	963	440	354	396
15	540	236	317	660	996	864	1,250	730	820	454	300	414
16	502	270	348	1,080	794	852	1,060	678	822	420	339	427
17	548	414	425	788	818	839	1,000	594	710	487	361	344
18	311	358	461	509	837	875	920	564	1,030	518	422	440
19	208	374	411	464	732	798	1,840	622	704	450	560	470
20	326	326	301	571	794	772	1,740	895	666	544	410	222
21	444	316	396	1,360	1,010	694	1,380	1,880	551	540	368	315
22	432	249	392	2,740	610	495	1,390	1,500	531	820	278	395
23	398	184	426	1,530	650	646	1,160	1,310	452	626	332	300
24	424	264	436	1,190	580	700	1,030	1,220	1,070	520	494	375
25	294	294	417	1,030	594	605	1,010	1,390	981	462	518	442
26	295	374	388	1,020	649	694	780	1,330	888	440	374	382
27	320	416	332	1,020	548	1,670	793	1,450	495	526	432	245
28	518	646	815	738	482	1,100	800	1,510	368	656	312	438
29	500	576	568	616	-	772	973	1,660	542	679	440	556
30	451	366	512	678	--------	866	950	1,530	629	582	266	986
31	394	--------	586	597	--------	942	--------	1,780	--------	666	427	--------
Total	11,635	10,514	13,221	24,119	20,199	26,118	31,820	31,003	27,445	18,028	12,372	14,753
Mean	375	350	426	778	721	843	1,061	1,000	915	582	399	492
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958 : Max 2,610 Min 184 Mean 762 Cfsm 2.20 In. 29.79
Water year 1958-59 : Max 2,740 Min 184 Mean 661 Cfsm 1.90 In. 25.85

Peak discharge (base, 4,500 cfs).--Jan. 21 (11 p.m.) 5,280 cfs (7.63 ft).

* Discharge measurement made on this day.

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 1959.

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.--12 years, 498 cfs.

Extremes.--Maximum discharge during year, 12,600 cfs Jan. 21 (gage height, 10.69 ft); minimum, 120 cfs Oct. 31 (gage height, 0.85 ft).
1945-46, 1948-59: 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 25				June 26 to Sept. 30			
0.8	105	3.0	1,420	0.9	126	2.0	660
1.0	167	4.0	2,400	1.0	159	3.0	1,420
1.5	380	5.0	3,580	1.5	364		
2.0	675						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	420	222	246	557	345	424	740	514	866	295	299	261
2	276	207	226	630	325	*396	958	520	831	374	269	273
3	250	199	242	462	330	391	852	484	727	326	298	268
4	284	171	284	396	538	370	852	452	598	286	331	313
5	230	157	234	b295	520	441	740	430	610	291	597	257
6	203	203	215	b250	418	962	675	413	556	295	400	236
7	189	185	203	b310	370	616	623	396	520	261	336	362
8	174	160	196	496	365	544	*580	375	484	240	304	432
9	171	167	192	452	365	514	544	365	474	224	273	364
10	167	164	185	b300	440	479	514	365	391	236	257	345
11	164	154	181	b290	484	462	656	350	370	252	232	326
12	150	147	171	b300	396	592	1,700	355	370	261	224	295
13	*150	144	171	312	970	479	1,500	526	345	269	213	265
14	150	*141	181	307	1,210	468	1,090	490	330	252	198	236
15	150	141	b145	507	1,320	708	922	391	312	265	194	228
16	150	171	b125	862	980	636	831	360	298	261	224	217
17	150	157	b150	b480	803	574	740	340	284	269	213	*198
18	147	147	b150	b430	747	526	768	330	*280	257	600	187
19	171	144	*b145	b460	616	496	1,330	316	271	277	*431	180
20	150	137	157	*b380	544	484	1,240	*355	259	295	379	180
21	144	134	b135	3,050	474	474	1,040	468	250	685	331	173
22	141	131	b130	3,140	462	484	988	514	242	442	291	162
23	141	128	b135	1,200	520	435	880	413	238	345	299	159
24	137	125	b160	873	538	418	796	380	446	308	308	156
25	131	125	b145	701	*496	402	727	391	1,650	291	331	152
26	131	128	b125	592	468	508	675	408	875	322	326	149
27	131	128	b150	514	452	2,600	630	435	530	291	313	152
28	128	456	804	462	430	1,160	604	446	410	407	317	159
29	125	684	993	418	-	943	574	435	355	*313	291	146
30	122	312	556	396	--------	887	532	592	317	277	273	1,320
31	122	--------	435	365	--------	796	--------	740	--------	374	304	--------
Total	5,349	5,669	7,567	20,187	15,926	19,669	25,301	13,349	14,489	9,541	9,656	8,151
Mean	173	189	244	651	569	634	843	431	483	308	311	272
Cfsm	0.940	1.03	1.33	3.54	3.09	3.45	4.58	2.34	2.62	1.67	1.69	1.48
In.	1.08	1.15	1.53	4.08	3.22	3.98	5.11	2.70	2.93	1.93	1.95	1.65

Calendar year 1958: Max 2,150 Min 122 Mean 426 Cfsm 2.32 In. 31.45
Water year 1958-59: Max 3,140 Min 122 Mean 424 Cfsm 2.30 In. 31.31

Peak discharge (base, 4,000 cfs).--Jan. 21 (10 p.m.) 12,600 cfs (10.69 ft); Mar. 27 (6 a.m.) 5,820 cfs (6.58 ft); June 25 (2:30 p.m.) 5,360 cfs (6.27 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, 0.6 mile downstream from Deep Creek, and at mile 12.6.

Drainage area.--655 sq mi.

Records available.--October 1897 to September 1959. 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.--62 years, 1,563 cfs (unadjusted).

Extremes.--Maximum discharge during year, 19,100 cfs Jan. 21 (gage height, 8.45 ft); minimum, 370 cfs Oct. 20, Nov. 23 (gage height, 0.80 ft); minimum daily, 393 cfs Nov. 24.

1897-1959: Maximum discharge, 61,600 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 of May 1840 reached a stage of 21 ft, from survey by Tennessee Valley Authority.

Remarks.--Records excellent. Considerable diurnal fluctuation caused by powerplants above station. Flow regulated by Thorpe Lake, Cedar Cliff Lake, Bear Creek Lake, Tennessee Creek project lakes (see p. 214,219), and two small reservoirs with combined capacity of 250 cfs-days. Records of chemical analyses for the water year 1959 are given in WSP 1641.

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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28, Mar. 7 to Aug. 18				Nov. 29 to Mar. 6, Aug. 19 to Sept. 30			
0.8	370	2.0	1,830	0.8	340	2.0	1,810
1.0	530	3.0	3,590	1.0	495	3.0	3,590
1.5	1,090	4.0	5,710	1.5	1,050	5.0	8,180

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,170	752	614	1,280	1,260	1,000	1,910	1,680	3,080	1,090	1,040	758
2	928	652	650	1,480	1,190	1,160	2,360	1,950	2,970	1,120	864	774
3	722	578	624	1,280	1,110	1,230	2,100	1,410	2,630	1,060	720	684
4	724	587	806	1,040	1,380	1,240	2,380	1,260	2,390	804	948	996
5	586	620	720	865	1,790	1,310	1,730	1,430	2,380	1,370	1,100	878
6	508	674	724	908	1,210	2,840	1,630	1,320	2,290	1,480	*971	578
7	491	682	621	896	1,360	2,150	1,710	1,290	2,120	816	902	768
8	584	636	670	1,190	1,180	1,600	*1,400	1,430	1,630	700	1,110	1,360
9	450	508	758	1,310	1,160	1,580	1,330	1,260	1,580	680	632	1,250
10	554	465	668	972	1,240	1,710	1,330	986	1,570	1,150	578	1,200
11	562	568	658	722	1,270	1,560	1,880	1,010	1,450	1,230	670	1,170
12	430	588	684	725	1,200	1,820	3,770	1,450	1,580	1,400	711	1,020
13	*419	525	670	904	2,650	1,380	4,310	1,860	1,470	1,160	698	1,060
14	484	*551	582	863	3,030	1,590	3,180	1,700	1,480	888	726	694
15	686	553	466	1,060	3,150	1,850	2,630	1,370	1,380	948	616	718
16	728	506	563	2,360	2,270	1,830	2,270	1,250	1,320	792	697	724
17	718	534	668	1,510	2,130	1,730	2,120	1,260	1,210	960	574	*582
18	669	598	695	1,140	2,060	1,640	2,110	970	1,380	936	1,080	618
19	462	601	*621	999	1,750	*1,570	3,710	1,120	1,200	973	1,120	874
20	440	518	604	*1,160	1,580	1,420	3,770	1,420	1,080	1,020	888	496
21	674	542	581	3,760	1,870	1,380	2,990	2,490	1,040	1,440	832	462
22	605	528	592	8,040	1,370	1,280	2,910	2,470	886	1,480	693	660
23	634	416	627	3,290	1,540	1,170	2,540	2,030	826	1,130	698	538
24	618	393	687	2,600	1,400	1,400	2,260	1,880	1,750	1,040	818	570
25	610	484	652	2,130	*1,290	1,170	2,120	2,170	3,240	1,080	975	590
26	490	502	592	1,900	1,350	1,370	1,950	*2,180	*2,200	960	744	735
27	399	694	638	1,840	1,150	5,010	1,650	2,160	1,500	948	872	501
28	712	1,030	1,520	1,580	1,190	2,820	1,780	2,440	1,060	1,160	779	586
29	684	1,640	1,970	1,210	-	2,210	1,880	2,210	962	*1,260	735	674
30	644	810	1,160	1,280	--------	2,100	1,760	2,710	1,240	1,020	594	2,340
31	580	--------	1,130	1,170	--------	2,090	--------	2,890	--------	1,190	844	--------
Total	18,965	18,735	23,215	51,464	46,130	54,210	69,470	53,056	50,894	33,285	25,229	24,858
Mean	612	624	749	1,660	1,612	1,749	2,316	1,711	1,696	1,074	814	829
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 5,970 Min 393 Mean 1,422 Cfsm 2.17 In. 29.47
Water year 1958-59: Max 8,040 Min 393 Mean 1,284 Cfsm 1.96 In. 26.60

Peak discharge (base, 9,000 cfs).--Jan. 21 (12 p.m.) 19,100 cfs (8.45 ft).

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Altitude of gage is 2,280 ft (from topographic map).

Average discharge.--24 years, 44.0 cfs.

Extremes.--Maximum discharge during year, 980 cfs Jan. 21 (gage height, 4.20 ft), from rating curve extended as explained below; minimum, 6.6 cfs Oct. 30, 31, Nov. 1 (gage height, 0.88 ft).

1935-59: 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, 1937-39(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-29				Oct. 30 to Sept. 30			
0.8	6.0	1.4	31	0.8	5.0	1.7	49
1.0	12	1.6	47	1.0	10	2.0	81
1.2	20	2.0	93	1.2	18	2.5	175
				1.4	28	3.0	345

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	12	15	43	31	39	60	38	60	28	23	26
2	18	10	13	36	29	36	70	38	66	34	21	22
3	18	12	18	29	30	35	61	35	55	27	24	20
4	18	8.5	22	25	*49	33	58	33	51	25	24	20
5	14	8.2	17	b20	41	37	52	32	51	25	22	18
6	12	18	15	b20	37	66	*48	30	47	24	20	17
7	12	11	14	b25	34	44	45	29	42	21	19	18
8	11	9.1	13	b35	33	41	43	27	38	20	18	18
9	10	11	12	b28	33	40	41	27	35	18	17	18
10	10	9.7	12	b25	50	38	40	26	32	18	16	17
11	10	8.8	11	b23	43	38	54	25	30	20	15	20
12	9.8	8.5	11	b25	39	49	151	25	28	24	18	17
13	9.8	8.2	10	b25	123	40	97	49	26	24	15	16
14	9.8	*7.9	11	b22	124	39	77	44	25	24	14	15
15	9.8	8.5	b9.5	52	140	66	68	31	23	28	13	15
16	9.8	12	b9.5	b60	97	*53	61	29	22	26	13	14
17	10	11	10	b35	80	49	56	27	20	*29	13	13
18	10	9.7	10	b32	75	46	68	26	20	27	56	13
19	9.8	9.4	9.7	b35	61	43	140	24	19	29	29	12
20	9.5	8.8	10	b30	54	41	108	35	18	30	35	12
21	9.2	8.5	9.4	*265	48	41	91	49	17	36	30	11
22	*8.9	8.2	*9.1	184	45	40	81	40	16	32	24	11
23	8.6	7.9	9.4	97	58	36	70	40	18	30	24	11
24	8.6	7.6	11	70	50	35	62	39	49	26	20	11
25	8.1	7.6	9.4	58	46	33	57	*47	138	33	19	*10
26	7.8	7.6	b8.5	50	43	122	52	58	*104	32	18	10
27	7.6	7.6	10	43	41	163	48	46	48	27	19	11
28	7.3	37	54	40	39	91	46	42	39	26	*17	11
29	7.0	35	35	36	-	79	43	40	33	25	18	10
30	*6.8	18	26	35	-------	73	40	42	30	24	21	26
31	6.6	-------	22	32	-------	66	-------	58	-------	30	43	-------
Total	345.8	347.3	456.5	1,535	1,573	1,652	1,988	1,131	1,200	822	678	463
Mean	11.2	11.6	14.7	49.5	56.2	53.3	66.3	36.5	40.0	26.5	21.9	15.4
Cfsm	0.812	0.841	1.07	3.59	4.07	3.86	4.80	2.64	2.90	1.92	1.59	1.12
In.	0.93	0.94	1.23	4.14	4.24	4.45	5.36	3.05	3.23	2.22	1.83	1.25

Calendar year 1958: Max 293 Min 6.6 Mean 37.4 Cfsm 2.71 In. 36.74
Water year 1958-59: Max 265 Min 6.6 Mean 33.4 Cfsm 2.42 In. 32.87

Peak discharge (base, 600 cfs).--Jan. 21 (7:30 p.m.) 980 cfs (4.20 ft); June 25 (11 a.m.) 630 cfs (3.59 ft).

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

5183. Little Tennessee River below Chilhowee Dam, Tenn.

Location.--Lat 35°32'48", long 84°03'50", on right bank on U. S. Highway 129, at Tallassee, 100 ft upstream from Cochran Creek, 0.8 mile downstream from Chilhowee Dam, 20 miles south of Maryville, Blount County, and at mile 32.8. Records include flow at Cochran Creek.

Drainage area.--1,987 sq mi, including Cochran Creek.

Records available.--July 1958 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 799.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--1958: Maximum discharge during period July to September, 12,100 cfs Aug. 30 (gage height, 11.20 ft); minimum, 45 cfs July 19 (gage height, 5.60 ft); minimum daily, 1,360 cfs July 13, 20, Aug. 16.
1958-59: Maximum discharge during water year, 13,400 cfs Jan. 16 (gage height, 11.52 ft); minimum, 302 cfs Aug. 25 (gage height, 6.09 ft); minimum daily, 1,350 cfs Feb. 26, May 19, June 7, 8.

Remarks.--Records good. Flow regulated by many reservoirs above station (see p. 213).

Rating table, July 1, 1958, to Sept. 30, 1959 (gage height, in feet, and discharge, in cubic feet per second)

6.5	720
7.0	1,360
8.0	3,180
10.0	7,970
11.6	13,700

Discharge, in cubic feet per second, 1958

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	4,700	4,100	7,680	9	5,560	5,220	*7,130	17	4,920	3,920	7,270	25	7,100	5,110	6,960
2	5,400	4,760	7,540	10	4,990	4,620	7,380	18	5,500	5,320	8,290	26	3,940	6,870	7,100
3	5,000	4,120	5,080	11	5,440	4,440	7,380	19	*1,970	5,670	6,570	27	2,930	3,490	7,780
4	4,840	5,000	*4,520	12	3,370	4,780	7,060	20	*1,360	4,980	6,410	28	5,820	4,680	4,140
5	4,190	4,970	5,410	13	1,360	5,050	7,380	21	*3,550	4,970	2,780	29	5,770	5,380	6,650
6	4,600	5,040	8,440	14	4,620	6,240	7,440	22	5,220	4,910	7,160	30	5,140	7,360	8,400
7	5,460	*5,050	7,480	15	5,300	4,580	6,440	23	5,220	4,820	*7,550	31	4,720	7,240	-
8	*5,290	4,920	7,380	16	5,410	1,360	8,270	24	5,330	4,860	7,210				
Total													144,020	153,830	206,280
Mean													4,646	4,962	6,876

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,990	3,950	3,980	1,480	3,550	3,900	1,460	1,380	1,470	3,020	6,120	2,800
2	6,540	3,840	3,800	1,700	5,070	6,090	1,460	1,400	1,390	4,810	4,500	4,660
3	*7,060	7,350	3,020	3,100	*2,060	3,470	1,820	1,380	1,390	2,230	4,990	3,910
4	8,040	6,240	2,710	7,740	3,850	*5,460	2,250	*3,040	3,200	1,390	4,670	3,920
5	8,180	5,560	4,780	7,240	2,920	5,090	1,900	3,110	1,360	1,360	4,090	2,980
6	6,870	*5,430	5,360	5,020	4,520	5,260	1,520	2,860	1,380	*2,940	*3,890	3,100
7	5,320	6,640	2,960	*3,220	3,620	5,670	1,390	2,810	1,350	4,960	6,380	4,600
8	5,400	6,370	*5,580	5,380	3,450	2,720	1,390	4,240	1,350	4,420	4,820	*4,120
9	6,810	4,040	5,310	6,400	2,410	2,430	*1,820	1,440	1,360	3,780	1,460	4,850
10	7,140	4,960	4,510	3,090	1,390	2,340	2,560	1,380	1,360	3,400	4,080	4,380
11	6,630	5,430	2,290	1,610	4,990	4,340	1,540	2,780	1,380	5,750	5,720	4,570
12	6,070	7,710	1,450	2,370	1,590	6,570	5,170	2,210	2,880	1,990	4,700	4,350
13	8,780	4,240	4,210	1,380	2,250	5,350	7,560	1,380	2,220	3,850	5,230	2,750
14	6,660	5,440	2,010	1,390	1,440	2,790	4,740	2,090	2,300	4,460	5,670	4,100
15	6,020	5,500	3,670	3,520	2,650	2,580	2,260	1,780	3,060	4,000	4,880	5,180
16	4,190	2,450	2,350	6,670	2,600	4,620	1,800	1,380	*2,530	3,190	3,420	5,010
17	6,910	5,950	1,740	2,530	1,390	6,020	1,560	1,380	1,750	4,650	5,720	5,940
18	6,140	5,890	1,380	2,410	2,590	6,600	2,620	1,360	2,360	3,950	5,570	3,570
19	5,620	5,240	1,830	4,280	4,820	4,940	1,610	1,350	1,950	3,010	6,820	3,920
20	5,620	5,070	4,470	1,740	4,570	1,840	2,210	1,360	1,460	4,840	5,160	2,170
21	2,500	3,850	3,430	5,870	4,240	1,520	3,370	1,360	1,480	5,370	5,120	4,610
22	5,220	5,940	5,190	5,860	3,720	2,640	1,460	1,380	5,430	5,170	5,220	4,240
23	4,400	4,530	3,490	3,800	1,610	3,860	1,450	1,380	2,050	3,890	3,820	6,270
24	4,670	5,240	1,890	1,480	1,440	2,520	1,420	1,360	1,800	2,900	6,120	7,050
25	5,540	3,310	1,460	1,460	1,660	3,580	1,400	1,360	2,540	3,760	7,290	5,160
26	3,860	6,220	1,440	1,450	1,350	4,740	1,390	1,400	3,740	3,010	7,550	2,180
27	7,190	5,840	2,000	1,450	1,380	4,060	1,390	1,400	2,680	5,070	6,750	1,790
28	6,340	5,260	1,460	1,890	2,360	1,950	1,400	1,440	2,070	6,000	6,670	3,860
29	5,500	5,870	3,780	1,420	-	2,110	1,970	1,440	5,060	5,800	7,120	4,860
30	6,030	5,840	1,510	1,440	--------	1,460	1,860	1,390	4,930	6,320	3,500	3,280
31	5,230	--------	1,500	1,420	--------	1,380	--------	1,390	--------	5,720	6,140	--------
Total	187,470	159,200	94,560	99,810	79,490	117,900	65,750	55,410	69,280	125,010	163,190	124,180
Mean	6,047	5,307	3,050	3,220	2,839	3,803	2,192	1,787	2,309	4,033	5,264	4,139

	Observed			Adjusted†		
Calendar year 1958:	Max -	Min -	Mean -	Mean -	Cfsm -	In. -
Water year 1958-59:	Max 8,780	Min 1,350	Mean 3,675	Mean 3,791	Cfsm 1.91	In. 25.90

* Discharge measurement made on this day.
† Adjusted for change in contents in Santeetlah, Chilhowee, Fontana, Thorpe, Cheoah, Calderwood, and Nantahala Lakes.

5185. Tellico River at Tellico Plains, Tenn.

Location.--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 1959. 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.--34 years, 278 cfs.

Extremes.--Maximum discharge during year, 8,180 cfs Jan. 21 (gage height, 10.40 ft); minimum, 33 cfs Dec. 15 (gage height, 1.08 ft), result of freezeup.
1925-59: 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, 1925 (gage height, 0.25 ft).

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

Revisions (water years).--WSP 1336: 1927-28(M), 1936, 1940, 1944.

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28		Nov. 29 to Sept. 30			
1.1	35	1.1	35	2.5	452
1.4	83	1.4	84	4.0	1,210
1.7	152	1.7	159	6.0	2,400
2.0	242				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	163	102	105	120	178	216	254	262	268	*103	78	112
2	*101	95	*94	*150	*165	*193	*404	248	*540	206	78	*168
3	93	*97	92	120	165	190	400	226	360	105	*76	105
4	101	72	110	108	237	181	432	*210	262	92	97	128
5	81	63	92	b71	258	197	364	197	230	86	94	192
6	70	78	84	b69	210	424	321	187	276	84	90	206
7	65	78	78	112	187	317	283	178	226	84	92	248
8	62	65	76	226	181	265	258	168	190	76	82	276
9	60	67	74	248	181	251	234	162	168	71	73	369
10	59	65	71	150	203	230	226	159	150	71	67	317
11	59	60	71	133	206	220	694	150	142	109	63	327
12	55	59	67	b140	178	328	1,740	144	136	144	62	206
13	54	57	65	130	392	280	940	230	144	90	60	159
14	54	57	69	133	404	272	571	213	142	103	57	136
15	54	55	b55	387	745	364	460	162	118	101	65	125
16	54	74	b51	666	515	321	400	147	112	103	101	122
17	54	72	b67	344	404	287	352	139	103	125	65	105
18	52	63	67	b300	368	254	481	136	99	92	71	97
19	52	62	65	b290	302	230	1,310	128	97	153	112	92
20	52	62	65	234	265	220	1,080	178	92	364	78	86
21	51	59	b64	1,880	237	213	652	210	90	283	74	82
22	51	57	b62	1,990	223	203	528	211	86	314	69	80
23	51	55	62	630	283	184	456	318	84	181	76	76
24	49	55	88	447	262	174	400	187	274	130	67	74
25	49	54	82	364	230	165	360	184	289	118	80	73
26	48	54	67	305	216	200	328	165	165	122	90	69
27	49	62	74	269	203	532	309	181	120	122	74	65
28	49	228	289	237	190	384	302	178	103	122	63	87
29	49	346	178	216	-	321	302	181	97	97	97	65
30	48	139	133	200	--------	302	262	178	92	88	99	71
31	46	--------	112	190	--------	265	--------	237	--------	82	122	--------
Total	1,935	2,512	2,729	10,859	7,588	8,183	15,103	5,854	5,255	4,021	2,472	4,298
Mean	62.4	83.7	88.0	350	271	264	503	189	175	130	79.7	143
Cfsm	0.529	0.709	0.746	2.97	2.30	2.24	4.26	1.60	1.48	1.10	0.675	1.21
In.	0.61	0.79	0.86	3.42	2.39	2.58	4.76	1.85	1.66	1.27	0.78	1.35

Calendar year 1958: Max 2,370 Min 46 Mean 244 Cfsm 2.07 In. 28.12
Water year 1958-59: Max 1,990 Min 46 Mean 194 Cfsm 1.64 In. 22.32

Peak discharge (base, 2,800 cfs).--Jan. 21 (10 p.m.) 8,180 cfs (10.40 ft); Apr. 12 (1:30 p.m.) 3,260 cfs (7.28 ft).

* Discharge measurement made on this day.
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 1959. Prior to December 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.--55 years, 5,608 cfs (unadjusted).

Extremes.--Maximum discharge during year, 19,200 cfs Jan. 22 (gage height, 10.96 ft); minimum, 1,440 cfs Dec. 18 (gage height, 3.47 ft); minimum daily, 1,480 cfs Dec. 18.
1904-59: 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. 213).

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

3.4	1,340
4.0	2,330
6.0	6,750
10.0	16,800

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,370	4,360	4,490	1,700	3,270	5,220	2,120	2,060	2,120	3,720	6,820	3,950
2	7,010	4,190	3,450	1,910	5,580	5,560	2,260	1,960	2,740	5,520	4,770	4,800
3	7,670	7,160	3,540	2,800	*3,140	4,720	2,570	1,930	2,190	2,600	5,060	4,340
4	7,790	6,550	2,810	7,110	3,340	*5,110	3,420	*2,850	3,760	1,680	5,230	4,130
5	*8,740	6,280	4,800	7,860	4,620	5,240	2,550	3,480	1,830	1,620	4,130	3,420
6	8,080	*5,250	4,950	5,580	4,680	6,320	2,550	3,460	1,860	*2,970	*4,940	3,480
7	4,580	7,510	3,770	*3,320	4,220	6,550	2,060	2,850	1,880	4,350	6,440	5,240
8	5,980	6,160	*5,480	5,120	3,980	4,100	1,960	5,020	1,760	5,390	5,550	*5,330
9	6,580	5,030	6,010	7,760	3,080	2,810	*1,980	2,170	1,730	4,040	2,200	5,790
10	7,210	5,120	4,870	4,280	1,980	2,930	3,270	1,750	1,710	3,770	3,800	5,210
11	7,250	5,610	2,540	1,980	4,950	3,850	2,740	3,120	1,710	5,660	5,550	6,080
12	6,550	7,990	1,600	2,610	2,580	7,450	7,940	2,370	3,060	2,940	5,380	5,070
13	8,470	5,010	3,820	1,730	3,180	6,130	13,200	1,890	2,240	4,040	5,210	3,180
14	7,080	5,530	2,580	1,670	3,170	3,720	7,780	2,130	2,680	4,610	5,960	4,620
15	6,840	5,550	3,530	2,850	5,480	3,130	3,970	2,460	3,120	4,200	5,290	5,740
16	4,210	3,170	2,460	9,320	4,890	4,750	2,850	1,710	*3,070	3,430	3,750	5,760
17	6,160	5,720	1,910	4,250	3,030	6,920	2,460	1,680	1,950	5,010	5,980	6,150
18	7,340	6,020	1,480	3,030	3,290	6,530	3,720	1,680	2,520	4,840	5,450	4,400
19	5,560	5,660	1,840	4,260	5,940	6,490	5,410	1,650	2,250	3,120	7,590	4,000
20	6,360	5,740	3,880	2,790	5,350	2,900	6,490	1,650	1,670	5,310	5,600	2,910
21	2,190	3,970	3,210	4,200	5,000	1,810	5,620	1,750	1,680	5,640	5,480	4,240
22	5,310	5,270	5,150	14,500	4,290	2,600	3,470	1,710	4,620	6,610	5,210	4,810
23	4,120	5,540	4,180	7,730	2,310	4,300	2,700	1,860	3,510	4,890	4,380	6,410
24	5,040	5,230	2,140	2,870	2,150	2,490	2,440	1,760	2,720	3,660	5,620	7,880
25	4,250	3,750	1,900	2,330	2,220	3,870	2,290	1,700	3,220	3,480	7,370	5,960
26	4,790	5,470	1,550	2,150	1,880	5,150	2,190	1,710	4,090	3,780	8,690	2,850
27	7,190	6,150	1,960	2,060	1,880	12,800	2,100	1,730	3,240	5,400	7,210	2,240
28	6,530	6,130	2,110	2,350	2,870	4,770	2,050	1,790	2,420	6,430	7,230	3,650
29	5,870	6,470	3,950	1,880	-	3,420	2,550	1,760	5,020	6,240	7,830	5,070
30	6,160	6,600	2,240	1,840	--------	2,490	2,380	1,710	5,000	6,870	4,160	3,850
31	5,290	--------	1,750	1,810	--------	2,150	--------	1,760	--------	5,890	6,610	--------
Total	193,570	168,190	99,950	125,650	102,350	146,280	109,090	67,110	81,370	137,710	174,490	140,560
Mean	6,244	5,606	3,224	4,053	3,655	4,719	3,636	2,165	2,712	4,442	5,629	4,685

	Observed						Adjusted†					
Calendar year 1958:	Max	14,400	Min	1,480	Mean	5,826	Mean	5,063	Cfsm	2.07	In.	28.13
Water year 1958-59:	Max	14,500	Min	1,480	Mean	4,236	Mean	4,353	Cfsm	1.78	In.	24.19

* Discharge measurement made on this day.
† Adjusted for change in contents in Santeetlah, Chilhowee, Fontana, Thorpe, Cheoah, Calderwood, and Nantahala 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 1959. 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.--14 years, 190 cfs.

Extremes.--Maximum discharge during year, 2,360 cfs Jan. 22 (gage height, 7.75 ft); minimum, 7.5 cfs Sept. 25, 26, 28 (gage height, 0.55 ft); minimum daily, 14 cfs Sept. 25,27. 1945-59: 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, which are fair. Diurnal fluctuation at low flow caused by mill above station.

Revisions (water years).--WSP 1306: 1946(M), 1948-50(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
0.8	31	3.0	488	0.6	10	3.0	468
1.0	60	5.0	1,150	.7	18	4.0	780
2.0	237	7.0	2,000	1.0	55	5.0	1,150
				1.5	126	7.0	2,000
				2.0	220		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*52	42	51	200	96	126	238	155	*69	28	38	43
2	57	74	*44	171	89	*122	356	136	72	33	32	*36
3	45	84	48	135	87	114	595	126	73	38	28	30
4	45	*56	58	117	*117	107	1,310	146	62	30	39	28
5	42	52	60	88	184	107	745	124	55	28	96	39
6	39	51	52	b70	164	524	*482	114	51	34	51	26
7	38	51	46	b65	136	482	347	*108	47	29	37	24
8	37	41	b47	b68	131	322	275	98	45	27	32	24
9	35	48	48	b70	124	262	231	91	42	25	29	22
10	31	54	b46	73	116	224	206	89	41	24	*27	22
11	35	52	b45	b65	105	188	330	84	39	20	24	22
12	31	45	b42	b60	91	238	1,200	80	38	22	22	37
13	31	44	b40	79	100	277	1,510	172	38	*22	22	26
14	37	41	37	95	116	266	798	220	38	26	21	22
15	31	39	b35	137	628	260	566	172	34	25	21	24
16	31	41	b40	202	524	229	454	138	33	22	16	19
17	31	39	52	177	334	204	347	117	33	44	19	18
18	35	38	b48	b140	271	174	286	107	33	42	25	19
19	44	38	b45	b130	208	153	279	97	32	33	20	19
20	41	39	42	189	162	143	242	86	32	50	27	22
21	38	38	b40	476	138	134	220	80	30	50	30	16
22	37	37	39	1,780	128	129	322	84	30	38	33	20
23	34	34	57	675	198	114	552	80	32	37	24	16
24	38	34	51	360	233	105	482	70	39	34	21	22
25	34	35	51	257	194	98	360	63	54	36	26	14
26	34	31	b45	210	172	103	286	61	72	33	24	16
27	42	34	b40	178	153	1,730	249	65	47	36	32	14
28	51	41	108	152	136	902	222	65	38	38	34	16
29	45	105	1,150	128	-	524	192	59	33	49	45	20
30	41	70	516	116	-------	386	170	62	29	72	45	66
31	37	-------	266	105	-------	298	-------	89	-------	50	45	-------
Total	1,199	1,428	3,289	6,768	5,135	9,045	13,852	3,238	1,311	1,075	985	742
Mean	38.7	47.6	106	218	183	292	462	104	43.7	34.7	31.8	24.7
Cfsm	0.278	0.342	0.763	1.57	1.32	2.10	3.32	0.748	0.314	0.250	0.229	0.178
In.	0.32	0.38	0.88	1.81	1.37	2.42	3.71	0.87	0.35	0.29	0.26	0.20

Calendar year 1958: Max 2,810 Min 31 Mean 228 Cfsm 1.64 In. 22.21
Water year 1958-59: Max 1,780 Min 14 Mean 132 Cfsm 0.950 In. 12.86

Peak discharge (base, 1,300 cfs).--Dec. 29 (10:30 a.m.) 1,470 cfs (5.84 ft); Jan. 22 (9 a.m.) 2,360 cfs (7.75 ft); Mar. 27 (1:30 p.m.) 2,320 cfs (7.73 ft); Apr. 4 (10 a.m.) 1,600 cfs (6.11 ft); Apr. 12 (10:30 p.m.) 2,320 cfs (7.73 ft).

* Discharge measurement made on this day.
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 1959 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 1,928.96 ft above mean sea level (Tennessee Valley Authority bench mark).

Average discharge.--7 years, 74.0 cfs.

Extremes.--Maximum discharge during year, 2,250 cfs Jan. 22 (gage height, 3.65 ft); minimum, 6.3 cfs Dec. 21 (gage height, 1.31 ft).

1952-59: Maximum discharge, 2,740 cfs Jan. 29, 1957 (gage height, 4.48 ft in gage well, 4.7 from outside gage), 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 6-8)

1.3	5.7	2.0	125
1.5	18	2.3	265
1.6	26	2.6	470
1.7	42	3.0	1,080

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*20	15	20	62	a32	39	90	64	*40	a14	13	9.2
2	20	22	18	52	a35	39	212	60	82	a13	11	9.2
3	18	25	19	40	a40	37	250	57	72	a12	10	8.6
4	17	*19	24	34	*a50	36	320	67	47	a12	12	8.6
5	16	15	24	22	95	36	215	52	37	a11	13	9.2
6	15	17	22	18	77	240	157	42	31	a13	12	8.6
7	15	16	19	19	62	180	129	*40	28	a12	11	8.6
8	14	13	17	20	60	122	105	39	24	a11	12	8.6
9	14	14	16	21	54	99	90	37	22	a10	12	8.6
10	15	15	15	20	47	82	92	36	21	a11	12	8.0
11	14	14	14	17	47	74	193	34	20	a12	10	8.0
12	14	13	13	17	39	133	578	32	23	a12	9.8	8.0
13	13	13	13	19	50	118	416	47	28	13	9.8	8.6
14	13	12	13	32	102	105	276	67	21	13	9.2	8.6
15	13	12	10	70	362	99	220	47	20	15	9.2	8.0
16	13	12	12	133	215	90	175	40	17	14	13	8.0
17	13	12	13	a90	149	80	145	36	17	15	12	8.0
18	13	12	12	a70	118	70	122	36	16	19	10	7.4
19	13	12	12	a60	87	60	115	36	16	16	9.8	7.4
20	13	13	12	a90	72	57	99	31	16	14	12	7.4
21	13	12	12	a210	60	52	87	29	13	15	10	7.4
22	13	12	12	a350	52	50	115	204	13	15	9.8	7.4
23	13	12	12	a210	60	44	210	157	13	15	9.2	7.4
24	13	12	14	a120	62	39	157	84	16	13	9.8	7.4
25	13	12	15	a75	52	37	125	62	20	13	12	7.4
26	13	12	12	a60	47	37	105	47	52	13	9.8	6.9
27	13	12	12	a50	42	454	90	40	a80	12	9.8	6.9
28	14	13	62	a45	39	225	82	37	a30	12	9.8	6.9
29	48	47	235	a40	-	157	74	32	a20	11	11	7.4
30	13	28	115	a35	--------	133	70	34	a15	12	11	26
31	13	--------	80	a33	--------	108	--------	34	--------	16	9.8	--------
Total	475	468	899	2,134	2,207	3,132	5,104	1,660	870	409	334.8	257.7
Mean	15.3	15.6	29.0	68.8	78.8	101	170	53.5	29.0	13.2	10.8	8.59
Cfsm	0.297	0.303	0.563	1.34	1.53	1.96	3.30	1.04	0.563	0.256	0.210	0.167
In.	0.34	0.34	0.65	1.54	1.59	2.26	3.69	1.20	0.63	0.30	0.24	0.19

Calendar year 1958: Max 1,940 Min 10 Mean 90.3 Cfsm 1.75 In. 23.82
Water year 1958-59: Max 578 Min 6.9 Mean 49.2 Cfsm 0.955 In. 12.97

Peak discharge (base, 700 cfs).--Jan. 22 (time unknown) 2,250 cfs (3.65 ft); Mar. 27 (5 a.m.) 1,110 cfs (3.02 ft); Apr. 12 (3 to 4 p.m.) 1,050 cfs (2.98 ft); June 27 (1 a.m.) 1,390 cfs (3.18 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 nearby stations.

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 1959. 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 datum 1.0 ft lower.

Average discharge.--39 years, 698 cfs.

Extremes.--Maximum discharge during year, 7,840 cfs Jan. 22 (gage height, 11.20 ft); minimum, 46 cfs Dec. 12; minimum gage height, 1.26 ft Sept. 28, 29.
1920-59: 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, which are fair.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1921-23(M), 1926-27(M), 1929-31(M).

Rating tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
1.5	72	5.0	1,650	1.2	40	3.0	575
2.0	170	8.0	4,350	1.5	95	5.0	1,775
2.5	310	11.0	7,600	2.0	200	8.0	4,350
3.0	520			2.5	350	11.0	7,600

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*142	110	212	695	394	530	1,050	650	*279	131	180	180
2	161	157	*170	560	362	*495	1,200	580	406	123	137	*169
3	155	218	159	450	340	457	2,050	510	418	119	117	139
4	144	*220	170	366	414	439	3,750	520	322	121	109	119
5	127	178	195	b250	812	418	3,060	575	267	119	125	147
6	118	155	190	b170	812	1,520	*1,910	470	231	117	169	159
7	112	144	170	*b160	650	1,900	1,450	*422	210	133	147	119
8	106	123	146	b180	590	1,420	1,170	394	192	119	129	119
9	104	129	133	b200	550	1,110	990	362	180	103	117	99
10	104	131	b120	b170	510	960	840	340	169	99	*103	91
11	103	133	104	b150	466	812	1,140	322	165	103	97	87
12	101	131	95	b160	398	870	3,440	306	167	99	89	107
13	95	123	b100	b200	390	1,080	6,720	402	180	*91	83	101
14	95	114	b95	256	545	1,050	3,450	702	163	95	77	105
15	94	110	b90	485	2,260	1,020	2,260	675	153	105	77	91
16	95	114	86	845	2,400	960	1,840	540	143	109	91	81
17	95	114	106	b700	1,610	840	1,480	444	139	107	105	79
18	97	106	104	b580	1,260	730	1,260	414	133	135	79	70
19	103	106	103	b500	990	625	1,170	390	129	159	81	66
20	108	106	108	620	785	580	1,050	336	129	133	137	64
21	108	104	b90	1,170	625	545	930	303	125	139	121	62
22	106	99	b95	7,160	575	515	990	442	119	157	109	66
23	108	97	99	3,750	625	462	1,040	730	119	163	109	61
24	103	95	121	1,710	930	414	1,780	439	129	159	95	61
25	99	92	131	1,230	840	382	1,450	332	171	139	159	59
26	101	94	97	960	730	362	1,200	285	282	139	141	59
27	103	95	97	812	650	3,840	1,020	279	478	129	123	55
28	103	101	242	675	585	4,350	900	297	246	127	125	52
29	114	215	2,140	585	-	2,120	785	270	171	133	145	57
30	118	280	2,070	510	-------	1,580	702	255	145	127	180	161
31	108	-------	1,020	448	-------	1,260	-------	264	-------	231	192	-------
Total	3,430	3,994	8,858	26,707	22,098	33,646	52,077	13,250	6,160	3,963	3,748	2,885
Mean	111	133	286	862	789	1,085	1,736	427	205	128	121	96.2
Cfsm	0.210	0.252	0.542	1.63	1.49	2.05	3.29	0.809	0.388	0.242	0.229	0.182
In.	0.24	0.28	0.62	1.88	1.56	2.37	3.67	0.93	0.43	0.28	0.26	0.20

Calendar year 1958: Max 10,800 Min 86 Mean 833 Cfsm 1.58 In. 21.40
Water year 1958-59: Max 7,160 Min 52 Mean 495 Cfsm 0.937 In. 12.72

Peak discharge (base, 5,000 cfs).--Jan. 22 (9 a.m.) 7,840 cfs (11.20 ft); Mar. 27 (10 to 11 p.m.) 6,060 cfs (9.60 ft); Apr. 13 (6 a.m.) 7,600 cfs (10.98 ft).

* Discharge measurement made on this day.
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 1959 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 1,925.00 ft above mean sea level (Interstate Railroad bench mark).

Average discharge.--10 years, 140 cfs.

Extremes.--Maximum discharge during year, 2,560 cfs Jan. 22 (gage height, 8.89 ft); minimum, 6.8 cfs Oct. 18 (gage height, 1.54 ft).
1949-59: 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 prior to Apr. 16, poor thereafter.

Revisions (water years).--WSP 1436: 1950(P), 1955(P).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 8, 10-15, Jan. 6-12, 17-19)

Oct. 1 to Apr. 15				Apr. 16 to Sept. 30			
1.5	4.0	3.0	250	1.7	11	3.0	228
1.6	11	5.0	825	2.0	36	4.0	490
1.8	35	7.0	1,600	2.5	124	5.0	825
2.0	64	9.0	2,620				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	11	28	120	60	98	157	75	a90	23	a25	66
2	*29	21	23	107	55	96	210	a75	*a350	a27	a22	43
3	23	19	*24	84	*52	*87	308	a70	650	a25	a20	42
4	18	18	33	70	84	87	531	a65	263	a23	a22	35
5	15	*15	35	67	136	91	385	a55	152	a22	a20	31
6	12	12	33	b65	127	580	262	*a54	112	a22	a30	29
7	10	10	30	b68	105	430	*200	a52	90	a20	a25	34
8	10	9.6	b28	b70	100	264	161	a50	70	a19	a20	43
9	9.6	9.6	25	b60	93	212	134	a50	60	a20	a18	52
10	9.6	9.6	b24	b55	91	178	121	a52	53	a21	a16	84
11	9.6	9.6	b22	b50	89	152	147	a60	53	a22	a14	98
12	9.6	9.6	b22	b47	74	362	729	80	55	a23	a13	a60
13	8.2	8.9	b23	45	96	400	1,150	340	60	a23	a12	a25
14	8.2	8.9	b20	64	156	276	550	172	53	a22	a12	a20
15	8.9	8.9	b18	103	595	226	346	a110	a50	a22	a11	a15
16	8.9	9.6	16	216	490	182	217	a85	a45	a25	a12	a14
17	8.2	10	17	b150	288	156	197	a75	a42	a27	a15	a13
18	7.5	9.6	19	b120	228	134	156	a90	a38	a30	a16	a13
19	11	10	19	b140	168	120	160	a95	a35	42	a15	a12
20	12	10	18	156	129	107	152	a90	a34	122	a16	a12
21	9.6	10	19	337	103	102	148	a85	a33	71	a18	a12
22	9.6	10	17	2,110	94	93	158	a90	32	46	a20	a11
23	8.9	9.6	16	696	120	82	261	a100	31	a35	a17	a11
24	9.6	9.6	19	284	141	70	213	a80	44	a36	a13	a11
25	9.6	8.9	25	194	125	62	150	a70	64	a38	a15	a11
26	9.6	8.9	23	152	121	61	a130	a60	55	46	a17	a11
27	9.6	8.9	24	123	111	832	a110	a55	37	73	a35	a10
28	9.6	15	63	103	100	520	a100	a120	28	104	a60	a9.5
29	8.9	52	685	89	-	290	a90	a75	24	a60	a50	a10
30	8.9	41	298	77	--------	232	a80	a65	21	a45	a45	28
31	9.6	--------	165	69	--------	186	--------	a60	--------	a30	a35	--------
Total	347.8	403.8	1,831	6,091	4,131	6,768	7,713	2,655	2,724	1,164	679	865.5
Mean	11.2	13.5	59.1	196	148	218	257	85.6	90.8	37.5	21.9	28.8
Cfsm	0.128	0.155	0.677	2.25	1.70	2.50	2.94	0.981	1.04	0.430	0.251	0.330
In.	0.15	0.17	0.78	2.59	1.76	2.88	3.29	1.13	1.16	0.50	0.29	0.37

Calendar year 1958: Max 1,960 Min 7.5 Mean 140 Cfsm 1.60 In. 21.80
Water year 1958-59: Max 2,110 Min 7.5 Mean 96.9 Cfsm 1.11 In. 15.07

Peak discharge (base, 1,500 cfs).--Jan. 22 (6:30 a.m.) 2,560 cfs (8.89 ft); Apr. 12 (10 p.m.) 1,680 cfs (7.15 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations.
b Stage-discharge relation affected by ice.

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 Obeys Creek, and 2.6 miles northeast of Gate City, Scott County.

Drainage area.--106 sq mi.

Records available.--September 1947 to September 1959.

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.--12 years, 145 cfs.

Extremes.--Maximum discharge during year, 2,720 cfs Jan. 22 (gage height, 9.40 ft); minimum, 13 cfs Dec. 27 (gage height, 2.16 ft).
1947-59: 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.

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

Revisions (water years).--WSP 1143: 1948. WSP 1306: 1948-50(M). WSP 1556: 1951(M).

Rating tables, water year 1958-59, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 24 to July 11)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
2.3	22	4.0	332	2.2	16	4.0	332
2.5	39	6.0	810	2.5	44	6.0	810
2.7	60	8.0	1,880	3.0	120	8.0	1,880
3.0	114						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*43	35	39	68	76	99	178	124	91	41	28	33
2	46	36	34	64	*71	96	191	116	92	39	23	28
3	41	40	*34	58	68	*91	310	107	91	40	22	24
4	38	37	44	51	120	91	387	115	82	39	22	22
5	37	32	45	41	288	91	321	102	76	38	23	21
6	36	*32	39	33	193	409	251	*96	72	38	23	21
7	35	31	34	45	136	376	204	189	70	42	22	24
8	34	30	30	49	120	233	*174	116	67	37	23	31
9	34	30	29	43	115	191	154	99	63	36	34	24
10	35	30	b26	39	107	166	142	91	61	36	27	22
11	35	30	b25	29	97	144	185	84	60	62	24	44
12	34	28	b26	b35	83	226	770	83	57	40	22	29
13	34	28	b27	b40	107	229	1,190	189	60	32	21	22
14	34	28	b27	44	266	185	580	365	60	31	20	22
15	34	28	b22	92	742	170	409	196	56	29	20	21
16	34	29	b23	453	508	150	321	144	54	28	21	20
17	34	29	b25	255	332	133	257	120	*52	33	26	20
18	33	28	b30	122	255	122	218	122	48	29	20	19
19	38	28	34	102	191	115	213	120	47	33	26	18
20	36	28	33	98	148	109	200	104	45	33	22	18
21	35	28	27	524	125	106	178	102	44	29	23	18
22	34	27	b29	1,880	113	106	187	122	43	26	22	18
23	34	26	30	555	144	94	376	257	42	25	22	18
24	34	26	34	310	154	88	299	152	47	26	31	18
25	34	25	30	211	129	83	229	127	53	27	26	18
26	34	26	22	166	118	84	196	111	58	25	37	18
27	34	26	26	138	111	944	172	111	50	23	48	18
28	34	29	214	120	104	542	162	113	48	24	33	18
29	34	44	580	104	-	321	146	102	43	23	60	20
30	33	58	200	94	--------	257	131	96	41	27	41	30
31	32	--------	98	83	--------	213	--------	92	--------	24	38	--------
Total	1,097	932	1,916	5,946	5,021	6,264	8,731	4,067	1,773	1,015	850	677
Mean	35.4	31.1	61.8	192	179	202	291	131	59.1	32.7	27.4	22.6
Cfsm	0.334	0.293	0.583	1.81	1.69	1.91	2.75	1.24	0.558	0.308	0.258	0.213
In.	0.38	0.33	0.67	2.09	1.76	2.20	3.06	1.43	0.62	0.36	0.30	0.24

Calendar year 1958: Max 2,870 Min 22 Mean 169 Cfsm 1.59 In. 21.57
Water year 1958-59: Max 1,880 Min 18 Mean 105 Cfsm 0.991 In. 13.44

Peak discharge (base, 1,200 cfs).--Jan. 22 (11 a.m.) 2,720 cfs (9.40 ft); Mar. 27 (6 p.m.) 1,580 cfs (7.46 ft); Apr. 13 (2 a.m.) 1,880 cfs (7.97 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 1959. 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.--39 years, 1,577 cfs.

Extremes.--Maximum discharge during year, 15,800 cfs Jan. 22 (gage height, 15.70 ft); minimum, 118 cfs Sept. 29 (gage height, 1.25 ft).
1920-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 6-12)

Oct. 1 to Dec. 31				Jan. 1 to Sept. 30			
1.5	150	4.0	1,400	1.2	110	3.0	680
2.0	280	6.0	3,200	1.5	160	4.0	1,400
2.5	465	9.0	6,560	2.0	295	6.0	3,200
3.0	750	16.0	16,300	2.5	455	9.0	6,560
						16.0	16,300

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*253	202	480	a1,500	a900	a1,300	2,510	1,480	1,400	280	334	410
2	283	218	*404	a1,100	a800	*a1,200	2,420	1,400	1,880	247	346	526
3	310	250	352	a1,000	734	1,120	3,300	1,240	2,280	241	271	*420
4	307	320	400	a800	1,080	1,080	4,670	1,280	1,720	223	232	325
5	283	345	408	a600	1,880	1,040	6,200	*1,160	1,240	211	217	334
6	256	*317	404	a400	2,100	2,320	4,560	1,120	895	214	205	277
7	232	268	380	a350	1,800	4,230	3,300	1,120	704	217	217	283
8	215	244	345	*a500	1,560	3,400	*2,700	930	575	202	280	295
9	210	241	310	552	1,440	2,600	2,330	818	498	202	262	265
10	210	226	280	498	1,320	2,240	2,100	752	455	190	229	250
11	210	223	256	a400	1,240	1,920	2,100	692	416	235	*200	313
12	202	241	235	a370	1,080	2,330	4,680	664	392	247	176	295
13	190	226	208	a450	1,280	2,900	13,300	1,160	379	200	164	235
14	188	215	208	a700	2,150	2,600	9,320	2,200	410	*195	152	217
15	188	210	a200	a1,100	5,000	2,420	5,240	1,970	373	178	144	198
16	188	210	a200	a1,800	6,320	2,200	3,900	1,560	343	195	140	192
17	185	205	a230	a1,500	4,230	1,920	3,200	1,280	319	198	142	174
18	188	202	a230	a1,200	3,100	1,720	2,800	1,120	298	208	154	158
19	185	202	a230	a1,200	2,420	1,560	2,600	1,240	*280	265	172	152
20	185	195	a220	a2,000	1,970	1,400	2,510	1,040	268	448	160	144
21	190	192	a200	a6,000	a1,400	1,320	2,330	965	259	392	162	137
22	192	192	a210	a15,000	a1,300	1,240	2,200	1,160	253	298	192	134
23	192	185	a220	a6,000	a1,500	1,120	2,800	1,840	238	289	188	131
24	188	180	a250	a3,300	a1,800	1,000	3,600	1,680	283	298	337	130
25	185	172	a300	a2,500	a1,700	895	3,200	1,200	349	379	256	128
26	180	172	a210	a2,000	a1,600	842	2,600	895	361	343	229	122
27	180	168	a300	a1,700	a1,500	6,370	2,240	740	466	298	416	120
28	182	180	a2,200	a1,500	a1,400	9,680	2,020	2,280	605	313	361	120
29	180	280	a8,000	a1,300	-	5,600	1,840	1,800	427	304	514	120
30	178	412	a4,500	a1,100	--------	3,700	1,640	1,600	331	361	438	146
31	185	--------	2,300	a1,000	--------	2,900	--------	1,520	--------	310	466	--------
Total	6,500	6,893	24,670	59,420	54,604	76,167	108,210	39,906	18,697	8,181	7,756	6,751
Mean	210	230	796	1,917	1,950	2,457	3,607	1,287	623	264	250	225
Cfsm	0.187	0.204	0.707	1.70	1.73	2.18	3.20	1.14	0.553	0.234	0.222	0.200
In.	0.21	0.23	0.81	1.96	1.80	2.52	3.57	1.32	0.62	0.27	0.26	0.22

Calendar year 1958: Max 30,700 Min 168 Mean 1,818 Cfsm 1.61 In. 21.91
Water year 1958-59: Max 15,000 Min 120 Mean 1,145 Cfsm 1.02 In. 13.79

Peak discharge (base, 10,000 cfs).--Jan. 22 (time unknown) 15,800 cfs (15.70 ft); Mar. 28 (2:30 a.m.) 10,900 cfs (12.53 ft); Apr. 13 (10:30 a.m.) 14,400 cfs (14.91 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, recorded range in stage, weather records, and records for nearby stations.

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.--November 1950 to September 1952 (annual maximum only), October 1952 to September 1959, discontinued (monthly discharge only May to September 1959).

Gage.--Water-stage recorder and crest-stage indicators. Datum of gage is 1,814.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years, 35.4 cfs.

Extremes.--Maximum discharge during year, 702 cfs Jan. 21 (gage height, 6.85 ft); minimum not determined.
1950-59: Maximum discharge, 811 cfs May 6, 1958 (gage height, 7.46 ft); minimum, 1.0 cfs Sept. 17-19, 23, 24, 1954.

Remarks.--Records good prior to Feb. 9, poor thereafter.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 15, 16, 21, 22, 26, Jan. 6, 10-12, 17-19)

1.3	3.4	2.0	44
1.4	4.9	3.0	142
1.5	8.0	5.0	425
1.7	20		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.5	3.8	5.6	26	19	a28	a50					
2	5.4	4.2	4.9	23	17	27	a60					
3	4.6	4.2	5.6	18	17	26	a90		(*)			
4	4.4	4.2	9.8	16	40	25	a130					
5	4.2	4.2	8.0	13	69	26	a100					
6	3.8	4.1	6.8	11	54	64	a75					
7	3.7	4.1	5.6	9.8	44	a90	*a55					
8	3.7	4.1	5.1	*9.8	40	a60	a50					
9	3.7	4.1	4.9	10	33	44	a40					
10	3.6	4.1	4.7	7.0	26	34	a36					
11	3.6	4.1	4.6	6.0	23	33	a45					
12	3.6	3.8	4.4	6.2	19	80	a150					
13	3.6	3.8	4.4	6.5	43	70	a250					
14	3.6	3.8	4.2	8.0	132	58	a120					
15	3.6	3.8	4.0	22	260	a50	a80					
16	3.6	4.1	4.2	67	142	39	a60					
17	3.6	4.1	4.4	50	80	38	a50					
18	3.6	4.1	4.4	45	60	34	a45					
19	3.8	4.1	4.2	40	43	33	a50					
20	3.8	4.1	4.1	49	34	32	a45					
21	3.8	4.1	3.6	202	31	a30	a50					
22	3.8	3.8	3.7	410	a40	a27	a70					
23	3.8	3.8	3.8	142	53	a25	a90					
24	3.7	3.8	4.7	75	52	a23	a70					
25	3.7	3.8	4.1	50	49	a22	a50					
26	3.8	3.8	4.0	40	44	a25	a40					
27	4.1	3.8	5.6	34	38	a190	a36					
28	4.1	4.9	56	30	a30	a130	a33					
29	3.8	12	100	26	-	a100	a31					
30	3.8	6.8	47	24	--------	a70	a29					
31	3.8	--------	33	21	--------	a60	--------		--------			--------
Total	122.2	131.5	369.4	1,497.3	1,532	1,593	2,080	-	-	-	-	-
Mean	3.94	4.38	11.9	48.3	54.7	51.4	69.3	27.4	28.0	8.71	7.10	7.67
Cfsm	0.171	0.190	0.515	2.09	2.37	2.23	3.00	1.19	1.21	0.377	0.307	0.332
In.	0.20	0.21	0.59	2.41	2.47	2.56	3.35	1.37	1.35	0.43	0.35	0.37

Calendar year 1958: Max 654 Min 3.6 Mean 36.8 Cfsm 1.59 In. 21.62
Water year 1958-59: Max - Min - Mean 26.7 Cfsm 1.16 In. 15.66

Peak discharge (base, 500 cfs).--Jan. 21 (12 p.m.) 702 cfs (6.85 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, 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, Claiborne County, and at mile 159.8.

Drainage area.--1,474 sq mi.

Records available.--October 1918 to September 1959. 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.--41 years, 2,079 cfs.

Extremes.--Maximum discharge during year, 18,200 cfs Jan. 23 (gage height, 11.42 ft); minimum, 146 cfs Sept. 28, 29 (gage height, 0.50 ft).

1918-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.5	146	3.0	1,990
.7	220	5.0	4,800
1.0	350	9.0	12,400
1.5	650	11.0	17,100
2.0	1,030		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	300	232	*484	2,420	1,120	1,570	3,170	1,690	*1,760	*416	383	550
2	323	252	544	1,710	*1,010	*1,450	2,780	1,550	2,040	361	350	478
3	*332	*264	520	1,410	934	1,360	3,230	1,420	2,440	323	*405	*587
4	356	274	496	1,180	1,180	1,300	4,720	*1,330	2,420	310	341	502
5	356	336	526	*998	2,260	1,240	6,420	1,290	1,660	296	310	410
6	332	383	526	783	2,560	1,700	6,400	1,220	1,250	296	278	372
7	310	366	508	587	2,320	3,950	*4,400	1,160	1,010	292	260	356
8	287	323	478	608	1,920	4,720	3,300	1,140	846	287	269	361
9	269	296	444	776	1,680	3,530	2,670	998	727	269	305	356
10	260	282	405	699	1,530	2,810	2,270	918	650	269	318	372
11	256	269	372	594	1,420	2,380	2,080	862	594	274	287	356
12	252	264	336	615	1,310	2,500	4,060	814	550	269	260	336
13	248	269	323	615	1,300	3,380	12,400	886	520	350	232	361
14	236	278	305	587	2,960	3,440	14,400	1,520	490	287	209	300
15	236	269	282	692	5,770	3,030	8,640	2,220	502	260	197	269
16	232	264	323	1,870	8,000	2,690	5,630	1,770	466	260	182	252
17	228	264	328	2,880	6,590	2,380	4,420	1,420	427	244	178	244
18	228	260	292	2,140	4,450	2,080	3,620	1,230	400	256	178	228
19	232	260	278	1,620	3,300	1,840	3,600	1,220	372	274	186	209
20	232	260	282	1,490	2,550	1,650	3,980	1,230	356	346	224	193
21	232	252	274	2,900	2,000	1,540	3,660	1,160	341	496	209	186
22	232	244	305	11,900	1,670	1,470	3,130	1,090	332	490	201	175
23	232	240	292	16,500	1,800	1,360	2,960	1,440	323	405	228	171
24	236	240	296	8,920	2,240	1,250	3,840	1,950	323	383	240	164
25	232	236	305	4,340	2,240	1,150	4,060	1,550	449	432	416	160
26	232	232	305	2,980	2,160	1,090	3,400	1,200	478	466	405	157
27	228	228	328	2,360	1,910	3,970	2,800	974	484	432	296	153
28	224	244	1,830	1,980	1,720	11,500	2,400	1,180	550	366	544	150
29	224	394	3,260	1,690	-	9,340	2,120	2,170	685	356	449	146
30	224	410	4,670	1,450	-------	5,440	1,890	1,730	500	383	615	171
31	224	-------	4,180	1,260	-------	3,960	-------	1,820	-------	405	587	-------
Total	8,025	8,385	24,097	80,554	69,904	91,070	132,450	42,152	23,945	10,553	9,542	8,725
Mean	259	280	777	2,599	2,497	2,938	4,415	1,360	798	340	308	291
Cfsm	0.176	0.190	0.527	1.76	1.69	1.99	3.00	0.923	0.541	0.231	0.209	0.197
In.	0.20	0.21	0.61	2.03	1.76	2.30	3.34	1.06	0.60	0.27	0.24	0.22

Calendar year 1958: Max 28,900 Min 224 Mean 2,187 Cfsm 1.48 In. 20.15
Water year 1958-59: Max 16,500 Min 146 Mean 1,396 Cfsm 0.947 In. 12.84

Peak discharge (base, 14,000 cfs).--Jan. 23 (6 a.m.) 18,200 cfs (11.42 ft); Apr. 14 (12:30 a.m.) 16,400 cfs (10.72 ft).

* Discharge measurement made on this day.

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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 1959 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 1,459.07 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.--15 years, 203 cfs.

Extremes.--Maximum discharge during year, 5,520 cfs Jan. 21 (gage height, 6.71 ft); minimum, 16 cfs Aug. 19 (gage height, 0.82 ft).
1944-59: 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 except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 1053: Drainage area. WSP 1276: 1948. WSP 1436: 1949(M), 1950(P), 1951-53(M), 1955(P).

Rating table, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 28 to Apr. 12)

0.8	14	2.0	300
1.0	38	3.0	930
1.5	134	4.0	1,850
1.7	179	5.0	3,000

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	28	49	166	100	150	242	134	138	33	34	64
2	*46	30	*41	152	94	*142	300	126	*951	46	29	43
3	34	26	51	138	*94	144	396	166	734	41	26	33
4	29	25	56	128	144	140	648	146	330	34	28	29
5	26	*23	56	100	166	148	540	*132	198	30	50	51
6	25	23	58	b70	156	396	390	122	150	29	28	32
7	23	22	56	b80	140	396	*280	112	128	28	26	43
8	22	21	54	*b88	138	275	238	106	108	24	44	41
9	21	22	56	b80	132	234	198	100	96	24	34	48
10	26	23	44	b70	138	198	179	98	88	28	28	82
11	25	22	40	b60	140	192	201	92	78	26	23	98
12	23	21	40	b50	132	672	943	90	86	28	21	56
13	22	21	40	b60	188	564	1,170	188	86	26	18	40
14	22	21	34	110	384	390	630	207	72	25	18	33
15	21	24	28	204	1,020	306	438	154	64	29	18	29
16	21	28	b25	366	672	230	330	130	58	33	18	28
17	21	25	b26	265	432	198	255	114	54	33	17	24
18	25	24	b28	b190	318	172	222	146	49	34	16	23
19	38	26	32	b170	214	152	234	150	48	35	38	22
20	28	28	33	285	172	146	222	138	44	86	28	22
21	26	25	29	2,440	150	142	226	128	43	43	28	21
22	25	25	30	1,950	142	130	260	147	41	33	29	21
23	25	24	33	846	172	118	426	152	40	35	24	20
24	26	24	44	b400	172	112	402	130	60	32	24	20
25	26	24	35	b300	166	108	285	112	72	37	26	18
26	28	24	26	b200	166	118	218	96	56	57	29	18
27	26	24	33	b180	146	902	188	86	43	104	90	18
28	26	57	252	159	138	660	172	181	40	80	98	17
29	26	114	811	130	-	474	152	118	35	76	94	16
30	26	68	384	120	-------	372	140	104	34	48	54	74
31	26	-------	210	108	-------	285	-------	96	-------	41	54	-------
Total	846	892	2,734	9,665	6,226	8,666	10,525	4,001	4,024	1,258	1,094	1,086
Mean	27.3	29.7	88.2	312	222	280	351	129	134	40.6	35.3	36.2
Cfsm	0.244	0.265	0.787	2.79	1.98	2.50	3.13	1.15	1.20	0.362	0.315	0.323
In.	0.28	0.30	0.91	3.21	2.07	2.88	3.49	1.33	1.34	0.42	0.36	0.36

Calendar year 1958: Max 3,280 Min 21 Mean 192 Cfsm 1.71 In. 23.32
Water year 1958-59: Max 2,440 Min 17 Mean 140 Cfsm 1.25 In. 16.95

Peak discharge (base, 1,600 cfs).--Jan. 21 (6 p.m.) 5,520 cfs (6.71 ft); Apr. 12 (9 p.m.) 1,950 cfs (4.08 ft); June 2 (2 to 3 p.m.) 1,750 cfs (3.88 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 1959. 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.--28 years, 506 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Jan. 22 (gage height, 18.86 ft); minimum, 37 cfs Sept. 27, 28 (gage height, 1.07 ft).
1931-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 7, 10-12, 19; shifting-control method used Nov. 3-28)

Oct. 1 to Dec. 29				Dec. 30 to Sept. 30			
1.0	30	6.0	2,220	1.0	30	3.0	565
1.4	80	10.0	4,820	1.4	80	6.0	2,220
2.0	184			2.0	195	10.0	4,820
3.0	540			2.5	360	16.0	8,870

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	51	151	467	269	427	655	370	297	76	86	106
2	*122	51	*122	415	240	*427	678	350	1,200	73	76	128
3	122	50	114	360	*225	395	925	325	*2,220	80	65	*94
4	110	55	142	311	378	395	1,240	332	975	86	62	82
5	80	*50	160	246	850	370	1,240	*297	610	76	58	99
6	73	47	148	155	725	750	950	266	455	72	83	94
7	67	45	132	180	565	1,000	*725	243	367	69	74	79
8	63	44	114	*201	488	775	610	222	290	62	72	139
9	60	42	112	192	439	655	520	204	237	58	74	115
10	59	40	109	140	415	610	463	195	201	53	70	96
11	59	40	90	120	423	542	459	185	179	55	*60	141
12	60	41	83	130	370	1,410	1,380	172	162	67	55	162
13	60	40	82	135	506	1,560	3,910	269	164	58	48	110
14	58	40	83	146	1,160	1,080	1,860	447	160	*56	44	86
15	53	39	73	271	2,740	875	1,190	407	139	60	41	74
16	53	41	62	1,100	2,160	725	925	322	123	62	40	66
17	52	46	66	900	1,270	610	750	262	117	60	45	60
18	51	48	66	565	950	542	655	258	110	62	42	55
19	50	48	67	400	725	463	775	471	104	88	42	48
20	56	50	66	498	565	427	975	388	99	135	42	48
21	63	50	59	1,820	463	407	1,000	374	94	148	74	45
22	56	48	63	8,520	415	384	875	318	90	104	59	44
23	52	45	62	2,540	520	332	900	610	86	80	56	42
24	51	42	74	1,190	678	300	925	678	99	130	69	41
25	51	41	98	825	610	276	800	475	155	216	115	40
26	51	40	85	655	565	269	655	356	155	135	67	38
27	51	41	73	542	498	3,260	565	280	135	165	102	37
28	51	50	373	451	439	2,100	511	276	106	195	294	37
29	51	309	2,480	384	-	1,220	463	308	91	151	353	37
30	50	245	1,220	346	-------	950	403	322	83	126	228	47
31	50	-------	655	311	-------	775	-------	336	-------	107	137	-------
Total	1,959	1,819	7,284	24,516	19,651	24,311	27,982	10,318	9,303	2,965	2,733	2,290
Mean	63.2	60.6	235	791	702	784	933	333	310	95.6	88.2	76.3
Cfsm	0.198	0.190	0.737	2.48	2.20	2.46	2.92	1.04	0.972	0.300	0.276	0.239
In.	0.23	0.21	0.85	2.86	2.29	2.83	3.26	1.20	1.08	0.35	0.32	0.27

Calendar year 1958 : Max 8,730 Min 39 Mean 485 Cfsm 1.52 In. 20.62
Water year 1958-59 : Max 8,520 Min 37 Mean 370 Cfsm 1.16 In. 15.75

Peak discharge (base, 5,000 cfs).--Jan. 22 (11 a.m.) 10,900 cfs (18.86 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 1959. 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.--40 years, 1,132 cfs.

Extremes.--Maximum discharge during year, 13,200 cfs Jan. 23 (gage height, 15.16 ft); minimum, 93 cfs Sept. 29 (gage height, -0.12 ft).

1919-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 31 to Jan. 16, Sept. 24-30)

0.1	80	2.0	865
.3	120	4.0	2,210
.5	169	12.0	9,600
1.0	330	15.0	13,000

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	166	127	*447	1,250	603	877	1,540	811	*871	*216	270	288
2	185	136	320	967	*537	*811	1,380	739	992	202	225	236
3	*182	*136	260	829	495	787	1,390	685	1,920	191	*199	*185
4	205	134	260	709	655	721	1,720	*614	2,860	185	191	185
5	202	134	256	*592	1,300	691	2,060	625	1,480	182	185	156
6	169	138	288	495	1,600	721	2,020	570	979	208	182	141
7	153	136	270	380	1,320	1,070	*1,650	542	745	196	164	151
8	143	132	242	416	1,060	1,400	1,340	490	598	174	174	166
9	136	129	216	631	925	1,190	1,140	456	500	166	185	166
10	134	125	202	564	853	1,040	1,020	434	434	161	169	225
11	132	122	193	456	769	985	943	411	388	164	159	202
12	129	118	185	357	715	1,530	1,800	398	357	156	156	174
13	125	118	169	357	763	2,410	4,260	480	339	151	143	188
14	125	118	161	362	2,180	2,530	5,880	480	312	156	136	208
15	127	125	153	454	4,480	1,940	3,450	643	306	164	129	164
16	125	127	134	1,480	5,160	1,590	2,310	631	292	185	122	141
17	120	129	134	2,050	3,990	1,330	1,840	532	270	174	118	127
18	122	132	136	1,610	2,570	1,120	1,540	490	253	169	116	118
19	127	143	136	1,080	1,870	979	1,710	485	239	177	113	109
20	118	148	138	943	1,410	871	2,290	614	228	276	125	105
21	118	143	129	3,460	1,110	823	2,420	625	219	416	127	98
22	118	132	122	9,310	919	811	2,220	592	213	288	118	96
23	125	129	136	11,900	1,030	727	1,900	548	208	267	138	94
24	127	127	146	5,060	1,360	649	1,760	751	225	288	193	94
25	120	127	153	2,460	1,360	592	1,660	925	298	456	143	94
26	116	127	156	1,730	1,200	581	1,440	733	309	598	146	94
27	118	125	180	1,360	1,080	2,160	1,250	576	416	380	208	94
28	118	156	1,740	1,100	973	5,280	1,110	505	406	295	188	94
29	118	339	3,220	919	-	3,860	998	429	295	352	232	93
30	116	380	3,650	787	--------	2,390	907	490	242	323	352	105
31	116	--------	2,010	679	--------	1,880	--------	871	--------	323	388	--------
Total	4,235	4,392	15,942	54,747	42,287	44,346	56,948	18,175	17,194	7,639	5,494	4,391
Mean	137	146	514	1,766	1,510	1,431	1,898	586	573	246	177	146
Cfsm	0.200	0.213	0.750	2.58	2.20	2.09	2.77	0.855	0.836	0.359	0.258	0.213
In.	0.23	0.24	0.87	2.97	2.30	2.41	3.09	0.99	0.93	0.41	0.30	0.24

Calendar year 1958: Max 14,000 Min 116 Mean 1,015 Cfsm 1.48 In. 20.11
Water year 1958-59: Max 11,900 Min 93 Mean 756 Cfsm 1.10 In. 14.98

Peak discharge (base, 9,000 cfs).--Jan. 23 (10 a.m.) 13,200 cfs (15.16 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 1959. 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.--56 years, 4,320 cfs (unadjusted).

Extremes.--Maximum discharge during year, 8,530 cfs Aug. 11 (gage height, 5.63 ft); minimum, 48 cfs May 17, 18 (gage height, 1.18 ft); minimum daily, 54 cfs May 24.

1903-59: 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, 1826, reached a stage of 43.5 ft (discharge, 130,000 cfs) at railroad bridge at Clinton, from reports of 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 of Tennessee Valley Authority.

Remarks.--Records good. Flow completely regulated by Norris Lake (see p. 215).

Revisions (water years).--WSP 1306: 1936-40 (adjusted monthly runoff). WSP 1336: 1917-18, 1928.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.2	52	2.0	840
1.3	85	3.0	2,360
1.4	150	4.0	4,200
1.6	350	6.0	9,640

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,490	6,200	*3,700	68	144	4,860	76	95	85	*5,030	1,660	2,360
2	*3,500	2,540	4,560	3,670	*4,280	*4,910	76	100	85	3,420	1,090	3,180
3	4,460	5,580	4,530	4,830	85	2,720	76	1,940	85	668	4,950	*4,980
4	4,800	5,640	4,520	6,390	76	4,160	201	2,990	90	451	4,060	1,930
5	5,120	*5,800	5,360	*6,310	654	2,160	72	3,070	95	383	3,760	2,290
6	5,970	5,700	5,590	6,420	126	6,120	2,050	2,110	85	2,840	2,410	3,140
7	7,240	6,000	6,800	6,420	2,260	1,240	1,210	*3,520	85	2,730	3,800	3,860
8	4,850	4,880	6,550	3,840	80	76	*1,780	3,540	2,200	4,880	83	2,770
9	6,940	4,640	6,660	3,280	2,180	4,430	2,760	3,400	982	3,090	76	3,220
10	4,780	5,840	6,500	2,910	72	4,180	2,960	2,770	3,020	2,660	*5,160	1,720
11	4,260	5,720	5,930	5,000	3,930	4,400	2,110	2,460	1,630	2,710	3,850	1,530
12	3,220	5,920	5,960	4,270	85	2,540	80	2,840	1,500	814	1,910	2,700
13	4,850	6,160	6,010	1,530	72	860	2,390	2,470	80	924	5,450	2,100
14	5,850	5,570	6,040	68	72	592	555	2,900	80	2,260	4,400	3,230
15	4,020	3,880	6,120	2,040	72	68	76	3,890	76	2,880	3,210	3,580
16	4,280	1,410	3,580	4,380	72	3,980	76	3,660	76	1,800	1,860	2,700
17	4,350	5,600	2,700	200	72	4,220	76	588	253	1,900	4,060	3,110
18	4,230	5,050	3,350	65	72	4,120	85	2,680	247	76	4,890	3,040
19	3,950	4,690	3,980	404	383	4,320	85	3,990	388	2,490	5,060	3,030
20	5,140	4,890	4,070	68	138	4,430	90	2,800	281	5,110	1,680	279
21	6,550	5,160	2,000	76	1,680	4,120	85	112	950	5,090	1,890	4,660
22	6,550	2,720	4,080	72	4,000	4,740	85	1,400	4,850	4,850	3,250	2,420
23	6,550	3,020	2,550	68	5,000	4,670	85	767	4,540	3,800	3,780	3,710
24	6,500	4,860	2,550	68	2,860	4,630	85	54	4,500	2,670	4,520	3,980
25	6,550	5,050	68	68	2,630	4,320	85	1,750	1,220	1,470	5,130	4,480
26	6,600	5,100	1,220	72	4,470	2,050	85	3,830	407	76	4,390	2,020
27	6,600	6,630	2,180	292	4,670	72	85	5,360	2,330	1,640	1,100	3,450
28	6,630	5,730	1,880	2,080	4,980	147	95	4,510	1,690	624	*3,540	6,430
29	6,660	5,760	1,520	72	-	76	95	80	3,920	2,770	2,990	2,960
30	6,690	4,370	65	68	--------	76	95	80	5,910	5,090	103	3,140
31	6,690	--------	65	1,320	--------	76	--------	80	--------	5,250	5,180	--------
Total	169,870	150,110	120,488	66,419	45,215	89,363	17,764	69,836	41,740	80,446	99,292	91,999
Mean	5,480	5,004	3,887	2,143	1,615	2,883	592	2,253	1,391	2,595	3,203	3,067

	Observed			Adjusted†		
Calendar year 1958:	Max 16,300	Min 65	Mean 4,989	Mean 4,177	Cfsm 1.43	In. 19.46
Water year 1958-59:	Max 7,240	Min 54	Mean 2,856	Mean 2,792	Cfsm 0.958	In. 13.01

* Discharge measurement made on this day.
† Adjusted for change in contents in Norris Lake.

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 and 4.0 miles northwest of Halls Crossroads, Knox County.

Drainage area.--68.5 sq mi.

Records available.--October 1957 to September 1959.

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, 1,850 cfs Jan. 22 (gage height, 8.62 ft); minimum, 6.4 cfs Sept. 5 (gage height, 1.37 ft).
1957-59: Maximum discharge, 3,360 cfs Nov. 18, 1957 (gage height, 10.26 ft); minimum, that of Sept. 5, 1959.

Remarks.--Records good.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 29, 30)

Oct. 1 to Dec. 28				Dec. 29 to Sept. 30			
1.5	7.0	2.5	69	1.3	5.0	2.5	76
1.6	9.5	3.0	134	1.4	7.0	3.0	145
1.8	18	4.0	292	1.5	9.0	5.0	461
2.0	29			1.7	17	7.0	950
				2.0	36	8.0	1,430

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	11	*12	37	37	52	96	60	166	*12	8.2	11
2	*15	14	10	42	*34	*49	108	56	128	12	8.0	8.4
3	11	12	11	35	32	46	92	49	83	12	7.8	7.6
4	9.9	10	17	29	102	44	96	44	60	12	7.8	7.0
5	9.5	*9.5	14	*17	130	42	82	42	51	11	8.6	6.6
6	8.8	9.5	11	16	77	69	74	38	51	11	9.0	7.6
7	8.5	9.2	9.5	18	60	56	65	*36	44	12	38	6.8
8	8.2	9.0	8.8	31	56	51	*60	35	35	10	12	6.8
9	8.2	9.2	8.8	66	54	49	56	32	30	9.7	9.4	7.0
10	8.5	9.5	8.2	41	52	47	53	32	28	9.7	*8.4	8.4
11	8.5	9.0	8.0	41	48	46	68	30	25	78	8.0	8.6
12	8.8	8.8	8.0	40	42	94	644	28	23	25	7.6	7.8
13	8.2	8.8	7.5	30	106	73	511	76	22	14	7.4	7.2
14	8.2	8.8	7.8	24	772	64	252	111	20	12	7.2	7.2
15	8.5	9.0	8.0	61	673	71	178	46	18	11	7.0	7.6
16	8.8	9.5	8.0	164	301	61	138	38	18	10	7.4	7.8
17	8.8	10	8.0	91	196	56	108	32	*17	11	7.6	7.8
18	8.8	9.9	7.8	71	152	50	111	31	16	11	7.6	7.8
19	8.8	11	8.2	54	104	46	338	30	15	22	7.4	7.6
20	9.0	12	8.5	42	80	45	505	35	14	20	7.4	7.6
21	9.0	9.5	8.5	*645	64	46	330	66	14	14	7.6	7.4
22	9.0	8.5	8.8	1,180	59	51	228	56	13	12	7.8	7.6
23	9.0	8.2	8.8	247	109	42	169	38	13	11	12	7.6
24	9.0	8.2	9.0	150	94	40	128	34	18	10	24	7.4
25	9.0	8.0	8.5	105	76	37	104	35	67	10	32	7.2
26	9.0	8.2	7.8	82	67	116	86	72	42	11	8.4	7.2
27	9.2	8.5	10	66	61	1,030	74	68	26	10	7.4	6.9
28	9.2	22	260	58	56	320	80	132	19	9.4	*7.2	6.6
29	9.2	56	156	50	-	199	70	62	15	9.0	7.8	6.8
30	9.2	18	60	47	-------	152	60	67	13	8.8	8.4	6.8
31	9.2	-------	41	42	-------	118	-------	87	-------	8.6	41	-------
Total	287.0	354.8	768.5	3,622	3,694	3,262	4,964	1,598	1,104	439.2	355.4	225.7
Mean	9.26	11.8	24.8	117	132	105	165	51.5	36.8	14.2	11.5	7.52
Cfsm	0.135	0.172	0.362	1.71	1.93	1.53	2.41	0.752	0.537	0.207	0.168	0.110
In.	0.16	0.19	0.42	1.97	2.01	1.77	2.70	0.87	0.60	0.24	0.19	0.12

Calendar year 1958: Max 1,300 Min 7.5 Mean 77.8 Cfsm 1.14 In. 15.41
Water year 1958-59: Max 1,180 Min 6.6 Mean 56.6 Cfsm 0.826 In. 11.24

Peak discharge (base, 1,000 cfs).--Jan. 22 (5 a.m.) 1,850 cfs (8.62 ft); Feb. 14 (6 p.m.) 1,100 cfs (7.37 ft); Mar. 27 (11 a.m.) 1,420 cfs (7.99 ft); Apr. 12 (9 p.m.) 1,120 cfs (7.41 ft).

* Discharge measurement made on this day.

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, 4¾ miles downstream from Solway Bridge, and 17 miles west of Knoxville.

Drainage area.--3,300 sq mi.

Records available.--September 1936 to September 1959. 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.--23 years, 4,555 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,390 cfs Jan. 22 (gage height, 6.20 ft); minimum, 170 cfs Aug. 10 (gage height, 1.09 ft); minimum daily, 193 cfs June 17.
1936-59: 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. 215). 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.1	175	2.0	1,160
1.2	236	4.0	4,990
1.5	501	6.0	8,990

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,890	6,370	4,210	275	1,460	5,550	805	512	646	6,210	4,550	4,500
2	*5,710	4,630	4,070	570	1,220	4,870	792	491	*1,740	*4,770	1,690	*3,030
3	3,680	4,010	*4,550	4,310	*3,680	*5,270	779	532	1,020	3,040	*1,390	4,110
4	5,130	*5,730	4,590	6,430	652	2,810	715	*2,420	652	897	5,890	4,510
5	4,750	5,790	4,910	*6,390	779	3,730	753	3,730	559	538	4,450	1,370
6	5,530	5,430	5,610	6,330	1,130	3,960	*678	2,640	735	574	4,110	2,440
7	6,450	6,050	6,870	6,450	652	5,240	2,570	3,250	463	2,910	2,580	4,250
8	6,430	5,970	6,770	5,230	2,410	1,400	1,370	3,830	609	3,330	3,330	3,230
9	5,210	5,250	6,630	3,600	1,350	1,180	2,470	3,650	2,740	4,930	370	3,250
10	6,530	4,610	6,630	3,380	1,810	4,850	3,290	3,210	1,150	3,350	547	2,980
11	4,530	5,590	6,270	4,170	973	4,310	3,130	2,820	3,020	2,740	5,310	1,980
12	4,010	5,870	5,970	4,610	3,930	5,410	3,230	2,910	2,020	2,870	3,350	1,660
13	4,190	7,070	6,030	3,710	779	2,110	3,830	3,370	1,420	1,030	3,620	2,860
14	5,030	4,890	6,090	1,700	2,430	1,420	3,810	3,030	291	1,070	5,010	2,400
15	4,560	6,790	6,110	705	4,350	1,120	1,510	4,150	224	2,410	4,030	3,850
16	4,180	1,810	5,070	3,080	2,720	1,400	898	3,970	206	3,000	2,920	3,200
17	4,290	2,410	3,130	4,040	1,670	4,590	753	3,050	193	2,060	2,550	3,130
18	4,370	5,530	3,250	604	1,210	4,610	702	829	288	2,120	4,670	3,310
19	4,020	4,890	3,580	405	940	4,450	1,390	4,030	314	347	5,270	3,150
20	4,590	4,850	4,090	684	982	4,750	2,480	4,130	485	3,400	4,240	2,820
21	6,450	5,130	3,900	2,010	1,350	4,690	2,460	2,120	375	5,490	1,810	1,200
22	6,550	4,910	2,720	7,850	3,120	4,630	1,710	472	1,680	5,090	2,580	4,150
23	6,590	2,740	3,980	2,970	3,970	5,090	1,220	1,600	5,070	5,230	3,150	2,790
24	6,550	3,430	2,410	1,340	5,690	5,090	968	1,060	5,330	3,480	4,640	3,990
25	6,590	4,990	2,670	884	2,980	4,630	805	3,800	3,980	3,040	5,410	4,050
26	6,630	5,130	358	702	3,600	4,250	690	2,440	1,180	1,430	5,090	4,170
27	6,670	6,590	1,390	581	5,110	5,410	604	5,390	805	267	3,980	2,460
28	6,690	5,710	3,170	710	4,870	3,190	592	5,510	2,650	1,740	1,360	4,990
29	6,710	6,270	2,570	2,380	-	1,720	766	3,830	1,780	870	4,190	5,350
30	6,730	4,930	1,680	524	--------	1,190	678	558	4,890	3,710	2,680	3,230
31	6,750	--------	378	378	--------	954	--------	558	--------	5,690	1,260	--------
Total	170,990	153,370	129,656	87,002	65,817	113,874	46,448	83,892	46,515	87,633	106,027	98,410
Mean	5,516	5,112	4,182	2,807	2,351	3,673	1,548	2,706	1,550	2,827	3,420	3,280

	Observed			Adjusted†		
Calendar year 1958:	Max 20,300	Min 218	Mean 5,459	Mean 4,647	Cfsm 1.41	In. 19.11
Water year 1958-59:	Max 7,850	Min 193	Mean 3,259	Mean 3,195	Cfsm 0.968	In. 13.14

* 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 1959.

Gage.--Water-stage recorder. Datum of gage is 750.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--6 years (1950-52, 1955-59), 9.37 cfs.

Extremes.--Maximum discharge during year, 355 cfs Aug. 5 (gage height, 4.80 ft); minimum, 2.2 cfs Nov. 12 (gage height, 0.91 ft).
1950-53, 1955-59: 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 except those for periods of no gage-height record, which are fair. Natural flow of stream affected by operations of Oak Ridge National Laboratory.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	4.1	3.7	6.4	4.4	6.2	8.5	6.8	12	6.4	6.0	6.8
2	*5.0	3.0	4.0	5.4	4.4	5.8	11	6.4	*10	*6.0	5.8	*7.7
3	4.8	3.0	*6.0	4.6	*4.4	*5.8	8.5	6.4	7.2	5.6	*8.8	6.8
4	4.4	*3.0	5.2	4.2	13	5.6	7.0	*7.0	6.6	5.2	6.0	6.0
5	4.4	3.9	4.4	*3.8	8.0	6.8	6.4	6.4	6.0	5.4	60	6.6
6	4.6	3.7	3.3	4.2	6.6	11	*6.6	6.0	6.0	6.4	15	6.2
7	4.4	3.5	3.2	4.2	6.0	7.2	6.4	6.0	6.4	6.0	19	6.2
8	4.2	3.5	3.7	15	6.2	6.6	6.4	5.8	5.8	5.6	11	6.6
9	4.0	3.3	3.7	7.6	6.0	6.6	6.4	6.0	5.6	6.0	8.0	6.0
10	4.8	3.0	3.8	5.8	19	6.4	8.2	5.8	5.8	6.0	7.0	6.2
11	3.7	2.6	3.7	5.2	17	8.4	14	5.2	6.4	8.9	6.8	5.6
12	3.5	2.6	3.5	5.0	12	10	38	5.6	6.8	6.0	7.0	5.2
13	3.8	3.2	3.5	4.8	28	7.6	23	12	6.6	6.0	6.8	5.4
14	4.0	3.2	3.3	4.8	57	6.8	17	6.0	5.4	5.8	6.6	5.4
15	3.8	3.7	3.5	16	40	9.6	14	5.0	5.4	6.0	7.7	5.2
16	4.2	4.7	3.7	14	20	7.0	11	4.5	5.4	6.0	6.6	5.2
17	4.0	3.5	3.7	7.2	15	6.6	10	4.5	5.6	6.4	5.8	5.6
18	3.5	3.3	3.8	5.8	10	6.0	14	4.0	6.4	5.8	6.2	5.6
19	3.5	4.6	3.7	6.0	8.0	5.8	32	4.0	6.4	6.2	6.6	5.0
20	3.7	3.7	3.2	7.6	7.0	5.8	26	4.0	5.6	5.2	6.8	5.2
21	4.0	3.7	3.3	121	6.4	8.2	20	4.0	6.4	6.3	6.6	5.4
22	3.5	3.0	3.7	36	5.8	6.2	16	4.0	6.6	7.8	6.2	5.2
23	3.3	3.0	3.7	18	16	5.6	14	4.0	7.0	6.6	6.2	5.4
24	3.2	3.7	3.7	12	9.2	5.8	12	4.0	8.0	8.9	7.0	5.2
25	3.0	3.2	3.7	9.2	7.8	6.2	10	4.0	9.6	7.8	6.2	4.8
26	2.8	3.5	3.3	7.2	7.2	27	8.2	4.0	6.6	5.6	6.2	5.0
27	3.0	3.0	12	6.6	6.6	44	8.2	4.0	6.4	6.6	6.8	5.2
28	3.2	16	14	6.6	6.2	20	7.8	4.0	6.6	6.0	9.0	5.4
29	3.3	5.0	6.8	5.8	-	16	7.0	4.0	6.4	6.6	7.2	5.2
30	3.7	3.2	5.0	5.2	--------	12	7.2	10	5.8	6.6	6.2	6.2
31	3.5	--------	4.8	4.6	--------	10	--------	15	--------	6.6	8.0	--------
Total	122.2	116.4	140.6	369.8	357.2	302.6	384.8	178.4	200.8	196.3	289.1	171.5
Mean	3.94	3.88	4.54	11.9	12.8	9.76	12.8	5.75	6.69	6.33	9.33	5.72
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 68 Min 2.6 Mean 7.48 Cfsm - In. -
Water year 1958-59: Max 121 Min 2.6 Mean 7.75 Cfsm - In. -

Peak discharge (base, 280 cfs).--Jan. 21 (12 m.) 302 cfs (4.64 ft); Aug. 5 (5:30 a.m.) 355 cfs (4.80 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 4, Feb. 15-19, May 14 to June 2; discharge estimated on basis of recorded range in stage and records for station on Melton Branch.

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 1959.

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, 121 cfs Jan. 21 (gage height, 4.67 ft); minimum, 0.2 cfs May 26.
1955-59: Maximum discharge, that of Jan. 21, 1959; 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 1958-59 (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	.8	2.0	26
1.2	2.2	3.0	57
1.3	4.7		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.4	0.6	1.1	1.1	1.5	1.5	0.9	2.7	0.6	0.5	0.7
2	*.7	.4	.6	1.2	1.0	1.4	3.0	.9	*2.7	*.7	.5	*.8
3	.7	.4	*.7	1.1	*1.0	*1.4	2.4	.9	1.2	.8	*.6	.7
4	.7	*.4	.7	.9	3.6	1.2	2.2	*.8	1.0	.8	.6	.7
5	.7	.5	.6	*.8	3.4	1.5	1.7	.8	.9	.8	9.8	.7
6	.7	.5	.6	.8	2.2	4.2	*1.7	.8	.9	.8	1.2	.7
7	.7	.5	.6	.8	1.7	2.7	1.5	.7	.8	.8	3.0	.7
8	.7	.5	.6	3.0	1.7	2.2	1.7	.7	.9	.9	1.4	.7
9	.7	.5	.7	2.7	1.5	2.0	1.4	.6	.8	.8	.9	.6
10	.7	.7	.6	1.4	5.0	2.0	2.0	.6	.8	.7	1.0	.4
11	.5	.6	.6	1.1	4.4	2.6	5.8	.5	.8	.8	.8	.4
12	.5	.6	.6	1.1	2.7	4.7	16	.5	.8	.7	.8	.4
13	.5	.5	.6	1.1	8.7	3.4	7.2	1.1	.8	.8	.7	.4
14	.5	.4	.6	1.0	23	2.7	4.2	.6	.8	.7	.7	.4
15	.5	.4	.6	4.2	13	4.0	3.2	.5	.8	.8	.7	.6
16	.5	.6	.6	4.8	5.3	3.4	2.4	.4	.8	.7	.7	.5
17	.5	.6	.6	2.2	3.4	3.0	1.7	.4	.7	.7	.7	.4
18	.5	.7	.6	1.4	2.2	2.4	3.2	.4	.7	.7	.7	.4
19	.5	.6	.6	1.2	2.0	2.4	13	.4	.7	.7	.8	.4
20	.5	.6	.6	2.0	1.5	2.4	8.9	.4	.6	.7	.7	.4
21	.5	.5	.6	53	1.4	3.4	5.0	.4	.6	.7	.7	.6
22	.4	.4	.6	11	1.2	3.4	3.2	.4	.6	.7	.7	.5
23	.4	.5	.6	4.0	4.8	3.2	2.0	.3	.6	.7	.7	.5
24	.4	.4	.6	2.4	3.4	2.4	1.4	.4	.6	.7	.7	.5
25	.4	.5	.6	1.7	2.4	2.0	1.0	.4	.7	.6	.7	.5
26	.4	.5	.6	1.5	1.7	12	.9	.3	.6	.6	.7	.4
27	.4	.7	1.6	1.5	1.7	26	.9	.4	.6	.6	.7	.5
28	.4	1.9	3.2	1.4	1.4	5.6	.9	.4	.5	.5	.7	.5
29	.4	.8	1.4	1.1	-	4.0	.9	.4	.6	.5	.6	.5
30	.5	.7	1.0	1.1	-------	3.2	.9	2.0	.6	.5	.6	.5
31	.4	-------	.9	1.1	-------	2.2	-------	3.2	-------	.5	.7	-------
Total	16.7	17.3	24.0	113.7	106.4	118.5	101.8	21.5	26.2	21.6	34.3	16.0
Mean	0.54	0.58	0.77	3.67	3.80	3.82	3.39	0.69	0.87	0.70	1.11	0.53
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 25 Min 0.4 Mean 1.88 Cfsm - In. -
Water year 1958-59: Max 53 Min 0.3 Mean 1.69 Cfsm - In. -

Peak discharge (base, 86 cfs).--Jan. 21 (12:30 p.m.) 121 cfs (4.67 ft); Mar. 27 (1 a.m.) 104 cfs (4.24 ft).

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 1,445.1 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 6,630 cfs Jan. 21 (gage height, 10.50 ft); minimum, 1.8 cfs Oct. 30; minimum gage height, 2.03 ft July 18.
1957-59: Maximum discharge, 11,100 cfs Nov. 18, 1957 (gage height, 13.15 ft), from rating curve extended above 6,600 cfs; minimum, 0.2 cfs Sept. 6-9, 1957; minimum gage height, 1.75 ft Sept. 8, 9, 1957.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

2.0	1.2	2.5	12	4.0	260
2.1	2.0	2.6	17	5.0	670
2.2	3.2	2.7	25	6.0	1,290
2.3	5.0	3.0	58	7.0	2,200
2.4	7.7	3.5	135	9.0	4,420

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	3.7	91	102	172	228	346	145	346	8.8	68	54
2	4.6	6.9	75	139	155	220	314	168	508	8.1	48	103
3	4.6	12	71	145	145	200	290	170	392	8.8	38	86
4	4.8	8.5	100	121	236	188	275	160	257	10.	123	63
5	5.5	8.5	115	a105	420	178	248	139	188	7.7	225	53
6	5.3	8.1	103	a95	368	275	222	119	158	6.4	290	62
7	4.8	6.9	78	a85	297	322	200	103	141	5.0	472	53
8	4.5	6.1	64	*90	263	281	180	91	106	4.1	328	45
9	4.3	5.5	58	200	248	254	151	78	81	3.6	210	67
10	*3.9	11	52	a180	*278	*228	192	74	63	3.9	147	63
11	3.6	21	46	a160	440	212	508	66	53	3.1	108	254
12	3.2	12	42	a145	364	311	690	58	50	2.6	78	210
13	3.0	7.4	38	135	485	336	780	67	67	2.6	58	125
14	2.6	5.5	35	125	1,570	297	*562	*145	64	2.5	44	91
15	2.6	5.3	31	162	1,820	311	432	158	48	2.5	142	70
16	2.5	5.5	a25	526	976	308	346	118	36	2.8	236	57
17	2.4	*5.3	a23	428	635	275	284	100	29	2.5	127	*43
18	3.0	6.4	a19	a310	467	239	294	84	23	2.7	225	32
19	3.6	12	a17	a240	350	212	630	71	20	3.7	*192	25
20	2.6	28	a15	380	278	198	952	66	17	43	145	19
21	2.6	31	a14	2,830	236	212	858	115	16	*27	166	16
22	2.6	25	*14	3,630	208	308	685	215	12	21	254	14
23	2.4	21	19	1,370	290	304	521	195	11	23	131	12
24	2.2	20	22	715	440	269	404	160	16	28	100	10
25	2.1	19	17	508	368	239	322	119	17	813	81	8.5
26	2.0	20	16	392	311	346	263	127	23	557	62	7.4
27	2.0	24	18	318	263	1,610	225	125	19	251	48	6.4
28	2.1	37	58	269	228	1,050	202	138	15	147	43	5.5
29	2.0	125	119	233	-	655	188	200	*12	105	52	5.0
30	1.9	115	125	212	-------	526	160	133	10	182	58	4.8
31	2.0	-------	104	185	-------	420	-------	205	-------	98	54	-------
Total	100.1	622.6	1,624	14,535	12,311	11,012	11,724	3,912	2,798	2,386.4	4,353	1,664.6
Mean	3.23	20.8	52.4	469	440	355	391	126	93.3	77.0	140	55.5
Cfsm	0.023	0.150	0.377	3.37	3.17	2.55	2.81	0.906	0.671	0.554	1.01	0.399
In.	0.03	0.17	0.43	3.89	3.29	2.95	3.14	1.05	0.75	0.64	1.16	0.45

Calendar year 1958: Max 2,810 Min 1.6 Mean 192 Cfsm 1.38 In. 18.78
Water year 1958-59: Max 3,630 Min 1.9 Mean 184 Cfsm 1.32 In. 17.95

Peak discharge (base, 3,500 cfs).--Jan. 21 (11 p.m.) 6,630 cfs (10.50 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.

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, and 3.0 miles downstream from Clear Creek.

Drainage area.--518 sq mi.

Records available.--May 1957 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 891.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 18,000 cfs Jan. 22 (gage height, 12.80 ft); minimum, 2.2 cfs Oct. 31 (gage height, 0.81 ft).

1957-59: Maximum discharge, 40,600 cfs Nov. 18, 1957 (gage height, 18.95 ft); minimum, 1.2 cfs Sept. 8-10, 1957 (gage height, 0.71 ft).

Flood of Mar. 23, 1929, reached a stage of 33.9 ft, 35 ft downstream from gage, from high-water marks by Tennessee Valley Authority.

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.7	1.0	2.1	380
.8	2.5	2.5	640
.9	9	3.0	1,020
1.0	17	4.0	1,880
1.2	44	6.0	4,180
1.5	110	9.0	9,130
1.8	215	11.0	13,400

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*23	5.1	*326	a375	575	840	1,440	542	*1,740	*35	150	*175
2	22	6.4	265	*412	*510	*871	1,290	588	2,410	29	113	215
3	21	*9.8	235	471	471	773	1,230	608	1,720	25	90	245
4	18	11	245	419	620	731	1,200	536	1,050	22	164	179
5	17	16	344	a375	1,310	675	1,100	484	724	21	309	199
6	17	22	326	a380	1,220	1,010	975	412	738	29	542	230
7	16	22	270	320	1,020	1,240	*840	356	668	23	879	225
8	16	22	215	292	903	1,100	738	304	484	19	832	179
9	15	23	191	562	871	991	654	260	356	16	562	161
10	15	24	175	a660	887	911	752	230	270	16	393	199
11	14	22	158	a580	1,080	810	1,890	211	211	29	276	283
12	12	23	144	a540	975	1,660	2,560	195	215	19	199	464
13	11	32	134	a515	1,170	1,840	3,310	199	211	17	150	314
14	9.8	25	128	419	7,370	1,490	2,340	412	220	13	119	225
15	9.0	22	119	432	8,200	1,460	1,730	464	172	11	98	179
16	8.4	21	108	1,470	4,280	1,480	1,390	362	128	9.8	308	147
17	7.7	19	102	a1,430	2,640	1,260	1,140	292	105	9.0	276	125
18	7.0	19	105	a1,110	1,920	1,070	1,080	250	85	7.7	298	105
19	7.7	24	100	a990	1,440	911	2,190	211	71	7.0	510	90
20	8.4	35	92	999	1,140	810	3,030	203	60	15	406	78
21	7.7	67	92	5,540	927	848	2,760	270	51	47	362	67
22	7.0	100	90	11,900	802	1,400	2,170	478	44	74	497	58
23	7.0	85	92	4,700	975	1,320	1,700	614	40	57	362	51
24	5.8	74	88	2,510	1,570	1,150	1,340	582	38	55	245	46
25	5.0	69	88	1,740	1,340	999	1,100	426	44	1,100	207	41
26	4.0	67	85	1,370	1,160	1,130	903	338	51	1,250	164	36
27	3.0	64	92	1,110	991	7,820	766	332	53	661	131	32
28	2.5	249	187	935	855	4,680	689	309	64	393	110	28
29	2.4	a425	a430	795	-	2,780	696	458	57	240	105	25
30	2.5	a370	a405	710	-------	2,240	*614	419	44	250	138	*22
31	2.4	-------	a375	647	-------	1,770	-------	642	-------	*220	144	-------
Total	324.3	1,973.3	5,806	44,708	47,222	48,070	43,617	11,987	12,124	4,719.5	9,139	4,423
Mean	10.5	65.8	187	1,442	1,686	1,551	1,454	387	404	152	295	147
Cfsm	0.020	0.127	0.361	2.78	3.25	2.99	2.81	0.747	0.780	0.293	0.569	0.284
In.	0.02	0.14	0.42	3.21	3.39	3.45	3.13	0.86	0.87	0.34	0.66	0.32

Calendar year 1958: Max 13,800 Min 2.0 Mean 684 Cfsm 1.32 In. 17.92
Water year 1958-59: Max 11,900 Min 2.4 Mean 641 Cfsm 1.24 In. 16.81

Peak discharge (base, 13,000 cfs).--Jan. 22 (2 a.m.) 18,000 cfs (12.80 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 Emory River 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 1959. Prior to October 1929 published as Emery River at Harriman and October 1929 to September 1934 as Emery 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.--32 years, 1,400 cfs.

Extremes.--Maximum discharge during year, 33,500 cfs Jan. 22 (gage height, 18.76 ft); minimum, 4.2 cfs Nov. 1 (gage height, 0.99 ft).

1927-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.0	4.4	3.0	560
1.1	7.7	4.0	1,330
1.3	18	7.0	4,460
1.6	47	10.0	9,320
1.9	90	13.0	15,500
2.3	180	16.0	23,400
2.6	310		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*32	6.7	*477	532	798	1,280	2,110	826	*2,130	*60	204	*444
2	29	11	343	602	*714	*1,300	1,890	888	2,800	51	148	413
3	30	*11	290	700	651	1,180	1,800	976	2,240	45	112	444
4	28	11	338	623	942	1,110	1,730	840	1,460	38	156	321
5	25	11	470	470	2,090	1,020	1,610	735	1,030	31	652	251
6	22	14	444	290	1,930	1,480	1,460	623	960	28	1,120	383
7	21	22	343	321	1,600	1,930	*1,280	525	936	32	1,540	338
8	20	25	265	365	1,430	1,720	1,140	425	679	29	1,380	285
9	19	23	215	714	1,360	1,560	1,020	348	470	25	936	238
10	18	23	194	1,010	1,380	1,410	1,020	300	343	24	637	238
11	17	23	169	791	1,560	1,270	2,440	270	265	42	425	300
12	15	23	153	735	1,470	2,340	3,590	246	228	64	295	637
13	14	22	139	630	1,770	2,740	4,860	260	280	44	208	438
14	12	28	131	539	12,100	2,240	3,460	425	238	32	156	310
15	11	29	118	567	11,600	2,140	2,570	560	208	25	141	228
16	10	28	104	1,900	5,890	2,120	2,040	451	158	19	296	177
17	9.5	26	92	2,120	3,710	1,840	1,700	348	127	16	595	148
18	13	23	95	1,430	2,760	1,580	1,630	290	103	15	1,190	125
19	34	30	90	1,250	2,090	1,360	3,720	251	87	16	1,450	104
20	15	37	88	1,260	1,670	1,220	5,030	251	73	21	888	90
21	10	51	87	12,500	1,380	1,240	4,150	581	64	16	630	77
22	9.5	99	82	20,600	1,200	1,820	3,220	951	56	59	714	67
23	9.5	103	79	6,550	1,420	1,840	2,530	1,410	51	95	644	60
24	9.1	88	82	3,520	2,200	1,650	1,990	1,090	63	77	407	54
25	8.2	77	82	2,460	1,990	1,460	1,650	756	188	1,340	348	48
26	7.7	74	80	1,930	1,750	1,620	1,390	581	180	1,740	251	43
27	7.0	73	85	1,590	1,520	10,100	1,180	497	106	992	194	39
28	6.4	90	192	1,330	1,320	6,320	1,080	470	90	609	228	36
29	6.0	338	756	1,140	-	3,800	1,080	595	85	360	1,310	32
30	5.4	658	791	1,020	--------	3,100	*936	651	70	*270	623	*28
31	4.4	--------	623	904	--------	2,530	--------	1,000	--------	326	644	--------
Total	477.7	2,077.7	7,497	70,393	70,295	68,320	65,306	18,420	15,768	6,541	18,522	6,396
Mean	15.4	69.3	242	2,271	2,511	2,204	2,177	594	526	211	597	213
Cfsm	0.020	0.091	0.317	2.97	3.29	2.88	2.85	0.777	0.688	0.276	0.781	0.279
In.	0.02	0.10	0.36	3.43	3.42	3.33	3.18	0.90	0.77	0.32	0.90	0.31

Calendar year 1958: Max 17,000 Min 2.5 Mean 994 Cfsm 1.30 In. 17.64
Water year 1958-59: Max 20,600 Min 4.4 Mean 959 Cfsm 1.26 In. 17.04

Peak discharge (base, 19,000 cfs).--Jan. 22 (2:30 a.m.) 33,500 cfs (18.76 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, 5 miles north of Decatur, Meigs County, and at mile 5.7.

Drainage area.--117 sq mi.

Records available.--May 1934 to September 1959. 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.--25 years, 189 cfs.

Extremes.--Maximum discharge during year, 4,480 cfs Mar. 27 (gage height, 10.33 ft); minimum, 20 cfs Nov. 12-14, Dec. 23; minimum gage height, 0.21 ft Dec. 23.
1934-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.2	19	0.7	235	0.27	28	2.0	605
.3	39	1.0	355	.4	63	3.0	890
.4	75	4.0	1,260	.6	166	5.0	1,580
.5	125			1.0	345	8.0	3,090

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	31	29	44	76	108	250	120	*99	63	32	187
2	29	36	27	63	68	99	266	114	125	60	32	356
3	27	34	27	48	63	94	234	99	81	56	30	*776
4	27	29	*23	42	104	90	192	94	60	52	30	211
5	25	27	23	34	166	90	166	86	60	49	614	149
6	25	29	23	27	114	179	143	81	94	46	199	108
7	25	29	23	27	99	137	125	76	76	44	149	90
8	25	27	23	31	94	120	114	72	60	41	94	81
9	23	25	23	51	90	114	104	63	49	38	68	68
10	23	*22	22	42	99	*104	108	63	46	41	60	63
11	23	22	22	34	*120	99	360	63	44	46	49	63
12	23	20	22	31	94	125	740	56	46	44	46	52
13	*23	20	22	*29	284	104	622	99	44	41	44	49
14	23	20	22	29	935	94	*396	86	38	*60	41	46
15	23	22	22	44	1,050	120	298	60	36	38	141	46
16	23	22	22	131	550	108	250	56	36	36	108	44
17	23	23	22	85	402	99	217	52	34	38	52	41
18	23	23	22	63	320	90	340	52	32	63	289	41
19	25	23	22	55	230	86	1,210	46	32	41	205	41
20	23	23	22	67	185	81	1,270	93	30	76	86	38
21	25	23	22	1,010	149	90	*588	194	30	41	68	36
22	27	22	22	2,320	137	99	440	68	28	52	56	36
23	27	23	22	486	179	81	338	60	35	41	49	34
24	27	25	22	306	172	76	274	49	631	44	52	34
25	27	23	22	230	137	72	238	49	388	76	94	34
26	29	25	22	179	125	132	204	49	192	46	46	32
27	27	25	25	149	114	*2,830	185	63	125	*38	44	32
28	25	36	95	125	108	772	166	46	99	34	63	32
29	25	75	63	104	-	472	149	44	86	32	167	32
30	25	36	42	99	--------	381	131	49	72	30	81	32
31	25	--------	36	86	--------	298	--------	56	--------	30	154	--------
Total	777	820	856	6,071	6,264	7,444	10,118	2,258	2,808	1,437	3,243	2,884
Mean	25.1	27.3	27.6	196	224	240	337	72.8	93.6	46.4	105	96.1
Cfsm	0.215	0.233	0.236	1.68	1.91	2.05	2.88	0.622	0.800	0.397	0.897	0.821
In.	0.25	0.26	0.27	1.93	1.99	2.37	3.22	0.72	0.89	0.46	1.03	0.92

Calendar year 1958: Max 3,900 Min 20 Mean 149 Cfsm 1.27 In. 17.27
Water year 1958-59: Max 2,830 Min 20 Mean 123 Cfsm 1.05 In. 14.31

Peak discharge (base, 2,000 cfs).--Jan. 22 (6 a.m.) 3,880 cfs (9.34 ft); Mar. 27 (1 p.m.) 4,480 cfs (10.33 ft); Apr. 20 (3 a.m.) 2,160 cfs (6.26 ft).

* Discharge measurement made on this day.

5450. Hiwassee River at Presley, Ga.

Location.--Lat 34°54'17", long 83°43'01", on left bank 0.1 mile downstream from Cynth Creek, 0.5 mile southeast of Presley, Towns County, 1.4 miles (revised) upstream from Hightower Creek, and at mile 133.9.

Drainage area.--45.5 sq mi.

Records available.--October 1941 to September 1959. Monthly discharge only for some periods, published in WSP 1306.

Gage.--Water-stage recorder. Datum of gage is 1,932.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--18 years, 126 cfs.

Extremes.--1957-58: Maximum discharge during water year, 1,210 cfs Dec. 20 (gage height, 6.47 ft); minimum, 37 cfs Sept. 29 (gage height, 1.74 ft).

1958-59: Maximum discharge during water year, 2,760 cfs May 31 (gage height, 10.82 ft); minimum, 15 cfs Dec. 16 (gage height, 1.48 ft), result of freezeup; minimum daily, 25 cfs Dec. 16.

1941-59: Maximum discharge, 5,700 cfs Mar. 11, 1952 (gage height, 15.24 ft), from rating curve extended above 2,000 cfs on basis of slope-area and contracted-opening measurements at gage heights 12.80 and 15.24 ft, respectively; minimum, 15 cfs Dec. 16, 1958 (gage height, 1.48 ft), result of freezeup; minimum daily, 23 cfs Sept. 29, Oct. 5, 6, 8, 10-13, 1954, Sept. 7, 1957.

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

Revisions (water years).--WSP 973: 1942.

Rating tables, Oct. 1, 1957, to Sept. 30, 1959, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19, 1957				Nov. 20, 1957, to Jan. 21, 1959, June 1 to Sept. 30, 1959				Jan. 22 to May 31, 1959			
1.8	41	3.0	232	1.6	24	2.5	139	2.0	68	5.0	845
2.0	62	4.0	464	2.0	64	3.0	247	2.5	144	6.0	1,100
2.5	134	5.0	720	Note.--Same as following table above 3.0 ft.				3.0	247	7.0	1,340
								4.0	545		

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	68	69	164	164	217	215	177	294	123	64	82	51
2	68	67	156	152	190	192	168	334	126	63	79	49
3	190	63	150	145	175	177	162	281	*116	61	77	49
4	165	61	152	139	164	166	162	257	118	61	71	48
5	111	60	137	134	175	154	154	245	113	94	68	47
6	86	58	132	132	388	152	242	287	110	82	69	45
7	73	56	164	132	421	150	206	261	108	76	82	45
8	63	80	281	125	325	147	186	*240	107	251	74	44
9	58	70	226	b120	269	166	173	236	104	203	66	42
10	53	66	194	116	*238	152	201	217	100	*148	64	42
11	*50	62	175	115	219	147	194	248	99	132	62	42
12	55	61	156	111	203	*145	179	352	96	123	63	52
13	50	61	147	196	190	150	168	294	92	125	113	47
14	48	494	141	222	179	139	162	259	89	141	107	43
15	46	*261	135	181	183	135	*219	236	107	119	82	44
16	46	331	139	162	b160	130	261	217	92	105	77	44
17	105	316	130	150	b155	135	224	203	86	94	79	44
18	82	473	123	139	b160	164	201	192	83	86	70	41
19	70	671	*135	132	b155	150	188	186	83	82	*65	39
20	64	436	662	126	b140	143	177	179	82	100	63	40
21	60	297	421	237	141	139	168	171	80	96	62	86
22	56	254	289	226	141	134	190	162	84	90	60	54
23	58	271	242	*192	137	128	173	158	82	87	63	*46
24	192	231	219	303	137	171	164	166	75	207	75	44
25	122	325	215	349	135	287	162	156	72	148	71	42
26	106	289	245	271	208	249	154	147	82	118	63	41
27	91	245	215	233	338	238	162	139	75	104	62	41
28	84	217	203	208	264	226	582	137	69	92	57	40
29	79	201	188	192	-	206	457	130	66	86	56	39
30	77	183	175	179	--------	197	355	126	65	80	53	41
31	73	--------	166	181	--------	190	--------	123	--------	89	52	--------
Total	2,549	6,329	6,277	5,464	5,807	5,274	6,371	6,633	2,784	3,407	2,187	1,372
Mean	82.2	211	202	176	207	170	212	214	92.8	110	70.5	45.7
Cfsm	1.81	4.64	4.44	3.87	4.55	3.74	4.66	4.70	2.04	2.42	1.55	1.00
In.	2.08	5.17	5.13	4.47	4.75	4.31	5.21	5.42	2.28	2.78	1.79	1.12

Calendar year 1957: Max 1,220 Min 23 Mean 144 Cfsm 3.16 In. 42.94
Water year 1957-58: Max 671 Min 39 Mean 149 Cfsm 3.27 In. 44.51

Peak discharge (base, 800 cfs).--Nov. 14 (11 a.m.) 990 cfs (6.00 ft); Nov. 19 (5 a.m.) 871 cfs (5.56 ft); Dec. 20 (12 m.) 1,210 cfs (6.47 ft); Apr. 28 (6:30 a.m.) 872 cfs (5.11 ft).

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

5450. Hiwassee River at Presley, Ga.--Continued

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	64	37	87	78	89	119	127	*884	89	56	90
2	53	43	36	86	74	84	141	124	663	87	53	70
3	50	39	36	72	80	85	130	117	469	86	52	54
4	48	*37	35	64	100	80	127	113	376	83	52	50
5	45	37	34	b53	92	160	119	108	325	79	53	47
6	43	37	33	b50	84	264	114	103	297	77	54	50
7	41	35	32	b50	80	179	108	100	264	76	55	285
8	40	35	32	*62	78	151	103	95	236	72	52	137
9	39	36	31	55	71	137	100	95	219	71	49	110
10	38	35	31	b47	81	125	97	95	206	69	47	111
11	37	34	31	b45	77	*122	134	*94	192	96	*46	158
12	37	34	30	b45	*81	132	334	100	183	93	48	164
13	36	34	31	47	236	117	308	141	173	93	47	118
14	36	34	33	46	179	113	224	117	162	87	46	99
15	36	35	b26	63	233	168	*192	105	152	87	68	*108
16	36	39	b25	77	183	151	172	98	147	84	64	94
17	36	35	b27	b60	158	139	157	92	143	77	51	83
18	36	34	*b30	b55	153	127	162	89	135	84	64	76
19	36	33	30	b55	134	121	194	88	132	77	60	72
20	36	32	32	54	121	117	183	402	126	83	55	68
21	36	32	30	*539	113	114	173	439	118	83	51	65
22	36	32	29	563	106	108	181	284	115	101	48	62
23	36	32	29	236	114	101	173	261	110	*123	50	61
24	*35	32	38	172	105	98	162	211	130	87	48	58
25	34	31	32	141	98	95	153	254	116	89	47	57
26	35	32	30	124	94	98	144	261	108	87	50	56
27	35	31	56	111	91	125	137	233	104	72	50	61
28	34	52	166	100	88	106	149	215	99	66	46	56
29	34	54	90	92	-	106	142	217	94	63	48	54
30	34	40	65	87	--------	117	130	213	90	61	45	63
31	34	--------	56	82	--------	113	--------	1,240	--------	58	81	--------
Total	1,224	1,110	1,253	3,420	3,182	3,842	4,762	6,231	6,568	2,540	1,636	2,637
Mean	39.5	37.0	40.4	110	114	124	159	201	219	81.9	52.8	87.9
Cfsm	0.868	0.813	0.888	2.42	2.51	2.73	3.49	4.42	4.81	1.80	1.16	1.93
In.	1.00	0.91	1.02	2.80	2.60	3.14	3.89	5.09	5.37	2.08	1.34	2.16

Calendar year 1958: Max 582 Min 25 Mean 117 Cfsm 2.57 In. 35.06
Water year 1958-59: Max 1,240 Min 25 Mean 105 Cfsm 2.31 In. 31.40

Peak discharge (base, 800 cfs).--Jan. 21 (10:30 p.m.) 2,130 cfs (9.42 ft); May 20 (8 p.m.) 815 cfs (4.88 ft); May 31 (4:30 p.m.) 2,760 cfs (10.82 ft).

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

5470. Hiwassee River below Chatuge Dam, near Hayesville, N. C.

Location (revised).--Lat 35°01'45", long 83°47'45", on left bank 0.4 mile upstream from Hyatt Mill Creek, 1.6 miles southeast of Hayesville, Clay County, 1.7 miles downstream from Chatuge Dam, 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 1959. 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 20, 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.--17 years (1942-59), 428 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,480 cfs Mar. 23 (gage height, 5.17 ft); minimum, 1.6 cfs May 19 (gage height, 0.40 ft).
1907-9, 1922-23, 1942-59: 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. 215).

Revisions (water years).--WSP 973: 1942.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.4	1.6	1.2	38
.5	2.7	1.5	95
.6	4.1	2.0	211
.8	8.2	3.0	515
.9	11	4.0	910
1.0	16	5.0	1,390
1.1	24	6.0	1,940

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	13	10	316	4.4	13	16	1,010	768	462	471	448
2	164	12	10	291	4.2	12	16	1,030	917	574	14	933
3	159	12	10	338	4.2	12	216	24	940	852	558	1,000
4	13	225	10	562	4.9	11	17	1,030	966	620	548	891
5	13	12	10	876	4.2	12	16	1,020	959	16	539	910
6	12	12	10	1,000	4.1	11	866	1,070	927	852	428	14
7	258	12	10	320	3.9	10	864	679	954	1,160	460	14
8	13	12	10	*510	3.9	9.8	860	581	922	1,020	60	80
9	282	12	834	468	7.6	9.3	849	257	980	887	14	14
10	13	11	1,000	369	11	9.0	846	267	948	782	218	14
11	13	11	942	14	11	9.0	436	18	931	1,190	948	15
12	12	11	936	588	*11	9.0	20	2.9	932	117	529	14
13	82	11	968	165	13	9.0	983	3.2	955	1,040	413	12
14	13	11	748	164	10	8.8	982	2.7	22	1,130	496	11
15	12	11	898	334	10	10	*974	2.4	959	120	930	*10
16	12	11	926	890	9.3	9.0	971	2.3	960	208	550	12
17	12	11	456	343	8.5	8.8	20	1.9	1,070	1,040	820	15
18	12	11	514	336	8.2	8.5	19	2.4	734	948	854	72
19	11	11	564	612	9.5	8.5	20	2.2	1,030	932	860	14
20	11	11	536	585	65	8.2	18	3.5	426	972	914	13
21	11	11	16	19	14	8.2	852	10	286	440	632	212
22	11	11	534	16	13	8.0	1,040	449	*1,300	350	42	14
23	11	11	564	79	13	784	1,040	1,020	1,150	537	14	13
24	*11	11	16	14	48	793	1,030	46	1,060	15	546	12
25	10	11	15	12	14	*838	1,010	1,000	904	15	886	11
26	10	11	15	8.5	14	14	22	1,020	55	15	908	11
27	54	11	15	6.6	64	32	1,030	962	886	15	968	10
28	12	12	17	5.6	14	336	1,030	967	908	724	1,060	10
29	12	11	558	5.3	-	17	1,010	1,030	1,150	670	102	9.5
30	12	11	16	4.9	--------	98	1,030	104	1,440	684	14	9.3
31	18	--------	244	4.8	--------	16	--------	30	--------	648	527	--------
Total	1,557	554	11,412	9,256.7	401.9	3,142.1	18,103	13,647.5	26,439	19,036	16,323	4,817.8
Mean	50.2	18.5	368	299	14.4	101	603	440	881	614	527	161
(†)	+2,000	+3,200	-6,600	+1,900	+9,400	+8,900	-3,200	+5,200	-10,200	-10,800	-10,000	+1,700

Adjusted for change in contents in Chatuge Lake

Mean	115	125	155	360	350	388	497	608	541	266	204	217
Cfsm	0.605	0.658	0.816	1.89	1.84	2.04	2.62	3.20	2.85	1.40	1.07	1.14
In.	0.70	0.73	0.94	2.18	1.92	2.36	2.92	3.69	3.18	1.61	1.24	1.28

	Observed			Adjusted		
Calendar year 1958:	Max 1,450	Min 10	Mean 471	Mean 387	Cfsm 2.04	In. 27.63
Water year 1958-59:	Max 1,440	Min 1.9	Mean 342	Mean 318	Cfsm 1.67	In. 22.75

* 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 upstream from Will Scott Creek, 2.0 miles (revised) southeast 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 1959. 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.--62 years (1897-1959), 906 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 5,620 cfs June 2 (gage height, 7.59 ft); minimum, 65 cfs Sept. 29, 30 (gage height, 1.93 ft); minimum daily, 73 cfs Nov. 27.
1897-1959: 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. Considerable diurnal fluctuation caused by Mission powerplant at Andrews Dam (normal regulated storage, about 75 cfs-days). Flow regulated by Chatuge Lake (see p. 215).

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.9	58	3.0	535
2.1	107	4.0	1,270
2.3	174	5.0	2,200
2.6	308	6.0	3,440

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	685	186	227	389	268	332	445	1,360	2,460	1,070	796	490
2	391	174	197	658	244	309	529	1,340	3,020	833	234	814
3	370	*167	203	522	260	304	564	693	1,870	1,230	574	1,070
4	208	316	208	518	352	286	592	1,020	1,700	719	714	1,050
5	178	266	202	948	420	320	427	1,230	1,680	261	726	1,210
6	170	160	185	1,160	342	569	981	1,290	1,680	700	626	325
7	378	149	176	796	306	433	1,230	1,080	1,660	1,370	358	166
8	186	138	162	549	297	376	1,170	1,030	1,250	1,220	578	221
9	380	142	639	936	275	366	1,030	591	1,490	1,110	164	248
10	173	138	1,110	600	324	342	1,160	536	1,360	1,230	334	200
11	143	132	1,100	226	488	315	1,120	286	1,260	1,180	700	218
12	140	132	1,080	608	426	*371	948	265	1,340	791	954	298
13	140	132	1,110	513	*1,400	340	1,710	334	1,220	881	588	208
14	202	132	945	367	1,090	316	1,680	309	723	1,360	599	175
15	140	132	1,000	*724	1,090	624	1,530	262	980	740	838	*155
16	141	167	1,070	1,450	838	586	*1,430	254	1,180	432	1,090	196
17	128	160	762	1,120	676	494	804	247	1,230	910	752	152
18	138	145	*617	716	596	427	594	236	1,140	1,300	1,010	200
19	126	142	670	814	500	388	1,660	226	1,160	1,140	933	153
20	137	138	680	876	494	366	1,710	420	1,070	1,280	1,110	136
21	130	135	367	1,020	404	355	1,600	641	286	1,050	937	278
22	132	135	580	2,150	376	330	1,750	682	1,360	590	406	179
23	120	132	687	950	439	879	1,650	1,280	1,370	696	210	130
24	132	132	238	634	421	1,020	1,560	730	1,470	*328	618	120
25	121	113	173	488	404	1,160	1,500	1,210	1,230	220	834	113
26	118	80	158	432	355	436	860	1,450	713	261	1,030	112
27	*130	73	154	368	342	817	1,070	1,420	710	320	1,040	122
28	172	228	495	328	370	927	1,420	1,520	1,110	646	1,150	121
29	116	508	753	303	-	530	1,380	1,560	1,340	902	594	112
30	126	266	444	288	--------	612	1,360	976	1,630	860	169	112
31	122	--------	460	278	--------	472	--------	2,590	--------	818	577	--------
Total	5,973	5,050	16,852	21,729	13,797	15,402	35,464	27,068	40,692	26,448	21,241	9,084
Mean	193	168	544	701	493	497	1,182	873	1,356	853	685	303

	Observed			Adjusted†		
Calendar year 1958:	Max 5,430	Min 73	Mean 841	Mean 757	Cfsm 1.86	In. 25.30
Water year 1958-59:	Max 3,020	Min 73	Mean 654	Mean 631	Cfsm 1.55	In. 21.10

* Discharge measurement made on this day.
† Adjusted for change in contents in Chatuge Lake.

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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.

Drainage area.--104 sq mi.

Records available.--June 1904 to December 1909, January 1914 to April 1917, October 1918 to September 1959.

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.--47 years (1904-9, 1914-16, 1919-59), 251 cfs.

Extremes.--Maximum discharge during year, 3,020 cfs Jan. 22 (gage height, 9.70 ft); minimum, 47 cfs Sept. 30 (gage height, 1.77 ft).

1904-9, 1914-17, 1918-59: Maximum discharge, 18,000 cfs (revised) Nov. 19, 1906 (gage height, 20.5 ft, revised, from flood profile by Tennessee Valley Authority), from rating curve extended above 5,800 cfs on basis of slope-conveyance study; minimum, 12 cfs several times in August and September 1925 (gage height, 0.52 ft).

Flood of September 1898 reached a stage approximately 0.7 ft higher than that of Nov. 19, 1906, based on information from Tennessee Valley Authority (discharge, 20,000 cfs).

Revisions.--The maximum discharge for the water year 1907 has been revised to 18,000 cfs Nov. 19, 1906 (gage height, 20.5 ft), superseding figure published in WSP 783 and 1306.

Remarks.--Records excellent except those for periods 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 tables, water year 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22

1.8	48	3.5	609
2.0	81	4.0	793
2.3	153	5.0	1,140
2.6	248	6.0	1,490
3.0	396	7.0	1,890

Jan. 23 to Sept. 30

1.7	38	2.6	250
2.0	85	3.0	396
2.3	158		

Note.--Same as preceding table above 3.0 ft.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	266	92	114	142	172	215	294	240	529	122	81	74
2	119	74	102	150	164	202	356	253	1,220	241	80	76
3	98	*72	114	134	172	202	334	244	568	155	76	72
4	102	63	*126	121	250	190	316	218	421	121	76	102
5	85	62	109	b100	264	209	288	206	425	114	85	72
6	77	77	100	b95	224	349	267	190	421	121	79	74
7	72	65	94	b95	202	277	250	184	349	106	83	93
8	68	62	89	159	196	250	234	175	288	98	76	81
9	65	67	85	156	190	240	221	172	257	91	71	93
10	65	62	81	126	196	224	212	170	231	89	*67	93
11	62	60	79	b110	218	218	326	161	212	102	64	96
12	60	58	76	112	209	*277	686	*158	206	114	71	100
13	58	58	77	112	*724	237	704	280	190	100	62	80
14	58	58	81	114	617	224	502	212	172	104	59	*72
15	58	58	76	*269	729	402	404	181	161	108	67	71
16	57	83	67	542	559	364	*356	170	153	131	76	71
17	58	70	74	b295	433	319	319	158	144	121	65	64
18	57	65	74	b220	416	277	392	153	142	136	65	61
19	58	63	72	196	338	253	964	142	131	199	74	61
20	58	60	72	186	294	240	999	232	126	253	69	59
21	57	58	70	707	267	231	690	244	121	158	80	57
22	56	57	68	1,600	250	215	551	218	*114	134	79	56
23	56	57	68	613	302	199	450	187	111	124	87	54
24	54	57	85	404	274	190	388	170	209	114	69	53
25	54	57	74	323	250	181	349	218	206	114	79	51
26	54	60	68	274	237	255	316	206	158	106	67	51
27	*54	58	81	244	224	542	291	193	131	111	87	53
28	54	219	279	221	212	396	277	199	118	*104	72	53
29	54	282	196	199	-	341	260	202	111	93	83	50
30	54	145	150	193	-------	338	244	283	106	91	71	51
31	52	-------	120	181	-------	305	-------	352	-------	85	71	-------
Total	2,200	2,379	3,030	8,393	8,583	8,362	12,240	6,371	7,731	3,860	2,291	2,094
Mean	71.0	79.3	97.7	271	307	270	408	206	258	125	73.9	69.8
Cfsm	0.683	0.762	0.939	2.61	2.95	2.60	3.92	1.98	2.48	1.20	0.711	0.671
In.	0.79	0.85	1.08	3.00	3.07	2.99	4.38	2.28	2.76	1.38	0.82	0.75

Calendar year 1958: Max 2,330 Min 50 Mean 224 Cfsm 2.15 In. 29.28
Water year 1958-59: Max 1,600 Min 50 Mean 185 Cfsm 1.78 In. 24.15

Peak discharge (base, 1,700 cfs).--Jan. 22 (2 a.m.) 3,020 cfs (9.70 ft); June 2 (1:30 a.m.) 2,170 cfs (7.70 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 1959.

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.--17 years, 169 cfs.

Extremes.--Maximum discharge during year, 3,850 cfs Jan. 21 (gage height, 10.66 ft); minimum, 36 cfs Dec. 16 (gage height, 1.89 ft), result of freezeup.
1942-59: 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 periods 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 1958-59, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 27				Dec. 28 to Sept. 30			
1.9	37	2.6	145	2.0	50	3.5	425
2.0	46	3.0	248	2.3	90	4.0	670
2.3	87			2.6	149	5.0	1,250
				3.0	247	6.2	1,770

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117	91	52	126	104	112	147	153	963	92	68	77
2	75	58	51	120	99	104	173	147	550	85	65	79
3	66	52	51	99	103	108	160	141	389	84	62	59
4	65	*50	*51	87	130	103	160	132	310	79	64	57
5	62	48	48	b70	126	205	147	126	271	76	64	57
6	57	50	47	b70	110	369	141	122	271	82	66	58
7	54	47	46	b70	104	228	132	116	225	77	70	92
8	53	46	46	88	103	188	126	114	205	70	66	74
9	53	47	46	b80	101	169	122	112	190	68	61	70
10	53	45	45	b65	112	153	118	112	176	66	59	73
11	51	45	45	b60	112	149	193	*112	167	131	*56	174
12	48	45	44	b60	128	*169	380	116	160	143	60	143
13	48	45	45	66	*401	149	353	158	156	108	61	97
14	48	45	48	66	274	141	265	130	145	120	54	*82
15	47	46	b43	*103	357	249	225	116	136	156	94	103
16	47	52	b42	128	259	205	*202	110	130	151	96	90
17	47	47	b42	b85	218	183	183	104	126	122	66	76
18	47	47	46	b83	205	164	198	101	122	134	68	69
19	47	46	45	b81	171	153	287	97	118	114	68	66
20	47	45	46	b80	156	149	268	328	114	*160	61	64
21	47	44	44	1,090	143	143	239	265	110	138	61	61
22	46	44	44	*894	136	134	220	269	*104	116	57	59
23	46	44	44	320	145	126	202	242	103	118	58	58
24	*46	43	56	228	132	122	185	205	138	99	61	57
25	46	43	47	188	122	118	173	231	124	95	62	53
26	45	44	45	162	118	124	164	242	114	95	69	53
27	45	44	68	145	114	167	158	212	103	92	69	60
28	45	76	198	132	110	136	195	246	97	82	58	56
29	45	83	120	122	-	136	176	225	92	76	58	52
30	45	56	90	116	--------	143	158	234	88	73	59	56
31	45	--------	77	110	--------	134	--------	1,760	--------	70	69	--------
Total	1,633	1,518	1,762	5,194	4,393	4,933	5,850	6,778	5,997	3,172	2,010	2,225
Mean	52.7	50.6	56.8	168	157	159	195	219	200	102	64.8	74.2
Cfsm	0.705	0.676	0.759	2.25	2.10	2.13	2.61	2.93	2.67	1.36	0.866	0.992
In.	0.81	0.75	0.88	2.58	2.18	2.45	2.91	3.37	2.98	1.58	1.00	1.11

Calendar year 1958: Max 739 Min 42 Mean 151 Cfsm 2.02 In. 27.40
Water year 1958-59: Max 1,760 Min 42 Mean 125 Cfsm 1.67 In. 22.60

Peak discharge (base, 1,500 cfs).--Jan. 21 (9:30 p.m.) 3,850 cfs (10.66 ft); May 31 (3:30 p.m.) 3,460 cfs (10.00 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 northwest (revised) of Ivylog, Union County, and at mile 20.4.

Drainage area.--215 sq mi.

Records available.--July 1942 to September 1959.

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.--17 years, 397 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,830 cfs Mar. 25, Apr. 30 (gage height, 5.00 ft); minimum, 8.7 cfs Sept. 14, 15 (gage height, 0.60 ft).
1942-59: 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. 216).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.6	8.7	1.5	126
.7	13	2.0	251
.8	20	3.0	640
.9	29	4.0	1,170
1.0	41	5.0	1,830

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	194	13	13	362	12	14	16	15	593	238	1,510	1,170
2	200	13	13	338	12	14	16	15	588	250	803	1,300
3	176	*13	13	461	13	15	290	15	16	16	998	648
4	12	377	*13	659	13	15	16	15	16	16	1,590	607
5	12	13	13	1,020	13	15	15	15	16	16	1,130	10
6	402	13	13	1,090	13	15	837	16	17	460	659	10
7	412	13	13	426	13	15	812	261	17	610	1,390	11
8	405	13	13	720	13	15	741	514	18	615	1,180	132
9	312	13	1,040	502	14	15	833	15	18	276	13	342
10	127	13	1,240	445	13	15	824	15	19	250	*566	852
11	12	13	1,190	12	13	15	16	538	19	290	1,260	796
12	12	13	1,170	698	14	15	16	284	786	16	1,110	11
13	90	13	1,150	53	14	15	994	323	774	16	912	10
14	12	13	837	154	14	15	994	318	16	16	1,070	9.1
15	12	13	1,050	*341	14	16	945	324	848	16	1,280	842
16	12	13	950	938	14	16	*946	15	16	16	714	715
17	12	13	12	370	14	16	15	15	16	462	1,090	438
18	12	13	12	359	14	16	16	764	16	1,000	1,170	502
19	12	13	12	336	14	16	16	756	16	609	914	532
20	12	13	12	362	68	16	16	742	16	896	892	432
21	12	13	12	14	14	16	954	806	16	784	862	648
22	12	13	234	14	14	16	896	818	*16	280	87	562
23	12	13	12	70	14	760	921	15	138	726	11	514
24	*12	13	12	12	14	780	912	15	18	712	410	528
25	12	14	12	12	14	794	14	644	18	15	638	612
26	12	13	12	12	14	809	20	638	18	16	376	10
27	64	13	13	12	14	670	686	626	18	15	551	9.6
28	13	14	13	12	20	428	20	646	18	542	454	9.6
29	13	13	435	12	-	15	15	556	750	725	11	9.6
30	13	13	12	12	--------	103	944	16	626	1,370	11	9.6
31	13	--------	274	12	--------	15	--------	27	--------	1,030	1,150	--------
Total	2,639	756	9,820	9,840	440	4,710	13,756	9,782	5,477	12,299	24,812	12,281.5
Mean	85.1	25.2	317	317	15.7	152	459	316	183	397	800	409
(†)	+2,500	+4,100	-4,800	+1,000	+9,000	+5,900	-800	+4,300	+5,600	-4,900	-18,700	-6,400

Adjusted for change in contents in Nottely Lake

Mean	166	162	162	350	337	342	432	454	369	239	197	196
Cfsm	0.772	0.753	0.753	1.63	1.57	1.59	2.01	2.11	1.72	1.11	0.916	0.912
In.	0.89	0.84	0.87	1.88	1.63	1.84	2.24	2.44	1.92	1.28	1.06	1.02

	Observed			Adjusted		
Calendar year 1958:	Max 1,480	Min 1.3	Mean 425	Mean 367	Cfsm 1.71	In. 23.19
Water year 1958-59:	Max 1,590	Min 9.1	Mean 292	Mean 283	Cfsm 1.32	In. 17.91

* 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 1959. 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.--26 years, 48.9 cfs.

Extremes.--Maximum discharge during year, 513 cfs Jan. 22 (gage height, 4.62 ft); minimum, 22 cfs Dec. 16, 22, 23; minimum gage height, 1.05 ft Dec. 16 (result of ice regulation).

1933-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Jan. 21, 22)

1.06	22
1.2	34
1.5	70
2.0	138
3.0	304

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	37	30	38	37	41	50	61	97	46	30	72
2	43	32	*28	36	36	40	60	61	124	93	30	57
3	38	28	29	32	*37	*37	52	57	83	44	43	70
4	40	*26	29	30	47	36	53	*53	*69	41	41	71
5	34	27	27	26	45	45	51	51	67	38	32	46
6	31	29	26	*31	38	70	*46	51	76	*38	30	45
7	30	27	25	25	36	50	45	50	64	35	30	43
8	*29	25	25	42	36	45	43	50	57	33	29	51
9	30	29	25	41	36	43	42	49	53	32	26	52
10	30	27	24	33	40	41	43	50	51	36	26	44
11	29	25	24	30	42	42	78	47	51	41	25	*37
12	27	25	24	30	40	55	119	44	49	52	*26	36
13	27	25	24	30	105	45	95	62	50	41	25	33
14	27	25	25	30	76	43	74	50	46	37	25	32
15	27	25	24	36	96	70	65	47	44	36	29	32
16	27	25	29	71	73	56	60	44	43	38	27	31
17	27	25	24	47	62	51	56	44	43	45	24	30
18	26	25	24	40	57	47	96	43	42	52	38	29
19	26	24	23	36	51	45	216	41	43	52	33	29
20	26	24	23	37	47	43	153	55	42	57	31	28
21	26	24	23	142	43	42	108	56	41	63	30	28
22	26	24	22	255	43	42	92	57	40	97	30	27
23	25	24	22	87	49	40	82	57	40	57	29	27
24	25	24	31	65	44	38	75	51	57	45	28	26
25	25	24	26	56	42	37	71	61	55	41	26	25
26	24	24	24	51	40	63	67	53	44	38	24	24
27	24	24	38	47	40	92	65	49	41	37	24	24
28	24	52	69	44	38	62	62	47	38	35	23	24
29	24	49	41	42	-	56	62	44	37	33	28	24
30	24	32	35	40	-------	53	61	77	35	31	26	24
31	24	-------	31	38	-------	50	-------	142	-------	31	58	-------
Total	923	836	874	1,588	1,376	1,520	2,242	1,704	1,622	1,395	926	1,121
Mean	29.8	27.9	28.2	51.2	49.1	49.0	74.7	55.0	54.1	45.0	29.9	37.4
Cfsm	1.11	1.04	1.05	1.90	1.83	1.82	2.78	2.04	2.01	1.67	1.11	1.39
In.	1.28	1.16	1.21	2.20	1.90	2.10	3.10	2.36	2.24	1.93	1.28	1.55

Calendar year 1958: Max 367 Min 22 Mean 57.9 Cfsm 2.15 In. 29.23
Water year 1958-59: Max 255 Min 22 Mean 44.2 Cfsm 1.64 In. 22.31

Peak discharge (base, 300 cfs).--Jan. 22 (2 to 3:30 p.m.) 513 cfs (4.62 ft).

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 830.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--17 years, 2,336 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,120 cfs Jan. 22 (gage height, 5.01 ft); minimum, 74 cfs Dec. 16 (gage height, 1.28 ft); minimum daily, 112 cfs Aug. 9.
1942-59: 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 and those for period of no gage-height record, which are fair. Flow regulated by Chatuge, Nottely, Hiwassee, and Apalachia Lakes (see p. 215,216).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.4	103	4.0	2,900
1.8	240	5.0	5,090
3.0	1,200		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,550	2,020	2,080	2,080	343	1,970	212	1,110	718	a2,500	2,660	2,720
2	2,700	2,300	1,940	2,430	2,090	2,020	275	1,880	*1,470	a2,700	1,110	2,040
3	2,460	2,100	2,350	1,880	2,280	2,190	280	200	728	a2,000	2,160	1,980
4	1,800	2,450	2,420	2,850	2,120	2,560	290	1,900	515	a200	2,380	2,320
5	1,500	2,750	2,230	3,050	2,540	2,350	260	2,460	413	a250	2,650	1,980
6	2,080	2,700	2,590	3,220	2,720	2,830	478	2,380	479	a1,700	2,440	1,940
7	2,410	2,820	2,210	3,210	2,240	2,500	498	2,120	412	a2,300	2,170	2,660
8	2,290	2,730	2,590	2,120	1,060	1,120	594	2,770	700	a2,200	2,260	2,130
9	2,560	1,930	3,260	2,200	1,970	2,070	439	1,660	186	a2,100	112	2,890
10	2,650	2,630	3,240	2,580	152	1,430	994	159	188	a1,100	1,840	2,540
11	2,700	2,390	3,070	1,260	2,230	1,860	882	1,850	499	a2,100	*2,250	2,320
12	2,680	2,590	2,300	1,910	2,060	2,600	1,680	1,800	1,320	a1,500	1,350	1,100
13	2,740	2,570	2,110	1,360	2,280	2,000	1,850	463	1,250	a1,500	1,840	920
14	2,660	2,230	2,340	1,120	1,030	222	1,790	1,820	259	a2,200	1,620	2,300
15	2,660	1,830	1,790	1,950	636	423	887	2,810	1,890	a1,400	2,170	1,920
16	2,740	160	2,080	3,140	487	1,750	640	1,280	2,080	1,560	1,230	2,660
17	*2,620	2,520	1,960	2,180	350	1,740	847	559	2,280	2,120	2,390	2,710
18	2,330	2,400	2,000	532	*1,230	2,490	2,020	920	2,310	2,690	2,610	2,390
19	1,560	2,670	*1,710	2,220	2,280	2,170	3,090	1,340	1,760	1,960	2,700	1,970
20	2,560	2,660	2,380	1,420	2,270	1,210	2,020	1,440	1,350	2,410	2,050	2,050
21	2,630	2,620	2,620	1,070	2,240	683	660	646	423	3,190	1,820	2,580
22	2,550	2,700	2,100	2,920	1,390	1,590	536	731	2,500	2,400	1,270	2,700
23	2,600	2,270	1,940	932	962	1,200	404	360	a2,500	1,510	1,270	2,750
24	2,650	2,620	1,800	472	1,030	1,860	338	165	a2,700	1,570	1,960	2,790
25	2,200	2,260	1,040	240	1,980	2,030	296	378	a2,100	152	2,740	2,780
26	2,240	2,620	1,940	1,200	730	1,820	265	332	a1,200	163	2,740	1,560
27	2,650	2,750	1,610	1,390	348	1,540	1,050	835	a2,200	2,340	2,730	2,200
28	2,660	3,100	685	1,220	2,080	1,070	386	358	a2,100	1,880	2,670	2,590
29	2,710	2,760	1,240	849	-	1,010	761	1,370	a2,700	2,120	2,570	2,300
30	2,660	1,150	834	237	--------	414	1,580	585	a2,300	2,720	1,080	1,750
31	2,660	--------	1,440	1,990	--------	228	--------	646	--------	2,290	2,780	--------
Total	76,460	71,300	63,899	55,232	43,128	50,950	26,302	37,327	41,530	56,825	63,622	67,540
Mean	2,466	2,377	2,061	1,782	1,540	1,644	877	1,204	1,384	1,833	2,052	2,251

	Observed			Adjusted†		
Calendar year 1958:	Max 4,840	Min 160	Mean 2,444	Mean 2,228	Cfsm 1.96	In. 26.62
Water year 1958-59:	Max 3,260	Min 112	Mean 1,792	Mean 1,759	Cfsm 1.55	In. 21.01

* Discharge measurement made on this day.
† Adjusted for change in contents in Nottely, Chatuge, Hiwassee, and Apalachia Lakes.
a No gage-height record; discharge estimated on basis of Apalachia powerplant records.

5580. Toccoa River near Dial, Ga.

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, 2.5 miles northwest of Dial, Fannin County, and at mile 69.1.

Drainage area.--177 sq mi.

Records available.--October 1912 to September 1959. 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.

Average discharge.--47 years, 482 cfs.

Extremes.--Maximum discharge during year, 3,530 cfs Jan. 21 (gage height, 5.88 ft); minimum, 112 cfs Dec. 16 (gage height, 0.70 ft), result of freezeup.

1912-59: 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.

Remarks.--Records excellent.

Revisions (water years).--WSP 823: Drainage area. WSP 1386: 1923(M), 1924, 1927(M), 1929-32(M), 1933, 1934(M), 1944(M).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30			
0.9	154	1.0	178	3.0	1,100
1.5	340	1.5	328	4.0	1,780
2.0	560	2.0	540	5.0	2,650
3.0	1,100				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	420	286	*194	284	288	339	445	500	1,290	358	253	328
2	297	235	186	311	*278	*328	617	505	903	365	250	259
3	260	*197	197	260	281	332	500	505	*749	346	247	262
4	251	188	197	235	346	321	490	*463	666	343	247	232
5	235	183	183	*194	350	455	445	445	628	335	294	221
6	223	186	175	180	301	925	*433	433	820	*354	256	215
7	*217	180	170	175	284	551	417	425	644	335	259	365
8	214	175	167	170	281	458	405	413	584	318	253	328
9	211	180	167	175	281	433	397	409	546	308	235	*281
10	208	175	164	180	325	405	385	409	525	304	229	278
11	205	172	164	200	339	409	628	405	505	325	221	431
12	197	172	162	205	341	495	1,100	401	530	405	226	408
13	197	170	164	205	1,200	417	969	463	716	350	*226	297
14	194	170	177	200	749	397	732	445	530	369	232	272
15	191	172	167	282	744	782	628	397	490	381	262	301
16	191	220	170	434	584	606	578	381	472	373	314	294
17	191	191	180	260	520	520	535	373	454	365	235	262
18	191	180	175	241	490	468	672	361	437	346	247	244
19	194	175	170	257	437	441	1,150	354	433	346	262	235
20	200	170	172	254	405	433	903	540	425	409	288	232
21	191	170	170	1,020	385	429	760	520	417	358	259	224
22	186	167	164	1,880	377	429	694	437	405	339	256	218
23	186	164	162	687	409	397	644	520	397	328	272	212
24	183	164	214	492	385	385	600	421	515	318	284	210
25	180	164	183	425	361	377	568	649	468	308	238	204
26	177	170	170	381	350	417	540	568	429	311	262	204
27	175	167	191	354	343	600	530	505	397	318	238	215
28	175	231	430	335	335	450	551	650	381	284	234	212
29	175	346	297	318	-	433	584	749	373	275	218	204
30	175	214	241	308	-------	450	505	705	361	268	250	196
31	172	-------	220	297	-------	421	-------	1,610	-------	259	321	-------
Total	6,462	5,734	5,943	11,199	11,769	14,303	18,405	15,961	16,490	10,401	7,868	7,844
Mean	208	191	192	361	420	461	614	515	550	336	254	261
Cfsm	1.18	1.08	1.08	2.04	2.37	2.60	3.47	2.91	3.11	1.90	1.44	1.47
In.	1.36	1.20	1.25	2.35	2.47	3.01	3.87	3.35	3.46	2.19	1.65	1.65

Calendar year 1958: Max 1,730 Min 162 Mean 449 Cfsm 2.54 In. 34.47
Water year 1958-59: Max 1,880 Min 162 Mean 363 Cfsm 2.05 In. 27.81

Peak discharge (base, 2,400 cfs).--Jan. 21 (10:30 p.m.) 3,530 cfs (5.88 ft).

* Discharge measurement made on this day.

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, 2¼ miles west of Morganton, 2½ miles northeast of Blue Ridge, Fannin County, and at mile 52.5.

Drainage area.--233 sq mi.

Records available.--October 1898 to March 1903, October 1912 to September 1959. 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.--51 years (1898-1902, 1912-59), 615 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,730 cfs Oct. 3 (gage height, 4.89 ft); minimum, 1.8 cfs Dec. 4 (gage height, 0.73 ft); minimum daily, 3.9 cfs Dec. 3.
1898-1902, 1912-59: 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. 216).

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.7	1.2	1.7	116
.8	4.3	2.0	216
.9	9.3	3.0	640
1.1	23	4.0	1,170
1.3	42	5.0	1,800
1.5	68		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,280	750	*417	9.9	219	622	202	16	21	565	750	568
2	717	800	4.3	9.9	*620	644	386	369	21	18	750	74
3	707	250	3.9	350	632	331	365	364	*137	549	500	669
4	502	454	434	559	53	439	383	367	262	566	620	513
5	493	1,100	1,050	631	629	333	355	433	430	661	620	508
6	910	1,180	1,040	810	602	300	*338	492	108	636	570	456
7	*970	1,010	1,030	890	404	13	477	498	21	680	630	320
8	1,000	958	617	602	430	400	453	570	529	597	680	630
9	1,100	937	844	303	430	392	462	563	334	604	670	748
10	1,120	951	820	514	640	233	553	505	200	514	670	674
11	1,200	296	680	514	610	319	214	497	377	602	660	341
12	1,200	735	680	618	609	557	16	512	289	613	720	569
13	1,100	524	670	731	13	470	16	512	521	607	*740	517
14	900	713	660	695	12	544	15	310	518	76	733	569
15	800	628	655	409	12	30	15	502	517	813	655	556
16	830	15	655	9.3	12	448	409	373	583	810	673	644
17	860	701	296	140	12	562	400	490	614	750	690	680
18	960	1,080	408	447	12	342	400	498	414	680	687	699
19	720	1,040	972	447	391	219	20	779	625	600	748	649
20	1,010	1,160	850	456	165	210	20	667	526	15	588	623
21	1,170	1,060	984	171	292	416	10	390	531	670	420	560
22	1,140	513	880	11	530	412	10	309	638	30	22	748
23	950	397	438	10	85	387	15	314	624	740	653	733
24	890	701	742	140	469	709	15	497	18	510	640	725
25	1,010	574	762	126	510	639	15	372	721	560	575	727
26	1,000	706	471	53	723	218	15	432	653	630	407	657
27	940	772	318	148	597	61	13	18	874	610	508	671
28	820	792	80	777	620	13	10	488	880	570	604	418
29	810	772	238	1,020	-	13	6.7	251	554	500	694	482
30	740	369	318	458	--------	478	7.2	114	578	580	338	524
31	800	--------	174	433	--------	567	--------	22	--------	610	1,000	--------
Total	28,649	21,938	18,191.2	12,492.1	10,333	11,321	5,615.9	12,524	13,118	16,966	19,215	17,252
Mean	924	731	587	403	369	365	187	404	437	547	620	575

	Observed			Adjusted†		
Calendar year 1958:	Max 1,840	Min 3.9	Mean 690	Mean 563	Cfsm 2.42	In. 32.77
Water year 1958-59:	Max 1,280	Min 3.9	Mean 514	Mean 452	Cfsm 1.94	In. 26.35

* Discharge measurement made on this day.
† Adjusted for change in contents in Blue Ridge Lake.
Note.--No gage-height record Oct. 7 to Nov. 3, Feb. 8-10, Apr. 13, 15, 17-28, July 16 to Aug. 12; 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, 0.4 mile downstream from Copperhill, Polk County, and at mile 37.5.

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 1959. 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.--27 years (1902-6, 1907-13, 1942-59), 841 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,260 cfs Aug. 19 (gage height, 4.63 ft); minimum, 108 cfs Sept. 30 (gage height, 1.79 ft); minimum daily, 140 cfs Dec. 3.
1902-13, 1918-25, 1942-59: 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. Sixty-six percent of drainage area regulated by Blue Ridge Lake beginning Dec. 6, 1930 (see p. 216). Record includes diversion from this stream by Tennessee Copper Co.

Revisions (water years).--WSP 973: Drainage area. WSP 1386: 1945.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.9	140
2.0	182
2.2	290
2.8	755
3.5	1,450

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	836	982	*599	187	472	658	666	253	662	748	818	1,030
2	984	890	148	191	638	*938	711	662	410	282	904	225
3	854	600	140	368	*854	611	614	627	511	691	742	649
4	665	*573	316	755	408	516	595	606	*536	720	746	675
5	627	967	1,210	791	652	677	602	*660	989	845	796	619
6	921	982	1,190	*950	814	654	582	614	605	*981	671	595
7	1,100	1,140	1,190	1,090	764	240	*670	710	388	832	744	724
8	*895	1,090	854	972	610	520	658	866	828	789	874	740
9	1,140	1,240	965	465	598	612	626	800	725	738	780	900
10	1,260	1,030	1,060	678	719	588	726	710	483	678	795	*894
11	1,400	656	845	670	813	566	586	712	642	769	766	518
12	1,260	784	827	730	808	708	629	690	552	786	819	696
13	1,390	702	827	912	687	770	462	720	632	758	848	727
14	1,090	786	827	892	365	748	328	539	868	276	*829	676
15	906	800	809	828	418	445	278	675	578	869	781	686
16	917	170	809	433	305	730	677	556	954	927	746	754
17	974	757	669	284	271	771	656	671	768	982	806	798
18	971	946	291	675	284	725	762	641	656	861	836	810
19	844	1,170	1,120	646	654	497	1,030	670	793	832	876	752
20	1,090	1,280	1,010	646	447	482	654	1,120	731	284	654	764
21	1,200	1,190	1,160	754	541	673	448	711	721	818	685	672
22	1,300	946	1,050	876	720	679	372	551	793	304	330	782
23	1,120	556	802	328	402	639	328	518	796	782	698	845
24	1,110	747	722	426	696	851	298	707	301	666	774	829
25	954	776	928	392	695	826	284	641	722	748	706	802
26	1,180	706	802	280	841	628	271	672	800	774	598	748
27	1,120	810	519	358	851	558	265	240	1,210	796	614	758
28	1,010	1,180	544	700	787	335	271	775	1,000	740	701	594
29	917	1,100	358	1,200	-	305	271	513	900	665	812	569
30	845	739	522	876	--------	707	253	414	752	680	544	528
31	869	--------	482	600	--------	926	--------	1,190	--------	750	754	--------
Total	31,749	26,295	23,595	19,953	17,114	19,583	15,573	20,434	21,306	22,371	23,047	21,359
Mean	1,024	876	761	644	611	632	519	659	710	722	743	712

	Observed			Adjusted†			
Calendar year 1958:	Max 3,470	Min 140	Mean 943	Mean 815	Cfsm 2.32	In. 31.45	
Water year 1958-59:	Max 1,400	Min 140	Mean 719	Mean 657	Cfsm 1.87	In. 25.34	

* Discharge measurement made on this day.
† Adjusted for change in contents in Blue Ridge Lake.

5600. Fightingtown Creek at McCaysville, Ga.

Location.--Lat 34°58'53", long 84°23'12", on right bank 0.2 mile upstream from 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 1959. 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.--17 years, 196 cfs.

Extremes.--Maximum discharge during year, 1,520 cfs Jan. 21 (gage height, 5.72 ft, from recorded range in stage); minimum, 64 cfs Nov. 24, 25 (gage height, 1.57 ft).
1942-59: 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 periods 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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30	
1.5	55	1.6	65
1.7	85	2.0	140
2.0	144	2.5	272
2.5	272	3.0	430
3.5	620	5.0	1,270

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	135	111	99	151	138	168	194	216	339	122	92	188
2	109	94	*92	156	*134	158	230	213	252	168	102	128
3	99	*85	90	131	138	*156	208	199	213	118	106	104
4	98	78	90	116	166	152	210	194	*191	116	100	118
5	90	76	85	*103	166	170	194	*186	188	108	96	102
6	87	76	82	107	145	269	*186	180	278	108	87	98
7	83	75	80	131	136	196	176	176	241	*112	90	98
8	*82	71	78	112	136	180	170	170	199	104	87	110
9	80	78	76	111	136	176	168	168	183	100	78	104
10	78	71	76	99	163	168	166	168	176	96	76	*98
11	75	70	75	98	183	170	250	163	168	106	75	92
12	73	70	75	94	168	202	366	158	168	110	83	98
13	73	68	75	92	479	176	310	191	163	106	87	90
14	73	68	78	94	336	168	255	180	149	114	*76	87
15	73	68	75	169	336	244	230	161	145	118	79	94
16	73	78	a76	239	278	216	216	156	140	110	78	98
17	73	73	a78	160	250	196	205	152	136	114	73	87
18	73	68	a76	a150	247	183	307	147	134	118	85	81
19	73	68	73	a160	216	176	749	142	130	108	89	81
20	71	67	71	a160	199	170	524	170	128	180	85	78
21	71	67	71	a600	188	170	388	166	124	161	154	76
22	68	67	70	a900	183	168	336	166	120	232	193	75
23	70	67	70	a500	194	156	301	168	118	132	100	73
24	70	65	83	a300	186	154	278	166	166	122	90	73
25	68	65	78	222	176	149	264	180	140	120	116	71
26	67	70	71	194	170	193	250	168	138	120	90	70
27	67	68	89	178	163	336	236	156	122	114	83	70
28	68	140	200	166	158	238	238	194	118	102	92	70
29	68	202	126	154	-	219	236	156	112	98	83	68
30	68	116	109	149	-------	219	219	218	108	94	79	65
31	68	-------	101	142	-------	202	-------	423	-------	90	103	-------
Total	2,424	2,440	2,668	6,138	5,568	5,898	8,060	5,651	4,987	3,721	2,907	2,745
Mean	78.2	81.3	86.1	198	199	190	269	182	166	120	93.8	91.5
Cfsm	1.10	1.15	1.21	2.79	2.81	2.68	3.79	2.57	2.34	1.69	1.32	1.29
In.	1.27	1.28	1.40	3.22	2.92	3.09	4.23	2.96	2.62	1.95	1.52	1.44

Calendar year 1958: Max 1,760 Min 65 Mean 206 Cfsm 2.91 In. 39.49
Water year 1958-59: Max 900 Min 65 Mean 146 Cfsm 2.06 In. 27.90

Peak discharge (base, 1,200 cfs).--Jan. 21 (time unknown) 1,520 cfs (5.72 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.

5605. Davis Mill Creek at Copperhill, Tenn.

Location.--Lat 34°59'43", long 84°22'56", on right bank 0.1 mile upstream from mouth, 0.4 mile northwest of Louisville & Nashville Railroad station, and 0.8 mile northwest of post office at Copperhill, Polk County.

Drainage area.--5.16 sq mi.

Records available.--July 1940 to September 1941 (published as Mill Creek at Copperhill), December 1948 to September 1959.

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.--10 years (1949-59), 36.4 cfs.

Extremes.--Maximum discharge during year, 830 cfs Aug. 31 (gage height, 3.85 ft), from rating curve extended above 150 cfs as explained below; minimum daily, 19 cfs Dec. 10. 1940-41, 1948-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.4	17
1.7	31
2.0	47
2.5	93

[1] Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	46	29	37	31	30	36	40	50	62	42	56
2	45	43	*30	32	32	32	36	40	43	47	43	48
3	45	43	31	31	*33	*34	37	40	46	45	50	45
4	44	*41	33	28	36	34	35	40	*49	44	47	43
5	42	42	32	*28	32	38	32	*39	49	44	45	43
6	41	42	30	29	29	34	36	42	51	40	44	43
7	42	41	27	28	26	32	*36	44	46	*44	43	42
8	45	41	27	36	29	30	38	43	45	43	42	43
9	45	40	24	28	33	33	40	43	42	42	42	54
10	*44	40	19	28	40	31	40	40	41	42	41	45
11	44	38	22	28	36	34	47	40	43	42	42	*43
12	44	40	30	28	36	32	49	42	46	47	50	42
13	44	40	29	30	48	30	43	45	41	45	48	40
14	44	43	30	33	40	29	43	42	40	44	*47	41
15	45	43	30	38	40	34	42	43	42	44	45	42
16	44	43	33	32	38	34	43	40	40	44	43	42
17	45	43	32	30	34	32	42	40	42	45	42	41
18	43	43	28	30	36	30	61	40	42	46	52	40
19	44	40	26	30	30	29	60	40	42	47	50	40
20	44	42	28	29	31	32	49	47	44	63	48	39
21	43	40	29	54	31	30	45	42	42	64	47	40
22	43	38	28	38	30	28	45	45	47	77	46	40
23	43	37	29	36	36	32	45	45	49	45	45	33
24	43	38	30	36	32	30	45	43	49	45	45	39
25	40	38	26	36	30	32	46	52	44	44	44	41
26	40	36	26	34	31	37	45	49	45	44	43	40
27	40	32	36	34	34	36	45	46	41	44	43	40
28	38	46	36	33	32	32	43	44	41	44	43	40
29	39	30	34	30	-	32	43	42	40	43	43	40
30	42	30	32	34	-------	34	40	59	40	42	45	39
31	42	-------	30	33	-------	35	-------	72	-------	42	79	-------
Total	1,330	1,199	906	1,011	946	1,002	1,287	1,369	1,322	1,454	1,429	1,264
Mean	42.9	40.0	29.2	32.6	33.8	32.3	42.9	44.2	44.1	46.9	46.1	42.1
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 199 Min 19 Mean 43.4 Cfsm - In. -
Water year 1958-59: Max 79 Min 19 Mean 39.8 Cfsm - In. -

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 11, 12, Apr. 22, 23, May 2, 3, 22-25, 27-29, July 3-19, July 24 to Aug. 30; discharge estimated on basis of weather records, discharge measurements, 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 1959. 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.--25 years, 29.1 cfs.

Extremes.--Maximum discharge during year, 2,010 cfs July 1 (gage height, 6.30 ft), from rating curve extended above 700 cfs on basis of computation of peak flow over dam at gage height 7.86 ft; minimum daily, 17 cfs Oct. 11, 12, 14, Nov. 13, Dec. 31, Jan. 9-11.
1934-59: 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 doubtful or 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 11 to Mar. 8)

1.0	14	2.5	89
1.5	30	3.0	140
2.0	52	3.5	220

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	34	21	24	28	26	32	35	68	125	26	74
2	30	24	*18	22	28	27	33	30	65	80	25	35
3	29	25	18	22	*28	*28	29	28	43	40	35	80
4	29	*22	19	21	32	21	27	32	*36	35	32	41
5	25	21	20	18	30	34	26	*24	45	32	28	33
6	26	20	18	*18	29	39	28	22	50	30	26	32
7	23	19	20	18	28	30	*23	21	37	*27	25	32
8	*21	19	23	26	27	29	20	20	35	25	24	29
9	20	19	19	17	27	*29	19	20	30	24	23	37
10	18	19	18	17	25	25	21	21	30	28	23	27
11	17	18	19	17	22	29	40	25	29	28	26	*25
12	17	18	18	18	33	32	64	25	29	39	22	25
13	19	17	18	18	67	26	42	39	25	28	20	25
14	17	20	18	20	44	24	31	27	22	26	*25	25
15	18	20	19	31	44	49	29	24	26	30	22	25
16	18	19	23	21	38	32	29	24	21	36	18	24
17	18	21	21	18	33	27	28	25	20	51	20	22
18	18	20	20	18	31	24	89	26	21	35	86	22
19	18	19	19	23	29	23	89	23	23	28	97	22
20	21	18	19	24	26	23	57	43	24	53	37	22
21	19	18	19	166	21	25	47	32	24	145	58	23
22	18	19	19	66	20	23	41	89	25	100	52	21
23	18	19	19	44	29	24	37	37	28	50	32	20
24	18	19	25	36	27	24	33	59	42	40	28	20
25	18	19	22	34	27	23	32	58	30	37	25	21
26	18	19	20	34	26	50	30	37	27	34	24	20
27	18	19	22	30	26	41	32	49	25	31	23	20
28	19	50	26	29	26	30	31	33	22	30	53	22
29	18	22	23	28	-	33	30	30	22	29	32	19
30	18	20	18	28	-------	32	28	66	23	28	26	19
31	19	-------	17	27	-------	28	-------	125	-------	27	137	-------
Total	659	636	618	933	851	910	1,097	1,149	947	1,351	1,130	862
Mean	21.3	21.2	19.9	30.1	30.4	29.4	36.6	37.1	31.6	43.6	36.5	28.7
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 376 Min 17 Mean 35.4 Cfsm - In. -
Water year 1958-59: Max 166 Min 17 Mean 30.7 Cfsm - In. -

* Discharge measurement made on this day.

Note.--Doubtful or no gage-height record Oct. 1 to Mar. 8, July 2-6, July 22 to Aug. 8; discharge estimated on basis of recorder graph, discharge measurements, 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, 2 miles downstream from Goforth Creek, and at mile 19.6.

Drainage area.--524 sq mi.

Records available.--October 1912 to September 1959. 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.--47 years, 1,226 cfs (unadjusted).

Extremes.--Maximum discharge during year, 10,500 cfs Jan. 21 (gage height, 8.76 ft); minimum, 43 cfs Apr. 27 (gage height, 2.56 ft); minimum daily, 87 cfs Apr. 28.
1912-59: 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.216) and by powerplant above station.

Cooperation.--Water-stage recorder inspected by employee of Tennessee Valley Authority.

Revisions (water years).--WSP 783: 1913-34.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

2.7	75	4.5	1,200
3.0	162	5.0	1,790
3.5	404	6.0	3,360
4.0	760	7.0	5,250

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,200	1,060	998	686	956	990	981	981	2,580	972	972	998
2	1,100	1,050	990	794	956	981	990	981	1,090	1,550	981	998
3	1,140	1,300	972	972	956	981	1,010	998	1,030	981	998	1,050
4	1,180	1,180	645	938	972	964	1,010	990	998	981	990	1,060
5	1,200	1,010	981	1,100	964	956	1,010	*981	998	972	998	972
6	1,240	998	990	947	972	1,060	998	990	1,140	972	998	981
7	1,260	1,060	964	938	972	998	981	990	1,320	*972	990	972
8	1,240	1,060	972	972	981	972	998	972	998	981	990	972
9	*1,230	1,050	990	981	990	972	998	972	998	964	981	972
10	1,250	1,040	1,060	964	990	964	972	972	998	964	972	972
11	1,250	1,040	972	938	990	956	1,030	990	990	972	972	981
12	1,250	1,030	947	930	981	972	1,370	998	981	972	964	981
13	1,260	890	956	956	1,420	981	1,400	1,010	972	990	981	972
14	1,200	1,040	956	956	1,230	964	1,040	990	990	650	981	972
15	1,140	1,050	956	990	1,460	998	1,010	972	998	956	990	972
16	1,140	1,050	947	*1,230	1,080	990	1,020	972	972	972	990	972
17	1,240	1,030	956	965	1,020	904	1,010	981	972	990	981	972
18	1,240	1,030	947	972	1,010	981	1,240	990	972	990	981	972
19	1,240	1,010	*964	964	964	972	2,880	981	981	964	972	964
20	1,160	998	956	972	981	964	2,190	998	981	1,350	956	972
21	1,160	981	938	2,240	964	972	1,690	1,020	981	990	947	990
22	1,200	956	938	3,560	972	981	1,380	1,030	981	1,240	964	972
23	1,310	972	947	1,330	972	972	1,020	1,040	990	981	964	964
24	1,290	972	964	998	972	956	938	998	1,160	1,030	956	956
25	1,120	990	956	981	972	938	1,020	998	998	981	972	964
26	1,090	981	870	981	981	990	1,010	1,010	981	981	981	964
27	1,100	964	678	972	998	1,100	404	1,030	972	981	972	964
28	1,090	981	981	964	981	1,040	87	1,100	972	972	972	956
29	1,100	1,010	768	998	-	998	272	1,020	998	972	964	964
30	1,040	1,140	811	972	--------	990	811	1,210	990	972	964	972
31	992	--------	694	972	--------	990	--------	1,900	--------	972	*972	--------
Total	36,652	30,923	28,664	34,133	28,657	30,447	32,770	32,065	31,982	31,187	30,266	29,343
Mean	1,182	1,031	925	1,101	1,023	982	1,092	1,034	1,066	1,006	976	978

	Observed			Adjusted†		
Calendar year 1958:	Max 7,780	Min 414	Mean 1,375	Mean 1,248	Cfsm 2.38	In. 32.32
Water year 1958-59:	Max 3,560	Min 87	Mean 1,033	Mean 966	Cfsm 1.84	In. 25.03

* Discharge measurement made on this day.
† Adjusted for change in contents in Blue Ridge and Ocoee No. 3 Lakes.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 716.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--43 years, 1,283 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,030 cfs Apr. 20 (gage height, 7.87 ft); minimum, 79 cfs July 30 (gage height, 2.86 ft); minimum daily, 108 cfs June 21, July 5. 1911-16, 1921-59: 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. 216,217).

Cooperation.--Water-stage recorder inspected by employees of Tennessee Valley Authority.

Revisions (water years).--WSP 823: Drainage area. WSP 1306: 1916, 1921-36 (adjusted runoff). WSP 1386: 1926.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

2.9	95	4.0	775
3.2	225	6.0	2,770
3.6	465	7.0	3,920

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	664	1,130	1,160	851	1,250	980	886	1,100	2,790	968	1,060	908
2	747	1,050	1,380	885	1,100	960	837	1,060	2,580	1,540	1,060	934
3	612	1,080	1,400	1,010	1,030	1,070	860	1,060	1,630	1,440	1,010	972
4	1,090	1,060	1,150	1,240	938	1,080	880	983	*757	1,390	907	989
5	1,160	1,120	1,280	1,920	956	1,090	855	979	916	108	913	1,090
6	1,240	1,260	985	2,020	1,120	1,040	872	980	1,090	987	965	1,190
7	1,210	1,540	966	899	1,090	1,110	*840	956	1,760	929	943	1,110
8	1,380	1,100	909	842	1,080	1,010	852	1,000	954	965	1,140	919
9	*1,310	1,050	1,500	1,140	1,040	1,080	866	980	860	951	1,140	1,110
10	1,380	986	1,110	124	1,040	1,020	882	990	913	1,040	1,180	1,040
11	1,210	1,290	998	124	983	1,160	900	1,020	960	975	976	917
12	1,180	1,270	944	1,260	1,050	1,090	952	936	843	944	913	928
13	1,210	1,220	1,020	972	*983	1,100	963	920	1,010	972	880	902
14	1,220	1,150	1,010	960	1,180	1,020	1,340	1,130	991	1,150	905	947
15	1,200	1,180	1,130	904	1,260	1,000	1,320	1,180	1,010	1,080	1,040	973
16	1,190	1,080	1,130	1,940	1,140	984	1,310	872	996	901	1,010	895
17	1,260	1,220	1,060	1,290	1,670	956	1,150	858	937	846	1,020	834
18	1,280	1,250	1,100	1,110	1,740	1,070	1,100	842	1,080	891	*996	888
19	1,220	1,200	*1,090	1,200	1,080	1,060	1,910	1,130	1,040	1,390	1,000	913
20	1,180	1,340	960	1,020	1,750	905	3,800	1,100	1,070	1,200	938	995
21	1,170	1,310	950	834	1,570	880	2,690	1,090	108	1,150	1,010	955
22	1,190	1,100	934	2,640	1,080	932	2,240	1,130	1,060	1,290	838	937
23	1,140	866	1,190	2,810	1,070	939	1,310	910	1,070	1,300	903	969
24	1,130	1,170	1,080	941	1,070	769	1,200	921	1,860	1,640	873	955
25	1,260	1,280	1,080	124	878	673	971	932	1,710	1,030	852	1,020
26	1,190	1,210	1,150	1,530	851	702	116	993	638	964	1,180	975
27	1,130	1,190	682	1,730	975	721	402	1,100	897	1,020	842	1,020
28	1,090	1,180	701	1,640	980	1,330	520	1,220	861	993	846	943
29	1,140	906	727	1,680		1,150	630	1,310	1,000	909	779	999
30	1,020	1,140	856	1,660	--------	1,170	822	1,040	949	915	811	874
31	1,060	--------	1,080	1,730	--------	987	--------	1,390	--------	895	936	--------
Total	35,463	34,928	32,712	39,030	31,954	31,038	34,276	32,112	34,340	32,773	29,866	29,101
Mean	1,144	1,164	1,055	1,259	1,141	1,001	1,143	1,036	1,145	1,057	963	970

	Observed			Adjusted†		
Calendar year 1958:	Max 9,610	Min 152	Mean 1,496	Mean 1,369	Cfsm 2.30	In. 31.23
Water year 1958-59:	Max 3,800	Min 108	Mean 1,089	Mean 1,030	Cfsm 1.73	In. 23.49

* 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 34.2 (corrected).

Drainage area.--2,001 sq mi.

Records available.--October 1953 to September 1959.

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.--6 years, 3,793 cfs, unadjusted.

Extremes.--Maximum discharge during year, 11,900 cfs Apr. 20 (gage height, 11.47 ft); minimum, 450 cfs Aug. 10 (gage height, 1.66 ft); minimum daily, 627 cfs June 21.
1953-59: 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 period of no gage-height record and those for period of backwater, which are fair. Flow regulated by seven reservoirs (see p. 213).

Rating table, water year 1958-59, except period of backwater from Chickamauga Lake (gage height, in feet, and discharge, in cubic feet per second)

1.9	570	6.0	4,400
2.5	950	8.0	7,000
4.0	2,080	11.0	11,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,380	3,380	3,190	2,720	2,800	3,280	1,570	2,560	3,850	3,890	3,430	4,040
2	3,850	3,280	3,200	3,610	2,540	3,160	1,520	3,350	4,770	4,140	2,620	3,280
3	2,990	3,380	3,560	2,860	3,340	3,430	1,580	1,950	3,200	3,210	2,830	2,990
4	3,380	3,240	3,760	4,150	3,310	3,670	1,520	2,360	2,080	2,710	3,490	3,240
5	2,630	4,130	3,500	4,590	3,710	3,540	1,480	3,520	1,530	674	3,460	3,420
6	3,050	3,900	3,470	5,200	3,720	4,210	1,630	3,580	1,530	1,800	3,430	2,850
7	3,710	4,240	3,520	4,510	3,690	4,320	1,550	3,370	2,900	2,760	3,140	4,040
8	3,660	4,040	3,380	3,390	2,390	2,700	1,440	3,900	1,830	3,030	3,590	3,220
9	3,910	3,490	4,540	3,600	3,300	3,030	1,630	3,330	1,470	3,000	2,200	4,050
10	4,040	3,260	4,480	2,850	2,140	3,490	1,820	1,930	1,300	2,680	2,220	3,650
11	4,110	4,060	4,050	2,060	2,340	2,370	2,400	2,340	1,420	2,430	2,930	3,340
12	3,830	3,670	3,400	2,890	3,420	4,180	4,420	*3,100	1,720	3,910	2,400	2,900
13	4,100	3,910	3,120	2,640	*3,410	3,510	5,520	2,250	2,680	2,340	2,990	2,160
14	4,030	3,430	3,540	2,120	3,810	1,990	4,570	2,240	1,720	3,020	2,920	2,520
15	3,870	2,730	a3,200	2,620	3,200	1,430	*3,320	4,230	2,350	*3,350	2,860	3,020
16	3,980	2,450	a3,500	*5,770	2,770	2,920	2,630	3,020	3,140	2,070	2,400	*3,460
17	3,940	3,870	a3,200	4,570	2,650	2,990	2,510	1,990	3,220	2,890	3,020	3,580
18	3,870	3,730	a3,400	2,400	2,870	3,490	3,030	1,490	3,470	3,630	3,750	3,280
19	3,040	3,860	a3,100	2,850	3,570	3,680	7,360	2,630	2,930	3,240	3,990	2,950
20	3,310	4,030	3,230	2,850	4,330	2,350	9,950	2,510	3,270	4,110	3,340	2,860
21	3,830	*4,040	3,560	2,300	4,190	2,490	*c5,000	2,450	627	4,340	2,880	3,470
22	3,980	3,880	3,140	8,030	3,100	2,140	c3,500	1,910	2,720	3,960	2,270	3,460
23	3,730	3,410	3,190	5,210	2,620	2,630	c2,200	1,330	3,950	3,480	2,780	3,800
24	*3,870	3,530	2,990	2,450	2,340	2,170	c1,900	1,600	4,040	2,910	2,260	3,450
25	3,500	3,640	2,440	1,020	2,620	3,030	c1,600	1,270	4,400	2,030	3,620	3,670
26	3,770	3,540	2,930	2,300	2,590	2,760	984	1,580	2,560	1,170	3,800	3,390
27	3,650	3,910	2,600	3,400	1,350	3,060	1,520	1,570	2,570	2,520	3,740	2,490
28	3,930	4,160	2,150	3,440	2,540	3,160	1,640	2,190	3,090	3,080	3,570	3,360
29	3,850	4,280	1,780	2,630	-	3,250	1,570	2,000	3,640	3,000	3,450	3,550
30	3,740	2,880	2,210	2,400	--------	2,040	2,330	2,610	2,960	3,750	2,280	2,650
31	3,740	--------	2,450	2,910	--------	*1,680	--------	2,020	--------	3,480	3,510	--------
Total	114,270	108,350	99,780	104,340	84,660	92,150	83,694	76,180	80,937	92,604	95,170	98,140
Mean	3,686	3,612	3,219	3,366	3,024	2,973	2,790	2,457	2,698	2,987	3,070	3,271

	Observed			Adjusted†		
Calendar year 1958:	Max 14,600	Min 970	Mean 4,289	Mean 3,943	Cfsm 1.97	In. 26.75
Water year 1958-59:	Max 9,950	Min 627	Mean 3,097	Mean 3,003	Cfsm 1.50	In. 20.37

* Discharge measurement made on this day.
† Adjusted for change in contents in Hiwassee, Nottely, Chatuge, Apalachia, Blue Ridge, Ocoee No. 3 and Parksville Lakes.
a No gage-height record; discharge estimated on basis of records for Hiwassee River near McFarland and Ocoee River at Parksville.
c Backwater from Chickamauga Lake; discharge estimated on basis of records for stations near McFarland and Ocoee River at Parksville.

5653. South Chestuee Creek near Benton, Tenn.

Location.--Lat 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 1959.

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, 900 cfs Apr. 19 (gage height, 7.06 ft); minimum, 2.2 cfs Dec. 15 (gage height, 0.58 ft).
1957-59: Maximum discharge, 1,790 cfs Nov. 18, 1957 (gage height, 7.76 ft); minimum, that of Dec. 15, 1958.

Remarks.--Records good.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18

0.6	2.5	2.0	44
1.0	10	3.0	89
1.5	25	4.0	157

Note.--Same as following table above 4.0 ft.

Apr. 19 to Sept. 30

0.6	4.5	5.0	245
1.0	15	5.5	310
1.5	32	6.0	415
2.0	52	6.5	570
3.0	95	7.0	840
4.0	157		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	11	5.7	10	14	18	31	26	52	8.0	7.8	27
2	6.7	7.3	4.9	13	13	16	80	25	*43	8.0	7.2	17
3	6.5	4.9	4.9	8.3	13	15	54	20	26	7.5	7.0	9.8
4	6.7	4.3	5.1	6.7	28	15	38	19	20	7.0	8.5	7.8
5	5.7	4.5	4.9	5.7	37	19	28	17	34	7.0	8.0	211
6	4.9	6.3	4.5	5.7	22	92	24	16	51	6.8	7.5	160
7	4.5	5.7	4.1	5.3	17	44	20	15	27	7.5	7.5	34
8	4.3	4.9	5.1	23	17	30	18	14	21	6.2	7.2	21
9	4.1	6.3	6.3	29	19	27	16	14	17	6.0	6.0	20
10	4.7	5.7	4.9	12	20	23	15	14	16	8.0	6.0	15
11	4.1	4.7	4.5	10	17	21	62	13	15	14	6.2	13
12	3.7	4.3	4.3	13	14	28	434	*12	24	47	6.0	10
13	3.9	3.7	4.3	6.9	*82	20	186	17	26	12	6.0	9.8
14	3.9	3.9	3.9	7.1	106	17	70	16	13	8.5	5.5	9.5
15	4.1	5.1	3.5	53	222	31	50	13	13	7.8	5.2	9.8
16	3.9	5.7	3.9	*91	78	23	40	12	12	8.0	5.2	*10
17	3.5	5.5	3.7	25	56	19	32	12	11	11	5.0	8.8
18	3.5	5.3	4.3	15	46	16	205	11	10	18	*7.5	7.5
19	3.5	5.7	*4.9	12	33	14	626	11	10	10	10	7.0
20	3.9	4.5	4.1	14	26	14	*346	57	9.8	57	8.2	6.8
21	3.7	*4.1	3.9	167	22	15	111	41	8.8	14	5.5	6.5
22	*4.5	3.9	3.9	388	21	16	84	18	9.0	23	13	6.2
23	4.7	3.9	4.3	58	25	12	64	15	8.2	16	16	6.0
24	4.5	4.1	4.1	39	22	11	52	13	18	10	42	5.8
25	5.1	4.1	4.3	32	18	11	44	14	22	62	8.2	5.2
26	5.5	3.9	3.9	27	17	58	38	14	19	46	6.2	5.0
27	5.5	3.7	6.7	24	15	*152	34	13	10	25	5.8	4.8
28	5.5	7.1	24	21	14	58	31	12	9.0	13	6.5	5.0
29	5.5	17	10	18	-	43	30	20	8.8	10	44	5.0
30	6.1	7.1	7.5	17	-------	38	25	102	8.8	9.0	9.5	5.0
31	6.3	-------	6.1	15	-------	29	-------	124	-------	*8.0	22	-------
Total	151.5	168.2	170.5	1,171.7	1,034	945	2,888	740	572.4	501.3	316.2	669.3
Mean	4.89	5.61	5.50	37.8	36.9	30.5	96.3	23.9	19.1	16.2	10.2	22.3
Cfsm	0.154	0.176	0.173	1.19	1.16	0.959	3.03	0.752	0.601	0.509	0.321	0.701
In.	0.18	0.20	0.20	1.37	1.21	1.11	3.38	0.87	0.67	0.59	0.37	0.78

Calendar year 1958: Max 571 Min 3.5 Mean 36.8 Cfsm 1.16 In. 15.70
Water year 1958-59: Max 626 Min 3.5 Mean 25.6 Cfsm 0.805 In. 10.93

Peak discharge (base, 800 cfs).--Apr. 19 (2:30 a.m.) 900 cfs (7.06 ft).

* Discharge measurement made on this day.

5655. Oostanaula 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 at mile 5.7.

Drainage area.--57.0 sq mi.

Records available.--October 1954 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 716.51 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years, 83.0 cfs.

Extremes.--Maximum discharge during year, 1,770 cfs Mar. 27 (gage height, 8.35 ft); minimum, 16 cfs Sept. 27 (gage height, 2.18 ft).
1954-59: Maximum discharge, 2,020 cfs Nov. 18, 1957 (gage height, 8.77 ft); minimum, 16 cfs Oct. 13-28, 1954, Sept. 27, 1959; minimum gage height, 2.12 ft Oct. 28, 1954.

Remarks.--Records good.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 22 to Nov. 23)

2.1	14	4.0	219
2.2	18	5.0	436
2.5	35	6.0	700
3.0	73	7.0	1,060

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	26	27	27	54	63	123	88	*48	34	25	28
2	33	31	25	33	52	63	123	87	73	34	24	35
3	28	25	24	30	51	61	128	81	92	35	23	*32
4	28	23	*25	27	57	59	110	77	53	33	24	27
5	28	22	24	25	78	58	101	74	48	32	26	38
6	27	23	22	23	62	86	94	71	61	32	44	27
7	25	25	22	22	55	74	91	68	67	32	30	41
8	25	22	21	27	53	65	86	66	52	30	27	27
9	25	22	21	40	52	61	82	64	48	29	25	25
10	24	*23	20	33	*52	61	79	63	47	29	23	23
11	24	22	20	28	64	59	98	62	44	37	23	24
12	24	22	20	27	53	61	177	*60	44	44	22	25
13	*24	22	20	*25	72	59	252	63	43	32	22	22
14	24	22	21	25	127	56	148	62	41	31	22	22
15	24	22	21	31	231	61	*121	59	40	*31	21	22
16	24	22	20	57	156	61	110	56	40	30	22	21
17	24	22	20	45	113	61	101	54	39	30	23	20
18	24	22	20	36	112	54	129	53	38	30	22	20
19	23	22	20	34	96	52	289	52	37	31	*25	20
20	24	23	20	35	86	52	296	52	36	33	29	20
21	24	22	20	117	80	52	245	55	36	30	23	19
22	24	22	20	294	75	53	183	54	35	39	20	18
23	23	22	20	219	76	50	153	60	47	39	21	18
24	23	22	20	104	81	49	135	51	76	30	28	18
25	22	22	20	86	72	47	122	48	70	30	31	17
26	22	22	19	78	68	51	114	48	49	30	29	17
27	24	22	22	71	64	*824	107	47	41	27	22	17
28	23	27	46	65	63	861	104	45	38	27	27	17
29	22	49	40	62	-	233	99	44	36	26	26	17
30	22	37	30	59	-------	168	92	45	35	27	33	17
31	22	-------	26	57	-------	141	-------	56	-------	26	25	-------
Total	764	730	716	1,842	2,246	3,756	4,092	1,865	1,454	980	787	694
Mean	24.6	24.3	23.1	59.4	80.2	121	136	60.2	48.5	31.6	25.4	23.1
Cfsm	0.432	0.426	0.405	1.04	1.41	2.12	2.38	1.06	0.851	0.554	0.446	0.405
In.	0.50	0.48	0.47	1.20	1.47	2.45	2.67	1.22	0.95	0.64	0.51	0.45

Calendar year 1958: Max 700 Min 19 Mean 78.5 Cfsm 1.38 In. 18.69
Water year 1958-59: Max 861 Min 17 Mean 54.6 Cfsm 0.958 In. 13.01

Peak discharge (base, 400 cfs).--Mar. 27 (11:30 p.m.) 1,770 cfs (8.35 ft).

* Discharge measurement made on this day.

562837 O - 60 - 12

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 at mile 12.4.

Drainage area.--428 sq mi.

Records available.--October 1928 to September 1959. Monthly discharge only for December 1930, 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.--31 years, 686 cfs.

Extremes.--Maximum discharge during year, 6,980 cfs Apr. 20 (gage height, 13.02 ft); minimum, 100 cfs Sept. 27 (gage height, 0.44 ft).
1928-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 21-24)

0.4	94	8.0	2,840
1.0	199	10.0	4,000
2.0	470	12.0	5,720
4.0	1,190	13.0	6,950

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	158	*149	189	341	306	708	*389	*956	151	120	*173
2	187	183	140	*199	312	*312	*684	362	967	250	122	152
3	183	173	139	203	298	284	638	356	988	*240	*120	115
4	183	160	135	185	386	271	526	314	582	168	200	115
5	173	155	135	166	578	298	464	295	440	149	238	185
6	166	151	135	151	480	939	425	274	395	153	160	196
7	156	153	125	147	386	988	401	259	575	155	142	146
8	151	151	125	242	356	606	371	247	410	142	300	162
9	149	144	125	353	359	498	344	235	326	135	173	139
10	149	149	127	264	404	446	332	238	287	130	135	153
11	146	147	120	218	516	410	380	231	264	128	123	195
12	146	146	122	199	392	494	1,090	229	266	128	120	158
13	146	144	123	189	1,190	461	1,650	274	279	144	114	135
14	144	146	122	187	1,570	395	876	359	282	142	115	122
15	147	149	125	481	1,670	628	642	259	240	135	111	127
16	156	147	123	1,260	1,190	862	540	229	214	125	106	211
17	146	142	122	673	862	610	477	216	199	125	114	222
18	142	142	122	404	729	508	887	212	193	149	125	162
19	144	142	123	335	610	440	4,230	201	185	156	125	139
20	142	140	120	312	512	407	6,340	468	177	*164	125	130
21	147	135	119	1,850	446	404	5,180	841	170	207	128	123
22	140	134	119	*5,020	410	401	2,600	449	166	264	132	117
23	144	132	119	3,940	404	386	1,130	422	166	220	158	115
24	140	127	127	2,070	407	341	841	359	187	155	127	114
25	140	135	122	844	368	320	698	274	220	139	*119	109
26	139	135	125	676	335	642	600	389	214	135	138	111
27	139	123	145	568	317	3,190	530	338	185	158	117	104
28	142	149	314	491	303	3,220	480	467	171	146	112	104
29	142	183	300	440	-	1,780	508	645	164	132	122	104
30	144	173	220	398	-------	1,020	452	561	156	122	114	*103
31	*139	-------	185	371	-------	841	-------	1,380	-------	127	144	-------
Total	4,701	4,448	4,452	23,025	16,131	22,708	35,024	11,772	10,024	4,874	4,299	4,241
Mean	152	148	144	743	576	733	1,167	380	334	157	139	141
Cfsm	0.355	0.346	0.336	1.74	1.35	1.71	2.73	0.888	0.780	0.367	0.325	0.329
In.	0.41	0.39	0.39	2.00	1.40	1.97	3.04	1.02	0.87	0.42	0.37	0.37

Calendar year 1958: Max 7,540 Min 116 Mean 539 Cfsm 1.26 In. 17.11
Water year 1958-59: Max 6,340 Min 103 Mean 399 Cfsm 0.932 In. 12.65

Peak discharge (base, 5,500 cfs).--Apr. 20 (4 p.m.) 6,980 cfs (13.02 ft).

* Discharge measurement made on this day.
Note.--No recorder record Apr. 12 to May 1, Aug. 3-28, Sept. 1-6; discharge computed from bihourly Telemark readings furnished by the Tennessee Valley Authority.

5680. Tennessee River at Chattanooga, Tenn.

Location.--Lat 35°05'12", long 85°16'43", on right bank at Rivermont (formerly Meadow Lake) Golf and Country Club, 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 1959. Monthly discharge only for some periods, published in WSP 1306. July 1930 to September 1959 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 period since Feb. 28, 1915. Present auxiliary gage at site 2¼ miles downstream from base gage.

Average discharge.--85 years (1874-1959), using records at Hales Bar July 1930 to December 1935, 37,040 cfs.

Extremes.--Maximum discharge during year, 110,000 cfs Jan. 23; maximum gage height, 23.06 ft Jan. 23; maximum gage height at Walnut Street, 21.35 ft Jan. 23; minimum daily discharge, 7,900 cfs May 31; minimum gage height, 10.26 ft Jan. 20.

1874-1959: 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. 213).

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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*22,000	43,700	28,100	28,600	19,700	29,800	23,100	16,700	22,700	32,000	26,400	28,200
2	34,800	27,400	24,900	28,000	23,800	37,100	21,300	12,000	24,900	32,800	17,000	27,000
3	39,300	28,500	22,300	23,100	33,800	31,700	23,700	19,200	24,400	33,200	24,500	24,800
4	40,000	28,900	24,700	32,800	30,100	28,500	20,800	24,100	19,000	15,500	22,200	29,000
5	40,300	27,600	23,000	42,400	30,500	32,000	18,500	29,000	19,900	12,500	23,300	20,600
6	40,400	29,100	25,700	40,600	32,600	37,500	16,900	32,800	16,400	22,100	28,500	21,600
7	40,800	32,400	31,300	41,300	21,500	28,300	19,200	35,100	22,000	24,700	25,700	23,800
8	40,100	28,300	29,800	25,800	13,000	19,100	18,500	29,200	23,300	28,900	21,000	28,500
9	36,300	27,300	37,900	29,800	17,200	22,700	17,100	25,400	18,400	27,000	18,600	28,400
10	39,600	33,700	38,600	38,200	22,700	26,100	20,600	13,700	21,700	29,600	27,000	25,400
11	40,400	33,600	24,700	29,100	19,000	28,900	22,400	19,500	21,100	19,600	19,000	25,200
12	36,000	33,200	22,400	20,500	29,400	29,700	14,500	24,700	23,100	23,400	23,100	18,500
13	33,700	34,400	19,300	17,100	27,100	27,300	19,800	26,400	14,000	28,600	22,700	13,800
14	29,800	33,400	19,500	18,300	39,300	26,600	14,300	23,200	8,600	28,700	27,200	25,900
15	29,600	26,300	29,600	19,900	44,800	19,800	16,800	23,300	18,800	28,000	24,900	24,300
16	30,100	23,400	22,100	31,600	46,400	20,200	15,400	20,000	19,800	27,800	23,200	24,300
17	32,000	24,500	23,600	33,200	45,800	30,100	9,800	13,000	19,800	29,600	24,800	24,700
18	32,900	23,200	31,900	20,200	39,700	30,100	12,700	16,200	17,800	20,900	27,600	25,100
19	27,200	24,700	21,000	23,200	31,700	31,900	8,100	22,400	20,100	19,700	27,500	27,900
20	29,900	31,400	19,600	14,300	24,400	28,300	23,200	20,700	17,200	24,000	29,600	26,000
21	30,800	36,200	23,500	22,500	29,800	19,100	19,500	23,000	14,500	26,200	26,300	20,200
22	33,800	26,500	18,300	74,700	26,000	18,000	37,100	24,700	20,700	27,900	20,800	26,000
23	36,200	21,200	17,900	95,000	27,300	27,800	40,300	14,200	32,600	27,500	13,500	28,400
24	38,800	28,100	*10,400	66,000	32,600	34,500	38,300	9,600	26,600	29,300	26,100	29,400
25	28,600	31,300	11,700	58,600	31,100	19,500	38,600	28,900	33,300	18,000	26,900	31,100
26	28,600	32,800	14,900	42,400	32,600	23,600	29,900	14,500	35,700	8,300	27,900	30,200
27	36,200	21,300	21,200	38,100	*31,400	40,300	18,000	21,400	24,900	17,000	28,900	27,900
28	41,300	28,400	16,900	27,400	25,100	42,300	16,100	23,500	17,800	24,100	27,700	26,000
29	36,500	30,500	21,800	27,900	-	42,800	*20,500	20,300	22,400	24,400	18,700	30,700
30	31,500	31,500	31,900	21,900	--------	28,300	13,300	15,800	26,700	*21,700	22,400	*31,800
31	41,700	--------	29,200	26,200	--------	23,100	--------	7,900	--------	26,100	14,200	--------
Total	‡1,079.2	882,800	737,700	‡1,058.7	828,400	885,000	628,300	650,400	648,200	759,100	737,200	774,700
Mean	34,810	29,430	23,800	34,150	29,590	28,550	20,940	20,980	21,610	24,490	23,780	25,820
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 113,000 Min 7,900 Mean 35,750 Cfsm 1.67 In. 22.68
Water year 1958-59: Max 95,000 Min 7,900 Mean 26,490 Cfsm 1.24 In. 16.80

* 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 1959.

Gage.--Water-stage recorder. Datum of gage is 649.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--8 years (1951-59), 78.4 cfs.

Extremes.--Maximum discharge during year, 2,300 cfs Jan. 22 (gage height, 9.68 ft); minimum, 5.4 cfs Aug. 14, 15 (gage height, 0.87 ft).
1950-59: 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 tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 29, May 4-26)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
0.9	5.9	6.0	340	0.8	4.3	4.0	165
1.0	7.5	6.5	415	1.0	7.8	6.0	320
1.5	16	7.0	550	1.4	18	6.5	378
1.7	21	7.5	750	2.0	42	7.0	500
2.0	33	9.0	1,770	3.0	95	8.0	1,070
4.0	165						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	9.7	15	23	a45	50	106	48	110	9.4	7.0	9.6
2	13	11	14	*28	43	46	101	49	106	10	6.5	8.0
3	13	9.9	14	26	43	45	88	44	73	10	6.5	7.8
4	12	9.4	14	23	66	43	77	40	55	9.2	7.0	7.2
5	12	9.4	14	20	89	50	68	36	44	19	7.2	6.7
6	12	9.5	14	19	72	152	62	34	51	68	7.0	6.8
7	11	9.5	13	18	65	124	57	32	66	27	15	7.0
8	10	9.5	13	26	64	101	52	30	45	15	11	6.8
9	10	9.5	14	53	63	88	48	30	37	13	7.8	6.7
10	9.7	9.9	14	40	70	77	46	34	34	11	6.8	9.8
11	9.2	9.9	13	30	85	*69	62	30	32	10	6.3	14
12	8.9	9.7	13	24	79	81	208	28	50	9.4	5.9	10
13	8.2	9.9	13	23	243	71	266	44	63	8.8	5.9	8.4
14	7.8	9.9	13	22	257	66	175	*40	43	8.4	5.6	7.8
15	7.8	9.9	13	59	265	100	131	34	33	8.0	5.9	8.8
16	7.5	10	13	206	210	97	104	31	28	8.0	7.4	13
17	7.8	10	12	113	166	89	87	29	24	7.4	6.7	11
18	7.7	9.9	12	74	135	78	143	27	22	9.4	6.1	9.4
19	7.5	9.9	12	57	103	68	540	25	20	8.8	6.8	8.4
20	7.5	9.9	12	49	85	67	422	38	17	8.6	8.6	7.8
21	7.5	10	12	608	72	67	274	36	16	7.6	14	7.6
22	7.2	10	12	*1,300	66	70	195	33	14	7.4	51	6.8
23	7.5	10	12	a350	68	60	149	50	13	7.2	13	6.8
24	7.7	10	13	a200	64	57	119	41	18	7.2	9.8	6.5
25	7.3	10	13	a150	57	54	94	33	18	7.8	8.2	6.1
26	7.3	10	13	a120	54	103	82	51	14	8.2	*7.6	5.9
27	7.0	10	14	a100	52	*447	73	35	*13	7.4	7.0	6.1
28	7.0	12	34	a80	48	256	68	34	12	*6.8	6.7	6.3
29	6.9	18	34	a70	-	179	62	30	11	6.7	6.5	6.5
30	6.7	16	25	a60	--------	149	54	45	9.8	6.7	6.8	6.8
31	*6.9	--------	22	a50	--------	123	--------	87	--------	6.8	9.8	--------
Total	274.6	312.3	469	4,021	2,729	3,127	4,013	1,178	1,091.8	358.2	287.4	240.4
Mean	8.86	10.4	15.1	130	97.5	101	134	38.0	36.4	11.6	9.27	8.01
Cfsm	0.175	0.206	0.298	2.57	1.93	2.00	2.65	0.751	0.719	0.229	0.183	0.158
In.	0.20	0.23	0.34	2.96	2.01	2.30	2.95	0.87	0.80	0.26	0.21	0.18

Calendar year 1958: Max 1,800 Min 6.1 Mean 74.2 Cfsm 1.47 In. 19.91
Water year 1958-59: Max 1,300 Min 5.6 Mean 49.6 Cfsm 0.980 In. 13.31

Peak discharge (base, 800 cfs).--Jan. 22 (1 a.m.) 2,300 cfs (9.68 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 1959.

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.--29 years, 34,370 cfs.

Extremes.--Maximum discharge during year, 116,000 cfs Jan. 22; maximum gage height, 19.04 ft Jan. 23; minimum daily discharge, 4,500 cfs June 14; minimum gage height, 4.59 ft Dec. 26.

1930-59: 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 period of no gage-height record at auxiliary gage, which are fair. Since 1936, flow regulated by increasing number of reservoirs above station (see p. 213).

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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21,900	43,200	27,900	31,300	20,300	30,600	24,000	19,900	21,200	31,800	30,900	26,700
2	*33,500	32,900	28,000	31,900	26,300	39,000	22,000	13,000	26,000	30,900	19,000	27,900
3	39,400	30,700	20,200	24,700	32,500	35,300	24,500	18,000	25,300	33,200	23,700	25,400
4	39,600	28,100	22,400	32,600	31,500	29,000	21,500	23,800	19,100	16,100	*20,900	29,000
5	40,400	30,700	*25,000	43,500	33,900	32,500	19,000	29,300	18,100	12,400	23,400	24,000
6	39,400	29,100	27,400	41,600	33,900	38,500	17,500	32,600	15,800	21,700	29,600	23,700
7	40,000	32,600	32,600	42,000	25,100	29,000	19,500	35,200	20,600	23,500	24,600	24,800
8	39,500	31,300	32,200	28,900	17,600	20,000	19,000	30,000	25,000	27,800	22,100	27,700
9	36,300	28,200	39,500	32,400	20,900	23,500	17,500	25,600	17,900	27,300	19,600	29,700
10	39,400	34,200	39,700	38,300	24,400	27,000	21,600	10,400	20,700	31,100	26,700	26,300
11	40,000	34,200	27,300	31,500	21,900	29,500	23,300	16,900	20,800	18,800	16,200	25,500
12	34,800	34,100	20,200	20,800	29,100	30,500	17,500	24,600	22,500	20,400	22,100	21,200
13	33,900	35,400	20,900	20,100	30,000	28,000	23,900	27,100	14,100	28,200	20,800	17,300
14	30,000	33,200	19,100	18,100	41,300	27,000	16,400	23,300	4,500	31,600	28,200	24,700
15	29,900	27,500	28,800	20,000	51,700	20,500	17,700	22,500	17,000	29,200	25,400	24,200
16	29,800	22,300	22,700	33,400	50,900	21,000	16,200	20,400	17,000	27,200	24,200	24,200
17	33,100	23,400	20,900	36,200	49,200	31,000	12,000	12,100	18,800	28,000	24,600	24,600
18	32,000	22,900	31,800	22,600	43,700	31,000	14,100	15,700	17,200	21,000	26,700	26,600
19	27,700	24,600	23,000	22,700	34,600	32,500	18,600	21,200	19,300	19,800	26,900	30,600
20	31,000	32,300	19,400	19,000	25,900	29,000	31,100	21,500	17,500	23,100	29,800	28,300
21	31,300	35,900	20,200	20,400	31,400	19,500	29,400	22,500	16,500	27,300	27,500	19,600
22	33,600	28,200	19,200	77,200	29,100	18,500	38,200	22,500	19,300	27,300	21,400	26,000
23	36,800	21,200	15,900	*108,000	26,500	28,500	41,700	17,100	31,900	24,700	17,700	26,900
24	38,500	29,000	9,700	78,500	33,800	35,000	*41,200	10,000	26,500	28,300	28,400	27,900
25	29,400	31,300	10,600	58,500	34,500	20,000	39,200	25,600	32,600	21,000	24,600	30,400
26	29,400	33,600	18,400	47,000	33,700	24,500	32,500	13,900	35,500	10,700	27,300	31,400
27	34,900	22,000	21,000	39,800	33,600	44,000	22,000	19,500	25,800	19,200	27,200	29,600
28	42,400	28,000	16,300	31,500	23,700	44,500	17,000	22,500	15,900	25,000	27,600	26,100
29	40,600	33,900	19,400	27,400	-	44,000	21,200	*19,900	22,600	25,100	23,700	29,400
30	33,400	32,500	32,000	24,700	--------	29,500	14,400	13,900	26,500	22,000	24,900	31,600
31	39,500	--------	30,500	26,100	--------	24,000	--------	7,600	--------	27,500	18,200	--------
Total	‡1,081.4	906,500	742,200	‡1,130.7	891,000	916,400	693,700	638,100	631,500	761,200	753,900	791,300
Mean	34,880	30,220	23,940	36,470	31,820	29,560	23,120	20,580	21,050	24,550	24,320	26,380
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 121,000 Min 9,200 Mean 36,800 Cfsm 1.69 In. 22.91
Water year 1958-59: Max 108,000 Min 4,500 Mean 27,230 Cfsm 1.25 In. 16.95

* Discharge measurement made on this day.
‡ Expressed in thousands.
Note.--No gage-height record at auxiliary gage Mar. 4 to Apr. 9; discharge estimated on basis of records at Hales Bar Dam.

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, 4½ miles downstream from Griffith Creek, and at mile 25.1.

Drainage area.--384 sq mi.

Records available.--October 1920 to September 1959. Prior to December 1920 monthly discharge only, published in WSP 1306.

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.--39 years, 726 cfs.

Extremes.--Maximum discharge during year, 9,140 cfs Jan. 22 (gage height, 14.53 ft); minimum, 40 cfs Oct. 30, 31 (gage height, 0.70 ft).

1920-59: Maximum discharge, 22,600 cfs Nov. 19, 1957 (gage height, 16.71 ft); minimum, 16 cfs Sept. 6-21, 27, 28, 1925.

The flood of 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.7	40	3.0	455	1.3	100	12.0	4,120
1.0	63	6.0	1,510	2.0	210	13.0	5,200
1.5	120	9.0	2,620	3.0	475	14.0	7,220
2.0	205			6.0	1,510	14.5	9,000
				10.0	3,000		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	53	144	148	460	523	*1,140	*541	1,130	*133	400	298
2	*57	55	*144	*193	421	514	1,060	517	1,730	141	514	698
3	57	55	126	193	394	*496	1,040	514	1,230	158	454	475
4	57	53	111	185	421	472	958	496	880	144	*350	451
5	57	53	101	176	541	463	852	457	642	140	403	1,460
6	55	57	95	153	619	1,130	758	415	532	156	1,320	565
7	53	53	99	140	598	1,370	674	379	472	141	1,390	379
8	52	52	94	138	550	1,080	622	348	412	134	1,400	302
9	51	51	87	153	517	891	562	325	352	126	894	308
10	51	49	79	176	505	754	583	308	318	116	613	469
11	49	47	75	207	511	653	1,530	288	295	116	484	1,320
12	48	47	72	201	577	650	2,100	292	295	121	397	1,180
13	47	47	69	183	964	628	2,480	397	288	121	335	709
14	47	47	66	172	1,950	628	1,960	332	265	113	295	499
15	46	48	63	185	3,040	632	1,480	302	238	114	272	391
16	45	49	61	380	2,980	636	1,180	278	220	127	328	328
17	45	49	60	588	2,180	610	964	260	204	114	272	280
18	44	49	59	512	1,580	571	961	242	202	124	328	235
19	44	50	58	386	1,190	520	1,910	228	183	110	335	206
20	44	50	57	345	922	493	3,800	330	165	150	335	185
21	44	50	56	*2,460	765	484	3,100	720	160	147	330	175
22	44	50	54	8,020	664	499	2,260	740	155	156	285	163
23	43	51	55	5,720	628	517	1,720	667	155	164	255	154
24	43	53	57	3,640	653	520	1,380	583	168	308	226	148
25	42	55	54	1,870	653	496	1,130	481	176	3,890	245	144
26	42	55	53	1,230	610	478	950	400	170	4,590	208	138
27	42	55	55	916	571	3,690	824	364	170	1,820	190	133
28	*41	64	65	748	535	4,070	740	328	156	947	178	128
29	41	105	89	632	-	2,660	674	*312	146	622	171	124
30	41	119	97	562	--------	1,880	595	350	138	517	175	120
31	41	--------	119	508	--------	1,590	--------	571	--------	436	176	--------
Total	1,471	1,671	2,474	31,120	25,999	30,598	39,987	12,765	11,647	16,196	13,558	12,165
Mean	47.5	55.7	79.8	1,004	929	987	1,333	412	388	522	437	406
Cfsm	0.124	0.145	0.208	2.61	2.42	2.57	3.47	1.07	1.01	1.36	1.14	1.06
In.	0.14	0.16	0.24	3.01	2.52	2.96	3.87	1.24	1.13	1.57	1.31	1.18

Calendar year 1958: Max 6,860 Min 41 Mean 544 Cfsm 1.42 In. 19.23
Water year 1958-59: Max 8,020 Min 41 Mean 547 Cfsm 1.42 In. 19.33

Peak discharge (base, 5,500 cfs).--Jan. 22 (12 m.) 9,140 cfs (14.53 ft).

* Discharge measurement made on this day.

5729. Town Creek near Geraldine, Ala.

Location.--Lat 34°22'42", long 85°59'25", in SE¼ 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 northeast of Albertville.

Drainage area.--141 sq mi.

Records available.--July 1957 to September 1959.

Gage.--Water-stage recorder. Altitude of gage is 1,000 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,620 cfs Jan. 21 (gage height, 9.4 ft); minimum, 1.7 cfs Oct. 30.
1957-59: Maximum discharge, 10,600 cfs Nov. 18, 1957 (gage height, 15.6 ft); no flow Sept. 6-13, 1957.

Remarks.--Records good prior to May 30, and fair thereafter.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 19-23)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.6	1.2	2.0	135	0.5	2.2	1.5	83
.7	2.5	2.5	244	.6	4.1	2.0	178
.8	4.8	3.0	387	.7	6.8	3.0	450
.9	10	4.0	800	.8	11	4.0	860
1.1	24	6.0	2,000	.9	16	6.0	2,050
1.5	62			1.1	31	8.0	3,500
				1.3	53		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	3.6	35	38	215	208	324	129	435	15	12	6.8
2	19	10	28	39	196	190	330	128	345	13	11	6.5
3	16	11	24	36	194	168	285	116	262	10	12	5.2
4	17	8.0	22	36	270	157	242	97	213	8.7	15	5.2
5	16	*6.8	21	32	357	235	215	85	185	130	9.8	7.9
6	*12	11	19	28	272	520	199	75	203	353	14	25
7	9.4	11	16	28	240	354	178	67	180	151	13	20
8	6.8	8.7	15	32	235	290	161	63	149	73	12	11
9	5 9	8.0	*13	46	270	265	149	56	131	43	9.8	8.8
10	4.8	6.3	12	44	300	238	151	54	137	31	7.6	7.6
11	3.6	6.3	11	41	387	405	168	54	141	31	6.3	17
12	3.0	5.4	11	37	324	540	213	64	131	22	5.2	14
13	2.5	5.1	11	37	1,070	348	238	178	153	17	4.6	18
14	2.0	5.1	12	*37	910	290	192	145	111	14	4.1	39
15	1.9	5.4	12	66	792	575	168	92	78	13	4.7	58
16	2.0	5.4	12	222	580	420	153	73	*63	11	22	221
17	12	6.3	12	149	*485	345	141	64	53	9.1	8.7	104
18	5.9	6.3	12	110	405	292	187	59	42	141	6.5	49
19	4.2	6.3	12	96	345	260	1,110	54	33	60	6.0	30
20	3.2	5.9	12	92	295	252	1,070	130	27	*30	6.4	22
21	3.0	5.9	12	1,710	265	275	620	147	22	29	20	*16
22	3.0	5.4	11	2,860	248	232	468	146	17	20	11	13
23	2.8	5.1	11	935	260	196	375	320	31	15	6.8	10
24	3.0	5.1	22	620	262	185	312	176	112	12	*4.9	8.3
25	2.8	5.1	27	485	220	*172	268	242	126	40	4.1	6.5
26	2.3	6.3	26	390	201	403	230	159	67	95	3.3	5.7
27	2.2	8.7	28	336	190	985	*201	*492	40	60	13	4.9
28	2.0	15	39	290	178	640	187	270	30	31	10	3.9
29	1.9	47	47	262	-	485	176	194	23	20	6.3	3.5
30	1.8	36	44	252	--------	435	153	383	18	14	5.6	3.2
31	1.9	--------	39	245	--------	372	--------	580	--------	9.8	42	--------
Total	183.1	281.5	628	9,631	9,966	10,732	8,864	4,892	3,558	1,521.6	317.7	751.0
Mean	5.91	9.38	20.3	311	356	346	295	158	119	49.1	10.2	25.0
Cfsm	0.042	0.067	0.144	2.21	2.52	2.45	2.09	1.12	0.844	0.348	0.072	0.177
In.	0.05	0.07	0.17	2.54	2.63	2.83	2.34	1.29	0.94	.0.40	0.08	0.20

Calendar year 1958: Max 4,420 Min 0.7 Mean 202 Cfsm 1.43 In. 19.45
Water year 1958-59: Max 2,860 Min 1.8 Mean 141 Cfsm 1.00 In. 13.54

Peak discharge (base, 4,800 cfs).--No peak above base.

* Discharge measurement made on this day.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 570.95 ft above mean sea level, datum of 1929. Dec. 23, 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 (1936-59), 626 cfs.

Extremes.--Maximum discharge during year, 13,900 cfs Jan. 22 (gage height, 18.67 ft); minimum, 20 cfs Sept. 29, 30; minimum gage height, 0.68 ft Sept. 29.
1935-59: 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.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 1-6, May 30 to June 12; rate of change in stage used as a factor Jan. 16, 17, 21-25, Feb. 13-17, Mar. 27-30, Apr. 13, 14, 18-23)

0.7	20	8.0	1,320
1.0	33	11.0	2,290
1.5	68	14.0	3,620
2.0	117	16.0	5,050
3.0	240	17.0	6,650
4.0	420	18.0	10,000

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	37	548	142	322	382	754	308	404	*46	46	23
2	*59	37	*352	*139	*285	*468	*745	*290	*308	360	*45	22
3	54	*44	268	146	261	432	1,090	261	285	262	44	21
4	52	72	225	144	369	384	888	230	224	146	45	26
5	51	60	195	130	1,030	365	690	206	177	100	38	45
6	47	50	169	115	910	985	584	188	159	112	35	38
7	44	43	144	103	604	1,490	512	171	180	173	35	*32
8	40	44	129	116	506	904	452	158	159	103	57	45
9	38	50	116	548	492	706	406	146	132	72	59	32
10	36	50	108	615	492	596	783	142	115	58	61	33
11	34	46	98	355	604	512	1,420	138	110	51	48	305
12	32	41	92	268	659	476	1,720	130	221	50	42	318
13	30	38	85	225	1,880	480	2,100	131	1,160	50	35	152
14	28	36	82	203	3,020	434	1,580	137	750	54	30	101
15	28	35	74	461	3,540	442	997	128	400	47	47	75
16	27	38	69	2,230	3,660	550	778	115	268	43	94	62
17	26	39	66	2,450	2,400	496	637	104	206	37	173	63
18	28	65	62	1,110	1,340	434	1,050	95	167	79	106	60
19	28	91	62	635	890	380	3,270	88	140	75	67	50
20	24	132	60	522	668	352	4,580	99	118	97	58	41
21	23	208	59	2,220	548	353	4,760	149	101	82	86	36
22	23	143	57	9,780	474	350	2,940	177	87	74	68	32
23	23	112	56	7,620	462	319	1,480	194	84	62	49	29
24	22	92	58	4,040	542	286	897	201	88	62	*40	27
25	22	80	57	2,060	538	268	703	192	80	66	38	26
26	23	72	59	1,060	460	298	580	154	76	246	32	24
27	23	66	65	706	416	2,150	498	166	68	222	28	24
28	22	144	72	566	370	5,030	442	199	59	138	26	23
29	22	1,200	104	476	-	3,860	416	172	54	87	25	20
30	21	1,410	189	414	--------	1,860	355	269	50	66	24	20
31	21	--------	166	367	--------	994	--------	424	--------	52	25	--------
Total	1,013	4,575	3,946	39,966	27,742	27,036	38,107	5,562	6,430	3,172	1,606	1,805
Mean	32.7	152	127	1,289	991	872	1,270	179	214	102	51.8	60.2
Cfsm	0.102	0.475	0.397	4.03	3.10	2.72	3.97	0.559	0.669	0.319	0.162	0.188
In.	0.12	0.53	0.46	4.64	3.22	3.14	4.43	0.65	0.75	0.37	0.19	0.21

Calendar year 1958: Max 5,850 Min 21 Mean 518 Cfsm 1.62 In. 21.96
Water year 1958-59: Max 9,780 Min 20 Mean 441 Cfsm 1.38 In. 18.71

Peak discharge (base, 6,000 cfs).--Jan. 22 (6 p.m.) 13,900 cfs (18.67 ft).

* Discharge measurement made on this day.

5750. Flint River near Chase, Ala.

Location.--Lat 34°49'08", long 86°28'52", in SW¼ 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 1959. 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.--30 years, 516 cfs.

Extremes.--Maximum discharge during year, 5,620 cfs July 18 (gage height, 9.6 ft); minimum, 80 cfs Sept. 26, 27 (gage height, 1.05 ft).
1929-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 27				Mar. 28 to Sept. 30			
1.1	100	4.0	1,400	1.0	70	3.0	745
1.5	205	8.0	4,120	1.5	190	5.0	1,900
2.0	385			2.0	345	7.0	3,320

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	136	416	202	365	570	429	271	256	*138	180	122
2	180	149	349	215	337	540	590	259	*940	238	307	122
3	177	136	315	211	330	457	610	250	570	223	259	115
4	174	*129	300	199	478	416	454	238	334	160	185	110
5	168	129	275	183	820	444	390	226	256	148	162	168
6	*160	132	247	168	560	1,370	359	211	274	140	162	152
7	152	132	227	166	452	845	338	199	271	138	235	*125
8	146	132	*218	228	408	615	310	190	229	130	490	120
9	144	129	215	493	434	530	298	188	202	125	380	112
10	141	127	205	337	488	470	362	188	244	125	214	115
11	134	127	196	275	502	448	482	190	384	138	180	112
12	132	124	190	240	444	498	722	350	887	125	160	105
13	132	122	190	231	1,180	448	722	700	1,650	120	152	102
14	129	122	183	*227	1,800	403	494	320	722	115	142	100
15	129	139	174	558	2,300	525	404	235	422	115	142	108
16	127	157	168	1,240	*1,370	545	366	205	320	115	283	108
17	127	160	168	695	995	426	334	188	268	150	180	102
18	127	146	168	480	820	373	574	180	238	2,780	162	98
19	127	244	166	412	670	341	1,480	178	211	1,480	690	95
20	124	307	166	470	570	334	1,840	199	199	*436	277	90
21	122	215	160	1,750	502	361	840	262	182	334	193	90
22	122	183	154	3,640	470	349	700	271	178	418	160	88
23	122	171	160	1,400	595	*322	550	328	170	380	145	86
24	120	163	171	920	720	307	462	305	180	259	*138	84
25	120	154	180	745	550	296	408	214	178	610	132	82
26	118	160	174	660	480	598	370	199	175	418	128	82
27	118	168	183	570	439	2,630	*334	434	165	265	122	86
28	118	451	227	506	416	940	320	310	152	214	138	86
29	118	1,210	231	457	-	610	320	262	148	190	128	84
30	115	575	215	421	-------	550	295	235	142	168	122	98
31	120	-------	205	394	-------	478	-------	262	-------	152	135	-------
Total	4,223	6,429	6,596	18,693	19,495	18,039	16,157	8,047	10,547	10,547	6,483	3,147
Mean	136	214	213	603	696	582	539	260	352	340	209	105
Cfsm	0.398	0.626	0.623	1.76	2.04	1.70	1.58	0.760	1.03	0.994	0.611	0.307
In.	0.46	0.70	0.72	2.03	2.12	1.96	1.76	0.88	1.15	1.15	0.70	0.34

Calendar year 1958: Max 3,990 Min 100 Mean 490 Cfsm 1.43 In. 19.45
Water year 1958-59: Max 3,640 Min 82 Mean 352 Cfsm 1.03 In. 13.97

Peak discharge (base, 5,000 cfs).--Jan. 22 (6 a.m.) 5,050 cfs (9.0 ft); July 18 (8:30 p.m.) 5,620 cfs (9.6 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 1959. 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.--35 years, 42,200 cfs.

Extremes.--Maximum discharge during year, about 130,000 cfs Jan. 22 or 23 (computed on basis of Guntersville Dam releases); maximum gage height, 12.27 ft Jan. 23 or 24; minimum daily discharge, 1,500 cfs June 21, July 5; minimum gage height, 0.93 ft Dec. 27.
1924-59: 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. 213).

Revisions (water years).--WSP 1306: 1936 (monthly runoff). WSP 1436: 1938-39, 1941-42.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39,900	35,800	33,000	34,600	20,500	31,700	41,600	24,600	27,000	40,500	13,500	33,200
2	31,400	30,800	*36,500	37,000	29,000	39,000	46,700	18,000	*35,000	32,600	10,000	28,600
3	36,700	28,700	31,800	26,800	34,000	38,500	32,200	16,000	29,500	35,700	29,800	28,300
4	29,700	31,500	34,700	33,700	28,500	40,700	32,400	22,800	27,000	4,500	29,900	33,100
5	21,500	31,600	27,500	39,700	*44,500	37,900	32,100	38,400	26,500	1,500	29,000	7,500
6	35,200	32,000	32,800	44,400	41,200	46,200	20,500	43,600	25,500	31,700	34,300	11,000
7	46,200	32,500	31,000	42,500	27,600	43,700	20,000	41,600	23,000	33,200	34,900	27,000
8	44,400	35,800	32,200	34,700	14,000	32,300	19,000	24,400	26,500	34,600	9,000	31,500
9	42,200	33,400	40,100	42,000	31,100	32,000	15,000	29,500	30,000	33,100	3,000	32,200
10	38,200	39,500	35,400	38,600	35,000	40,400	27,100	18,500	29,000	39,900	26,800	32,900
11	42,400	37,600	30,800	30,900	37,200	39,600	35,500	27,200	21,500	3,500	29,000	35,400
12	35,200	34,200	28,500	26,200	36,800	44,500	23,000	29,400	11,000	6,000	33,400	13,500
13	37,500	30,800	27,100	20,000	42,500	37,100	38,700	27,800	9,500	37,200	30,300	4,500
14	33,400	38,000	18,000	20,000	57,000	33,000	16,000	30,500	7,500	35,100	28,700	27,200
15	31,300	21,500	33,800	26,500	59,900	33,600	20,000	29,900	17,500	34,700	11,000	28,000
16	32,800	18,500	25,800	39,000	59,800	29,200	17,000	26,800	25,000	32,500	8,500	32,200
17	32,900	26,000	27,200	49,000	63,100	38,200	14,000	12,000	25,000	14,000	28,900	30,700
18	32,500	27,100	31,500	22,000	65,800	36,800	29,300	16,000	25,000	18,000	32,100	33,600
19	27,200	24,800	17,500	28,000	54,100	36,000	55,600	23,800	29,500	21,000	31,100	16,000
20	37,300	39,300	17,000	26,000	51,500	40,300	57,800	27,100	5,000	29,600	31,000	12,500
21	33,900	41,400	14,000	30,000	46,400	30,800	58,200	28,300	1,500	34,900	33,700	26,900
22	34,500	31,100	18,000	91,000	34,800	21,000	62,300	20,500	29,500	34,700	9,500	31,400
23	35,200	24,100	15,000	125,000	32,900	34,800	51,000	24,200	33,000	32,800	3,500	32,200
24	38,700	22,400	13,000	127,000	40,900	31,800	47,500	10,000	31,000	33,500	27,000	32,700
25	27,400	29,600	14,500	112,000	40,000	31,700	42,500	19,500	38,500	9,000	32,600	30,600
26	27,700	34,000	15,000	71,500	40,200	29,800	40,000	26,500	40,500	2,500	30,900	21,600
27	37,400	27,900	19,000	47,000	41,200	50,500	30,100	27,000	2,000	32,300	30,100	24,300
28	40,200	31,100	19,000	32,500	33,400	57,800	20,500	41,600	3,000	33,200	32,200	30,200
29	36,600	31,600	17,000	35,000	-	56,200	29,100	26,300	32,500	*32,400	8,500	33,900
30	37,500	35,800	37,200	33,000	--------	57,100	21,000	15,000	36,000	29,200	12,000	33,000
31	45,600	--------	35,900	29,500	--------	*53,800	--------	27,800	--------	32,400	27,100	--------
Total	‡1,102.6	938,400	809,800	‡1,395.1	‡1,142.9	‡1,206	995,700	794,600	703,000	825,800	731,300	795,700
Mean	35,570	31,280	26,120	45,000	40,820	38,900	33,190	25,630	23,430	26,640	23,590	26,520
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 154,000 Min 6,200 Mean 43,210 Cfsm 1.69 In. 22.90
Water year 1958-59: Max 127,000 Min 1,500 Mean 31,340 Cfsm 1.22 In. 16.61

* Discharge measurement made on this day.
‡ Expressed in thousands.
Note.--No gage-height record at base or auxiliary gage Jan. 15 to Feb. 5, Apr. 23-26, June 3 to July 1; 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 SW¼ sec.2, T.8., 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 1959.

Gage.--Water-stage recorder. Altitude of gage is 580 ft (from topographic map).

Average discharge.--7 years, 125 cfs.

Extremes.--Maximum discharge during year, 6,600 cfs Jan. 22 (gage height, 13.8 ft); minimum, 0.8 cfs Aug. 30, 31 (gage height, 0.99 ft).
1952-59: Maximum discharge, 9,200 cfs Mar. 21, 1955 (gage height, 14.6 ft); no flow for many days 1952-57.

Remarks.--Records good.

Revisions (water years).--WSP 1556: 1953-57.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	9.0	59	20	87	85	177	61	141	12	12	1.8
2	*12	9.4	46	34	77	73	204	52	112	12	10	1.9
3	11	*7.0	40	33	73	63	165	45	84	12	8.2	4.3
4	9.9	6.2	36	29	124	55	135	40	*61	11	6.5	1.7
5	9.6	6.0	32	25	187	74	116	37	69	9.4	5.3	1.4
6	8.9	5.8	26	22	126	395	104	33	511	8.6	4.4	3.2
7	7.6	6.0	23	22	107	233	94	29	545	7.6	5.4	1.8
8	6.8	6.0	21	27	107	158	84	26	226	6.6	54	1.7
9	5.8	6.2	20	40	269	132	92	24	159	5.5	18	8.9
10	5.4	6.6	19	34	339	114	159	23	242	5.3	11	38
11	4.9	7.1	18	28	291	123	339	23	272	6.6	8.1	74
12	4.6	7.1	18	27	251	207	352	38	204	5.5	6.2	20
13	4.2	7.1	17	*27	568	147	395	124	239	*4.3	4.9	12
14	3.7	7.1	17	27	620	129	263	65	165	3.6	*4.1	9.7
15	3.2	9.0	16	95	620	179	204	42	116	3.4	3.4	14
16	3.1	13	16	440	575	147	165	32	89	9.6	2.9	38
17	3.1	12	15	260	440	126	141	26	72	7.1	2.8	*27
18	3.1	12	*15	144	302	110	281	23	56	5.4	3.5	15
19	3.1	13	15	114	199	94	798	23	48	4.2	5.0	11
20	3.2	15	15	102	150	90	*705	52	40	25	11	8.6
21	3.2	13	14	1,650	123	90	515	48	34	113	6.6	6.9
22	3.2	12	14	4,380	110	81	339	41	29	117	4.4	5.8
23	3.1	12	13	1,230	107	67	225	79	26	34	4.1	4.9
24	3.1	11	17	641	*102	59	177	46	*46	29	3.0	4.1
25	3.1	11	21	455	83	55	147	35	34	27	2.1	3.5
26	3.2	11	18	270	75	194	122	38	25	21	1.8	3.1
27	3.1	10	17	195	69	*945	104	138	21	16	1.8	2.9
28	3.2	73	18	150	65	850	94	199	18	77	1.5	3.5
29	3.5	256	19	126	-	515	96	86	16	28	1.2	4.5
30	3.6	94	19	112	--------	302	74	98	14	17	.9	3.1
31	4.0	--------	18	107	--------	218	--------	197	--------	13	1.4	--------
Total	158.7	673.6	672	10,866	6,246	6,110	6,866	1,823	3,714	656.7	215.5	336.3
Mean	5.12	22.5	21.7	351	223	197	229	58.8	124	21.2	6.95	11.2
Cfsm	0.059	0.261	0.251	4.07	2.58	2.28	2.65	0.681	1.44	0.246	0.081	0.130
In.	0.07	0.29	0.29	4.68	2.69	2.63	2.96	0.79	1.60	0.28	0.09	0.14

Calendar year 1958: Max 2,360 Min 1.5 Mean 128 Cfsm 1.48 In. 20.09
Water year 1958-59: Max 4,380 Min 0.9 Mean 105 Cfsm 1.22 In. 16.51

Peak discharge (base, 2,000 cfs).--Jan. 22 (2 a.m.) 6,600 cfs (13.8 ft).

* Discharge measurement made on this day.

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, 1.8 miles upstream from Caldwell Creek, and at mile 194.2.

Drainage area.--65.6 sq mi.

Records available.--November 1951 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 981.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--7 years (1952-59), 130 cfs.

Extremes.--Maximum discharge during year, 2,290 cfs Jan. 22 (gage height, 10.37 ft); minimum, 5.2 cfs Sept. 29, 30 (gage height, 1.96 ft).
1951-59: 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 except those for periods of no gage-height record, which are fair.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
2.0	5.5	3.5	90	0.9	4.5	6.0	455
2.5	21	4.0	155	2.5	18	8.0	755
3.0	47	7.0	605	3.0	47	9.0	1,020
				3.5	90	9.5	1,330
				4.0	155	10.0	1,840

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	9.9	208	63	76	125	156	105	220	9.1	16	12
2	24	23	150	78	67	117	254	179	394	12	14	23
3	21	24	120	70	64	105	275	123	203	8.5	13	22
4	20	19	121	62	127	96	215	96	127	8.3	12	18
5	19	17	97	a55	240	97	173	77	90	8.0	12	48
6	17	20	76	a45	182	287	144	64	76	7.8	12	48
7	15	32	62	a50	143	246	121	53	59	7.4	22	36
8	13	26	57	a90	125	184	105	45	45	7.4	28	26
9	12	24	53	*178	121	150	101	39	36	7.0	24	30
10	11	28	46	132	114	126	222	36	32	6.7	18	39
11	10	25	42	106	120	107	466	33	30	6.5	14	69
12	9.9	a23	40	88	107	*155	464	34	*29	6.3	12	48
13	9.1	a22	38	79	264	137	443	54	48	*6.5	10	33
14	8.8	a20	a35	77	610	121	302	57	38	6.5	8.8	26
15	*8.0	a20	a32	224	815	149	215	41	26	6.3	8.3	20
16	7.5	a35	a30	539	582	154	*170	33	22	6.1	8.0	17
17	7.0	a45	*29	365	344	133	137	29	18	7.6	7.4	*14
18	6.8	*43	29	216	*248	112	130	*26	16	8.0	7.4	11
19	6.6	116	28	167	182	96	402	24	14	8.3	8.3	9.1
20	6.6	160	28	208	140	87	848	32	12	8.3	*8.8	8.3
21	6.4	113	26	596	114	89	522	56	12	8.0	11	7.6
22	6.4	83	24	1,830	102	85	329	108	11	7.6	11	7.1
23	6.4	64	24	775	118	72	234	133	10	7.6	9.6	6.8
24	6.4	52	33	370	144	65	182	78	10	39	8.3	6.3
25	6.2	45	39	254	111	60	146	55	10	586	8.0	5.8
26	6.2	54	32	196	101	162	120	43	11	260	7.3	5.6
27	6.2	90	30	156	92	1,240	103	49	11	94	7.0	5.6
28	5.9	183	68	126	86	790	96	81	9.6	51	6.7	5.5
29	5.9	570	84	106	-	380	100	67	8.5	33	6.8	5.3
30	5.9	380	73	94	--------	257	78	93	8.1	26	7.8	5.2
31	5.9	--------	65	89	--------	194	--------	250	--------	20	9.6	--------
Total	319.1	2,365.9	1,819	7,484	5,539	6,178	7,253	2,193	1,636.2	1,284.8	357.1	618.2
Mean	10.3	78.9	58.7	241	198	199	242	70.7	54.5	41.4	11.5	20.6
Cfsm	0.157	1.20	0.895	3.67	3.02	3.03	3.69	1.08	0.831	0.631	0.175	0.314
In.	0.18	1.34	1.03	4.24	3.14	3.50	4.11	1.24	0.93	0.73	0.20	0.35

Calendar year 1958: Max 1,330 Min 5.1 Mean 118 Cfsm 1.80 In. 24.37
Water year 1958-59: Max 1,830 Min 5.2 Mean 101 Cfsm 1.54 In. 20.99

Peak discharge (base, 1,000 cfs).--Jan. 22 (5 to 6 a.m.) 2,290 cfs (10.37 ft); Mar. 27 (1 p.m.) 1,610 cfs (9.78 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.

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 November 1959 (discontinued).
Gage.--Water-stage recorder. Datum of gage is 968.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.
Average discharge.--7 years (1952-59), 65.0 cfs.
Extremes.--1958-59: Maximum discharge during water year, 700 cfs Apr. 19 (gage height, 6.40 ft); minimum, 6.0 cfs Nov. 13; minimum gage height, 1.25 ft Sept. 30.
1959: Maximum discharge during period October to November, 89 cfs Nov. 27 (gage height, 2.50 ft); minimum, 5.0 cfs Nov. 3, 4, 12-17; minimum gage height, 1.20 ft Nov. 3, 4, 12-14.
1951-59: Maximum discharge, 4,320 cfs Nov. 18, 1957 (gage height, 12.17 ft), from rating curve extended above 2,100 cfs on basis of slope-conveyance study; minimum, 3.2 cfs Nov. 23, 24, 1954; minimum gage height, 1.01 ft Nov. 17, 18, 1952.
Remarks.--Records good except those for period of no gage-height record, which are fair.
Revisions (water years).--WSP 1386: 1952, 1954(M).

Rating tables, Oct. 1, 1958, to Nov. 30, 1959 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 3-19, Nov. 27-30, 1959)

Oct. 1, 1958, to Jan. 21, 1959				Jan. 22 to Nov. 30, 1959			
1.29	6.2	2.0	57	1.2	5.0	2.0	56
1.4	10	3.0	176	1.3	9.0	3.0	145
1.7	29	4.0	312	1.5	20	5.0	425

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	7.3	14	8.9	44	68	84	83	28	13	14	10
2	12	7.3	14	8.9	40	55	151	102	39	14	13	19
3	11	7.3	14	8.9	40	49	129	58	30	13	12	11
4	10	7.3	13	8.9	73	44	102	46	27	12	12	9.5
5	10	7.3	12	8.5	78	44	84	41	73	12	13	13
6	9.7	6.9	12	8.5	55	127	73	36	54	12	13	12
7	9.7	6.9	12	8.9	47	78	66	34	34	12	20	12
8	9.3	6.9	12	11	44	63	59	31	29	11	18	11
9	8.9	6.9	12	*20	44	56	54	29	28	11	14	10
10	8.9	6.5	11	17	52	50	63	28	26	11	13	9.0
11	8.9	6.5	11	16	54	50	75	27	24	11	13	a25
12	8.9	6.5	10	15	46	*71	88	28	*28	10	13	a18
13	8.5	6.2	10	14	102	54	84	29	26	*9.5	13	a15
14	8.5	6.2	10	15	228	47	65	26	22	9.0	12	a12
15	*8.5	6.2	9.7	24	326	77	54	24	21	9.5	12	a10
16	8.5	6.2	9.3	85	183	60	*49	24	20	9.5	12	a9.5
17	8.5	6.2	*9.3	49	149	50	45	22	19	10	11	a9.0
18	8.5	6.2	9.3	38	*129	44	47	*21	18	11	11	*8.5
19	8.1	6.9	9.3	36	103	42	351	21	18	9.0	12	8.5
20	8.1	*8.5	8.9	50	86	41	333	22	17	9.0	*11	8.0
21	8.1	7.7	8.9	229	75	47	179	22	16	8.5	11	7.5
22	8.1	7.7	8.5	418	69	54	148	39	16	8.5	11	7.5
23	8.1	7.7	8.9	170	84	42	118	30	15	8.5	9.5	7.5
24	7.7	7.3	8.9	129	81	39	98	23	16	54	9.0	7.5
25	7.7	7.3	8.5	108	66	37	85	20	15	67	9.0	7.0
26	7.7	7.3	8.1	93	58	171	74	21	15	26	8.5	7.0
27	7.3	7.3	8.1	79	52	*332	66	43	14	20	8.0	7.0
28	7.3	11	8.9	69	48	164	61	28	14	18	8.0	7.0
29	6.9	27	8.5	61	-	126	52	25	13	17	8.5	7.0
30	6.9	16	8.1	55	-------	111	47	26	13	16	8.0	7.0
31	6.9	-------	8.5	49	-------	95	-------	27	-------	14	7.5	-------
Total	269.2	242.5	316.7	1,911.5	2,456	2,388	2,984	1,036	728	476.0	360.0	312.0
Mean	8.68	8.08	10.2	61.7	87.7	77.0	99.5	33.4	24.3	15.4	11.6	10.4
Cfsm	0.210	0.196	0.247	1.49	2.12	1.86	2.41	0.809	0.588	0.373	0.281	0.252
In.	0.24	0.22	0.29	1.72	2.21	2.15	2.69	0.93	0.66	0.43	0.32	0.28

Calendar year 1958: Max 1,180 Min 6.2 Mean 63.2 Cfsm 1.53 In. 20.76
Water year 1958-59: Max 418 Min 6.2 Mean 36.9 Cfsm 0.893 In. 12.14

Peak discharge (base, 600 cfs).--Jan. 22 (3 a.m.) 682 cfs (6.33 ft); Apr. 19 (11 p.m.) 700 cfs (6.40 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.

Discharge, in cubic feet per second, 1959

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	6.5	5.3	7	6.5	5.3	13	6.5	5.0	19	7.5	6.5	25	7.0	8.0
2	6.5	5.3	8	6.5	5.3	14	8.0	5.0	20	7.0	*6.2	26	6.5	8.0
3	6.5	5.0	9	*7.0	5.3	15	9.0	5.0	21	6.5	5.9	27	6.2	29
4	6.5	5.0	10	7.5	5.3	16	9.0	5.0	22	6.5	5.9	28	5.9	63
5	6.5	5.6	11	7.0	5.3	17	8.5	5.0	23	6.5	5.9	29	5.9	32
6	6.5	5.3	12	6.5	5.0	18	8.0	8.5	24	7.0	7.5	30	5.6	22
												31	5.6	-
Total													212.7	296.4
Mean													6.86	9.88
Cubic feet per second per square mile													0.166	0.239
Runoff in inches													0.19	0.27

Peak discharge (base, 600 cfs).--No peak above base.

* 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 1959.

Gage.--Water-stage recorder. Datum of gage is 687.72 ft above mean sea level, datum of of 1929.

Average discharge.--5 years (1954-59), 78.9 cfs.

Extremes.--Maximum discharge during year, 4,870 cfs June 1 (gage height, 11.77 ft); minimum, 1.1 cfs Sept. 28, 29 (gage height, 1.06 ft).
1953-59: Maximum discharge, 12,800 cfs Nov. 17, 1957 (gage height, 14.8 ft), from rating curve extended above 5,600 cfs on basis of contracted-opening measurement of peak flow; no flow at times in 1954-57.

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

Revisions (water years).--WSP 1506: 1954-55(M), 1956(P).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 20-26)

1.0	0.6	2.0	60
1.1	1.6	2.5	129
1.2	4.0	3.0	230
1.3	6.5	4.0	490
1.5	15	7.0	1,590
1.7	29		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	7.5	53	33	18	52	54	23	1,270	a120	34	6.8
2	7.5	6.5	39	45	16	41	145	21	218	a80	22	4.5
3	6.8	5.0	32	35	22	37	89	16	*97	a20	12	3.0
4	6.5	4.2	26	26	107	*33	70	16	61	a10	9.3	2.4
5	6.0	4.0	23	21	94	111	57	12	44	a9.0	8.2	20
6	5.2	4.2	17	18	*61	146	47	*12	34	a10	*9.3	19
7	5.0	4.0	14	*16	47	89	*39	11	25	a7.0	56	14
8	4.5	3.6	12	246	43	71	34	10	18	a5.0	28	13
9	4.5	3.6	12	125	47	61	32	9.7	15	*4.0	16	*24
10	4.5	3.6	*12	80	86	50	37	10	22	4.0	12	46
11	4.0	3.3	10	56	82	49	33	8.9	131	4.0	8.9	14
12	3.6	3.0	10	43	116	49	87	348	103	3.6	7.5	8.9
13	*3.3	2.7	9.7	34	224	40	78	123	80	3.0	6.5	6.5
14	3.3	2.7	8.9	29	571	37	60	41	44	2.7	5.5	5.5
15	3.0	11	8.5	192	402	76	48	24	28	2.1	9.7	5.0
16	3.0	16	7.5	175	175	54	40	17	21	1.9	7.8	4.7
17	3.0	*10	7.5	96	113	47	34	14	16	6.2	5.2	4.0
18	3.0	8.6	7.5	68	84	38	37	11	12	38	28	3.0
19	3.3	155	7.2	68	59	33	761	9.7	10	9.3	20	2.4
20	3.6	51	7.2	104	44	33	*310	17	8.2	13	8.5	2.2
21	3.3	28	6.8	714	35	33	161	19	7.5	47	21	2.1
22	3.3	19	6.3	334	31	27	116	69	6.5	116	14	1.9
23	3.0	14	7.5	138	68	23	88	40	6.0	27	7.2	1.6
24	3.0	12	9.3	92	60	22	71	20	7.2	535	5.2	1.4
25	3.0	9.7	8.2	70	47	20	59	14	22	330	4.5	1.4
26	2.7	9.3	7.2	56	39	332	50	12	15	84	3.6	1.4
27	3.0	7.8	11	45	33	324	41	76	12	49	3.3	1.3
28	3.0	387	32	35	32	131	44	39	10	32	3.0	1.2
29	3.0	169	31	28	-	93	35	28	10	23	4.7	1.3
30	2.7	82	22	26	--------	79	28	23	a10	16	5.2	1.3
31	3.0	--------	18	21	--------	60	--------	26	--------	14	8.1	--------
Total	125.9	1,047.3	483.3	3,069	2,756	2,291	2,785	1,120.3	2,363.4	1,625.8	394.2	223.8
Mean	4.06	34.9	15.6	99.0	98.4	73.9	92.8	36.1	78.8	52.4	12.7	7.46
Cfsm	0.099	0.847	0.379	2.40	2.39	1.79	2.25	0.876	1.91	1.27	0.308	0.181
In.	0.11	0.95	0.44	2.77	2.49	2.07	2.51	1.01	2.13	1.47	0.36	0.20

Calendar year 1958: Max 1,400 Min 0.2 Mean 61.5 Cfsm 1.49 In. 20.25
Water year 1958-59: Max 1,270 Min 1.2 Mean 50.1 Cfsm 1.22 In. 16.51

Peak discharge (base, 3,500 cfs).--June 1 (9 a.m.) 4,870 cfs (11.77 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.

5820. Elk River above Fayetteville, Tenn.

Location.--Lat 35°08'04", long 86°32'23", on right bank 100 ft downstream from highway bridge, 1¾ 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 1959.

Gage.--Water-stage recorder. Datum of gage is 650.58 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 1,384 cfs (unadjusted).

Extremes.--Maximum discharge during year, 7,130 cfs Jan. 22 (gage height, 12.71 ft); minimum, 214 cfs Oct. 31 (gage height, 1.71 ft); minimum gage height, 1.49 ft Sept. 29, 30. 1934-59: 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. 217).

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 27		Nov. 28 to Sept. 30			
1.7	210	1.5	220	5.0	1,920
2.0	336	2.0	380	10.0	5,170
3.0	776	3.0	776	13.0	7,340

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	532	269	1,570	468	1,160	1,170	1,500	967	1,000	310	390	320
2	515	286	1,490	502	1,100	1,070	1,800	967	3,000	500	394	298
3	730	265	1,030	485	1,020	891	1,700	1,410	*2,050	450	359	295
4	458	260	906	464	1,200	*1,200	1,500	1,120	1,320	380	342	314
5	412	252	841	474	1,550	1,170	1,300	799	1,110	350	324	298
6	386	269	753	478	1,580	2,080	1,200	*693	1,130	320	*348	380
7	370	328	596	485	1,440	2,110	1,050	653	860	*301	644	362
8	357	365	468	*901	1,340	1,910	*922	628	744	289	675	380
9	344	294	422	1,120	1,210	1,760	880	608	576	274	666	*415
10	336	290	*401	1,050	1,250	1,540	1,030	532	506	271	616	689
11	328	281	387	860	1,300	1,340	2,000	520	744	265	474	1,180
12	307	277	380	781	1,320	1,230	2,500	985	822	338	380	1,700
13	*302	273	370	730	2,140	1,100	2,300	1,600	1,200	280	356	1,520
14	294	273	362	702	3,630	1,000	1,950	753	1,050	262	334	1,140
15	294	294	359	1,120	5,760	1,200	2,100	640	900	256	338	662
16	286	315	415	1,740	5,070	1,300	1,800	584	750	256	532	432
17	273	*328	418	1,430	3,850	1,100	1,650	536	650	352	352	338
18	265	365	422	1,670	2,870	1,000	1,500	488	580	837	380	298
19	273	721	415	1,570	2,160	900	5,000	468	540	485	496	280
20	269	656	415	1,800	1,720	850	6,220	488	510	468	496	268
21	256	666	390	3,490	1,570	820	*5,820	600	470	401	373	256
22	244	437	370	6,970	1,480	800	3,780	750	450	560	352	250
23	244	386	373	6,780	1,560	750	2,810	1,000	420	398	320	244
24	235	391	394	5,530	1,560	700	1,990	800	450	477	310	238
25	231	382	384	4,580	1,460	1,000	1,520	700	500	2,140	304	232
26	227	399	370	1,960	1,320	2,500	1,350	720	450	2,330	301	229
27	227	407	384	1,410	1,140	4,000	1,240	740	420	1,490	289	226
28	223	1,470	457	1,910	1,090	2,500	1,170	920	370	880	289	223
29	218	2,310	471	2,720	-	2,000	1,120	800	350	499	286	220
30	218	1,760	450	1,910	--------	1,800	1,030	760	320	429	298	220
31	223	--------	436	1,220	--------	1,600	--------	800	--------	398	362	--------
Total	9,877	15,269	16,899	57,310	53,850	44,391	61,732	24,029	24,242	17,246	12,380	13,907
Mean	319	509	545	1,849	1,923	1,432	2,058	775	808	556	399	464

	Observed				Adjusted†			
Calendar year 1958:	Max 8,310	Min 218	Mean 1,323		Mean 1,324	Cfsm 1.60	In. 21.74	
Water year 1958-59:	Max 6,970	Min 218	Mean 962		Mean 963	Cfsm 1.16	In. 15.81	

* Discharge measurement made on this day.
† Adjusted for change in contents in Woods Reservoir.
Note.--No gage-height record Jan. 20, Mar. 13 to Apr. 7, Apr. 11-19, May 21 to June 2, June 13 to July 6; discharge estimated on basis of weather records, recorded range in stage when available, 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 County.

Drainage area.--36.5 sq mi.

Records available.--November 1954 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 655.61 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,110 cfs Mar. 26 (gage height, 11.33 ft); minimum, 0.9 cfs Oct. 30, 31; minimum gage height, 1.38 ft July 14.
1954-59: 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.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 28 to Apr. 19)

Oct. 1 to June 11				June 12 to Sept. 30			
1.49	1.0	2.5	88	1.4	1.8	1.8	18
1.55	2.0	3.0	160	1.5	3.3	2.0	37
1.6	3.8	5.0	520	1.6	6.5	2.5	100
1.7	7.8	7.0	1,010	1.7	12	3.5	294
1.8	15	8.0	1,380				
2.0	31						

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	22	46	58	27	40	62	25	26	9.0	168	10
2	9.6	8.4	36	51	26	38	83	22	18	13	65	8.5
3	9.0	5.5	32	38	29	36	58	19	*13	4.6	31	6.2
4	7.3	4.7	28	30	94	34	48	17	10	3.3	22	5.2
5	6.3	4.4	24	22	*61	96	42	16	9.0	3.0	18	4.9
6	5.1	*4.7	19	21	43	*94	37	*13	9.0	4.9	41	5.2
7	*4.4	3.8	16	*21	40	65	*33	13	6.8	3.2	90	3.6
8	4.1	3.2	16	203	40	57	30	10	5.5	2.6	55	3.6
9	4.4	3.2	*14	88	55	51	135	10	5.5	*2.1	32	54
10	4.7	2.9	13	62	101	44	151	9.6	9.6	2.1	23	*33
11	4.1	2.3	12	47	75	46	109	8.4	19	2.2	18	14
12	3.5	2.0	11	39	129	44	199	241	102	2.1	15	9.0
13	3.2	2.0	10	36	176	38	112	82	54	1.8	13	7.5
14	3.2	2.3	9.6	32	476	37	82	36	27	3.4	12	6.5
15	3.2	40	9.0	119	278	81	64	26	21	6.7	10	5.9
16	2.9	25	8.4	102	150	50	53	22	17	2.6	10	5.2
17	2.6	15	8.4	65	108	44	46	18	15	13	13	4.3
18	2.6	375	8.4	51	85	39	59	15	12	57	40	3.6
19	3.2	156	7.8	56	67	36	588	14	10	10	*30	3.2
20	2.6	48	7.8	70	57	36	216	21	9.0	21	16	3.0
21	2.0	33	7.3	423	49	37	148	17	8.0	10	12	2.7
22	1.7	27	6.8	184	47	35	108	42	7.5	132	9.0	2.6
23	1.5	23	9.6	106	69	31	79	22	9.0	38	6.5	2.4
24	1.3	20	13	75	56	29	64	14	24	262	5.9	2.4
25	1.1	18	9.6	61	49	27	53	22	16	188	4.9	2.2
26	1.1	16	8.4	51	46	1,050	44	17	10	54	4.6	2.1
27	1.1	14	20	43	42	528	39	35	7.5	32	4.3	2.1
28	1.1	311	32	39	42	164	36	23	5.9	23	7.3	2.1
29	1.0	115	26	36	-	117	30	14	4.9	18	36	2.0
30	1.0	64	21	34	-------	87	26	19	4.3	14	14	1.8
31	1.3	-------	21	30	-------	69	-------	22	-------	15	9.0	-------
Total	114.2	1,371.4	511.1	2,293	2,517	3,180	2,834	885.0	495.5	953.6	835.5	218.8
Mean	3.68	45.7	16.5	74.0	89.9	103	94.5	28.5	16.5	30.8	27.0	7.29
Cfsm	0.101	1.25	0.452	2.03	2.46	2.82	2.59	0.781	0.452	0.844	0.740	0.200
In.	0.12	1.40	0.52	2.34	2.56	3.24	2.89	0.90	0.50	0.97	0.85	0.22

Calendar year 1958: Max 801 Min 0.05 Mean 46.1 Cfsm 1.26 In. 17.16
Water year 1958-59: Max 1,050 Min 1.0 Mean 44.4 Cfsm 1.22 In. 16.51

Peak discharge (base, 2,500 cfs).--Mar. 26 (10:30 p.m.) 3,110 cfs (11.33 ft).

* Discharge measurement made on this day.

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, 4.9 miles upstream from mouth, and 8.7 miles northwest of Pulaski, Giles County.

Drainage area.--24.4 sq mi.

Records available.--July 1955 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 688.62 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 739 cfs Mar. 26 (gage height, 5.68 ft); minimum, 5.4 cfs Nov. 11-14; minimum gage height, 1.15 ft Aug. 28.

1955-59: Maximum discharge, 2,440 cfs Nov. 17, 1957 (gage height, 7.68 ft), from rating curve extended above 670 cfs; 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), by slope-area measurement of peak flow.

Remarks.--Records fair.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 26

1.4	3.0	2.5	130
1.5	11	3.0	214
2.0	64	4.0	387

Mar. 27 to Sept. 30

1.1	4.5	2.0	64
1.3	10	2.5	130
1.5	19	3.0	214
1.7	33	4.0	387

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	13	22	12	25	30	54	29	16	9.1	9.1	13
2	12	12	20	21	22	29	55	27	*16	11	11	14
3	11	11	18	22	21	28	49	27	16	10	9.4	12
4	10	8.6	17	21	*23	26	43	25	14	9.4	8.5	10
5	10	7.8	15	17	25	*36	40	*24	14	9.1	8.2	9.1
6	*9.4	*7.8	13	*14	24	68	*37	22	15	9.1	9.4	9.4
7	8.6	7.0	12	13	23	57	33	20	14	9.1	9.1	8.8
8	7.8	6.2	*11	19	23	49	32	19	14	*8.5	9.4	9.4
9	7.0	7.0	10	32	24	42	38	18	14	7.9	8.5	52
10	7.0	6.2	9.4	30	25	34	74	18	18	7.9	7.9	*25
11	7.0	5.4	9.4	26	25	39	95	18	31	7.9	7.3	16
12	6.2	5.4	8.6	24	28	42	106	18	26	7.6	6.8	14
13	6.2	5.4	8.6	21	46	39	101	24	24	7.0	6.5	12
14	6.2	6.2	7.8	19	195	38	80	21	22	7.0	6.5	11
15	6.2	10	7.0	27	177	60	64	19	20	7.3	6.5	10
16	6.2	14	7.0	54	113	60	54	18	18	9.1	6.5	9.4
17	6.2	12	7.0	45	86	52	46	16	16	12	6.2	8.8
18	6.2	10	7.0	38	70	42	53	16	15	14	7.0	8.2
19	6.2	20	7.8	36	57	34	81	16	14	13	*10	7.9
20	6.2	22	7.8	42	49	32	103	18	13	13	9.1	7.3
21	6.2	19	7.0	114	41	31	87	18	13	12	7.9	7.0
22	6.2	16	6.2	141	36	28	74	20	12	11	7.0	7.0
23	6.2	13	7.8	87	41	24	63	22	12	10	7.0	7.0
24	6.2	11	9.4	65	35	21	55	21	12	24	6.8	7.0
25	6.2	9.4	8.6	55	33	19	49	19	13	25	6.2	7.0
26	6.2	9.4	6.2	49	31	337	42	18	12	18	6.2	6.8
27	6.2	8.6	7.0	43	30	290	38	18	11	15	6.2	6.5
28	6.2	12	9.4	38	29	127	38	18	10	13	6.8	6.5
29	7.0	24	10	33	-	92	32	16	9.7	11	29	6.2
30	6.2	24	9.4	31	-------	72	30	16	9.1	10	16	6.2
31	7.0	-------	8.6	28	-------	61	-------	17	-------	9.4	14	-------
Total	228.4	343.4	315.0	1,217	1,357	1,939	1,746	616	463.8	347.4	276.0	334.5
Mean	7.37	11.4	10.2	39.3	48.5	62.5	58.2	19.9	15.5	11.2	8.90	11.2
Cfsm	0.302	0.467	0.418	1.61	1.99	2.56	2.39	0.816	0.635	0.459	0.365	0.459
In.	0.35	0.52	0.48	1.85	2.07	2.96	2.66	0.94	0.71	0.53	0.42	0.51

Calendar year 1958: Max 439 Min 4.8 Mean 30.3 Cfsm 1.24 In. 16.86
Water year 1958-59: Max 337 Min 5.4 Mean 25.2 Cfsm 1.03 In. 14.00

Peak discharge (base, 1,000 cfs).--No peak above base.

* Discharge measurement made on this day.

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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, 4 miles west of Pulaski, Giles County, and at mile 30.1.

Drainage area.--366 sq mi.

Records available.--April 1934 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 642.54 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 588 cfs.

Extremes.--Maximum discharge during year, 8,080 cfs Mar. 27 (gage height, 15.78 ft); minimum, 41 cfs Sept. 29 (gage height, 0.87 ft).

1934-59: 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 periods 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.9	45	10.0	3,220
1.2	98	12.0	4,280
1.6	178	14.0	5,830
3.0	520	16.0	8,550
5.0	1,220		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	116	428	202	308	448	804	348	475	88	80	260
2	*122	122	350	335	278	405	891	325	798	94	140	216
3	112	98	302	325	275	390	737	292	*440	88	100	144
4	108	82	270	280	455	362	634	268	330	80	85	112
5	102	76	232	222	480	437	556	250	280	74	70	96
6	92	*73	200	192	430	*1,020	502	*232	275	74	80	180
7	84	74	176	*194	392	877	*458	213	240	71	75	120
8	80	71	166	506	382	721	422	196	200	*64	70	108
9	78	71	158	912	428	634	745	188	194	60	65	130
10	76	71	*148	640	505	541	2,000	186	211	60	60	*406
11	74	69	140	498	586	532	2,030	180	470	60	55	211
12	71	67	136	415	589	691	1,970	225	482	57	50	148
13	67	67	132	368	992	601	2,000	609	502	52	50	122
14	65	67	124	330	3,410	556	2,100	305	355	90	50	104
15	64	114	116	584	4,320	807	1,300	232	282	140	55	94
16	64	174	112	1,340	2,400	754	800	198	235	80	60	88
17	64	136	112	956	1,560	682	691	184	202	60	55	74
18	67	126	112	691	1,120	580	727	168	184	65	90	69
19	73	432	108	589	790	505	1,510	170	164	70	*168	64
20	65	398	108	796	631	480	2,130	258	150	60	155	58
21	64	282	104	1,400	529	480	1,470	230	140	55	86	56
22	62	222	100	3,200	480	462	1,160	220	130	55	71	52
23	60	188	104	1,740	595	400	916	248	126	100	60	50
24	60	162	124	1,100	571	378	762	198	152	350	57	50
25	58	148	114	821	512	360	658	182	166	500	52	48
26	57	140	102	670	475	2,390	571	220	136	300	48	45
27	57	130	112	553	448	7,460	505	230	120	200	50	45
28	56	376	144	472	422	3,250	472	358	108	140	52	45
29	56	1,060	146	418	-	1,730	422	425	98	110	238	46
30	56	586	142	380	--------	1,230	380	345	90	90	203	45
31	60	--------	136	340	--------	948	--------	388	--------	85	151	--------
Total	2,306	5,798	4,958	21,469	24,363	31,111	30,323	8,071	7,735	3,472	2,681	3,286
Mean	74.4	193	160	693	870	1,004	1,011	260	258	112	86.5	110
Cfsm	0.203	0.527	0.437	1.89	2.38	2.74	2.76	0.710	0.705	0.306	0.236	0.301
In.	0.23	0.59	0.50	2.18	2.48	3.16	3.08	0.82	0.79	0.35	0.27	0.33

Calendar year 1958: Max 5,140 Min 25 Mean 457 Cfsm 1.25 In. 16.94
Water year 1958-59: Max 7,460 Min 45 Mean 399 Cfsm 1.09 In. 14.78

Peak discharge (base, 6,000 cfs).--Mar. 27 (7 a.m.) 8,080 cfs (15.78 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Apr. 13-16, July 16 to Aug. 18; discharge estimated on basis of weather records, recorded range in stage when available, 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 1959. 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 11¾ miles downstream at datum 13.52 ft lower.

Average discharge.--43 years (1904-7, 1919-59), 3,000 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,400 cfs Apr. 19 (gage height, 19.38 ft); minimum, 295 cfs Sept. 30 (gage height, 0.83 ft).

1904-8, 1919-59: 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. 217).

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
1.0	318	5.0	2,900	0.8	287	10.0	7,600
1.5	520	10.0	7,600	1.5	540	15.0	12,600
3.0	1,330	16.0	13,600	3.0	1,370	20.0	18,200
				5.0	2,930		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	884	470	3,030	906	1,940	2,220	3,250	1,830	1,970	560	844	920
2	813	550	2,580	1,320	1,820	2,210	4,010	1,710	*5,270	992	1,560	788
3	774	535	2,250	1,390	1,730	1,970	4,050	1,740	3,990	830	983	630
4	945	450	1,750	1,250	*2,200	1,870	3,690	1,900	2,730	700	739	518
5	692	*430	1,520	1,090	3,020	*2,160	3,180	*1,610	1,940	605	640	522
6	*620	418	1,370	*984	2,870	4,150	*2,760	1,330	1,740	531	712	508
7	575	414	1,200	972	2,600	4,300	2,400	1,180	1,670	*504	*1,970	635
8	540	450	*1,030	1,910	2,430	3,800	2,090	1,110	1,360	442	2,780	560
9	520	500	868	4,430	2,350	3,380	2,170	1,060	1,200	403	1,580	632
10	500	426	764	3,120	2,450	3,020	4,020	1,020	1,070	382	1,260	1,110
11	480	410	708	2,470	2,750	2,710	4,550	942	1,460	430	1,060	1,240
12	462	398	670	2,030	2,710	2,680	5,160	1,360	2,090	366	827	1,680
13	442	390	655	1,760	4,920	2,400	5,860	3,970	2,200	389	668	1,890
14	430	390	625	1,590	8,840	2,040	5,250	2,130	2,180	389	600	1,650
15	418	450	590	1,890	14,800	2,350	4,200	1,380	1,710	430	550	1,270
16	410	752	565	4,900	13,300	2,610	3,410	1,160	1,320	476	555	882
17	402	758	620	4,890	9,420	2,280	3,060	1,050	1,120	526	744	625
18	382	650	630	4,250	6,760	2,050	2,830	959	986	3,190	710	500
19	478	2,120	625	3,690	4,920	1,820	9,020	876	898	1,470	2,110	446
20	418	2,360	615	4,030	3,620	1,700	16,400	1,140	810	1,100	1,240	406
21	390	1,540	605	6,030	3,030	1,690	12,800	1,250	756	983	948	382
22	367	1,280	570	13,600	2,730	1,640	9,420	1,650	722	2,620	662	363
23	356	978	550	12,700	2,870	1,500	6,670	2,130	690	1,820	580	345
24	349	840	600	10,100	3,150	1,400	4,740	1,320	717	1,970	504	*336
25	338	780	625	8,110	2,830	1,320	3,650	1,340	822	8,860	464	327
26	332	742	595	5,940	2,570	3,410	2,970	1,450	827	4,920	434	318
27	328	714	575	3,240	2,360	14,400	2,620	1,490	744	3,200	422	312
28	321	2,200	703	2,590	2,140	14,300	2,390	1,890	700	2,110	403	307
29	321	6,820	852	3,390	-	8,660	2,220	1,560	646	1,420	488	304
30	318	4,480	868	3,650	--------	5,860	2,010	1,610	605	959	739	298
31	328	--------	818	2,450	--------	4,320	--------	1,690	--------	805	600	--------
Total	14,933	33,695	30,026	120,672	117,130	110,220	140,850	46,837	44,943	44,382	28,376	20,704
Mean	482	1,123	969	3,893	4,183	3,555	4,695	1,511	1,498	1,432	915	690

	Observed			Adjusted†		
Calendar year 1958:	Max 17,200	Min 296	Mean 2,622	Mean 2,623	Cfsm 1.47	In. 19.96
Water year 1958-59:	Max 16,400	Min 298	Mean 2,062	Mean 2,063	Cfsm 1.16	In. 15.70

Peak discharge (base, 17,000 cfs).--Apr. 19 (11 p.m.) 17,400 cfs (19.38 ft).

* Discharge measurement made on this day.
† Adjusted for change in contents in Woods Reservoir.

5853. Sugar Creek near Good Springs, Ala.

Location.--Lat 34°56'40", long 87°09'20", in SW¼ 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 1959.

Gage.--Water-stage recorder. Altitude of gage is 575 ft (from topographic map).

Extremes.--Maximum discharge during year, 7,820 cfs Mar. 27 (gage height, 10.1 ft); minimum, 32 cfs Sept. 26, 27 (gage height, 0.47 ft).
1957-59: Maximum discharge, 10,500 cfs Nov. 18, 1957 (gage height, 10.85 ft); minimum, 15 cfs Sept. 8, 1957 (gage height, 0.22 ft).

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

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 12 to July 1)

0.4	26	5.0	1,060
.8	62	6.0	1,600
1.5	143	7.0	2,360
2.0	223	8.0	3,460
3.0	450	9.0	5,120
4.0	730		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	91	190	130	136	202	340	177	279	63	77	110
2	*62	84	160	219	127	183	400	163	219	293	78	77
3	57	65	140	175	126	172	340	150	174	111	69	80
4	57	*59	120	143	214	162	294	140	140	88	61	60
5	55	55	110	113	219	204	258	133	127	81	57	55
6	51	50	96	98	195	475	234	125	126	88	58	55
7	48	50	88	98	177	400	212	118	121	74	69	49
8	48	51	*80	199	172	316	196	110	105	67	79	*47
9	48	53	76	305	188	272	210	105	110	61	63	46
10	48	56	73	229	196	234	330	98	133	61	56	142
11	47	59	71	182	193	219	490	92	1,400	97	50	78
12	43	63	70	156	200	*223	720	210	1,990	72	47	58
13	43	69	68	*140	438	191	970	330	550	*62	45	51
14	43	76	66	133	902	177	680	220	340	58	43	48
15	43	81	65	174	1,370	223	510	160	*244	64	42	49
16	43	88	64	376	*820	214	420	130	193	70	43	48
17	43	82	63	305	565	196	350	110	158	68	51	45
18	110	78	63	234	438	182	520	*91	136	194	55	41
19	107	130	62	209	328	168	1,900	93	120	109	52	40
20	57	220	61	246	266	164	*2,320	196	105	81	*137	39
21	52	170	59	428	227	169	902	154	97	80	74	37
22	48	130	58	1,010	209	162	640	165	89	74	60	36
23	48	110	64	565	258	*146	488	218	91	71	54	35
24	47	96	82	400	250	139	400	143	97	251	48	34
25	46	85	74	316	218	134	340	133	126	556	44	33
26	46	75	68	266	207	558	283	218	93	190	46	32
27	45	68	72	227	195	*4,460	258	364	79	125	47	33
28	45	150	85	196	183	1,100	238	229	70	99	45	35
29	45	340	81	177	-	670	214	198	65	83	88	37
30	45	230	77	163	--------	500	195	202	60	74	74	41
31	47	--------	74	147	--------	400	--------	236	--------	67	74	--------
Total	1,631	3,014	2,580	7,759	9,017	13,015	15,652	5,211	7,637	3,532	1,886	1,571
Mean	52.6	100	83.2	250	322	420	522	168	255	114	60.8	52.4
Cfsm	0.346	0.658	0.547	1.64	2.12	2.76	3.43	1.11	1.68	0.750	0.400	0.345
In.	0.40	0.74	0.63	1.90	2.21	3.18	3.83	1.27	1.87	0.86	0.46	0.38

Calendar year 1958: Max 2,370 Min 25 Mean 228 Cfsm 1.50 In. 20.40
Water year 1958-59: Max 4,460 Min 32 Mean 199 Cfsm 1.31 In. 17.73

Peak discharge (base, 3,000 cfs).--Mar. 27 (5 a.m.) 7,820 cfs (10.1 ft); Apr. 19 (time unknown) 5,220 cfs (9.07 ft); June 11 (12 p.m.) 4,470 cfs (8.66 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 24-27, Nov. 5 to Dec. 17, Apr. 9-19, May 8-17; discharge estimated on basis of recorded range in stage and records for stations on nearby streams.

5865. Big Nance Creek at Courtland, Ala.

Location.--Lat 34°40'12", long 87°19'02", in SW¼ sec.30, T.4 S., R.7 W., near right bank on downstream side of pier of bridge on State Highway 20, at Courtland, 12¾ miles upstream from mouth.

Drainage area.--166 sq mi.

Records available.--July 1935 to September 1940, March 1945 to September 1959.

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.--19 years, 262 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs Apr. 19 (gage height, 12.0 ft); minimum daily, 3.2 cfs Aug. 15.

1935-40, 1945-59: 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.

Revisions (water years).--WSP 1033: 1939, 1940(M). WSP 1053: 1939(M). WSP 1306: 1936(M).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Apr. 19)

1.3	3.2	3.0	174
1.4	6.3	4.0	340
1.5	11	6.0	750
2.0	51	8.0	1,200
2.5	104	12.0	2,380

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	41	322	109	139	181	*133	86	257	9.8	4.8	59
2	45	150	168	450	122	212	307	75	220	11	5.4	28
3	49	66	146	260	111	146	440	67	146	9.2	6.3	32
4	42	36	132	161	168	122	196	61	70	9.8	7.4	21
5	39	27	117	114	410	251	138	56	47	9.8	6.0	16
6	*36	24	93	80	252	1,230	112	52	39	8.2	5.1	18
7	31	26	75	69	163	885	98	47	39	7.4	5.4	16
8	26	25	*65	97	139	322	90	44	37	7.0	17	*17
9	24	23	62	252	216	236	87	41	31	6.3	44	16
10	21	*20	58	178	540	196	171	40	72	6.0	9.8	28
11	19	19	53	119	500	188	244	39	620	5.7	6.0	27
12	18	18	50	96	402	313	328	39	370	5.7	4.4	20
13	17	17	48	*90	1,310	228	490	42	220	5.7	4.1	14
14	16	17	46	88	1,650	170	244	57	139	*5.1	*3.5	12
15	14	20	44	308	1,230	260	170	43	*68	4.8	3.2	10
16	14	24	43	1,200	916	277	139	36	47	4.8	3.8	9.2
17	14	27	42	850	500	173	118	31	39	43	11	8.7
18	14	32	43	331	390	138	466	*28	32	36	8.7	8.2
19	13	163	44	244	295	114	2,040	26	28	14	34	8.2
20	12	313	43	236	228	105	2,120	40	24	12	201	7.8
21	12	150	40	450	194	107	*944	90	20	8.2	149	7.4
22	13	94	36	1,590	174	105	460	60	19	7.4	600	7.0
23	13	73	35	1,560	171	91	331	42	17	6.3	374	7.0
24	12	62	40	540	184	80	244	36	17	7.0	60	7.0
25	11	55	56	350	159	75	199	32	16	7.8	29	7.4
26	10	50	49	295	*138	128	160	28	16	7.8	20	7.8
27	10	48	43	252	126	662	139	26	15	7.0	58	14
28	9.8	130	46	212	119	580	125	24	13	5.7	74	14
29	9.8	830	56	181	-	220	112	22	12	5.7	25	12
30	9.8	560	53	161	-------	178	97	42	9.8	5.1	18	153
31	12	-------	46	150	-------	156	-------	344	-------	4.8	30	-------
Total	625.4	3,140	2,194	11,073	10,946	8,129	10,942	1,696	2,699.8	294.1	1,827.9	612.7
Mean	20.2	105	70.8	357	391	262	365	54.7	90.0	9.49	59.0	20.4
Cfsm	0.122	0.633	0.427	2.15	2.36	1.58	2.20	0.330	0.542	0.057	0.355	0.123
In.	0.14	0.70	0.49	2.48	2.45	1.82	2.45	0.38	0.60	0.07	0.41	0.14

Calendar year 1958: Max 2,060 Min 9.8 Mean 236 Cfsm 1.42 In. 19.30
Water year 1958-59: Max 2,120 Min 3.2 Mean 148 Cfsm 0.892 In. 12.13

Peak discharge (base, 3,800 cfs).--No peak above base.

* Discharge measurement made on this day.

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 at mile 22.0.

Drainage area.--348 sq mi.

Records available.--July 1925 to September 1959.

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.--34 years, 627 cfs.

Extremes.--Maximum discharge during year, 6,000 cfs Apr. 19 (gage height, 10.96 ft); minimum, 123 cfs Sept. 29, 30 (gage height, 2.56 ft); minimum daily, 129 cfs Sept. 29, 30.
1925-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 1-19)

2.6	112
3.0	245
5.0	1,370
7.0	2,590
9.0	3,950

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	202	194	286	444	325	516	704	380	365	237	237	221
2	188	188	258	665	300	489	775	355	*538	272	350	233
3	174	167	245	516	290	467	698	335	418	233	254	194
4	174	161	233	412	440	428	610	315	340	209	217	161
5	170	161	221	325	*445	538	555	*310	315	202	198	149
6	*164	*164	205	276	396	*1,350	538	300	340	205	217	409
7	158	161	198	*263	360	1,110	*494	295	315	198	205	229
8	158	158	194	390	355	866	462	290	290	*188	198	170
9	158	164	*188	560	396	736	516	286	300	180	188	152
10	164	164	184	478	440	632	938	281	428	184	177	*634
11	158	161	180	418	478	594	1,330	281	2,550	198	170	286
12	155	155	177	365	494	780	1,350	325	2,360	174	164	188
13	155	152	177	330	764	676	1,400	538	1,330	167	158	155
14	155	152	177	305	2,210	616	1,720	390	860	158	155	140
15	152	202	170	390	2,940	808	950	315	638	158	180	140
16	155	241	167	830	1,920	884	770	290	500	158	188	140
17	155	188	174	736	1,350	770	660	281	418	174	170	137
18	152	177	170	604	1,030	665	726	272	355	286	213	132
19	149	355	170	544	786	572	2,970	268	330	258	221	137
20	146	300	170	692	648	522	3,120	380	305	205	*355	134
21	146	225	164	1,120	544	500	1,770	445	290	202	233	137
22	146	198	164	3,220	500	484	1,410	375	276	205	188	134
23	146	188	170	1,560	560	423	1,110	594	268	649	174	134
24	146	177	221	1,060	588	390	878	423	290	2,200	161	134
25	146	170	194	814	528	370	748	365	340	2,390	155	134
26	146	167	180	682	500	1,640	643	467	276	872	155	132
27	143	164	180	577	472	3,440	560	428	268	522	152	132
28	149	225	198	494	456	1,720	506	390	250	375	161	132
29	149	428	194	434	-	1,170	456	345	237	315	202	129
30	149	345	188	390	-------	902	412	345	233	268	198	129
31	155	-------	184	355	-------	764	-------	390	-------	237	180	-------
Total	4,863	6,052	5,981	20,249	20,515	25,822	29,779	11,054	16,023	12,279	6,174	5,468
Mean	157	202	193	653	733	833	993	357	534	396	199	182
Cfsm	0.451	0.580	0.555	1.88	2.11	2.39	2.85	1.03	1.53	1.14	0.572	0.523
In.	0.52	0.65	0.64	2.16	2.19	2.76	3.18	1.18	1.71	1.31	0.66	0.58

Calendar year 1958: Max 3,270 Min 123 Mean 495 Cfsm 1.42 In. 19.30
Water year 1958-59: Max 3,440 Min 129 Mean 450 Cfsm 1.29 In. 17.54

Peak discharge (base, 6,000 cfs).--Apr. 19 (8:30 p.m.) 6,000 cfs (10.96 ft).

* Discharge measurement made on this day.

5895. Tennessee River at Florence, Ala.

Location (revised).--Lat 34°47'13", long 87°40'12", in SW¼ sec.14, T.3 S., R.11 W., on right bank of old lock and dam 1 canal at lower end of Patten Island, 137 ft upstream from Southern Railway bridge, 700 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.

Drainage area.--30,810 sq mi, approximately.

Records available.--November 1871 to September 1894 (gage heights only), October 1894 to September 1959.

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 137 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 15¼ miles downstream.

Average discharge.--65 years (1894-1959), 50,640 cfs.

Extremes.--Maximum discharge during year, 162,000 cfs Jan. 22; maximum gage height, 15.85 ft Jan. 23; minimum daily discharge, 11,700 cfs June 21; minimum gage height, 6.84 ft Jan. 29.

1871-1959: 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 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. 213). 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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52,400	33,900	44,600	36,000	a32,000	38,100	*45,500	20,300	30,500	38,500	23,800	29,400
2	49,200	38,000	41,900	45,000	a32,700	44,300	46,700	23,300	32,900	27,000	24,900	25,600
3	39,800	43,700	*42,900	31,200	38,500	43,900	48,300	23,500	*42,400	38,700	30,600	26,500
4	30,600	41,000	37,000	36,400	36,700	40,700	40,600	34,900	42,400	17,200	33,500	38,700
5	23,100	37,300	39,200	48,900	52,900	42,600	43,400	43,000	38,200	15,900	32,700	17,800
6	35,100	36,200	37,300	34,200	48,000	67,800	25,900	41,200	39,500	27,700	35,100	22,300
7	42,000	42,800	35,800	36,200	34,700	55,100	20,600	45,900	25,000	36,200	32,400	22,700
8	38,400	a30,400	42,300	43,700	20,300	38,500	22,900	26,400	33,400	36,600	20,900	32,500
9	45,700	a17,700	44,700	48,800	33,500	46,200	17,500	25,100	30,800	34,400	19,500	33,300
10	43,000	a41,200	28,700	44,800	34,600	48,100	23,800	18,100	40,300	22,200	23,600	33,600
11	44,500	a36,100	30,000	34,500	47,100	52,300	27,200	30,700	42,300	16,100	26,000	37,400
12	31,700	40,500	30,500	34,800	43,000	52,100	40,200	26,700	26,500	19,000	34,400	24,300
13	48,000	30,500	28,700	22,200	61,500	40,400	39,300	31,500	19,100	33,100	33,200	20,000
14	47,100	29,800	19,700	20,700	77,700	32,600	33,100	38,200	16,600	31,100	33,100	29,800
15	31,200	23,500	29,500	37,700	89,900	40,900	27,000	41,700	22,300	37,700	20,600	30,800
16	36,400	a22,800	32,300	44,900	94,600	38,700	21,300	32,300	40,400	34,600	19,700	31,000
17	31,400	28,600	29,900	46,800	86,500	48,300	26,100	15,600	42,900	20,600	29,800	32,400
18	27,700	a28,900	30,400	38,100	85,900	40,500	35,600	18,600	40,000	25,100	30,700	33,000
19	26,100	32,400	23,200	40,400	82,000	40,500	67,300	21,800	38,400	27,200	35,700	20,000
20	41,200	a41,400	18,200	42,000	69,200	39,300	105,300	25,400	24,500	38,700	36,000	23,600
21	38,800	a38,500	14,500	49,000	53,600	37,200	82,500	33,400	11,700	38,500	36,100	24,400
22	36,800	a35,300	20,000	100,000	41,100	26,600	71,800	26,700	25,900	36,300	20,700	32,500
23	37,400	a30,200	20,700	142,000	45,800	35,800	66,100	26,000	32,300	31,700	16,200	34,100
24	29,500	a32,100	19,200	137,000	47,500	31,800	61,800	19,700	25,200	37,000	33,900	33,500
25	33,700	a33,600	13,400	140,000	48,300	20,100	53,700	23,000	37,300	20,500	37,700	31,100
26	29,500	38,900	16,000	123,000	46,300	30,900	51,500	26,800	45,300	37,900	31,000	18,000
27	44,800	a25,300	18,800	87,000	46,300	64,200	44,900	26,200	17,300	44,100	25,900	16,700
28	41,100	39,600	13,400	34,400	39,400	69,800	37,800	42,100	15,300	35,600	33,400	34,900
29	39,700	35,900	16,500	48,900	-	64,600	40,000	35,500	32,400	35,300	24,400	38,700
30	38,800	25,200	38,700	*49,200	--------	65,100	32,900	25,700	35,400	26,600	19,700	36,700
31	39,900	--------	45,200	37,700	--------	55,300	--------	41,300	--------	*28,100	31,800	--------
Total	‡1,174.6	‡1,011.3	903,200	‡1,715.5	‡1,469.6	‡1,392.3	‡1,300.3	910,600	946,500	947,200	887,000	865,300
Mean	37,890	33,710	29,140	55,340	52,490	44,910	43,340	29,370	31,550	30,550	28,610	28,840
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 178,000 Min 13,400 Mean 50,820 Cfsm 1.65 In. 22.39
Water year 1958-59: Max 142,000 Min 11,700 Mean 37,050 Cfsm 1.20 In. 16.32

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record at auxiliary gage; 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 NW¼ 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 1959.

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, 94 cfs Apr. 20, 21; minimum daily, 17 cfs Sept. 22-26.
1928-30, 1956-59: Maximum daily discharge, 160 cfs Mar. 9, 1929; minimum daily, 13 cfs Dec. 4-11, 1956, Nov. 7, 1957.

Remarks.--Records good. Records include diversion averaging about 1 cfs for water supply for city of Tuscumbia.

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	a35	28	22	a54	76	*78	87	73	51	49	30
2	61	a34	27	25	a54	75	81	87	72	52	49	29
3	59	a34	27	25	a54	75	82	87	71	51	49	29
4	59	a33	27	25	a54	75	82	86	71	50	48	29
5	58	a33	26	24	a53	75	81	85	70	50	47	29
6	*57	33	25	23	a53	75	80	84	69	49	45	27
7	56	33	25	21	a53	75	79	83	67	48	45	27
8	54	a32	*26	25	a53	75	78	84	66	47	44	27
9	53	a32	27	29	a52	75	80	83	64	47	43	*25
10	53	a31	27	30	52	75	85	83	64	46	41	25
11	52	*30	25	30	53	75	87	82	63	45	39	24
12	52	29	25	*30	54	74	88	83	e63	45	39	24
13	51	29	24	29	61	73	90	82	e63	*44	37	23
14	50	28	25	29	64	73	90	83	59	42	36	23
15	49	29	24	34	73	73	90	82	58	41	36	23
16	48	27	a23	43	75	72	89	80	*57	41	35	22
17	47	24	23	44	78	71	89	80	56	41	34	21
18	47	24	22	44	78	71	89	*80	56	41	33	20
19	45	27	22	44	78	70	92	79	54	41	*35	20
20	44	26	21	45	78	69	94	79	53	40	35	20
21	43	25	21	47	78	69	*94	78	53	38	33	19
22	42	25	21	52	78	68	93	78	56	38	33	17
23	41	25	21	54	78	66	93	77	57	38	33	17
24	41	25	a21	54	78	66	93	77	57	41	32	17
25	39	24	a20	56	78	65	92	75	56	59	32	17
26	39	23	a20	56	*78	68	92	75	55	64	33	17
27	38	23	a20	56	78	76	90	75	54	63	32	21
28	36	26	a19	56	77	79	88	73	53	59	32	22
29	36	29	a19	55	-	80	88	72	53	56	32	21
30	35	29	a18	55	-------	79	87	75	51	52	32	21
31	35	-------	18	a55	-------	78	-------	72	-------	50	30	-------
Total	1,482	857	717	1,217	1,847	2,266	2,614	2,486	1,814	1,470	1,173	686
Mean	47.8	28.6	23.1	39.3	66.0	73.1	87.1	80.2	60.5	47.4	37.8	22.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 144 Min 18 Mean 74.4 Cfsm - In. -
Water year 1958-59: Max 94 Min 17 Mean 51.0 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.
e Stage-discharge relation indefinite; discharge estimated on basis of weather records and records for stations on nearby streams.

5918. Bear Creek near Hackleburg, Ala.

Location.--Lat 34°17'01", long 87°46'26", in SW¼ 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 3½ miles east of Hackleburg.

Drainage area.--143 sq mi.

Records available.--July 1956 to September 1959.

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, 2,520 cfs Jan. 21 (gage height, 10.3 ft); minimum, 10 cfs Aug. 15.
1956-59: 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 shifting control or no gage-height record, which are fair.

Rating table, water year 1958-59, except periods of shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.4	10	2.6	128
1.7	20	3.0	230
2.0	38	6.0	1,130
2.3	72	9.0	2,050

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	222	224	268	168	180	188	122	395	20	39	33
2	142	142	190	344	151	153	455	107	440	18	50	45
3	118	86	173	254	153	151	380	98	296	18	20	24
4	115	69	158	190	242	135	284	88	190	17	16	18
5	101	65	144	146	266	238	224	83	146	16	14	29
6	85	69	115	126	206	770	192	72	149	16	14	57
7	74	66	101	137	182	455	170	65	118	15	29	55
8	*66	61	99	168	200	328	153	59	92	13	18	a40
9	64	58	96	168	470	281	168	56	88	12	15	a70
10	62	58	*86	140	515	233	257	61	269	12	14	a200
11	55	55	85	128	425	236	287	59	590	73	13	59
12	47	52	82	128	680	257	440	90	545	29	12	37
13	45	*48	82	126	1,820	200	470	224	470	19	11	29
14	45	49	80	124	1,160	188	344	156	251	16	*11	26
15	42	70	66	746	1,220	203	275	94	168	*186	11	27
16	42	144	68	1,160	830	175	227	72	130	19	19	*29
17	44	103	80	605	620	163	195	61	*101	23	32	27
18	44	99	78	410	470	149	936	57	80	20	48	22
19	42	362	74	329	371	140	1,760	59	64	22	172	21
20	41	263	71	293	290	144	1,310	124	52	20	58	18
21	39	185	64	989	242	149	770	137	47	23	27	18
22	37	156	59	*1,580	224	156	*545	99	42	65	20	16
23	37	133	65	800	230	128	410	142	41	42	21	16
24	36	115	83	530	209	124	320	92	65	121	19	14
25	35	105	77	410	180	*118	263	170	52	221	16	14
26	33	107	66	344	170	178	215	101	40	57	14	14
27	32	94	68	290	*163	296	188	368	32	33	14	20
28	31	204	75	242	156	248	182	195	27	25	15	31
29	31	470	74	209	-	218	170	135	24	22	14	20
30	31	305	69	200	-------	200	142	455	22	18	71	16
31	40	-------	74	185	-------	178	-------	650	-------	16	25	-------
Total	1,809	4,015	2,926	11,769	12,013	6,770	11,920	4,351	5,026	1,227	872	1,045
Mean	58.4	134	94.4	380	429	218	397	140	168	39.6	28.1	34.8
Cfsm	0.408	0.937	0.660	2.66	3.00	1.52	2.78	0.979	1.17	0.277	0.197	0.243
In.	0.47	1.04	0.76	3.06	3.12	1.76	3.10	1.13	1.31	0.32	0.23	0.27

Calendar year 1958: Max 2,650 Min 18 Mean 258 Cfsm 1.80 In. 24.45
Water year 1958-59: Max 1,820 Min 11 Mean 175 Cfsm 1.22 In. 16.57

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 recorded range in stage and records for stations on nearby streams.
Note.--Shifting-control method used Oct. 1-31, Apr. 26 to Sept. 7, Sept. 11-30.

5920. Bear Creek near Red Bay, Ala.

Location.--Lat 34°26'39", long 88°06'55", in NE¼ sec.31, 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 1.8 miles east of Red Bay.

Drainage area.--263 sq mi.

Records available.--August 1913 to May 1920, July 1958 to September 1959. 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 (datum lowered Apr. 11, 1918).

Average discharge.--7 years (1913-19, 1958-59), 398 cfs.

Extremes.--Maximum discharge during year, 2,950 cfs Apr. 30 (gage height, 14.8 ft); minimum observed, 37 cfs Sept. 21, 26 (gage height, 3.80 ft).
1913-20, 1958-59: 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 except those for period of no gage-height record, which are poor.

Revisions (water years).--WSP 1306: 1913-18, 1920(M), drainage area at former site.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 16		Jan. 17 to Sept. 30			
4.2	66	3.8	37	8.0	785
5.0	150	4.2	63	13.0	1,880
6.0	315	4.8	125	14.0	2,250
9.0	1,070	5.8	277	15.0	3,220
12.0	1,600				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	208	93	356	184	277	296	335	259	835	63	55	80
2	224	193	315	450	259	296	735	241	535	59	63	96
3	241	164	259	450	241	259	935	208	510	52	90	63
4	208	114	241	335	277	241	660	193	355	52	76	208
5	178	108	224	259	397	277	485	178	277	55	59	a170
6	164	108	208	224	375	485	419	164	224	55	48	55
7	*157	103	178	193	315	935	355	164	208	52	48	90
8	131	103	164	224	315	660	315	137	193	52	63	71
9	120	103	*157	259	397	441	419	131	171	48	59	101
10	125	93	150	241	810	375	735	125	178	45	52	*125
11	114	93	131	208	785	355	810	125	355	42	48	193
12	114	*93	131	193	710	441	885	137	735	96	48	113
13	98	84	137	186	1,810	419	1,010	244	685	80	45	80
14	93	80	125	193	2,530	355	835	335	485	55	42	63
15	98	108	125	414	1,970	441	635	241	277	*52	45	63
16	93	114	108	1,470	1,830	441	510	178	*224	52	48	63
17	88	178	114	1,470	1,290	375	441	157	186	52	*48	71
18	93	131	125	885	960	315	685	137	164	52	45	80
19	88	196	120	660	735	296	2,000	119	137	52	63	52
20	88	425	125	485	535	277	2,620	*137	113	48	121	48
21	84	315	114	*610	463	277	1,900	193	96	55	101	37
22	75	259	108	1,740	375	259	*1,210	208	90	71	71	48
23	75	208	103	2,000	375	277	860	193	80	107	52	42
24	84	186	108	1,190	397	241	660	208	71	101	48	42
25	75	171	120	785	355	224	535	208	101	262	48	40
26	75	157	125	635	296	*296	463	208	96	252	48	37
27	75	131	120	535	*277	510	375	246	76	125	42	91
28	75	164	114	419	277	535	355	419	67	80	42	52
29	66	312	120	355	-	419	335	277	59	67	42	55
30	70	531	114	315	-------	397	296	239	55	55	42	55
31	93	-------	114	315	-------	355	-------	985	-------	55	42	-------
Total	3,570	5,108	4,753	17,882	19,633	11,770	22,813	6,994	7,638	2,344	1,744	2,384
Mean	115	170	153	577	701	380	760	226	255	75.6	56.3	79.5
Cfsm	0.437	0.646	0.582	2.19	2.67	1.44	2.89	0.859	0.970	0.287	0.214	0.302
In.	0.50	0.72	0.67	2.53	2.78	1.66	3.23	0.99	1.08	0.33	0.25	0.34

Calendar year 1958: Max - Min - Mean - Cfsm - In. -
Water year 1958-59: Max 2,620 Min 37 Mean 292 Cfsm 1.11 In. 15.08

Peak discharge (base, 4,000 cfs).--No peak above base.

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations on nearby streams.

5922. Cedar Creek near Pleasant Site, Ala.

Location.--Lat 34°32'56", long 88°01'09", in SW¼ 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 1959.

Gage.--Water-stage recorder. Datum of gage is 482.67 ft above mean sea level, datum of 1929 (corrected).

Extremes.--Maximum discharge during year, 3,250 cfs Apr. 19 (gage height, 12.0 ft); minimum, 9.6 cfs Sept. 26, 27.

1957-59: Maximum discharge, 6,860 cfs Nov. 16, 1957 (gage height, 18.6 ft); minimum, 3.5 cfs Sept. 6, 1957.

Flood in March 1951 reached a stage of 22.1 ft, from floodmarks, from information by Tennessee Valley Authority.

Remarks.--Records good.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30			
1.1	25	0.9	11	4.0	610
1.5	62	1.0	16	8.0	1,640
2.0	120	1.4	49	10.0	2,340
2.5	210	1.8	100	12.0	3,250
5.0	850	2.5	233		
7.0	1,450				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	57	126	391	162	207	352	186	209	35	42	43
2	92	63	112	315	149	178	1,010	168	208	33	90	37
3	83	48	102	182	147	160	555	155	137	31	45	25
4	79	39	98	139	305	147	392	142	111	29	35	20
5	74	39	88	112	305	384	330	130	98	28	29	17
6	68	55	80	99	213	505	285	121	94	28	25	236
7	*62	51	73	96	182	292	254	111	84	23	29	72
8	57	58	70	170	190	233	242	103	74	21	43	57
9	55	60	*67	162	405	215	1,080	98	75	20	29	*38
10	53	59	63	123	886	196	1,280	96	184	22	25	36
11	49	55	60	107	595	256	860	91	884	58	20	44
12	46	*60	59	101	792	355	1,210	109	355	26	17	29
13	46	61	60	96	2,580	261	910	196	777	25	15	27
14	42	57	59	94	1,360	242	625	123	258	*20	15	27
15	41	91	54	747	1,540	492	492	97	176	18	14	25
16	41	99	52	1,330	910	355	430	85	*138	17	47	24
17	40	65	54	475	685	280	368	81	118	19	36	21
18	39	61	54	312	530	240	1,010	74	102	21	*19	18
19	38	254	52	250	418	215	2,900	*69	86	20	17	17
20	38	171	51	232	342	205	1,510	97	78	20	30	17
21	36	114	49	1,180	292	207	885	94	70	27	23	17
22	33	95	48	*1,700	266	229	*655	96	65	24	26	14
23	32	86	50	640	261	210	505	113	59	23	43	13
24	31	80	62	455	235	190	430	85	77	161	25	12
25	31	75	56	368	209	180	368	74	66	250	17	12
26	31	73	50	312	194	*870	320	69	56	74	59	12
27	31	62	52	268	*184	1,060	275	82	48	44	34	65
28	29	157	56	233	186	492	251	90	45	33	36	33
29	29	292	54	207	-	392	233	74	42	29	20	19
30	29	164	50	190	--------	342	207	339	37	25	18	15
31	31	--------	49	178	--------	295	--------	368	--------	23	107	--------
Total	1,486	2,701	2,010	11,264	14,523	9,885	20,224	3,816	4,811	1,227	1,030	1,042
Mean	47.9	90.0	64.8	363	519	319	674	123	160	39.6	33.2	34.7
Cfsm	0.253	0.476	0.343	1.92	2.75	1.69	3.57	0.651	0.847	0.210	0.176	0.184
In.	0.29	0.53	0.40	2.22	2.86	1.95	3.98	0.75	0.95	0.24	0.20	0.21

Calendar year 1958: Max 4,150 Min 14 Mean 287 Cfsm 1.52 In. 20.62
Water year 1958-59: Max 2,900 Min 12 Mean 203 Cfsm 1.07 In. 14.58

Peak discharge (base, 3,500 cfs).--No peak above base.

* Discharge measurement made on this day.

5923. Little Bear Creek near Halltown, Ala.

Location.--Lat 34°29'19", long 88°02'07", in NW¼ 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 1959.

Gage.--Water-stage recorder. Datum of gage is 499.30 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,280 cfs Apr. 19 (gage height, 8.4 ft); minimum daily, 9.0 cfs Sept. 25, 26.
1957-59: Maximum discharge, 4,130 cfs Nov. 18, 1957 (gage height, 12.1 ft); minimum daily, 7.2 cfs Sept. 7, 1957.

Remarks.--Records good except those for periods of shifting control, which are fair, and those for periods of indefinite stage-discharge relation or of no gage-height record, which are poor. Occasional slight diurnal fluctuation at low flow caused by mill above station.

Rating table, water year 1958-59, except periods of shifting control or indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)

1.0	8.0	2.0	87
1.1	12	3.0	202
1.3	23	5.0	505
1.5	38	7.0	895

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	62	80	158	85	104	145	99	107	18	60	38
2	57	44	73	170	79	95	a450	90	95	16	104	28
3	50	36	68	124	78	90	272	83	73	16	58	14
4	48	23	63	101	119	84	196	78	61	14	32	14
5	46	24	59	83	130	130	164	73	54	14	24	14
6	42	29	52	73	103	189	142	67	51	14	19	46
7	*37	30	47	72	93	138	126	63	47	14	a23	36
8	36	28	45	85	97	121	120	60	43	12	a29	19
9	35	27	*43	95	189	116	a350	57	44	12	a22	18
10	34	27	42	81	237	108	a430	56	57	19	a18	*21
11	32	27	40	73	223	151	a320	54	88	15	a15	36
12	32	*29	40	70	340	196	a400	65	102	21	a13	22
13	26	26	40	67	828	148	a340	102	132	16	a11	19
14	28	28	39	66	488	138	a280	82	73	*12	a11	20
15	27	48	38	360	522	272	a230	63	58	20	a11	21
16	26	50	37	488	352	196	a210	56	*49	13	a32	22
17	25	40	38	258	279	164	a190	51	44	10	a24	18
18	25	39	38	189	230	141	a620	49	40	10	*14	15
19	24	124	37	158	182	127	a830	47	36	10	14	13
20	24	103	37	140	158	120	a520	*57	32	14	15	12
21	23	77	36	437	139	119	a400	60	29	14	16	11
22	22	64	35	*556	128	112	*286	58	29	25	14	10
23	21	57	38	300	126	102	230	66	31	26	14	10
24	21	51	44	223	121	96	196	54	36	142	16	9.4
25	20	47	45	182	109	92	170	52	36	152	20	9.0
26	20	44	41	158	103	*190	152	53	29	56	55	9.0
27	20	41	42	137	*98	336	140	61	26	34	28	45
28	20	69	43	120	96	209	134	59	23	25	20	36
29	20	128	44	106	-	170	126	54	21	20	21	29
30	20	95	42	99	--------	152	110	106	19	16	21	26
31	47	--------	44	93	--------	134	--------	164	--------	15	26	--------
Total	967	1,517	1,410	5,322	5,732	4,540	8,281	2,139	1,565	815	800	640.4
Mean	31.2	50.6	45.5	172	205	146	276	69.0	52.2	26.3	25.8	21.3
Cfsm	0.399	0.647	0.582	2.20	2.62	1.87	3.53	0.882	0.668	0.336	0.330	0.272
In.	0.46	0.72	0.67	2.53	2.73	2.16	3.94	1.02	0.74	0.39	0.38	0.30

Calendar year 1958: Max 1,570 Min 14 Mean 127 Cfsm 1.62 In. 22.05
Water year 1958-59: Max 830 Min 9.0 Mean 92.4 Cfsm 1.18 In. 16.04

Peak discharge (base, 1,100 cfs).--Feb. 13 (8 a.m.) 1,160 cfs (8.0 ft); Apr. 19 (2 a.m.) 1,280 cfs (8.4 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations on nearby streams.
Note.--Stage-discharge relation indefinite Oct. 16-31, Sept. 17-26; discharge estimated on basis of records for nearby streams. Shifting-control method used Nov. 1 to Dec. 31, Feb. 12 to Mar. 5, Sept. 6-16, 27-30.

5925. Bear Creek at Bishop, Ala.

Location.--Lat 34°39'21", long 88°07'21", in SE¼ sec.5, T.5 S., R.15 W., on left bank 20 ft upstream from highway bridge, half a mile downstream from Cedar 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 1959.

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.--29 years (1926-27, 1929-31, 1933-59), 1,059 cfs.

Extremes.--Maximum discharge during year, 5,980 cfs Feb. 14 (gage height, 12.78 ft); minimum, 67 cfs Sept. 27 (gage height, 0.94 ft).
1926-59: 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 table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

0.9	61	5.0	1,280
1.3	118	9.0	3,220
2.0	235	11.0	4,360
3.0	495	13.0	6,200

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	218	852	543	772	840	1,110	744	1,580	170	146	161
2	492	261	674	1,030	694	784	1,990	670	1,340	167	287	153
3	474	338	586	1,020	660	730	2,200	607	960	148	289	150
4	444	298	530	876	900	663	1,830	554	824	138	205	121
5	408	245	486	694	1,090	784	1,460	502	635	133	167	118
6	369	239	444	568	1,010	1,480	1,220	468	516	130	139	104
7	*342	245	396	502	868	1,420	1,050	435	456	124	153	309
8	315	233	*357	614	804	1,410	936	402	417	115	187	170
9	295	235	332	740	1,080	1,130	1,560	372	390	108	142	*151
10	283	227	320	663	1,730	984	3,120	360	509	106	128	189
11	265	*220	308	593	2,410	916	2,950	338	1,110	126	115	255
12	251	*216	287	*537	1,960	1,250	2,940	345	1,120	128	104	285
13	241	218	283	502	4,800	*1,140	3,080	516	1,850	136	95	180
14	227	214	281	489	4,950	1,000	2,480	582	1,190	*148	86	148
15	216	287	277	883	5,320	1,310	1,970	593	836	116	85	133
16	211	372	267	3,100	4,750	1,420	1,660	468	*593	132	86	126
17	207	312	255	2,720	3,640	1,140	1,420	375	465	108	127	115
18	203	325	261	2,440	2,810	984	1,600	330	393	102	110	109
19	202	526	265	1,740	2,020	868	4,370	*305	330	103	*96	104
20	200	691	263	1,390	1,600	800	5,180	384	289	103	122	97
21	194	726	259	2,100	1,330	768	*4,490	426	263	112	162	92
22	187	568	249	4,370	1,170	768	3,840	465	239	118	166	85
23	184	468	245	3,240	1,090	726	2,780	537	273	150	138	79
24	180	408	265	3,030	1,020	666	1,900	468	259	209	122	76
25	177	366	273	2,660	948	607	1,550	483	251	1,340	100	72
26	170	342	271	1,730	*860	1,360	1,330	453	249	579	134	68
27	169	320	271	1,420	796	3,050	1,140	702	229	390	151	206
28	167	393	273	1,190	752	1,940	1,020	656	200	237	116	180
29	164	730	271	1,040	-	1,510	936	719	180	182	100	130
30	164	820	263	924	--------	1,300	860	698	175	151	95	114
31	170	--------	259	836	--------	1,130	--------	1,230	--------	136	112	--------
Total	8,069	11,061	10,623	44,184	51,834	34,878	63,972	16,187	18,121	6,145	4,265	4,280
Mean	260	369	343	1,425	1,851	1,125	2,132	522	604	198	138	143
Cfsm	0.390	0.553	0.514	2.14	2.78	1.69	3.20	0.783	0.906	0.297	0.207	0.214
In.	0.45	0.62	0.59	2.46	2.89	1.94	3.57	0.90	1.01	0.34	0.24	0.24

Calendar year 1958: Max 6,400 Min 103 Mean 1,047 Cfsm 1.57 In. 21.31
Water year 1958-59: Max 5,320 Min 68 Mean 750 Cfsm 1.12 In. 15.25

Peak discharge (base, 7,500 cfs).--No peak above base.

* 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 1959.

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.--29 years, 52,030 cfs.

Extremes.--Maximum discharge during year, 141,000 cfs Jan. 24; maximum gage height, 69.49 ft Jan. 26; minimum daily discharge, 14,400 cfs Dec. 21; minimum gage height, 54.12 ft Dec. 21.

1930-59: 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. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 213). 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 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52,700	34,700	41,800	32,700	23,900	37,700	46,000	31,100	38,800	*32,800	38,500	32,400
2	52,500	28,800	41,800	50,000	37,900	51,300	47,600	30,300	46,700	30,400	32,300	24,000
3	49,200	38,200	45,100	32,100	43,600	45,400	53,800	25,400	49,200	36,200	25,300	25,000
4	36,100	43,900	44,500	35,800	42,700	42,700	47,300	43,800	42,800	30,500	28,400	33,800
5	21,400	39,600	37,600	42,100	54,700	46,000	41,100	45,600	40,100	25,500	29,800	28,700
6	33,900	*37,800	36,600	40,500	47,800	60,800	31,500	40,300	44,500	23,700	37,300	30,000
7	40,200	38,200	37,000	34,900	34,500	62,900	28,000	44,000	28,500	30,300	39,200	25,500
8	41,900	29,700	47,600	41,300	26,200	43,500	33,400	30,800	29,600	34,700	32,200	28,600
9	48,700	24,200	35,500	54,900	38,400	44,200	20,700	28,800	38,100	30,300	25,800	*30,500
10	51,100	43,400	36,500	47,100	33,800	49,000	24,400	23,300	48,700	26,900	20,800	31,300
11	48,100	39,200	27,800	36,100	52,500	47,300	36,000	35,000	35,800	36,000	24,900	33,300
12	28,100	41,100	23,600	35,900	55,500	51,100	34,400	35,400	23,400	20,200	32,200	35,600
13	40,300	39,100	27,300	26,300	62,300	46,100	39,600	37,000	27,600	27,300	31,500	35,000
14	40,800	33,500	23,200	*24,700	86,300	33,200	37,100	40,800	27,700	29,100	29,400	27,800
15	38,300	24,900	35,400	33,900	97,000	33,700	31,800	45,600	47,100	36,800	34,300	25,700
16	40,800	21,300	28,700	53,100	101,000	41,900	41,800	29,900	48,000	37,800	32,400	26,900
17	36,500	29,600	26,100	54,000	96,200	46,100	41,700	16,100	51,500	17,400	27,800	26,100
18	26,400	29,400	30,500	32,900	90,700	42,300	36,400	25,900	51,600	40,100	28,400	32,900
19	22,700	37,700	27,600	42,500	83,400	40,100	56,300	31,400	48,500	48,300	30,400	22,200
20	38,500	50,500	21,500	46,200	84,700	34,800	85,800	30,200	41,200	41,500	30,800	22,900
21	39,400	48,300	14,400	43,600	69,100	38,900	89,700	32,700	27,800	35,000	32,100	29,400
22	41,700	34,100	24,100	97,300	42,700	29,800	89,800	33,500	29,900	27,800	31,600	31,300
23	37,200	23,500	19,400	132,000	50,600	*38,400	89,600	33,000	30,500	28,000	28,500	36,300
24	33,100	30,900	18,300	139,000	52,400	33,000	80,100	23,200	29,900	30,500	32,500	41,700
25	30,700	34,100	15,600	140,000	49,100	18,700	76,600	35,100	32,900	37,400	35,500	32,000
26	28,700	39,400	18,800	136,000	50,800	19,100	59,400	*32,500	39,400	55,400	28,900	19,500
27	41,100	30,600	26,000	97,000	52,400	43,200	46,600	38,900	31,700	51,000	26,600	19,300
28	45,300	36,600	19,900	56,000	36,700	59,000	38,500	45,000	28,700	30,000	30,000	35,000
29	40,900	35,100	23,900	37,100	-	63,100	49,800	34,000	32,100	34,000	30,300	42,200
30	41,400	35,800	35,900	53,000	-------	65,900	43,900	21,000	29,200	26,000	32,400	36,100
31	41,500	-------	43,600	34,000	-------	59,700	-------	43,900	-------	19,900	35,900	-------
Total	‡1,209.2	‡1,053.2	935,600	‡1,762	‡1,596.9	‡1,368.9	‡1,478.7	‡1,043.5	‡1,121.5	‡1,010.8	956,000	901,000
Mean	39,010	35,110	30,180	56,840	57,030	44,160	49,290	33,660	37,380	32,610	30,840	30,030
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 185,000 Min 12,500 Mean 53,080 Cfsm 1.60 In. 21.74
Water year 1958-59: Max 140,000 Min 14,400 Mean 39,550 Cfsm 1.19 In. 16.20

* Discharge measurement made on this day.
‡ Expressed in thousands.

5960 (revised). Duck River below Manchester, Tenn.

Location.--Lat 35°28'15", long 86°07'18", on right bank 50 ft downstream from Powers Bridge, 2 miles southwest of Manchester, Coffee County, 3¼ miles downstream from Little Duck River, 7 miles upstream from Crumpton Creek, and at mile 265.4.

Drainage area.--107 sq mi.

Records available.--April 1934 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 878.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 176 cfs.

Extremes.--Maximum discharge during year, 1,720 cfs Jan. 22 (gage height, 5.70 ft); minimum, 18 cfs Sept. 30 (gage height, 1.16 ft).

1934-59: 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, 23.2 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).--WSP 1436: 1946-47.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28		Nov. 29 to Sept. 30			
1.3	20	1.1	14	2.5	298
1.5	35	1.2	21	3.0	485
1.8	75	1.5	56	4.0	895
		2.0	147	5.5	1,620

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	34	125	64	103	222	170	83	336	40	40	66
2	33	28	106	69	93	199	439	101	745	40	39	61
3	33	26	104	67	92	163	401	95	294	36	35	55
4	33	26	118	62	222	152	248	76	161	34	32	145
5	30	26	106	51	334	154	183	66	154	36	246	88
6	29	28	86	44	199	585	152	59	178	41	549	81
7	28	26	74	44	149	356	131	*55	143	32	428	66
8	27	26	67	80	135	222	119	53	110	*30	284	52
9	27	26	64	*143	137	178	*112	50	86	30	154	110
10	26	26	59	127	165	156	161	53	77	29	104	212
11	25	26	55	101	242	161	209	52	72	28	76	206
12	24	26	53	86	178	*364	255	89	*106	25	64	121
13	24	25	53	83	392	266	327	367	123	24	56	88
14	*24	25	50	81	1,300	188	196	165	83	22	51	76
15	24	33	47	126	1,380	298	152	104	62	21	74	67
16	24	33	44	439	597	287	127	81	55	22	127	62
17	24	30	*44	245	386	188	112	69	51	88	86	*53
18	24	*32	46	156	*316	149	127	62	46	59	81	48
19	24	57	42	141	235	129	405	55	40	32	72	44
20	24	45	43	280	183	121	685	59	39	30	*59	40
21	24	50	42	663	152	143	360	64	38	29	55	36
22	24	46	41	1,320	139	199	320	226	38	30	51	33
23	24	42	41	477	238	156	215	360	38	36	47	31
24	23	39	43	298	312	129	161	131	47	107	44	28
25	22	36	42	235	215	116	135	88	47	215	41	25
26	23	39	41	196	170	254	119	74	43	152	39	24
27	23	37	46	170	149	1,180	106	157	41	88	40	21
28	22	73	69	147	141	513	101	135	40	61	36	20
29	22	294	83	135	-	298	92	97	38	52	38	19
30	21	170	70	123	--------	262	79	83	38	47	44	19
31	21	--------	64	114	--------	202	--------	85	--------	43	48	--------
Total	793	1,430	1,968	6,367	8,354	7,990	6,399	3,294	3,369	1,559	3,140	1,997
Mean	25.6	47.7	63.5	205	298	258	213	106	112	50.3	101	66.6
Cfsm	0.239	0.446	0.593	1.92	2.78	2.41	1.99	0.991	1.05	0.470	0.944	0.622
In.	0.28	0.50	0.68	2.21	2.90	2.78	2.22	1.14	1.17	0.54	1.09	0.69

Calendar year 1958: Max 1,340 Min 21 Mean 152 Cfsm 1.42 In. 19.24
Water year 1958-59: Max 1,380 Min 19 Mean 128 Cfsm 1.20 In. 16.20

Peak discharge (base, 2,500 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 1959.

Gage.--Water-stage recorder. Datum of gage is 822.74 ft above mean sea level, datum of 1929.

Average discharge.--5 years (1954-59), 29.2 cfs.

Extremes.--Maximum discharge during year, 4,010 cfs Mar. 26 (gage height, 9.34 ft), from rating curve extended as explained below; minimum, 0.2 cfs Aug. 5 (gage height, 2.32 ft). 1954-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21

2.5	1.0	3.0	26
2.6	3.0	3.5	95
2.7	6.6	4.5	298
2.8	12		

Jan. 22 to Sept. 30

2.4	0.4	2.8	8.7	4.0	187
2.5	.8	2.9	15	5.0	445
2.6	2.0	3.0	24	6.0	790
2.7	4.6	3.5	95		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	4.9	24	8.2	6.1	22	23	7.7	342	4.6	1.0	11
2	7.7	3.3	19	9.3	5.3	17	56	7.7	108	6.5	.9	8.2
3	6.6	2.7	19	9.3	8.3	15	30	5.7	33	1.4	.8	4.0
4	5.7	2.1	17	7.7	59	12	22	4.3	*18	1.2	.5	2.6
5	5.3	1.9	14	6.1	*33	*25	18	4.0	36	1.2	227	1.8
6	4.2	1.7	10	5.7	21	29	15	3.4	33	1.2	160	1.6
7	3.6	1.5	9.3	5.7	17	18	12	*3.4	22	.9	107	1.3
8	3.0	1.5	8.8	81	14	15	11	3.1	13	*.7	30	1.1
9	3.0	1.7	7.7	*40	17	14	*69	2.8	9.8	.7	12	29
10	3.0	1.7	6.6	24	23	11	73	2.8	11	.6	6.9	22
11	2.4	1.5	6.1	19	18	48	50	2.6	22	.6	4.3	8.2
12	1.7	1.5	5.7	15	38	42	137	18	101	.5	2.8	4.9
13	1.7	1.5	4.2	13	202	27	64	14	46	.4	2.0	3.4
14	*1.5	1.5	3.9	12	633	22	42	4.6	24	1.6	1.3	2.6
15	1.5	6.3	3.6	237	167	65	31	3.4	15	2.4	1.3	2.2
16	1.3	4.2	3.6	99	75	28	24	3.7	10	1.2	1.1	1.8
17	1.3	2.4	*3.3	42	45	22	19	4.0	7.7	1.0	48	*1.4
18	1.2	*18	3.0	28	30	17	28	2.8	6.9	1.6	19	1.1
19	1.2	64	3.0	66	20	13	156	2.4	6.1	1.6	7.7	1.1
20	1.2	22	3.0	68	15	13	68	5.5	5.3	1.4	*4.3	1.1
21	1.2	14	2.4	273	12	59	49	4.0	4.6	1.4	2.8	.9
22	1.2	10	2.4	98	11	33	36	5.6	4.0	3.4	2.2	.8
23	1.5	8.8	2.4	46	69	24	27	4.0	3.7	2.8	2.0	.7
24	1.5	7.1	2.4	30	25	18	21	2.8	4.3	17	1.4	.7
25	1.5	6.1	2.1	22	20	15	18	26	4.6	14	1.2	.6
26	1.5	8.8	1.7	18	16	756	14	8.2	3.4	4.6	1.1	.7
27	1.5	7.7	4.6	14	14	221	11	9.1	3.1	2.6	1.6	.6
28	1.5	221	10	10	16	81	11	6.5	2.8	1.8	1.1	.6
29	1.5	73	10	8.7	-	51	8.7	4.6	2.4	1.3	6.4	67
30	1.5	34	8.2	7.7	-------	36	7.7	8.4	2.2	1.2	2.2	7.4
31	1.7	-------	6.6	6.5	-------	29	-------	7.7	-------	1.2	19	-------
Total	82.5	536.4	227.6	1,329.9	1,629.7	1,798	1,151.4	192.8	904.9	82.6	678.9	190.4
Mean	2.66	17.9	7.34	42.9	58.2	58.0	38.4	6.22	30.2	2.66	21.9	6.35
Cfsm	0.163	1.10	0.450	2.63	3.57	3.56	2.36	0.382	1.85	0.163	1.34	0.390
In.	0.19	1.22	0.52	3.03	3.72	4.10	2.63	0.44	2.06	0.19	1.55	0.43

Calendar year 1958: Max 423 Min 0.1 Mean 23.7 Cfsm 1.45 In. 19.69
Water year 1958-59: Max 756 Min 0.4 Mean 24.1 Cfsm 1.48 In. 20.08

Peak discharge (base, 2,000 cfs).--Feb. 14 (1 a.m.) 2,400 cfs (8.43 ft); Mar. 26 (8:30 p.m.) 4,010 cfs (9.34 ft).

* Discharge measurement made on this day.

5980. Duck River near Shelbyville, Tenn.

Location.--Lat 35°28'49", 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 1959. 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.--26 years, 792 cfs.

Extremes.--Maximum discharge during year, 7,500 cfs Mar. 27 (gage height, 14.33 ft); minimum, 99 cfs Sept. 29 (gage height, 0.88 ft).

1933-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 8-10, 15-21)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30			
1.0	102	0.8	85	5.0	1,580
1.5	192	1.0	120	7.0	2,600
2.0	320	1.5	230	10.0	4,350
3.0	750	2.0	370	13.0	6,400
7.0	2,750	3.0	700		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	185	130	855	254	391	712	840	373	2,790	232	180	640
2	181	148	590	280	358	679	1,450	439	3,760	397	172	265
3	166	140	473	264	337	648	1,540	418	1,830	210	167	208
4	160	128	433	242	655	578	1,230	361	*940	165	149	170
5	154	122	382	206	*924	*560	920	313	974	163	283	176
6	146	122	326	181	848	1,470	760	283	1,650	167	1,050	200
7	141	122	275	179	644	1,500	654	*265	868	157	*1,630	163
8	132	117	249	*801	564	1,060	*581	245	602	*141	1,300	157
9	130	116	234	1,200	542	840	602	232	466	133	704	237
10	129	117	217	790	682	704	1,080	228	403	130	445	584
11	126	117	206	610	840	682	868	225	439	135	310	*448
12	122	116	197	457	760	1,220	1,480	239	401	128	238	379
13	*120	116	188	378	1,550	1,040	1,420	868	1,280	120	202	260
14	118	116	179	338	5,350	876	1,150	658	712	116	180	205
15	118	135	168	898	5,690	1,180	868	424	487	115	167	178
16	116	213	*158	2,260	3,480	1,020	708	316	382	128	345	167
17	114	*185	162	1,500	2,040	896	612	265	313	133	307	155
18	114	166	168	980	1,450	720	592	242	270	167	319	143
19	120	1,070	172	740	1,040	612	1,440	225	242	180	304	133
20	120	690	177	1,200	820	564	2,550	225	220	151	225	128
21	118	389	172	2,060	668	578	2,020	245	202	159	185	122
22	117	291	168	4,580	595	840	1,440	230	190	252	167	118
23	116	249	166	2,970	808	662	1,130	421	182	208	157	115
24	114	217	162	1,580	888	581	888	546	182	373	157	113
25	111	197	174	1,090	824	511	732	319	215	2,310	301	109
26	111	183	168	884	686	1,800	626	286	208	820	163	106
27	111	185	172	732	609	5,970	553	370	178	508	153	104
28	111	1,130	239	623	564	3,100	504	415	165	331	176	100
29	111	2,670	283	539	-	1,780	457	394	157	242	165	100
30	110	1,350	269	481	--------	1,240	409	301	153	307	165	166
31	111	--------	244	436	--------	1,010	--------	295	--------	218	183	--------
Total	3,953	11,047	8,026	29,733	34,607	35,633	30,104	10,666	20,861	8,996	10,649	6,149
Mean	128	368	259	959	1,236	1,149	1,003	344	695	290	344	205
Cfsm	0.266	0.765	0.538	1.99	2.57	2.39	2.09	0.715	1.44	0.603	0.715	0.426
In.	0.31	0.85	0.62	2.30	2.68	2.76	2.33	0.82	1.61	0.70	0.82	0.48

Calendar year 1958: Max 5,260 Min 99 Mean 713 Cfsm 1.48 In. 20.11
Water year 1958-59: Max 5,970 Min 100 Mean 576 Cfsm 1.22 In. 16.28

Peak discharge (base, 8,000 cfs).--No peak above base.

* Discharge measurement made on this day.

562837 O - 60 - 14

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 1959.

Gage.--Water-stage recorder. Datum of gage is 705.01 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 41.8 cfs.

Extremes.--Maximum discharge during year, 2,820 cfs Mar. 26 (gage height, 10.20 ft); minimum, 0.1 cfs Oct. 23, caused by withdrawal upstream; minimum discharge unaffected by withdrawal, 0.2 cfs Sept. 27 (gage height, 0.33 ft).

1954-59: 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 in 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 3-31, Jan. 8, 9)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
0.4	0.6	1.2	13	0.32	0.3	1.2	20
.5	1.1	1.4	29	.4	.8	1.6	46
.6	1.8	2.0	110	.5	1.5	2.0	85
.8	4.2	3.0	290	.6	2.5	3.0	270
1.0	7.6	4.0	510	.8	5.5	6.0	1,010
				1.0	11		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	7.0	39	11	18	25	48	16	40	1.4	4.1	5.5
2	5.0	5.6	24	22	15	22	68	16	30	1.5	3.8	6.0
3	4.4	5.1	18	17	17	21	48	14	16	1.5	1.8	2.4
4	4.2	4.8	13	13	*50	*18	39	13	*12	1.4	1.5	1.2
5	3.7	4.5	11	11	38	37	34	11	10	1.4	1.4	2.2
6	3.3	4.8	9.5	9.5	30	72	30	*9.5	9.8	1.4	9.4	5.0
7	2.8	4.1	8.6	9.0	26	49	27	8.3	8.0	1.1	85	2.0
8	2.2	4.1	8.1	*180	25	42	*24	8.0	6.0	1.1	14	1.2
9	2.1	4.2	7.6	55	30	36	181	7.8	6.0	*1.1	8.3	15
10	3.4	4.2	7.0	30	39	30	164	7.0	6.8	1.2	4.8	11
11	3.0	3.9	6.6	25	32	57	102	6.2	7.5	1.1	2.5	*4.5
12	2.6	3.7	6.5	20	44	54	152	246	209	1.0	2.0	2.2
13	*2.5	3.4	6.1	17	112	42	88	60	55	1.0	1.8	1.2
14	2.1	3.3	5.7	15	450	39	67	26	21	1.0	1.5	.8
15	1.8	5.7	5.4	90	223	88	54	18	14	1.0	1.4	.7
16	1.7	6.3	*5.4	80	112	51	45	15	11	1.9	1.3	.6
17	1.2	*5.1	5.4	50	78	44	38	13	9.2	1.1	1.4	.5
18	.7	17	5.0	40	58	36	48	11	7.2	1.4	2.0	.5
19	1.5	90	5.0	40	45	31	168	10	5.5	1.9	4.9	.4
20	1.6	26	5.0	50	37	32	81	10	4.1	1.3	*3.2	.4
21	1.1	13	4.4	400	31	32	71	8.3	3.4	25	1.4	.4
22	1.1	10	4.2	206*	28	28	60	9.2	3.0	29	1.2	.3
23	.8	8.8	4.5	70	48	24	50	7.8	3.2	8.0	1.1	.3
24	.8	7.6	5.0	50	37	22	42	6.0	6.5	64	1.0	.3
25	.7	7.2	4.2	35	31	20	36	6.2	5.8	26	.9	.3
26	1.0	6.8	3.8	28	28	890	31	8.0	3.4	12	.9	.3
27	1.0	6.3	4.5	26	25	409	28	13	2.3	7.0	1.0	.3
28	1.1	261	15	23	25	130	25	9.8	2.0	3.8	2.5	.3
29	1.3	116	14	21	-	88	21	7.8	1.6	2.5	4.0	.4
30	1.3	64	11	20	--------	67	19	8.6	1.5	2.0	1.8	.3
31	2.6	--------	9.0	19	--------	55	--------	8.9	--------	1.8	3.7	--------
Total	68.5	713.5	281.5	1,675.5	1,732	2,651	1,889	619.4	520.8	206.9	175.6	66.5
Mean	2.21	23.8	9.08	54.0	61.9	85.5	63.0	20.0	17.4	6.67	5.66	2.22
Cfsm	0.089	0.956	0.365	2.17	2.49	3.43	2.53	0.803	0.699	0.268	0.227	0.089
In.	0.10	1.07	0.42	2.50	2.59	3.96	2.82	0.93	0.78	0.31	0.26	0.10

Calendar year 1958: Max 456 Min 0.08 Mean 31.6 Cfsm 1.27 In. 17.21
Water year 1958-59: Max 890 Min 0.3 Mean 29.0 Cfsm 1.16 In. 15.84

Peak discharge (base, 1,500 cfs).--Mar. 26 (8 p.m.) 2,820 cfs (10.20 ft); May 12 (6:30 p.m.) 1,950 cfs (8.95 ft); June 12 (4 p.m.) 1,700 cfs (8.38 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 27 to Jan. 7, Jan. 10 to Feb. 3; discharge estimated on basis of weather records, recorded range in stage when available, 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.--October 1904 to December 1908, April 1920 to September 1959. 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.--43 years (1904-8, 1920-59), 1,918 cfs.

Extremes.--Maximum discharge during year, 18,400 cfs Feb. 15 (gage height, 25.21 ft); minimum, 36 cfs June 25, 26 (gage height, 1.38 ft); minimum daily, 106 cfs Sept. 28.
1904-8, 1920-59: 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 for periods of backwater from aquatic vegetation, which are fair. Occasional diurnal fluctuation and infrequent regulation at low flows 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 1958-59, except periods of backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

1.7	87	9.0	4,100
2.0	168	20.0	13,700
4.0	1,020	25.0	18,200
6.0	2,180		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	c397	c176	2,580	475	885	1,400	2,430	c830	c688	c195	c578	417
2	c361	*1,750	683	889	1,440	2,220	c773	*5,380	c191	c466	c487	
3	c353	c219	1,260	808	674	1,390	2,850	c709	7,830	c1,010	c369	c752
4	c333	c246	1,080	756	*1,080	*1,260	2,670	c752	3,190	c633	*c329	c520
5	c309	c242	965	650	1,820	1,300	2,300	c671	1,830	c377	c313	c401
6	*c281	c211	853	566	2,040	2,140	1,840	c471	1,370	c293	c1,160	c426
7	c262	c180	748	397	1,720	2,900	1,540	c545	2,320	c713	3,000	c629
8	c242	c165	650	800	1,440	2,610	1,280	c369	1,440	c426	3,550	c503
9	c226	c155	583	*2,630	1,300	2,190	1,360	c345	c992	*c297	2,370	c629
10	c207	c152	532	2,980	1,390	1,740	4,120	c329	c899	c258	1,460	c553
11	c191	c149	389	1,920	1,870	2,100	5,320	c293	c765	c277	995	1,430
12	c184	c142	483	1,370	2,100	4,250	3,960	c301	c662	c730	c730	1,030
13	c184	c139	357	1,090	2,470	3,680	5,440	*c1,060	1,400	c409	c549	c800
14	c187	*c139	345	1,100	13,600	2,680	3,920	1,500	1,840	c281	c421	c658
15	c158	c152	357	1,370	18,200	2,500	2,890	1,150	1,300	c234	c405	c508
16	c158	c162	337	5,030	14,700	3,010	*2,280	c880	c889	c203	c658	c401
17	c158	c180	317	5,400	8,280	2,450	1,860	c524	c692	c211	c536	c317
18	c152	c353	301	3,130	4,860	2,040	1,600	c446	c462	c207	c595	*c273
19	c152	1,010	293	2,300	3,270	1,710	1,950	c377	c426	c230	c908	c226
20	c155	2,240	293	2,960	2,520	1,430	4,630	c446	c381	c238	1,110	c219
21	c149	1,680	293	5,080	1,960	1,680	4,950	c241	c321	c365	c735	c191
22	c158	1,040	293	9,990	1,620	2,810	3,750	c305	c285	1,380	c512	c172
23	c162	773	289	9,970	1,620	2,240	2,920	c369	c254	3,170	c385	c155
24	c155	625	269	6,010	2,190	1,740	2,340	c466	c365	1,710	c341	c139
25	c149	536	269	3,560	2,120	1,460	1,910	c722	c262	3,240	c285	c128
26	c142	466	273	2,550	1,810	3,020	1,590	c705	c143	5,190	c238	c119
27	c139	421	289	2,090	1,500	12,700	1,360	c508	c246	2,240	c349	c111
28	c139	751	297	1,700	1,350	15,500	1,170	c1,260	c266	1,360	c289	c106
29	c139	4,160	345	1,420	-	7,500	c1,060	1,120	c238	970	c277	c111
30	c139	5,020	520	1,220	--------	4,420	c903	965	c207	c739	c361	c215
31	c146	--------	616	1,070	--------	3,040	--------	c840	--------	c595	c487	--------
Total	6,267	22,083	18,226	81,075	99,278	100,330	78,413	20,272	37,343	28,372	24,761	12,626
Mean	202	736	588	2,615	3,546	3,236	2,614	654	1,245	915	799	421
Cfsm	0.167	0.609	0.487	2.16	2.94	2.68	2.16	0.541	1.03	0.757	0.661	0.348
In.	0.19	0.68	0.56	2.50	3.06	3.09	2.41	0.62	1.15	0.87	0.76	0.39

Calendar year 1958: Max 11,000 Min 46 Mean 1,497 Cfsm 1.24 In. 16.82
Water year 1958-59: Max 18,200 Min 106 Mean 1,449 Cfsm 1.20 In. 16.28

Peak discharge (base, 16,000 cfs).--Feb. 15 (11:30 a.m.) 18,400 cfs (25.21 ft); Mar. 28 (3 a.m.) 17,500 cfs (24.24 ft).

* Discharge measurement made on this day.
c Backwater from aquatic vegetation.

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 1959.

Gage.--Water-stage recorder. Datum of gage is 670.59 ft above mean sea level, datum of 1929.

Average discharge.--6 years, 22.4 cfs.

Extremes.--Maximum discharge during year, 419 cfs Feb. 14 (gage height, 4.13 ft); minimum, 1.0 cfs July 9 (gage height, 0.91 ft), caused by removal of gravel from channel 0.2 mile upstream; minimum natural discharge, 2.7 cfs July 13, 14, 15 (gage height, 1.07 ft).

1953-59: Maximum discharge, 2,550 cfs Mar. 21, 1955 (gage height, 11.22 ft), from rating curve extended above 830 cfs; minimum, 1.0 cfs Sept. 10, 1958, and July 9, 1959, caused by removal of gravel from channel 0.2 mile upstream; minimum natural discharge, 1.5 cfs Sept. 4-7, 1954; minimum gage height, 0.80 ft Sept. 17, 1956.

Remarks.--Records fair.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 8		Jan. 9 to Sept. 30			
1.1	5.3	1.0	1.7	2.0	61
1.2	7.5	1.1	3.5	2.5	105
1.3	10	1.4	16	2.8	141
1.5	19	1.6	30	3.3	229
1.6	25				

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	8.5	9.0	9.9	9.9	18	23	13	13	6.0	5.3	8.3
2	6.2	6.8	*8.2	11	9.5	16	24	13	*13	7.9	5.3	9.2
3	5.9	6.4	8.2	9.3	9.9	15	21	12	12	6.8	4.6	7.2
4	5.9	5.9	7.7	8.2	*27	*15	18	11	10	6.0	*4.2	6.4
5	5.5	5.7	7.5	7.5	19	29	16	11	10	5.7	4.6	8.0
6	*5.3	5.7	7.0	7.0	16	55	15	9.9	9.9	5.7	6.4	11
7	5.3	5.7	7.0	7.0	14	40	14	9.5	8.7	5.3	6.4	7.6
8	5.3	5.5	6.8	22	14	31	13	8.7	7.9	4.6	6.4	6.4
9	5.3	5.7	6.6	*20	15	27	15	8.7	9.9	*3.7	5.7	7.9
10	6.8	5.7	6.6	13	19	21	38	8.7	18	3.8	4.9	7.9
11	6.2	5.7	6.4	11	20	96	41	8.3	50	3.8	4.2	7.2
12	5.7	5.5	6.4	9.9	19	105	55	9.5	28	3.5	3.8	6.4
13	5.5	5.5	6.4	9.5	34	59	49	*12	20	3.2	3.5	6.0
14	5.5	*5.5	6.4	8.7	227	42	39	9.5	15	2.9	2.9	5.7
15	5.5	9.6	6.2	48	105	37	31	9.5	13	3.5	3.5	5.3
16	5.5	7.7	6.2	40	61	28	*27	8.3	11	4.2	4.2	5.3
17	5.5	6.6	6.2	22	43	25	23	8.3	9.9	7.2	4.9	4.6
18	5.5	7.2	6.2	16	32	20	25	7.9	9.2	6.0	7.9	*4.6
19	5.7	16	6.2	20	25	18	41	7.9	8.3	5.3	9.5	4.2
20	5.7	9.6	6.2	40	20	17	48	12	7.6	4.9	6.0	4.2
21	5.7	8.5	6.2	128	16	20	42	12	7.6	4.6	5.3	3.8
22	5.7	7.9	5.9	81	16	18	37	11	7.2	8.7	4.9	3.5
23	5.7	7.5	6.2	40	23	16	31	11	6.8	9.0	4.6	3.5
24	5.7	7.2	6.4	28	21	16	27	9.5	11	14	4.2	3.5
25	5.7	7.0	6.2	22	19	15	23	8.7	10	10	3.8	3.5
26	5.7	6.8	6.2	19	18	66	20	9.2	8.3	8.3	3.8	3.2
27	5.7	6.6	6.6	16	16	68	18	8.7	7.6	6.8	4.6	3.2
28	5.7	15	7.2	15	16	46	16	8.3	7.2	6.0	6.4	3.2
29	5.7	14	7.0	12	-	37	15	8.7	6.4	6.0	20	3.2
30	5.9	10	7.0	12	-------	31	14	23	5.7	6.4	11	3.2
31	6.2	-------	6.8	11	-------	26	-------	19	-------	5.3	8.7	-------
Total	178.0	231.0	209.1	724.0	884.3	1,073	819	327.8	362.2	185.1	181.5	167.2
Mean	5.74	7.70	6.75	23.4	31.6	34.6	27.3	10.6	12.1	5.97	5.85	5.57
Cfsm	0.328	0.440	0.386	1.34	1.81	1.98	1.56	0.606	0.691	0.341	0.334	0.318
In.	0.38	0.49	0.44	1.54	1.88	2.28	1.74	0.70	0.77	0.39	0.39	0.36

Calendar year 1958: Max 169 Min 3.1 Mean 19.0 Cfsm 1.09 In. 14.76
Water year 1958-59: Max 227 Min 2.9 Mean 14.6 Cfsm 0.834 In. 11.36

Peak discharge (base, 600 cfs).--No peak above base.

* Discharge measurement made on this day.

6025. Piney River at Vernon, Tenn.

Location.--Lat 35°52'17", long 87°30'00", on left bank 350 ft upstream from county highway bridge, 400 ft upstream from Pretty Creek, 0.2 mile northwest of Vernon, Hickman County, 2.2 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 1959.

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.--34 years, 302 cfs.

Extremes.--Maximum discharge during year, 3,410 cfs Jan. 21 (gage height, 6.59 ft); minimum, 73 cfs Sept. 26-30 (gage height, 0.24 ft).

1925-59: 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.

Flood in March 1897 reached a stage of 17.5 ft (discharge, 37,000 cfs), from reports by Tennessee Valley Authority.

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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 9		Jan. 9 to Sept. 30			
0.4	71	0.2	65	2.0	615
.5	86	.5	126	5.0	2,320
.7	120	1.0	258		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	84	98	80	167	301	301	158	280	128	190	101
2	86	87	94	80	158	289	330	153	368	128	137	95
3	86	86	94	80	153	277	317	148	277	116	124	95
4	86	83	96	79	170	261	292	144	228	111	118	95
5	83	82	94	77	162	267	274	139	202	146	113	95
6	83	82	91	76	155	323	258	137	186	160	109	93
7	83	82	87	76	148	323	243	*130	170	126	162	91
8	83	82	84	87	148	308	231	130	155	116	137	93
9	83	80	*84	99	148	298	243	128	158	113	120	95
10	84	80	84	99	194	280	264	126	295	113	*113	93
11	84	79	83	97	274	274	264	124	499	107	107	87
12	83	79	82	97	261	261	289	139	527	105	103	81
13	83	*79	82	99	258	243	308	153	385	*101	99	81
14	*83	80	82	99	1,790	234	304	130	308	99	97	81
15	83	94	82	*137	1,730	231	292	124	258	97	95	81
16	84	94	82	219	940	214	283	122	*228	95	120	81
17	84	87	82	194	678	199	270	120	205	95	111	81
18	84	89	80	172	539	191	258	*118	186	172	118	83
19	84	104	80	160	431	180	249	118	167	118	113	81
20	83	86	80	160	*365	177	243	128	155	118	101	81
21	80	89	79	1,310	317	231	225	133	148	137	97	79
22	80	86	79	1,540	289	320	214	144	144	180	95	79
23	80	84	79	669	355	308	202	144	137	369	93	75
24	82	83	79	476	378	289	191	130	188	277	91	75
25	82	83	79	385	355	274	186	124	175	264	91	*77
26	82	83	77	333	336	346	180	128	144	194	89	75
27	82	83	77	286	314	*435	175	168	135	167	89	73
28	82	101	77	249	298	402	*172	684	126	148	89	73
29	80	115	77	222	-	372	167	304	122	139	101	73
30	80	103	77	202	--------	342	162	234	118	130	101	73
31	80	--------	76	183	--------	317	--------	205	--------	166	120	--------
Total	2,573	2,609	2,577	8,122	11,511	8,767	7,387	5,067	6,674	4,535	3,443	2,516
Mean	83.0	87.0	83.1	262	411	283	246	163	222	146	111	83.9
Cfsm	0.430	0.451	0.431	1.36	2.13	1.47	1.27	0.845	1.15	0.756	0.575	0.435
In.	0.50	0.50	0.50	1.57	2.22	1.69	1.42	0.98	1.29	0.87	0.66	0.48

Calendar year 1958: Max 5,050 Min 76 Mean 247 Cfsm 1.28 In. 17.38
Water year 1958-59: Max 1,790 Min 73 Mean 180 Cfsm 0.933 In. 12.68

Peak discharge (base, 4,000 cfs).--No peak above base.

* 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 1959. 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.--34 years, 3,913 cfs.

Extremes.--Maximum discharge during year, 26,800 cfs Feb. 16 (gage height, 17.38 ft); minimum, 470 cfs Sept. 30 (gage height, 0.78 ft).
1925-59: 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 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 30		Dec. 1 to Sept. 30			
0.9	500	0.7	430	6.0	5,100
1.0	550	1.0	590	9.0	9,600
2.0	1,180	2.0	1,240	15.0	20,500
4.0	3,000	4.0	3,000	18.0	28,500

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	958	572	5,870	940	2,490	3,230	6,050	2,180	2,100	778	1,570	*1,050
2	952	610	4,220	1,090	2,260	3,180	5,100	1,870	2,400	742	1,380	1,090
3	876	684	3,000	1,100	1,990	3,120	4,600	1,780	3,760	718	1,200	1,210
4	846	684	2,420	1,240	2,090	3,070	4,620	1,670	9,070	700	1,030	1,070
5	822	684	1,970	1,320	2,150	2,940	4,690	1,580	5,410	1,130	916	1,130
6	792	684	1,770	1,240	2,800	3,130	4,240	1,540	3,510	1,290	862	972
7	756	684	1,600	1,110	3,220	4,320	3,720	1,440	2,620	998	946	992
8	726	678	1,460	1,110	3,070	4,930	3,290	1,280	2,710	820	3,040	916
9	702	654	*1,300	1,200	2,840	4,810	3,020	1,230	2,840	966	4,040	972
10	702	622	1,200	2,360	2,710	4,320	2,930	1,160	2,560	880	3,670	1,050
11	696	600	1,110	3,900	2,780	3,800	4,500	1,030	2,570	736	2,640	1,440
12	690	583	1,050	3,160	3,090	*4,010	7,630	1,060	3,130	672	1,980	1,130
13	649	*578	966	2,530	3,570	6,810	6,810	1,180	2,730	*628	1,550	1,660
14	*616	578	904	2,080	7,760	6,660	7,540	1,260	2,500	844	1,240	1,370
15	600	605	934	1,960	21,000	5,340	6,880	2,040	3,020	784	1,040	1,130
16	594	654	784	2,640	26,400	4,740	5,340	2,120	*2,850	672	934	998
17	583	696	826	5,060	24,700	4,720	4,430	1,790	2,220	640	1,460	880
18	566	714	826	7,040	*15,800	4,440	3,870	1,550	1,830	672	1,460	778
19	561	780	820	5,140	9,690	3,860	3,530	1,250	1,540	880	1,240	712
20	561	991	802	4,130	6,820	3,420	3,480	1,200	1,300	706	1,490	678
21	550	2,020	790	6,360	5,270	3,200	5,220	1,240	1,120	656	1,670	623
22	545	2,740	778	14,800	4,390	4,000	6,800	1,270	1,060	880	1,590	590
23	550	2,080	766	16,100	4,000	5,410	5,620	1,240	979	1,940	1,240	574
24	556	1,590	766	14,700	3,990	4,880	4,740	1,290	972	4,250	1,020	546
25	556	1,310	766	10,300	4,090	4,130	3,980	1,250	1,090	5,830	874	530
26	550	1,150	760	6,960	4,220	3,810	3,470	1,220	1,080	3,960	814	513
27	545	1,030	748	5,100	3,830	5,950	3,040	1,670	1,110	6,040	766	502
28	540	1,000	760	4,170	3,510	13,700	*2,780	1,970	814	4,330	730	491
29	530	1,160	796	3,630	-	18,700	2,490	2,020	784	2,790	820	480
30	530	2,740	808	*3,120	--------	13,500	2,210	2,330	*790	*2,150	966	470
31	545	--------	808	2,780	--------	8,060	--------	*2,050	--------	1,790	1,090	--------
Total	20,245	30,155	42,378	138,370	180,530	170,190	136,620	47,760	70,469	50,872	45,268	26,547
Mean	653	1,005	1,367	4,464	6,448	5,490	4,554	1,541	2,349	1,641	1,460	885
Cfsm	0.255	0.393	0.535	1.75	2.52	2.15	1.78	0.603	0.919	0.642	0.571	0.346
In.	0.29	0.44	0.62	2.01	2.63	2.48	1.99	0.69	1.02	0.74	0.66	0.39

Calendar year 1958: Max 20,100 Min 430 Mean 2,997 Cfsm 1.17 In. 15.91
Water year 1958-59: Max 26,400 Min 470 Mean 2,629 Cfsm 1.03 In. 13.96

* 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 1959.

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.--39 years, 721 cfs.

Extremes.--Maximum discharge during year, 7,350 cfs Jan. 22 (gage height, 12.85 ft); minimum, 168 cfs July 15, 16, Sept. 26-30 (gage height, 1.99 ft).

1920-59: 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.

Maximum stage known since at least 1897, that of Feb. 13, 1948.

Remarks.--Records good.

Revisions (water years).--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

1.9	145	6.0	1,880
2.0	170	10.0	4,800
4.0	930	13.0	7,500

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	249	238	340	240	450	610	746	430	606	*228	260	350
2	256	274	308	270	414	586	794	406	530	221	242	358
3	242	270	294	350	396	550	774	389	486	210	224	350
4	238	249	284	320	478	526	706	368	426	207	210	312
5	235	238	274	350	538	514	650	350	382	207	204	274
6	228	*235	266	300	498	694	606	340	375	238	204	260
7	221	232	249	300	462	834	566	326	354	228	238	326
8	214	228	242	370	454	766	530	312	326	207	221	291
9	214	224	238	380	458	706	526	302	319	197	252	*333
10	224	224	235	460	518	654	590	302	418	185	*280	538
11	224	224	235	400	590	662	666	298	550	182	277	446
12	218	221	235	350	*618	974	734	308	766	179	274	350
13	214	221	235	320	674	1,230	866	582	666	176	288	298
14	210	218	232	*333	3,880	1,020	878	578	558	173	284	266
15	210	249	221	406	6,650	918	306	458	*470	170	284	249
16	210	347	*210	898	3,710	842	730	396	418	173	308	235
17	210	326	205	894	2,010	750	670	361	375	176	291	218
18	210	294	200	706	1,470	674	646	340	344	207	305	204
19	207	344	200	634	1,140	614	*690	326	319	249	532	197
20	204	386	205	906	898	574	802	382	298	242	754	191
21	204	336	210	1,600	758	550	854	526	277	207	534	185
22	204	298	215	6,180	666	550	826	558	266	350	364	179
23	*204	274	220	3,260	714	*518	778	922	260	622	316	176
24	204	260	225	1,610	786	482	706	810	302	618	270	173
25	207	246	230	1,160	726	454	646	646	406	578	238	170
26	204	246	230	934	666	570	602	*554	368	446	246	170
27	204	242	235	786	630	1,240	562	510	302	354	263	168
28	200	280	240	674	602	1,310	530	466	270	294	246	168
29	204	392	245	594	-	1,050	506	438	246	266	312	168
30	207	389	250	538	--------	906	462	410	238	263	386	168
31	221	--------	215	494	--------	806	--------	570	--------	288	358	--------
Total	6,701	8,205	7,423	27,017	31,854	23,134	20,448	13,964	11,921	8,341	9,465	7,771
Mean	216	274	239	872	1,138	746	682	450	397	269	305	259
Cfsm	0.483	0.613	0.535	1.95	2.55	1.67	1.53	1.01	0.888	0.602	0.682	0.579
In.	0.56	0.68	0.62	2.25	2.65	1.92	1.70	1.16	0.99	0.69	0.79	0.65

Calendar year 1958: Max 5,560 Min 162 Mean 535 Cfsm 1.20 In. 16.25
Water year 1958-59: Max 6,650 Min 168 Mean 483 Cfsm 1.08 In. 14.66

Peak discharge (base, 4,500 cfs).--Jan. 22 (1 p.m.) 7,350 cfs (12.85 ft); Feb. 15 (11 a.m.) 6,970 cfs (12.47 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 17 to Jan. 13; discharge estimated on basis of weather records, 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 1959. 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 May 31, 1934, staff gage 40 ft downstream on left bank at same datum.

Average discharge.--32 years, 1,142 cfs.

Extremes.--Maximum discharge during year, 8,440 cfs Feb. 16 (gage height, 12.03 ft); minimum, 254 cfs Sept. 27-30 (gage height, 1.88 ft).

1927-59: 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.

Flood in March 1902 reached a stage of about 24 ft, from flood profile by Tennessee Valley Authority.

Remarks.--Records good.

Revisions (water years).--WSP 803: 1935. WSP 853: 1928-37.

Rating tables, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 15				Feb. 16 to Sept. 30			
2.2	278	5.0	1,770	1.8	230	5.0	1,850
2.5	363	9.0	4,750	2.0	290	9.0	4,750
3.0	570	11.0	6,990	2.5	450	12.0	8,390
				3.0	670		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*384	318	556	430	774	1,050	1,350	725	675	377	457	*513
2	377	338	525	398	692	1,020	1,410	670	1,090	365	440	493
3	377	360	480	434	636	986	1,420	625	931	347	387	493
4	374	366	451	480	675	931	1,340	590	765	335	356	501
5	363	354	426	480	714	920	1,230	556	725	329	341	457
6	354	338	402	476	768	990	1,130	525	745	347	329	432
7	351	332	388	442	730	1,100	1,050	501	670	341	326	401
8	341	329	374	438	686	1,240	975	478	595	338	326	404
9	332	326	*360	556	675	1,200	953	457	566	320	329	415
10	335	326	354	566	697	1,130	990	450	785	308	320	482
11	341	324	351	648	763	1,080	1,030	443	1,570	296	347	585
12	338	321	344	585	834	*1,230	1,120	450	1,550	284	350	620
13	329	*318	332	538	906	1,530	1,220	534	1,360	*278	350	525
14	*324	318	326	507	3,530	1,740	1,330	670	1,180	272	353	454
15	324	338	329	595	6,600	1,620	1,340	770	997	266	356	412
16	324	380	332	986	*8,240	1,470	1,260	680	*660	260	359	374
17	321	402	332	1,260	5,360	1,360	1,160	600	810	272	371	350
18	321	446	326	1,330	*3,080	1,220	1,080	*538	665	287	380	329
19	318	498	324	1,130	2,340	1,120	1,060	505	590	308	394	314
20	315	498	326	1,290	*1,890	1,040	1,080	552	534	317	432	299
21	315	516	332	2,420	1,540	1,030	1,160	715	493	335	705	290
22	312	494	338	5,170	1,320	1,000	1,210	770	464	344	695	281
23	312	455	344	6,520	1,260	964	1,190	855	440	700	538	275
24	312	410	341	5,500	1,280	915	1,130	1,040	471	920	450	266
25	310	391	351	2,670	1,280	860	1,050	1,040	513	986	398	*260
26	304	370	357	1,950	1,220	942	975	990	534	860	387	257
27	304	363	357	1,580	*1,140	1,300	920	835	590	740	368	254
28	301	380	363	1,320	1,080	1,820	*875	790	485	600	380	254
29	*299	484	394	1,120	-	1,930	825	730	436	493	590	254
30	296	530	438	*992	--------	*1,680	775	665	398	*436	590	254
31	301	--------	463	856	--------	1,490	--------	620	--------	408	525	--------
Total	10,209	11,623	11,716	43,667	50,710	37,908	33,638	20,369	22,487	13,069	12,929	11,498
Mean	329	387	378	1,409	1,811	1,223	1,121	657	750	422	417	383
Cfsm	0.465	0.547	0.535	1.99	2.56	1.73	1.59	0.929	1.06	0.597	0.590	0.542
In.	0.54	0.61	0.62	2.30	2.67	1.99	1.77	1.07	1.18	0.69	0.68	0.60

Calendar year 1958: Max 8,930 Min 269 Mean 870 Cfsm 1.23 In. 16.69
Water year 1958-59: Max 8,240 Min 254 Mean 767 Cfsm 1.08 In. 14.72

Peak discharge (base, 5,200 cfs).--Jan. 24 (about 3 a.m.) 7,740 cfs (11.55 ft); Feb. 16 (11 a.m.) 8,440 cfs (12.03 ft).

* Discharge measurement made on this day.

Note.--Discharge Jan. 2-29, June 2, 7, 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 1959.

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.--30 years, 289 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs Feb. 16 (gage height, 11.83 ft); minimum, 49 cfs July 16, Aug. 14, 24, 25, Sept. 24, 25; minimum gage height, 2.52 ft Aug. 25.

1929-59: 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.

Revisions (water years).--WSP 853: Drainage area. WSP 923: 1929-35.

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 7, 8, 10-14, Jan. 25 to Feb. 13, Feb. 19-22, Feb. 25 to Mar. 5, Mar. 7-21, 23-25, May 28, June 1, 2, 14, 25, July 2, 10, 22, Aug. 30, Sept. 2, 3, 7, 9, 10)

2.5	50	10.0	1,150
3.0	92	11.0	1,500
4.0	202	11.5	1,940
9.0	950	12.0	2,700

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	114	119	170	125	255	198	78	170	59	135	121
2	69	150	124	150	119	*184	402	73	*312	184	75	194
3	66	117	195	118	125	179	244	69	132	86	64	156
4	67	94	158	102	196	159	171	*66	86	65	59	98
5	66	88	123	86	158	238	144	66	73	62	58	72
6	64	87	106	86	132	472	134	64	70	76	64	64
7	63	83	98	88	114	232	125	61	65	62	91	177
8	62	83	98	252	112	167	122	60	60	56	68	92
9	62	88	98	292	159	160	174	60	71	60	62	173
10	107	85	95	150	*210	146	174	61	760	143	58	165
11	90	75	95	120	221	186	138	60	952	63	56	96
12	70	*76	96	*120	143	222	206	76	1,010	60	55	73
13	67	77	92	132	282	159	198	129	846	*56	52	67
14	*66	83	84	129	1,510	140	*142	168	374	52	*50	64
15	66	229	78	356	2,070	134	127	91	129	51	56	62
16	67	202	79	513	2,320	113	119	76	96	61	60	60
17	67	122	92	256	1,640	107	113	71	85	88	57	56
18	67	194	*100	152	512	102	111	72	*76	58	56	*55
19	67	352	102	160	242	100	118	65	71	54	54	53
20	66	168	105	614	194	102	128	81	68	62	55	52
21	67	121	92	1,150	165	189	111	113	65	56	53	52
22	67	106	89	1,490	174	424	107	80	64	240	64	52
23	79	102	108	954	717	242	102	80	77	608	56	51
24	85	99	135	586	603	153	97	141	154	662	51	50
25	76	96	105	269	360	126	94	81	192	423	50	50
26	73	102	96	216	221	332	91	190	95	143	80	51
27	74	96	98	184	184	516	89	520	75	96	71	53
28	75	154	102	162	178	301	93	232	66	80	60	54
29	*74	225	98	152	-	*194	90	120	60	139	231	81
30	73	148	96	144	--------	179	85	91	57	119	282	76
31	76	--------	96	131	--------	160	--------	86	--------	84	105	--------
Total	2,211	3,816	3,252	9,484	13,186	6,373	4,247	3,281	6,411	4,108	2,388	2,520
Mean	71.3	127	105	306	471	206	142	106	214	133	77.0	84.0
Cfsm	0.348	0.620	0.512	1.49	2.30	1.00	0.693	0.517	1.04	0.649	0.376	0.410
In.	0.40	0.69	0.59	1.72	2.39	1.16	0.77	0.60	1.16	0.75	0.43	0.46

Calendar year 1958: Max 1,570 Min 46 Mean 183 Cfsm 0.893 In. 12.12
Water year 1958-59: Max 2,320 Min 50 Mean 168 Cfsm 0.820 In. 11.12

Peak discharge (base, 2,000 cfs).--Feb. 16 (10 a.m.) 2,400 cfs (11.83 ft).

* Discharge measurement made on this day.

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 21.6.

Drainage area.--40,200 sq mi, approximately (at Gilbertsville).

Records available.--October 1875 to August 1889 (gage heights only), September 1889 to September 1959. 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 3.65 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, 1926, 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 66.2, all at different datums.

Average discharge.--70 years (1889-1959), 63,790 cfs.

Extremes.--Maximum discharge during year, 172,000 cfs Jan. 24; maximum gage height, 38.29 ft Jan. 27; minimum daily discharge, 15,900 cfs Dec. 28; minimum gage height, 12.96 ft Dec. 15:

1889-59: Maximum discharge, 500,000 cfs Feb. 17, 1948; maximum gage height, 62.43 ft Feb. 2, 1937, at Gilbertsville, present datum; minimum daily discharge, 250 cfs (based on lockages at Kentucky Dam) 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. 213). Flow now almost completely regulated. Records of chemical analyses and water temperatures for the water year 1959 are given in WSP 1641.

Revisions (water years).--WSP 1306: 1936 (monthly runoff).

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55,200	35,900	40,200	46,500	47,100	54,700	54,600	52,900	49,800	36,400	38,300	43,700
2	43,400	30,600	57,700	44,600	46,200	59,400	54,500	40,300	38,700	38,300	35,700	44,400
3	53,900	38,200	57,300	39,000	44,900	56,900	56,200	39,400	48,400	34,900	36,300	36,300
4	40,700	47,900	55,300	41,900	47,200	54,300	54,800	40,500	48,900	36,700	32,600	43,300
5	33,800	46,500	56,700	42,600	50,200	54,700	55,100	39,700	49,800	35,600	35,400	31,900
6	44,100	44,300	44,600	41,300	51,100	68,800	54,600	*33,200	50,500	37,600	35,500	31,700
7	47,200	47,900	38,800	46,400	51,800	73,000	55,800	34,800	31,600	32,800	45,000	32,100
8	47,000	33,900	45,400	44,600	49,400	72,700	43,300	35,000	31,900	29,400	47,000	33,500
9	53,300	28,900	45,800	53,700	40,800	72,800	26,900	28,800	40,600	32,000	39,100	37,600
10	55,100	47,000	42,600	48,000	38,400	64,700	25,700	26,200	*44,900	32,400	32,300	39,600
11	50,300	40,300	36,300	47,300	56,200	55,700	48,700	33,800	49,200	33,200	34,500	40,200
12	39,200	42,600	31,400	43,000	56,000	56,400	40,700	35,300	47,500	25,100	34,700	41,500
13	42,000	39,500	26,600	39,900	63,300	55,000	46,700	34,400	50,300	29,900	33,200	41,400
14	53,100	44,600	27,100	38,800	108,000	54,200	36,100	46,900	51,400	34,700	32,700	33,500
15	43,800	32,900	36,500	47,000	152,000	59,200	36,100	46,600	51,200	*32,400	33,400	30,900
16	43,600	26,900	30,700	55,600	*165,000	55,800	36,500	35,700	50,900	33,500	32,300	34,400
17	44,500	41,000	28,100	55,800	167,000	55,700	35,200	24,400	50,600	33,600	39,800	28,100
18	33,000	34,100	27,000	54,100	147,000	54,900	22,200	20,600	50,600	42,500	38,400	36,500
19	28,300	47,600	26,800	*54,000	128,000	55,500	45,500	26,100	51,400	48,500	a34,000	26,900
20	35,700	54,800	20,700	52,100	109,000	50,100	55,100	36,000	47,300	36,700	a40,800	26,300
21	39,300	*51,200	16,200	70,300	101,000	48,900	55,500	37,600	34,000	37,900	a44,900	32,200
22	42,600	50,700	20,600	117,000	73,800	43,700	61,400	43,800	36,800	35,800	a34,900	32,400
23	41,300	31,400	20,800	168,000	65,800	47,800	66,200	36,300	34,800	38,100	a30,800	36,100
24	40,600	33,900	20,700	170,000	74,300	39,300	71,300	26,200	35,300	52,900	*a34,500	33,200
25	33,400	39,300	16,000	171,000	69,000	26,800	85,700	34,000	48,800	46,100	39,600	32,100
26	29,500	38,900	20,500	169,000	57,100	*27,400	81,400	31,100	50,200	53,100	34,800	27,100
27	43,400	33,100	16,000	152,000	53,600	54,400	69,700	40,100	45,900	52,300	32,200	27,400
28	42,000	43,700	15,900	111,000	54,000	54,400	58,100	46,300	30,600	52,100	36,500	36,400
29	45,300	41,400	37,800	70,700	-	55,200	55,700	47,900	37,100	53,200	38,300	36,000
30	*45,300	32,400	54,900	52,100	--------	55,500	54,800	47,000	36,800	40,100	28,100	*41,900
31	46,100	--------	52,900	47,800	--------	54,900	--------	49,800	--------	39,700	36,600	--------
Total	‡1,336.0	‡1,201.4	‡1,067.9	‡2,235.1	‡2,167.2	‡1,692.8	‡1,544.1	‡1,150.7	‡1,325.8	‡1,197.5	‡1,122.2	‡1,048.6
Mean	43,100	40,050	34,450	72,100	77,400	54,610	51,470	37,120	44,190	38,630	36,200	34,950
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 212,000 Min 250 Mean 62,360 Cfsm 1.55 In. 21.06
Water year 1958-59: Max 171,000 Min 15,900 Mean 46,820 Cfsm 1.16 In. 15.81

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record at base gage; discharge computed on basis of records at Kentucky Dam.

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 1½ miles upstream from Clayton Creek.

Drainage area.--89.7 sq mi.

Records available.--October 1951 to September 1959.

Gage.--Water-stage recorder. Datum of gage is 459.88 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 97.0 cfs.

Extremes.--Maximum discharge during year, 4,080 cfs June 11 (gage height, 11.45 ft); no flow for many days.
1951-59: Maximum discharge, 32,300 cfs Mar. 22, 1952, and Nov. 18, 1957 (gage height, 15.20 ft); no flow for many days each year.

Remarks.--Records poor.

Revisions (water years).--WSP 1506: 1952(M).

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0	0.1	2.9	b4.0	22	70	72	6.0	17	1.6	12	49
2	.4	.1	3.3	b5.0	22	47	68	5.7	28	2.3	13	2.3
3	.6	0	5.7	b4.0	30	40	26	5.3	13	2.1	13	2.0
4	.8	0	8.4	b3.0	39	36	12	4.6	7.6	1.5	14	2.6
5	.8	0	5.7	a2.5	40	130	6.0	4.3	5.3	34	17	3.3
6	.9	0	b2.9	a2.3	30	197	3.6	4.0	4.0	*14	31	4.0
7	.8	0	b2.9	b2.3	27	56	3.3	4.0	3.6	11	53	10
8	.8	0	b2.8	b2.5	28	35	*7.2	3.6	3.3	12	27	3.3
9	.7	0	b2.8	a2.5	32	34	12	3.6	2.6	16	22	5.7
10	.8	0	b2.7	a2.5	142	33	16	9.2	10	25	22	13
11	.8	0	a2.6	a2.5	64	*31	15	7.6	1,100	11	21	*2.4
12	.8	0	a2.6	2.9	29	41	17	31	1,090	9.6	18	2.6
13	.2	0	a2.5	5.3	*739	29	21	19	69	9.6	12	2.4
14	0	0	a2.5	*6.0	1,660	24	18	5.3	30	9.6	9.6	2.4
15	0	0	a2.4	129	666	22	18	2.9	20	8.4	7.6	2.4
16	0	0	a2.3	87	131	18	17	2.6	*14	8.0	5.7	2.4
17	0	0	*a2.3	b50	83	16	16	2.6	10	7.2	5.0	2.1
18	0	.4	b2.2	b35	55	15	16	2.4	8.8	7.2	24	2.3
19	0	.5	b2.2	b30	36	15	15	2.6	7.6	6.4	30	2.1
20	0	.9	b2.1	266	28	15	56	3.3	6.4	6.4	18	1.8
21	0	*1.6	b2.1	946	24	15	27	*3.3	5.3	4.6	25	1.3
22	0	1.6	b2.0	292	24	14	17	3.6	5.7	14	12	1.3
23	0	1.0	b2.5	62	631	15	11	5.0	5.0	179	8.4	1.0
24	0	1.6	b3.0	42	133	20	6.4	4.0	4.3	122	6.0	1.0
25	0	1.6	b3.0	35	66	33	4.6	385	6.8	32	2.3	.9
26	0	1.8	b2.9	33	47	56	4.6	694	2.1	6.4	**.8	1.2
27	.1	1.8	b2.8	53	35	68	4.3	283	2.0	9.2	1.5	1.2
28	0	2.0	b2.7	53	33	54	6.0	504	2.0	34	2.9	1.3
29	*0	2.3	b2.7	34	-	50	*6.8	372	1.8	9.2	3.6	4.0
30	0	2.9	b2.7	30	--------	58	6.4	37	1.6	*5.7	4.0	6.0
31	.1	--------	b2.7	24	--------	66	--------	20	--------	10	14	--------
Total	8.6	20.2	92.9	2,248.3	4,896	1,353	529.2	2,440.5	2,486.8	629.0	455.4	137.3
Mean	0.28	0.67	3.00	72.5	175	43.6	17.6	78.7	82.9	20.3	14.7	4.58
Cfsm	0.0031	0.0075	0.033	0.808	1.95	0.486	0.196	0.877	0.924	0.226	0.164	0.051
In.	0.004	0.008	0.04	0.93	2.03	0.56	0.22	1.01	1.03	0.26	0.19	0.06

Calendar year 1958: Max 2,050 Min 0 Mean 68.5 Cfsm 0.764 In. 10.37
Water year 1958-59: Max 1,660 Min 0 Mean 41.9 Cfsm 0.467 In. 6.34

Peak discharge (base, 3,000 cfs).--June 11 (12 p.m.) 4,080 cfs (11.45 ft).

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for station near Benton.
b Stage-discharge relation affected by ice.

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 1959.

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.--21 years, 227 cfs.

Extremes.--Maximum discharge during year, 4,310 cfs Jan. 21 (gage height, 13.17 ft); minimum, 5.3 cfs Oct. 22.
1938-59: Maximum discharge, 36,000 cfs Nov. 19, 1957 (gage height, 17.10 ft), from rating curve extended above 17,000 cfs; minimum observed, 1.8 cfs Aug. 9, 1948.
Maximum stage known, 17.8 ft in February 1937, from floodmarks.

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

Revisions (water years).--WSP 923: Drainage area. WSP 1143: 1938-47. WSP 1206: 1949(M).

Rating table, water year 1958-59 (gage height, in feet, and discharge, in cubic feet per second)

2.3	4.0	10.0	805
2.4	6.2	11.0	1,020
2.8	23	11.5	1,220
3.3	50	12.0	1,600
4.0	102	13.0	3,800
7.0	400		

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*8.1	7.7	36	43	88	206	55	34	77	16	22	14
2	8.1	7.0	34	55	75	209	84	32	127	15	19	125
3	8.1	7.0	35	45	72	170	143	29	102	14	17	139
4	8.1	6.6	36	38	84	152	90	26	60	14	15	49
5	7.7	7.0	36	33	88	255	67	24	45	13	34	24
6	7.7	7.3	35	30	78	609	56	23	38	*31	137	20
7	7.3	8.1	32	30	70	369	48	22	33	41	204	60
8	7.0	8.5	30	33	68	199	*46	20	29	22	80	38
9	7.3	8.9	29	34	68	160	58	18	27	58	35	37
10	7.3	8.5	26	32	92	139	59	85	32	36	25	171
11	7.0	8.5	26	32	269	125	56	26	99	27	20	*75
12	6.6	8.5	26	31	*165	*115	57	59	623	18	17	32
13	6.2	8.9	26	32	328	115	60	378	1,050	14	16	24
14	6.6	10	24	34	1,500	98	57	240	226	12	14	19
15	6.6	23	23	104	2,780	87	51	77	109	10	13	17
16	6.6	30	22	275	2,620	74	46	49	*79	10	12	15
17	6.2	26	*22	165	668	65	42	39	61	10	15	14
18	6.0	35	22	a120	311	59	39	36	50	10	15	13
19	6.0	77	22	a100	207	54	38	34	42	10	12	12
20	5.8	*51	22	a500	152	52	172	32	36	9.6	22	11
21	5.8	34	22	a2,600	122	51	187	*39	32	8.9	18	11
22	5.8	28	20	3,580	113	48	91	34	30	9.6	20	10
23	6.2	26	26	1,810	766	45	68	32	27	30	14	10
24	6.0	24	36	354	1,020	42	56	30	26	205	23	9.2
25	6.0	24	36	225	368	41	48	26	26	384	14	8.9
26	7.3	22	32	183	236	66	42	550	29	143	*11	23
27	6.2	22	32	165	179	79	40	556	28	49	10	38
28	*6.2	26	34	*212	155	69	42	477	22	32	33	16
29	6.2	32	34	180	-	63	*42	640	20	124	26	50
30	6.2	36	32	138	-------	58	37	336	17	*58	15	54
31	6.6	-------	32	110	-------	54	-------	113	-------	28	12	-------
Total	208.8	628.5	900	11,323	12,742	3,928	1,977	4,116	3,202	1,462.1	940	1,139.1
Mean	6.74	21.0	29.0	365	455	127	65.9	133	107	47.2	30.3	36.0
Cfsm	0.030	0.093	0.128	1.61	2.00	0.559	0.290	0.586	0.471	0.208	0.133	0.167
In.	0.03	0.10	0.15	1.86	2.09	0.64	0.32	0.67	0.52	0.24	0.15	0.19

Calendar year 1958: Max 4,310 Min 4.7 Mean 193 Cfsm 0.850 In. 11.55
Water year 1958-59: Max 3,580 Min 5.8 Mean 117 Cfsm 0.515 In. 6.96

Peak discharge (base, 4,400 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 station at Murray and stations on nearby streams.

Reservoirs in Tennessee River basin

4685. Douglas Lake.--Lat 35°57'40", long 83°32'20", at Douglas Dam on French Broad River, 6½ miles north of Sevierville, Sevier County, Tenn., and at mile 32.3. Drainage area, 4,541 sq mi. Records available, February 1943 to September 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 715,600 cfs-days June 6 (elevation, 998.93 ft); minimum, 48,200 cfs-days Dec. 22 (elevation, 920.24 ft). Maximum contents during period 1943-59, 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.

4760. 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 1959. 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, 219,300 cfs-days Oct. 1, 1958 (elevation, 1,698.06 ft); minimum, 81,900 cfs-days Jan. 17 (elevation, 1,632.51 ft). Maximum contents during period 1950-59, 315,800 cfs-days May 19, 1958 (elevation, 1,727.42 ft); 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 six 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.

4835. 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 1959. 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, 208,000 cfs-days Oct. 1 (elevation, 1,932.11 ft); minimum, 103,500 cfs-days Jan. 21 (elevation, 1,885.40 ft). Maximum contents during period 1948-59, 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 six 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.

4868. Boone Lake.--Lat 36°26'26", long 82°26'16", 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 96,800 cfs-days Aug. 8 (elevation, 1,383.95 ft); minimum, 40,600 cfs-days Jan. 10 (elevation, 1,348.27 ft). Maximum contents during period 1952-59, 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 five 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.

4870. 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 1959. 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 Jan. 5 (elevation, 1,262.95 ft); minimum, 11,500 cfs-days Jan. 22 (elevation, 1,258.08 ft). Maximum contents during period 1953-59, 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 five 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

4935. 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 482,200 cfs-days June 21 (elevation, 1,051.78 ft); minimum, 59,500 cfs-days Jan. 12 (elevation, 985.10 ft). Maximum contents during period 1941-59, 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 nine radial gates 32 ft high by 40 ft wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 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.

4995. Fort Loudoun Lake.--Lat 35°47'30", long 84°14'35", at Fort Loudoun Dam on Tennessee River, 1 mile northeast of Lenoir City, Loudon County, Tenn., and at mile 602.3. Drainage area, 9,550 sq mi. Records available, July 1943 to September 1959. 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, 186,000 cfs-days Apr. 20; maximum elevation, 814.07 ft May 14; minimum 12 p.m. contents, 140,000 cfs-days Jan. 1; minimum elevation, 806.74 ft Mar. 11. Maximum elevation during period 1943-59, 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 taintor 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.

5045. 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 1959. 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, 64,900 cfs-days June 12 (elevation, 2,883.58 ft); minimum, 23,900 cfs-days Jan. 18 (elevation, 2,814.19 ft). Maximum contents during period 1942-59, 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.

5075. Thorpe Lake.--Lat 35°11'46" (revised), long 83°09'09" (revised), 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 1959. 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, 22,800 cfs-days July 11 (elevation, 3,080.55 ft); minimum, 11,700 cfs-days Jan. 20 (elevation, 3,058.87 ft). Maximum contents during period 1941-59, 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 two taintor 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.

5145. 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., 9.6 miles (revised) upstream from Cheoah Dam, and at mile 61.0. Drainage area, 1,571 sq mi. Records available, October 1944 to September 1959. 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, 611,600 cfs-days July 6 (elevation, 1,686.67 ft); minimum, 148,800 cfs-days Jan. 10 (elevation, 1,527.71 ft). Maximum contents during period 1944-59, 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 four 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 583,500 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

5165. 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 1959. 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, 45,200 cfs-days Oct. 1 (elevation, 1,788.34 ft); minimum, 16,500 cfs-days Dec. 27 (elevation, 1,748.76 ft). Maximum contents during period 1927-59, 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 six taintor 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.

5182. 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 1959. 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, 24,800 cfs-days Oct. 9, Apr. 20 (elevation, 873.96 ft); minimum, 20,800 cfs-days Oct. 15 (elevation, 869.33 ft). Maximum 12 p.m. contents during period 1957-59, 25,200 cfs-days Feb. 6, 1958 (elevation, 874.46 ft); minimum (after first filling), that of Oct. 15, 1958.

Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by six taintor 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.

5325. 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 1959. 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, 746,700 cfs-days June 21 (elevation, 1,001.51 ft); minimum, 163,900 cfs-days Dec. 27 (elevation, 934.56 ft). Maximum contents during period 1935-59, 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 three 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.

5430. 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 1959. 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, 560,000 cfs-days Apr. 23; maximum elevation, 744.57 ft Apr. 23; minimum12 p.m. contents, 382,000 cfs-days Jan. 2; minimum elevation, 734.82 ft Jan. 3. Maximum elevation during period 1941-59, 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 taintor 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.

5465. 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, 2.4 miles (revised) southeast of Hayesville, Clay County, N. C., and at mile 121.0. Drainage area, 189 sq mi. Records available, February 1942 to September 1959. 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, 65,400 cfs-days June 4 (elevation, 1,907.18 ft); minimum, 29,400 cfs-days Sept. 5 (elevation, 1,885.28 ft). Maximum contents during period 1942-59, 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

5530. Nottely Lake.--Lat 34°57'29", long 84°05'22", at Nottely Dam on Nottely River, 1.3 miles upstream from Dooley Creek, 1.7 miles southwest (revised) 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 42,500 cfs-days June 29 (elevation, 1,747.88 ft); minimum, 10,600 cfs-days Sept. 25 (elevation, 1,701.96 ft). Maximum contents during period 1942-59, 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.

5545. 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 1959. Prior 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, 205,400 cfs-days Aug. 22 (elevation, 1,521.48 ft); minimum, 40,600 cfs-days Jan. 16 (elevation, 1,420.07 ft). Maximum contents during period 1939-59, 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 seven 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.

5555. 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 Farner, Polk County, Tenn., 9.8 miles downstream from Hiwassee Dam, and at mile 66.0 (revised). Drainage area, 1,018 sq mi. Records available, February 1943 to September 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 29,700 cfs-days Nov. 28 (elevation, 1,280.26 ft); minimum, 25,800 cfs-days Jan. 14 (elevation, 1,273.27 ft). Maximum contents during period 1943-59, 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.

5585. Blue Ridge Lake.--Lat 34°52'52", long 84°16'49", 400 ft upstream from Blue Ridge Dam on Toccoa River, 2½ miles northeast of Blue Ridge, Fannin County, Ga., and at mile 53.0. Drainage area, 232 sq mi. Records available, December 1930 to September 1959. 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, 61,300 cfs-days Oct. 2 (elevation, 1,663.39 ft); minimum, 11,000 cfs-days Jan. 15 (elevation, 1,599.34 ft). Maximum 12 p.m. contents during period 1930-59, 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 five 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.

5625. 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 1959. 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, 3,400 cfs-days Nov. 30 (elevation, 1,435.08 ft); minimum, 900 cfs-days Dec. 4 (elevation, 1,413.11 ft). Maximum contents during period 1942-59, 7,800 cfs-days Jan. 8, 1946 (elevation, 1,436.7 ft, estimated); minimum (after first filling), that of Dec. 4, 1958.

Reservoir is formed by concrete dam. Spillway with crest at elevation 1,412.00 ft equipped with seven 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, Dec. 31, 1953, and Sept. 30, 1958. 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

5640. Parksville Lake.--Lat 35°05'44", long 84°38'51", at Parksville Dam on Ocoee River at Parksville, Polk County, Tenn., 13¾ miles east of Cleveland, and at mile 11.9. Drainage area, 595 sq mi. Records available, June 1914 to September 1959. 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, 43,900 cfs-days Apr. 19, June 1 (elevation, 837.7 ft); minimum, 32,800 cfs-days Jan. 8 (elevation, 825.3 ft). Maximum 12 p.m. contents during period 1914-59, 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 four 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.

5665. Chickamauga Lake.--Lat 35°06'07", long 85°13'42", at Chickamauga Dam on Tennessee River, 5¾ 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 344,000 cfs-days Apr. 21; maximum elevation, 684.85 ft Apr. 21; minimum 12 p.m. contents, 192,000 cfs-days Feb. 1; minimum elevation, 674.71 ft Dec. 30. Maximum elevation during period 1939-59, 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.

5695. Hales Bar Lake.--Lat 35°02'48", long 85°22'19", at Hales Bar Dam on Tennessee River, 5¼ 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 1959. 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, 88,000 cfs-days Jan. 22; maximum elevation, 635.00 ft July 13; minimum 12 p.m. contents, 67,000 cfs-days Jan. 20; minimum elevation, 631.47 ft Jan. 21. Maximum elevation during period 1914-59, 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 elevation 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 at elevation 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.

5740. 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 524,000 cfs-days Jan. 23; maximum elevation, 595.40 ft Jan. 26; minimum 12 p.m. contents, 436,000 cfs-days Aug. 13; minimum elevation, 592.70 ft Dec. 7. Maximum elevation during period 1939-59, 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.

5790. Woods Reservoir.--Lat 35°17'54", long 86°05'48", at Elk River Dam on Elk River, 1.2 miles upstream from Spring Creek, 2½ miles northeast of Estill Springs, Franklin County, Tenn., 6.8 miles upstream from bridge on U. S. Highway 41A, and at mile 170.0. Drainage area, 263 sq mi. Records available, May 1952 to September 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Maximum contents during year, 40,500 cfs-days May 23 (elevation, 960.14 ft); minimum 29,500 cfs-days Feb. 2 (elevation, 954.00 ft). Maximum contents during period 1952-59, 42,300 cfs-days Apr. 21, 22, 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

5790. Woods Reservoir--Continued.
Reservoir is formed by concrete gravity and earthfill type dam with riprapped embankments. Spillway equipped with three taintor gates, 25 ft high by 50 ft wide and two 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.

5860. Wheeler Lake.--Lat 34°47'52", long 87°22'51", at Wheeler Dam on Tennessee River, in SW¼ 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 1959. 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, 587,000 cfs-days Apr. 19; maximum elevation, 556.40 ft Apr. 20; minimum 12 p.m. contents, 410,000 cfs-days Dec. 26; minimum elevation, 549.51 ft Jan. 5. Maximum elevation during period 1936-59, 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). Reservior is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.
Revisions (water years).--WSP 1306: 1947-48.

5890. Wilson Lake.--Lat 34°47'46", long 87°37'27", in SE¼ 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 1959. 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, 328,200 cfs-days Sept. 25 (elevation, 507.94 ft); minimum, 300,800 cfs-days Feb. 8 (elevation, 504.47 ft). Maximum contents during period 1924-59, 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.

5930. Pickwick Lake.--Lat 35°04'16", long 88°15'04", at Pickwick Landing Dam on Tennessee River, 1½ 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 533,000 cfs-days Apr. 21; maximum elevation, 417.11 ft Apr. 21; minimum 12 p.m. contents, 342,000 cfs-days Dec. 8; minimum elevation, 407.81 ft Feb. 5. Maximum elevation during period 1937-59, 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.

6090. 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 1959. Gage, water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Maximum 12 p.m. contents during year, 1,449,000 cfs-days Apr. 24; maximum elevation, 360.13 ft Apr. 25; minimum 12 p.m. contents 992,000 cfs-days Dec. 12; minimum elevation, 353.25 ft Jan. 15. Maximum elevation during period 1944-59, 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 made 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 2,002,100 cfs-days is controlled storage above 354.0 ft (ordinary minimum pool). Reservoir 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.

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 Tuckasegee River neat Tuckasegee, 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 Tuckasegee River near Tuckasegee, 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 Tuckasegee River near Tuckasegee, 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 1958 to September 1959

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			South Holston Lake			Watauga Lake		
Sept.30.....	957.42	244,500	-	1,698.03	219,200	-	1,932.07	207,800	-
Oct. 31.....	934.40	99,500	-145,000	1,680.15	172,500	-46,700	1,919.92	176,800	-31,000
Nov. 30.....	927.01	69,500	-30,000	1,664.52	137,800	-34,700	1,911.37	156,600	-20,200
Dec. 31.....	934.11	98,200	+28,700	1,647.42	105,700	-32,100	1,898.75	129,200	-27,400
Calendar year 1958.	-	-	-7,700	-	-	-105,200	-	-	-85,800
Jan. 31.....	935.68	105,500	+7,300	1,645.96	103,200	-2,500	1,893.06	117,800	-11,400
Feb. 28.....	940.08	127,900	+22,400	1,654.25	117,800	+14,600	1,894.14	119,900	+2,100
Mar. 31.....	959.93	265,200	+137,300	1,667.16	143,300	+25,500	1,893.25	118,200	-1,700
Apr. 30.....	991.50	608,600	+343,400	1,693.77	207,300	+64,000	1,911.37	156,600	+38,400
May 31.....	995.67	667,300	+58,700	1,694.82	210,200	+2,900	1,915.32	165,700	+9,100
June 30.....	992.95	628,600	-38,700	1,689.58	196,100	-14,100	1,918.50	173,300	+7,600
July 31.....	986.80	546,700	-81,900	1,682.14	177,300	-18,800	1,917.66	171,300	-2,000
Aug. 31.....	980.15	466,300	-80,400	1,671.85	153,400	-23,900	1,917.27	170,400	-900
Sept.30.....	969.37	351,400	-114,900	1,670.50	150,500	-2,900	1,914.78	164,500	-5,900
Water year 1958-59.	-	-	+106,900	-	-	-68,700	-	-	-43,300
	Boone Lake			Fort Patrick Henry Lake			Cherokee Lake		
Sept.30.....	1,379.28	87,000	-	1,262.13	13,300	-	1,039.29	357,300	-
Oct. 31.....	1,370.75	71,400	-15,600	1,261.84	13,200	-100	1,020.45	214,300	-143,000
Nov. 30.....	1,362.15	58,000	-13,400	1,260.93	12,800	-400	1,003.37	124,400	-89,900
Dec. 31.....	1,353.40	46,500	-11,500	1,259.68	12,200	-600	998.30	103,300	-21,000
Calendar year 1958.	-	-	-4,600	-	-	-200	-	-	-112,600
Jan. 31.....	1,356.12	49,800	+3,300	1,260.11	12,400	+200	1,009.80	154,600	+51,300
Feb. 28.....	1,364.04	60,800	+11,000	1,261.39	13,000	+600	1,025.81	249,700	+95,100
Mar. 31.....	1,373.65	76,500	+15,700	1,259.76	12,200	-800	1,028.84	271,500	+21,800
Apr. 30.....	1,381.09	90,700	+14,200	1,260.68	12,600	+400	1,046.05	421,700	+150,200
May 31.....	1,380.47	89,400	-1,300	1,259.85	12,300	-300	1,048.80	450,000	+28,300
June 30.....	1,381.76	92,100	+2,700	1,261.01	12,800	+500	1,049.65	459,100	+9,100
July 31.....	1,383.65	96,200	+4,100	1,261.28	12,900	+100	1,045.39	415,100	-44,000
Aug. 31.....	1,381.64	91,800	-4,400	1,261.50	13,000	+100	1,044.60	407,300	-7,800
Sept.30.....	1,377.47	83,500	-8,300	1,258.41	11,700	-1,300	1,037.61	342,400	-64,900
Water year 1958-59.	-	-	-3,500	-	-	-1,600	-	-	-14,900
	Fort Loudoun Lake‡			Nantahala Lake††			Thorpe Lake††		
Sept.30.....	813.19	181,000	-	2,854.81	45,000	-	3,076.81	20,700	-
Oct. 31.....	812.71	178,000	-3,000	2,839.84	36,400	-8,600	3,071.33	17,700	-3,000
Nov. 30.....	807.56	143,000	-35,000	2,832.63	32,600	-3,800	3,069.23	16,600	-1,100
Dec. 31.....	807.76	144,000	+1,000	2,821.77	27,300	-5,300	3,063.18	13,600	-3,000
Calendar year 1958.	-	-	0	-	-	-32,600	-	-	-15,200
Jan. 31.....	807.20	141,000	-3,000	2,825.21	28,900	+1,600	3,063.15	13,600	0
Feb. 28.....	807.91	146,000	+5,000	2,834.22	33,400	+4,500	3,062.70	13,400	-200
Mar. 31.....	809.94	152,000	+6,000	2,838.12	35,400	+2,000	3,060.55	12,400	-1,000
Apr. 30.....	813.24	182,000	+30,000	2,861.33	49,100	+13,700	3,066.75	15,300	+2,900
May 31.....	813.13	181,000	-1,000	2,877.85	60,500	+11,400	3,076.52	20,500	+5,200
June 30.....	812.47	176,000	-5,000	2,879.10	61,500	+1,000	3,079.67	22,300	+1,800
July 31.....	811.79	171,000	-5,000	2,869.93	54,900	-6,600	3,079.06	22,000	-300
Aug. 31.....	813.08	180,500	+9,500	2,864.02	50,900	-4,000	3,078.75	21,800	-200
Sept.30.....	812.62	177,500	-3,000	2,853.93	44,500	-6,400	3,080.07	22,600	+800
Water year 1958-59.	-	-	-3,500	-	-	-500	-	-	+1,900

† 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 1936.

Reservoirs in Tennessee River basin--Continued

Month-end elevation and contents, water year October 1958 to September 1959

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			Santeetlah Lake††			Chilhowee Lake		
Sept.30.....	1,631.57	391,600	-	1,788.25	45,100	-	871.02	22,300	-
Oct. 31.....	1,591.63	275,500	-116,100	1,772.93	31,700	-13,400	872.30	23,400	+1,100
Nov. 30.....	1,547.29	181,500	-94,000	1,760.60	23,000	-8,700	871.46	22,600	-800
Dec. 31.....	1,535.15	160,700	-20,800	1,750.31	17,200	-5,800	872.59	23,600	+1,000
Calendar year 1958.	-	-	-178,700	-	-	-52,000	-	-	+500
Jan. 31.....	1,562.76	210,800	+50,100	1,769.82	29,300	+12,100	873.41	24,300	+700
Feb. 28.....	1,588.95	268,800	+58,000	1,775.30	33,600	+4,300	872.60	23,600	-700
Mar. 31.....	1,608.42	320,200	+51,400	1,770.04	29,500	-4,100	873.09	24,000	+400
Apr. 30.....	1,648.56	451,600	+131,400	1,783.97	41,000	+11,500	873.00	24,000	0
May 31.....	1,670.05	537,500	+85,900	1,781.21	38,600	-2,400	872.52	23,500	-500
June 30.....	1,685.29	605,100	+67,600	1,783.76	40,900	+2,300	872.02	23,100	-400
July 31.....	1,682.92	594,200	-10,900	1,765.26	26,100	-14,800	872.79	23,800	+700
Aug. 31.....	1,663.15	508,700	-85,500	1,751.91	18,100	-8,000	873.42	24,300	+500
Sept.30.....	1,649.00	453,300	-55,400	1,760.87	23,200	+5,100	872.55	23,600	-700
Water year 1958-59.	-	-	+61,700	-	-	-21,900	-	-	+1,300
	Norris Lake			Watts Bar Lake‡			Chatuge Lake		
Sept.30.....	984.14	533,700	-	740.52	481,000	-	1,894.98	42,600	-
Oct. 31.....	968.68	384,000	-149,700	738.14	435,000	-46,000	1,896.27	44,600	+2,000
Nov. 30.....	951.75	257,600	-126,400	736.77	411,000	-24,000	1,898.14	47,800	+3,200
Dec. 31.....	940.21	191,100	-66,500	735.44	388,000	-23,000	1,894.08	41,200	-6,600
Calendar year 1958.	-	-	-296,400	-	-	-7,000	-	-	-30,700
Jan. 31.....	959.18	308,600	+117,500	735.57	390,000	+2,000	1,895.28	43,100	+1,900
Feb. 28.....	972.32	416,300	+107,700	735.43	392,000	+2,000	1,900.81	52,500	+9,400
Mar. 31.....	980.41	494,300	+78,000	737.24	419,000	+27,000	1,905.32	61,400	+8,900
Apr. 30.....	998.97	712,500	+218,200	741.35	495,000	+76,000	1,903.79	58,200	-3,200
May 31.....	999.44	718,700	+6,200	741.63	501,000	+6,000	1,906.28	63,400	+5,200
June 30.....	1,000.16	728,200	+9,500	740.40	478,000	-23,000	1,901.16	53,200	-10,200
July 31.....	995.60	668,500	-59,700	740.98	488,000	+10,000	1,894.83	42,400	-10,800
Aug. 31.....	989.01	588,500	-80,000	740.33	476,000	-12,000	1,887.78	32,400	-10,000
Sept.30.....	981.95	510,200	-78,300	741.30	494,000	+18,000	1,889.07	34,100	+1,700
Water year 1958-59.	-	-	-23,500	-	-	+13,000	-	-	-8,500
	Nottely Lake			Hiwassee Lake			Apalachia Lake		
Sept.30.....	1,710.90	14,600	-	1,508.42	169,600	-	1,278.97	29,000	-
Oct. 31.....	1,715.75	17,100	+2,500	1,484.27	117,700	-51,900	1,277.65	28,200	-800
Nov. 30.....	1,722.59	21,200	+4,100	1,450.10	68,300	-49,400	1,277.09	27,900	-300
Dec. 31.....	1,714.52	16,400	-4,800	1,427.77	46,600	-21,700	1,277.98	28,400	+500
Calendar year 1958.	-	-	-21,000	-	-	-27,400	-	-	+200
Jan. 31.....	1,716.24	17,400	+1,000	1,441.45	59,100	+12,500	1,276.75	27,700	-700
Feb. 28.....	1,730.00	26,400	+9,000	1,445.42	63,200	+4,100	1,275.98	27,300	-400
Mar. 31.....	1,737.34	32,300	+5,900	1,448.01	66,000	+2,800	1,275.32	26,900	-400
Apr. 30.....	1,736.42	31,500	-800	1,493.89	136,400	+70,400	1,278.07	28,400	+1,500
May 31.....	1,741.19	35,800	+4,300	1,506.66	165,200	+28,800	1,278.59	28,700	+300
June 30.....	1,746.85	41,400	+5,600	1,519.14	198,500	+33,300	1,278.75	28,800	+100
July 31.....	1,741.96	36,500	-4,900	1,520.10	201,300	+2,800	1,277.89	28,300	-500
Aug. 31.....	1,716.93	17,800	-18,700	1,519.00	198,100	-3,200	1,278.87	28,900	+600
Sept.30.....	1,703.85	11,400	-6,400	1,508.24	169,200	-28,900	1,278.79	28,800	-100
Water year 1958-59.	-	-	-3,200	-	-	-400	-	-	-200
	Blue Ridge Lake			Ocoee No. 3 Lake*			Parksville Lake		
Sept.30.....	1,663.00	60,800	-	1,433.32	3,000	-	833.7	40,000	-
Oct. 31.....	1,644.68	41,000	-19,800	1,433.21	3,000	0	835.3	41,500	+1,500
Nov. 30.....	1,626.72	26,200	-14,800	1,434.00	3,200	+200	832.2	38,600	-2,900
Dec. 31.....	1,607.76	15,000	-11,200	1,433.76	3,100	-100	828.3	35,200	-3,400
Calendar year 1958.	-	-	-46,700	-	-	‡‡ +200	-	-	+200
Jan. 31.....	1,611.49	17,000	+2,000	1,431.30	2,600	-500	827.9	34,900	-300
Feb. 28.....	1,619.45	21,500	+4,500	1,430.62	2,400	-200	828.0	35,000	+100
Mar. 31.....	1,629.19	28,000	+6,500	1,429.65	2,300	-100	829.9	36,600	+1,600
Apr. 30.....	1,649.28	45,500	+17,500	1,432.75	2,900	+600	836.0	42,200	+5,600
May 31.....	1,656.48	53,100	+7,600	1,434.01	3,200	+300	837.1	43,300	+1,100
June 30.....	1,662.05	59,600	+6,500	1,433.60	3,100	-100	835.9	42,100	-1,200
July 31.....	1,658.28	55,200	-4,400	1,431.52	2,600	-500	836.4	42,600	+500
Aug. 31.....	1,649.81	46,000	-9,200	1,430.36	2,400	-200	836.5	42,700	+100
Sept.30.....	1,641.87	38,300	-7,700	1,417.15	1,100	-1,300	836.4	42,600	-100
Water year 1958-59.	-	-	-22,500	-	-	-1,900	-	-	+2,600

* Revised capacity table put into use Sept. 30, 1958.
† 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 1936.
‡‡ Based on revised capacity table being applicable Dec. 31, 1957.

Reservoirs in Tennessee River basin--Continued

Month-end elevation and contents, water year October 1958 to September 1959

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.....	680.75	274,000	-	632.80	73,000	-	593.34	453,000	-
Oct. 31.....	678.92	243,000	-31,000	633.80	77,000	+4,000	593.46	460,000	+7,000
Nov. 30.....	675.96	204,000	-39,000	633.70	74,000	-3,000	593.55	456,000	-4,000
Dec. 31.....	675.60	197,000	-7,000	632.93	72,000	-2,000	593.15	445,000	-11,000
Calendar year 1958.	-	-	-13,000	-	-	-12,000	-	-	-31,000
Jan. 31.....	676.00	203,000	+6,000	632.80	72,000	0	593.15	444,000	-1,000
Feb. 28.....	675.40	198,000	-5,000	632.71	72,000	0	593.12	445,000	+1,000
Mar. 31.....	678.84	242,000	+44,000	632.34	70,000	-2,000	593.80	464,000	+19,000
Apr. 30.....	682.63	303,000	+61,000	634.00	74,000	+4,000	594.98	500,000	+36,000
May 31.....	682.54	302,000	-1,000	633.70	73,000	-1,000	594.90	497,000	-3,000
June 30.....	682.56	303,000	+1,000	632.74	72,000	-1,000	594.38	483,000	-14,000
July 31.....	680.57	269,000	-34,000	634.07	76,000	+4,000	593.10	442,000	-41,000
Aug. 31.....	681.00	276,000	+7,000	633.14	72,000	-4,000	593.70	456,000	+14,000
Sept.30.....	680.90	274,000	-2,000	634.00	76,000	+4,000	592.92	437,000	-19,000
Water year 1958-59.	-	-	0	-	-	+3,000	-	-	-16,000
	Woods Reservoir			Wheeler Lake‡			Wilson Lake		
Sept.30.....	957.05	34,700	-	553.37	499,000	-	507.27	322,700	-
Oct. 31.....	957.18	34,900	+200	551.90	460,000	-39,000	507.72	326,400	+3,700
Nov. 30.....	957.35	35,200	+300	551.85	452,000	-8,000	507.58	325,200	-1,200
Dec. 31.....	957.30	35,100	-100	550.35	414,000	-38,000	505.81	311,100	-14,100
Calendar year 1958.	-	-	+400	-	-	-38,000	-	-	+4,900
Jan. 31.....	954.08	29,600	-5,500	550.40	417,000	+3,000	505.69	310,200	-900
Feb. 28.....	954.16	29,700	+100	550.45	419,000	+2,000	505.66	310,000	-200
Mar. 31.....	958.78	37,900	+8,200	554.20	523,000	+104,000	505.57	309,300	-700
Apr. 30.....	959.87	40,000	+2,100	555.55	557,000	+34,000	507.44	324,100	+14,800
May 31.....	959.82	39,900	-100	555.78	566,000	+9,000	507.53	324,800	+700
June 30.....	959.03	38,400	-1,500	555.12	549,000	-17,000	507.10	321,400	-3,400
July 31.....	958.97	38,200	-200	554.97	541,000	-8,000	505.97	312,400	-9,000
Aug. 31.....	958.75	37,800	-400	552.88	480,000	-61,000	507.00	320,500	+8,100
Sept.30.....	957.28	35,100	-2,700	552.85	480,000	0	507.56	325,100	+4,600
Water year 1958-59.	-	-	+400	-	-	-19,000	-	-	+2,400
	Pickwick Lake‡			Kentucky Lake‡					
Sept.30.....	411.95	418,000	-	354.58	1,063,000	-			
Oct. 31.....	409.70	373,000	-45,000	354.48	1,034,000	-29,000			
Nov. 30.....	409.05	359,000	-14,000	354.43	1,024,000	-10,000			
Dec. 31.....	408.30	347,000	-12,000	354.00	1,000,000	-24,000			
Calendar year 1958.	-	-	-18,000	-	-	-97,000			
Jan. 31.....	408.82	356,000	+9,000	354.10	1,014,000	+14,000			
Feb. 28.....	408.67	355,000	-1,000	354.28	1,022,000	+8,000			
Mar. 31.....	413.23	448,000	+93,000	355.97	1,142,000	+120,000			
Apr. 30.....	414.16	464,000	+16,000	359.43	1,387,000	+245,000			
May 31.....	414.40	470,000	+6,000	358.77	1,341,000	-46,000			
June 30.....	413.40	447,000	-23,000	357.86	1,259,000	-82,000			
July 31.....	413.02	440,000	-7,000	356.78	1,186,000	-73,000			
Aug. 31.....	411.10	400,000	-40,000	356.31	1,145,000	-41,000			
Sept.30.....	411.00	398,500	-1,500	355.05	1,072,000	-73,000			
Water year 1958-59.	-	-	-19,500	-	-	+9,000			

† 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 floodflow 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 is 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 1959

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Cumberland River basin				
*4007	Clover Fork at Evarts, Ky.	Lat 36°51'56", long 83°11'37", at bridge on State Highway 215, at Evarts, just below Yocum Creek.	82.4	1954-55, 1959	10-24-58 8-19-59 9- 9-59 9-17-59 9-23-59 9-28-59	9.00 8.92 7.66 6.12 5.35 4.88
4192	Cane Creek near Spencer, Tenn.	Lat 35°44'36", long 85°23'33", at bridge on State Highway 30, 4 miles east of Spencer.	133	1930, 1951, 1959	12-22-58 5-12-59 7- 1-59	0 6.07 0
4193	Cherry Creek at Yankeetown, Tenn.	Lat 35°60'00", long 85°25'10", at bridge on State Highway 84, 0.3 mile northeast of Yankeetown and 0.9 mile above mouth.	16.7	1959	10-22-58 5-12-59 6-30-59	3.77 9.34 5.11
4208	Hickory (formerly Big Hickory) Creek near McMinnville, Tenn.	Lat 35°39'30", long 85°48'10", at bridge on State Highway 55, 2.3 miles southwest of McMinnville and 0.1 mile above mouth.	132	1950-52, 1954-55, 1959	5-18-59	43.6
*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.	32.0	1951-53, 1955, 1959	5-18-59 6-30-59	23.7 20.3
4319	Overall Creek at College Grove, Tenn.	Lat 35°47'14", long 86°40'12", at county road bridge, 0.3 mile east of College Grove and 0.8 mile above mouth.	11.4	1959	7- 9-59 9-18-59	a.7 .57
4320	Harpeth River near Kirkland, Tenn.	Lat 35°49'14", long 86°41'16", at Louisville & Nashville RR. bridge, 1.7 miles northwest of Kirkland and 3.1 miles above Nelson Creek.	64.6	1953, 1959	7- 9-59 9-18-59	21.0 .95
4322	Nelson Creek near Arrington, Tenn.	Lat 35°50'44", long 86°41'57", at county road bridge, 0.4 mile below Wilson Branch, 0.5 mile above mouth, and 1.6 miles southeast of Arrington.	25.7	1953, 1959	7- 9-59 9-18-59	.36 .40
4323	Arrington Creek at Arrington, Tenn.	Lat 35°51'56", long 86°42'28", at county road bridge, 0.2 mile southeast of Arrington and 0.8 mile above Louisville & Nashville RR. bridge.	15.9	1953, 1959	7- 9-59 9-18-59	.55 .25
4324	Harpeth River below Franklin, Tenn.	Lat 35°56'53", long 86°52'54", at bridge on U. S. Highway 431, 1.1 miles below Spencer Creek and 1.3 miles north of city limits of Franklin.	210	1959	7- 9-59 8- 4-59 9-18-59	32.7 20.6 8.57
4340	Turnbull Creek at Kingston Springs, Tenn.	Lat 36°06'04", long 87°05'36", at county road bridge, just above Louisville & Nashville RR. bridge, 0.2 mile above mouth and 0.7 mile west of Kingston Springs.	123	1926-27‡, 1932, 1954, 1959	5-19-59 6- 7-59 7- 8-59	46.7 86.5 41.0

* Also a crest-stage station.
‡ Operated as a continuous-record gaging station.
a Estimated.

Discharge meaaurements made at low-flow partial-record stations during water year 1959--Continued

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, at Swannanoa, 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, 1958-59	11-10-58 4- 8-59 6-18-59	11.4 29.6 27.1
4613	Cosby Creek below Cosby, Tenn.	Lat 35°52'23", long 83°13'26", at bridge on State Highway 32, just below Middle Creek, 4 miles north of Cosby.	55.3	1959	10-14-58 9-28-59	21.5 20.7
4662	Big Limestone Creek at Limestone, Tenn.	Lat 36°13'07", long 82°38'27", 0.5 mile below bridge on former U. S. Highway 11E and Southern Ry. and 2.0 miles above mouth, at Limestone.	78.1	1958-59	9-28-59	14.9
4680	Long Creek at White Pine, Tenn.	Lat 36°07'00", long 83°17'08", at bridge on U. S. Highway 25E, 0.5 mile north of White Pine.	29.1	1952-54, 1956, 1959	10-14-58 9-28-59	6.29 3.78
4691	Little Pigeon River near Pittman Center, Tenn.	Lat 35°45'00", long 83°25'00", at bridge on State Highway 73, 1 mile southwest of Pittman Center.	48.3	1952-54, 1959	9-28-59	29.9
4818	Town Creek at Mountain City, Tenn.	Lat 36°28'01", long 81°48'15", at U. S. Highway 421, 25 ft below confluence of Goose Creek and Furnace Creek, at Mountain City.	24.4	1952-56, 1959	10- 7-58 9-28-59	6.38 1.45
4822	Doe Creek at Doeville, Tenn.	Lat 36°23'39", long 81°58'03", at bridge on State Highway 67, 100 ft below mouth of Dugger Branch, at Doeville.	36.0	1952-54, 1956, 1959	10- 7-58 9-28-59	27.3 20.4
4842	Stony Creek at Hunter, Tenn.	Lat 36°22'17", long 82°09'19", at bridge on county highway, 0.3 mile above mouth at Hunter.	58.2	1952-54, 1956, 1959	10- 6-58 9-28-59	15.9 8.04
4876	Reedy Creek at Kingsport, Tenn.	Lat 36°33'27", long 82°33'35", 0.1 mile below Roach Branch and 0.4 mile east of intersection of U. S. Highway 23 and county highway, at Kingsport.	57.2	1950-54, 1956, 1959	10- 9-58 7- 2-59 9-29-59	13.0 22.7 6.94
4950	Big Flat Creek near Skaggston, Tenn.	Lat 36°06'51", long 83°43'56", at bridge on U. S. Highway 11W, 2.4 miles northeast of Skaggston.	61.4	1952, 1959	10- 9-58 9-28-59	6.17 2.62
4972	Little River near Townsend, Tenn.	Lat 35°39'39", long 83°42'25", in Great Smoky Mountain National Park, 600 ft above Middle Prong and 3 miles southeast of Townsend.	60.1	1952-54, 1956, 1958-59	9-28-59	32.7
5113.6	Soco Creek near Cherokee, N. C.	Lat 35°27'42", long 82°19'09", at bridge on U. S. Highway 441, 0.6 mile above mouth and 1.0 mile south of Cherokee.	43.2	1925, 1943, 1947, 1953-54, 1958-59	6-18-59 9-23-59	59.3 35.0
5188	Notchy Creek near Vonore, Tenn.	Lat 35°33'22", long 84°13'22", at county bridge, 0.2 mile above mouth and 2.5 miles south of Vonore.	27.9	1943, 1952-54, 1959	9-28-59	4.91
5282	Big Sycamore Creek near Springdale, Tenn.	Lat 36°26'21", long 83°27'00", at bridge on State Highway 33, 5 miles northeast from intersection of U. S. Highway 25E and State Highway 33 and 6.0 miles northeast of Springdale.	21.7	1959	9-29-59	.27
5322	Big Creek at La Follette, Tenn.	Lat 36°23'19", long 84°07'33", at bridge on U. S. Highway 25W, 0.5 mile west of La Follette.	24.0	1950-53, 1959	10-10-58 9-28-59	.64 .85
5352	Beaver Creek near Powell, Tenn.	Lat 36°01'06", long 84°03'06", at bridge on U. S. Highway 25W, 1.5 miles southeast of Powell.	56.1	1952-53, 1955, 1959	10-10-58 9-28-59	8.51 7.51
*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 and 4 miles above Indian Creek.	55.9	1951-55, 1957-59	9-28-59	5.08
*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.	26.4	1953-54, 1959	5-11-59 7-14-59	7.56 2.57
5567	Spring Creek near Servilla, Tenn.	Lat 35°16'17", long 84°25'00", at bridge on county road, 3.7 miles northeast of Springton, 7.4 miles northeast of Reliance, and 12.8 miles above mouth.	3.82	1959	10-22-58 5-11-59	.29 1.17
5572	Cane Creek near Etowah, Tenn.	Lat 35°18'04", long 84°32'16", at U. S. Highway 411 bridge, 1.7 miles south of junction of State Highway 30 in Etowah and 2.7 miles above mouth.	10.3	1950-52, 1954, 1956-57, 1959	10-22-58 5-11-59 7-16-59	.78 3.55 1.86

* Also a crest-stage station.

Discharge measurements made at low-flow partial-record stations during water year 1959--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
5661.5	Rogers Creek near Lamontville, Tenn.	Lat 35°23'04", long 84°47'37", at county road bridge, 2.4 miles northeast of Lamontville and 5.0 miles southeast of Goodfield.	44.5	1954, 1959	10-21-58 5-11-59 7-14-59	9.39 16.9 15.3
5662.5	Candies Creek near Cleveland, Tenn.	Lat 35°13'02", long 84°52'58", on State Highway 60, 4.0 miles north of Cleveland and 14.9 miles above mouth.	88.7	1959	10-22-58 5-12-59 7-15-59	15.8 34.3 16.3
5663	Rock Creek at Sale Creek, Tenn.	Lat 35°23'10", long 85°06'30", on U. S. Highway 27, 0.5 mile north of Sale Creek and 0.9 mile above mouth.	38.1	1959	10-21-58 5-12-59	0 8.49
5664	Soddy Creek at Soddy, Tenn.	Lat 35°18'05", long 85°09'56", at county highway bridge, 0.8 mile north of Soddy and 1.2 miles above U. S. Highway 27 bridge.	49.0	1932, 1955-56, 1959	10-21-58 5-12-59 6-29-59	.063 11.1 15.1
*5667	South Chickamauga Creek at Ringgold, Ga.	Lat 34°55', long 85°08, Catoosa County, at State Highway 3 at Ringgold.	161	1951, 1959	10-15-58	69.4
*5672	West Chickamauga Creek near Kinsington, Ga.	Lat 34°48', long 85°21', Walker County, at State Highway 2, 2½ miles northeast of Kinsington.	73.0	1955, 1959	10-16-58	11.1
5706	Sequatchie River at Pikeville, Tenn.	Lat 35°36'19", long 85°11'09", at bridge, 0.2 mile east of Pikeville and 2.4 miles above Skillern Creek.	86.2	1932-33, 1951, 1959	1- 2-59 5-12-59 7- 1-59	53.9 61.6 23.9
5807	Hurricane Creek at Awalt, Tenn.	Lat 35°15'24", long 86°15'21", at county road bridge at Awalt, 25 ft below Fall Lick Branch and 2.9 miles above mouth.	24.6	1959	10-21-58 5-12-59 7- 9-59	10.9 15.7 9.78
5808	Beans Creek near Lexie Crossroads, Tenn.	Lat 35°07'18", long 86°18'20", at county road bridge, 1.8 miles southwest of Lexie Crossroads, 2.0 miles northeast of Shady Grove, and 1.3 miles above mouth.	89.7	1953-54, 1959	10-21-58 5-12-59 7- 9-59	36.8 54.0 26.4
5810	East Fork Mulberry Creek at Lynchburg, Tenn.	Lat 35°16'53", long 86°22'21", at county road bridge, 0.2 mile southeast of Lynchburg and 1.3 miles above Price Branch.	23.1	1932-33, 1950, 1959	5-12-59 7- 9-59	11.1 7.99
5827	Coldwater Creek at Coldwater, Tenn.	Lat 35°05'02", long 86°44'02", at bridge, 1.2 miles above mouth.	29.8	1952-54, 1959	10-21-58 5-11-59 7- 7-59	4.53 12.2 6.66
5834	Big Creek near Riversburg, Tenn.	Lat 35°16'31", long 87°03'30", at county road bridge, 1.0 mile northwest of Riversburg and 0.5 mile above mouth.	85.2	1952-54, 1959	5-11-59 7- 9-59	45.6 17.7
5852	West Fork Shoal Creek near Minor Hill, Tenn.	Lat 35°02'55", long 87°08'25", at county road bridge, 1.0 mile southwest of Minor Hill and 4.4 miles above junction with East Fork Shoal Creek.	13.5	1959	10-21-58 5-11-59 7- 8-59	1.56 3.76 1.23
5882	Crowson Creek near Lawrenceburg, Tenn.	Lat 35°14'33", long 87°21'25", at bridge on U. S. Highway 64, 1¼ miles west of Lawrenceburg and 0.5 mile above mouth.	18.6	1932, 1951, 1959	10-21-58 11- 6-68 5-11-59	9.59 9.47 13.4
5925	Cripple Deer Creek near Tishomingo, Miss.	SW¼ sec.26, T.4 S., R.10 E., Chickasaw meridian, at bridge on State Highway 25, 4½ miles north of Tishomingo.	-	1953-57, 1959	10-30-58	1.52
5927	Yellow Creek drainage canal near Burnsville, Miss.	S½ sec.12, T.3 S., R.9 E., Chickasaw meridian, at bridge on U. S. Highway 72, ½ mile above Southern RR. and ¾ mile southeast of Burnsville.	46.3	1941b/, 1953b/, 1954-57, 1959	10-30-58	4.57
5927.5	Little Yellow Creek drainage canal near Burnsville, Miss.	NW¼ sec.3, T.3 S., R.9 E., Chickasaw meridian, at bridge on State Highway 72, ½ mile above Southern RR. and 1½ miles northwest of Burnsville.	-	1953, 1955-57, 1959	10-30-58	6.08
*5944	Cypress Creek at Pope, Tenn.	Lat 35°36'55", long 87°59'23", at county road bridge, 0.2 mile south of Pope.	16.8	1953-54, 1956-57, 1959	5-18-59 6-17-59	6.61 10.2
5993	Caney Creek at Caney Spring, Tenn.	Lat 35°36'29", long 86°46'05", at bridge on State Highway 99, 0.8 mile west of Caney Spring and 1.0 mile above mouth.	28.9	1949, 1953-54, 1959	10-22-58 5-12-59 7- 9-59	0 0 0
6017	Lick Creek at Littlelot, Tenn.	Lat 35°47'43", long 87°18'41", at county road bridge, 0.8 mile northeast of Littlelot and 1.0 mile above mouth.	99.8	1953-54, 1959	5-18-59 6-15-59	65.0 52.4
6027	Tumbling Creek near Hurricane Mills, Tenn.	Lat 35°55'58", long 87°43'50", at county road bridge, 0.6 mile above mouth and 3.9 miles southeast of Hurricane Mills. (Location revised.)	51.2	1953-59	5-18-59 6-16-59 6-30-59 7-13-59 7-30-59	23.4 52.1 21.6 17.7 27.4

* Also a crest-stage station.
b In files of Corps of Engineers, Memphis District.

Discharge measurements made at low-flow partial-record stations during water year 1959--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
*6042	Cane Creek at Farmers Exchange, Tenn.	Lat 35°38'53", long 87°39'39", at county road bridge, 0.5 mile north of Farmers Exchange.	45.1	1956, 1959	5-18-59 6-15-69	33.7 46.3
6072	West Sandy Creek near Springville, Tenn.	Lat 36°15'37", long 88°12'10", at bridge on State Highway 69, 0.4 mile above Beasley Creek and 3.6 miles southwest of Springville.	47.9	1958-59	10-28-58 5-11-59 6-18-59 7-20-59	22.3 19.4 18.7 16.1

* 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.

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					
*4007	Clover Fork at Evarts, Ky.	Lat 36°51'56", long 83°11'37", at bridge on State highway 215, at Evarts, just below Yocum Creek.	82.4	1959	1-22-59	7.24	6,160
4049	Lynn Camp Creek at Corbin, Ky.	Lat 36°57'18", long 84°05'41", on bridge on U. S. Highway 25W, at Corbin, and 1.1 miles upstream from Horse Creek.	53.8	1957-59	1-29-57 11-19-57 1-22-59	22.5 9.88 7.14	a9,000 2,120 1,220
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.	48.7	1955-59	2-14-59	14.01	(†)
4090	White Oak Creek at Sunbright, Tenn.	Lat 36°14'38", long 84°40'14", at bridge on U. S. Highway 27, in Sunbright.	13.5	1933‡, 1955-59	2-14-59	9.80	(†)
4096	Black Creek tributary near Robbins, Tenn.	Lat 36°21'53", long 84°35'21", at culvert under U. S. Highway 27, 0.8 mile above mouth and 1.5 miles north of Robbins.	.25	1955-59	2-14-59	2.75	(†)
4147	Puncheon Camp Creek at Allred, Tenn.	Lat 36°19'35", long 85°11'10", at bridge on State Highway 85 at Allred, 7.0 miles south of intersection of State Highways 85 and 52.	15.5	1955-59	2-14-59	4.11	(†)
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.	7.98	1955-59	2-14-59	3.50	(†)
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.	.49	1955-59	6- 1-59	1.91	42
4205	Barren Fork near Trousdale, Tenn.	Lat 35°39'55", long 85°53'00", at county highway bridge on Trousdale-McMinnville pike, 3¼ miles east of Trousdale.	132	1933-57‡, 1958-59	1-22-59	11.46	9,750
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.	4.60	1955-59	9- 1-59	3.00	(†)
4207	Owen Branch near Trousdale, Tenn.	Lat 35°39'55", long 85°51'50", at bridge, 0.2 mile above mouth, 1.0 mile east of Barren Fork near Trousdale gaging station, and 4.3 miles east of Trousdale.	9.42	1955-59	9- 1-59	3.84	(†)
*4212	Charles Creek near McMinnville, Tenn.	See previous table.	32.0	1955-59	9- 1-59	8.61	(†)
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.	1.16	1955-59	1-30-56 12- -56 11- -57 9- 1-59	b2.98 b3.98 b4.68 3.04	b108 b183 b241 112
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.	3.32	1955-59	11-19-58	5.79	540
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.	.86	1955-57, 1959	9- 9-59	3.52	(†)
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.	3.57	1955-59	1959	(c)	(†)

* Also a low-flow partial-record station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
a Estimated.
b Revised; supersedes figures published in WSP 1556.
c 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					
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	1955-59	7-31-58 9-30-59	b19.91 20.35	(†) (†)
4538.8	Brush Creek at Walnut, N. C.	Lat 35°50'40", long 82°44"30", at culvert, 0.7 mile southwest of Walnut, Madison County, and 0.8 mile above mouth.	7.99	1954-59	1-21-59	14.04	790
4612	Cosby Creek near Cosby, Tenn.	Lat 35°47'02", long 83°13'08", at bridge on State Highway 32, 2.4 miles southeast of junction of State Highways 32 and 73 at Cosby.	10.2	1959	9-30-59	4.59	(†)
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	1955-59	9-30-59	20.27	(†)
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	1955-59	9- 5-59	17.23	120
4650	North Indian Creek near Unicoi, Tenn.	Lat 36°10'35", long 82°17'36", on right bank, 900 ft above Rocky Branch and 3.4 miles southeast of Unicoi.	15.9	1945-57‡, 1959	1-21-59	4.30	536
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.	9.86	1955-59	3-27-59	3.67	(†)
4675	Nolichucky River near Morristown, Tenn.	Lat 36°10'49", long 83°10'32", on right bank along Southern Ry., 0.6 mile above Susong Bridge and 7 miles southeast of Morristown.	1,679	1921-57‡, 1959	9-30-59	d12.95	18,200
4691.3	Little Pigeon River near Sevierville, Tenn.	Lat 35°51'38", long 83°30'13", at bridge on U. S. Highway 411, 4¼ miles east of Sevierville.	110	1954-59	1-21-54 1955 4-16-56 1-31-57 1958 1-21-59	11.19 (c) 13.29 16.23 (c) 14.13	(†) (†) (†) (†) (†) (†)
4691.6	East Fork Little Pigeon River near Sevierville, Tenn.	Lat 35°51'55", long 83°29'17", at bridge on U. S. Highway 411, 5.2 miles east of Sevierville.	64.1	1954-59	1-21-54 2-23-55 4-16-56 1-31-57 5- 7-58 3-27-59	11.83 9.20 13.44 15.62 10.87 11.01	(†) (†) (†) (†) (†) (†)
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.	201	1954-59	1955 1-21-59	(c) 13.07	<7,800 10,000
4693	Hog Pen Branch near Gatlinburg, Tenn.	Lat 35°43'37", long 83°28'18", at culvert under State Highway 73, 2.7 miles east of intersection at State Highway 73 and U. S. Highway 441 in Gatlinburg.	.61	1959	6-25-59	2.06	(†)
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.	76.2	1946-49‡, 1954-59	1-21-59	10.61	6,000
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‡, 1958-59	4-12-59	(c)	(†)
4738	Staley Creek near Marion, Va.	Lat 36°49'25", long 81°28'25", 2 miles southeast of Marion.	8.33	1951-59	1-22-59	2.71	160
4775	Beaver Creek near Wallace, Va.	Lat 36°38'25", long 82°06'42", 1.2 miles southeast of Wallace.	13.7	1946-57‡, 1958-59	3-27-59	2.83	85
4789.1	Cove Creek at Sherwood, N. C.	Lat 36°15'50", long 81°47'03", at bridge, 0.3 mile below Isaac Hollow and 0.5 mile southwest of Sherwood, Watauga County.	23.1	1940, 1955-59	9-30-59	19.26	(†)
4804.1	Grassy Creek near Banner Elk, N. C.	Lat 36°10'20", long 81°54'42", at culvert on State Highway 94, 100 ft above mouth and 2.7 miles west of Banner Elk, Avery County.	.54	1955-59	12-28-58	16.56	19
4816	Corn Creek at Mountain City, Tenn.	Lat 36°29'23", long 81°48'52", at bridge on county road, 600 ft north of junction of county road and U. S. Highway 421 and 1 mile northwest of Mountain City.	5.34	1959	1-21-59	2.51	(†)
4820	Roan Creek near Neva, Tenn.	Lat 36°22'37", long 81°53'14", on right bank on Butler-Neva road, 1.7 miles southwest of Neva.	103	1943-55‡, 1959	1-22-59	6.34	3,710

† Discharge not determined.
‡ Operated as a continuous-record gaging station.
b Revised; supersedes figures published in WSP 1556.
c Peak stage did not reach bottom of gage.
d Maximum recorded.

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					
4832	Kopley Creek tributary at Butler, Tenn.	Lat 36°21'21", long 82°01'48", at culvert under State Highway 67, about 500 ft northeast of intersection with old State Highway 67, at Butler.	0.76	1959	1-21-59	1.37	(†)
4898	Cove Creek near Shelleys, Va.	Lat 36°39'13", long 82°21'16", 2 miles north of Shelleys.	17.3	1951-59	3-27-59	5.58	730
4908	Surgoinsville Creek at Surgoinsville, Tenn.	Lat 36°28'15", long 82°51'06", at bridge on U. S. Highway 11W, at Surgoinsville.	4.38	1955-59	1959	(c)	(†)
4912	Big Creek tributary near Rogersville, Tenn.	Lat 36°25'30", long 82°57'17", at culvert under county road, 300 ft above mouth and 2.8 miles northeast of Rogersville.	2.00	1955-59	9-30-59	6.93	(†)
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 and 10.5 miles southeast of Knoxville.	.361	1955-59	1-21-59	2.10	(†)
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	1958-59e	1-21-59	5.04	175
5134.1	Jenkins Branch tributary at Bryson City, N. C.	Lat 35°24'40", long 83°27'20", at culvert 500 ft above mouth and 1.0 mile southwest of Bryson City, Swain County.	.45	1955-59	1-21-59	18.95	(†)
5186	Tellico River tributary at Tellico Plains, Tenn.	Lat 35°21'48", long 84°17'24", at culvert under road running eastward to crossing of Tellico River, ¼ mile east of railroad crossing at Tellico Plains.	.25	1959	6- 2-59	4.24	(†)
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.	11.2	1954-59	1-21-54 1- -56 1-31-57 5- 6-58 3-27-59	9.44 9.20 9.04 9.71 10.19	b1,100 b900 b795 b1,340 1,810
5197	Bat Creek near Vonore, Tenn.	Lat 35°38'36", long 84°15'12", at bridge on State Highway 72, 4.5 miles north of Vonore.	30.7	1954-59	3-27-59	10.74	1,760
5201	Sweetwater Creek near Loudon, Tenn.	Lat 35°44'17", long 84°22'25", at bridge on State Highway 72, 2.0 miles west of Loudon.	62.2	1954-59	1-21-54 12-29-54 4- -56 1-31-57 5- 6-58 4-19-59	8.79 6.35 6.85 9.96 9.52 8.10	(†) (†) (†) (†) (†) (†)
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‡, 1953-59	3-27-59	4.64	1,340
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‡, 1951-59	3-27-59	4.84	1,130
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‡, 1952-59	1-22-59	9.30	5,200
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.	24.5	1933‡, 1955-59	1-21-59	12.28	2,760
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.	9.45	1948-50‡, 1955-59	1-21-59	5.98	370
*5382	Poplar Creek near Oliver Springs, Tenn.	See previous table.	55.9	1954-59	1-22-59	15.15	(†)
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.	5.54	1955-59	2-14-59	4.39	570
5385	Emory River near Wartburg, Tenn.	Lat 36°06'46", long 84°36'54", at bridge on Wartburg-Lancing road, 1½ miles northwest of Wartburg.	83.2	1935-57‡, 1958-59	11-18-57 1-21-59	d22.81 16.00	13,900 6,800
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.	12.0	1955-59	7-27-59	5.85	(†)
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.	4.71	1955-59	1-22-59	4.81	(†)

* Also a low-flow partial-record station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
b Revised; supersedes figures published in WSP 1556.
c Peak stage did not reach bottom of gage.
d Maximum recorded.
e Peak published for 1957 water year in WSP 1556 not the annual maximum.

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.	.717	1955-59	1-22-59	(c)	(†)
5415	Whites Creek near Glen Alice, Tenn.	Lat 35°47'49", long 84°45'37", 2,200 ft above Southern Ry. bridge and 1.2 milea southwest of Glen Alice.	123	1935-55‡, 1956-59	1-22-59	16.58	13,300
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.	98.3	1928-30‡, 1955-59	1-22-59	13.68	9,700
*5432	Ten Mile Creek near Decatur, Tenn.	See previous table.	26.4	1954-59	3-27-59	10.54	1,840
5445	Richland Creek near Dayton, Tenn.	Lat 35°30'17", long 85°01'20", 0.4 mile above bridge on State Highway 30 and 1.0 mile northwest of Dayton.	50.2	1928-31‡, 1935-55‡, 1956-59	1-21-59	7.16	5,150
5498.1	Hyatt Creek at Marble, N. C.	Lat 35°11'22", long 83°55'14", at bridge 0.8 mile north of Marble, Cherokee County, and 1 mile above mouth.	6.90	1955-59	5-31-59	16.86	(†)
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 and 11 miles west of Murphy, Cherokee County.	12.6	1955-59	5-31-59	13.90	(†)
5661	South Mouse Creek tributary near Cleveland, Tenn.	Lat 35°12'32", long 84°50'15", at bridge on old U. S. Highway 11, 4.2 miles northeast of intersection with U. S. Highway 64 in Cleveland.	1.31	1955-59	7-12-59	5.38	(†)
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.	9.68	1955-59	1-21-59	d5.42	(†)
5667	South Chickamauga Creek at Ringgold, Ga.	Lat 34°55', long 85°08', at State Highway 3 at Ringgold, Catoosa County.	161	1950-59	4-19-59	13.35	4,700
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	1951-59	4-20-59	13.09	3,180
5707	McWilliams Creek near Dunlap, Tenn.	Lat 35°24'22", long 85°19'46", at bridge on county road, 1.2 miles above mouth and 3.8 miles northeast of Dunlap.	6.64	1959	4-20-59	7.54	(†)
5708	Little Brush Creek near Dunlap, Tenn.	Lat 35°24'15", long 85°23'18", at bridge on State Highway 8, 1.5 miles north of Dunlap.	15.4	1959	1-21-59	6.23	1,450
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.	.67	1955-59	3-27-59	f4.84	(†)
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.	50.4	1955-59	1-22-59	7.33	(†)
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.	2.18	1955-59	1-21-59	2.83	86
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.	4.30	1955-59	6-25-59	7.05	440
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 and U. S. Highway 64 in Cowan.	17.0	1955-59	6-25-59	7.05	1,460
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 and 3.1 miles south of Belleville.	.034	1955-59	4-20-59	4.02	34
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.	42.6	1954-59	4-19-59	8.70	5,820
5832	Chicken Creek at McBurg, Tenn.	Lat 35°11'03", long 86°48'47", at bridge on County Highway R7374 in McBurg.	7.66	1955-59	8- 1-59	5.60	2,200

* Also a low-flow partial-record station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
c Peak stage did not reach bottom of gage.
d Maximum recorded.
f Affected by backwater.

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					
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.	0.49	1955-59	3-27-59	2.42	(†)
5875	Shoal Creek at Lawrenceburg, Tenn.	Lat 35°14'02", long 87°20'00", at bridge on U. S. Highway 43, 0.5 mile south of intersection of U. S. Highways 43 and 64 in Lawrenceburg.	27.0	1933-34‡, 1955-59	9-10-59	5.89	(†)
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 and U. S. Highway 64 in Clifton Junction.	19.0	1955-59	1959	-	-
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.	.75	1955-59	2-14-59	(c)	(†)
*5944	Cypress Creek at Pope, Tenn.	See previous table.	16.8	1955-59	2-14-59	3.47	(†)
5970	Garrison Fork at Fairfield, Tenn.	Lat 35°33'59", long 86°17'00", at bridge on county road, 0.1 mile east of Fairfield.	63.3	1954-58‡, 1959	3-26-59	d12.61	3,900
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 county road with U. S. Highway 41A at Rover.	9.46	1955-59	7-22-59	5.68	1,480
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.	43.1	1954-59	3-26-59	9.93	2,480
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 at Flat Creek in Rally Hill.	.630	1955-59	3-26-59	2.09	51
6000	Rutherford Creek near Carters Creek, Tenn.	Lat 35°40'23", long 86°58'12", at bridge on county road, 3.2 miles south of town of Carters Creek.	68.8	1954-58‡, 1959	2-14-59	11.09	2,180
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.	3.68	1955-59	1959	(c)	(†)
*6042	Cane Creek at Farmers Exchange, Tenn.	See previous table.	45.1	1955-59	2-14-59	d5.32	(†)
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.	17.4	1932-33‡, 1955-59	1959	(c)	(†)
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.	1.04	1955-59	2-14-59	1.88	(†)

* Also a low-flow partial-record station.
† Discharge not determined.
‡ Operated as a continuous-record gaging station.
c Peak stage did not reach bottom of gage.
d Maximum recorded.

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 water year 1959

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Cumberland River basin				
Martins Fork.	Clover Fork..	Lat 36°47'22", long 83°14'53", at road bridge, 20 ft below Bobs Creek and 1 mile west of Cawood, Ky.	-	1954-55	10- 4-58 10-24-58 7-21-59 9-28-59	15.0 *6.30 18.6 *1.76
Yellow Creek Bypass.	Yellow Creek.	Lat 36°37'52", long 83°43'45", at Middlesboro, Ky., 1/3 mile above Fourmile Run and 1/3 mile below Lick Fork.	35.3	1940-41, 1944-50, 1952-58	10-28-58 12- 8-58 3-27-59 5-26-59 7-21-59	a.3 12.0 426 40.6 a.5
Left Fork Straight Creek.	Straight Creek.	Lat 36°47'29", long 83°39'57", at Louisville & Nashville RR. bridge, ¼ mile south of Cary, Ky., and 1.3 miles above mouth.	38.8	1947	10- 3-58 10-24-58 7-22-59	7.22 *2.51 *.72
Straight Creek.	Cumberland River.	Lat 36°46'24", long 83°40'12", at bridge on State Highway 66, at village of Straight Creek, Ky., and 0.1 mile below Left Fork.	-	1954-55	10- 3-58 10-24-58 7-22-59	22.4 *4.87 *5.71
Clear Fork...	....do.....	Lat 36°40'10", long 84°07'50", at bridge on U. S. Highway 25W, 0.9 mile below Wolf Creek and 5.4 miles south of Williamsburg, Ky.	356	1953-54	10- 9-58 10-24-58 11- 5-58 7-22-59	*16.6 *16.6 *36.2 *52.2
Browns Creek.	Watts Creek..	Lat 36°46'26", long 84°08'17", at culvert on State Highway 26, 0.1 mile above mouth and 2½ miles northeast of Williamsburg, Ky.	5.46	1957	10- 7-58 10-24-58 7-20-59	*.10 *a.08 .15
Jellico Creek	Cumberland River.	Lat 36°40'56", long 84°15'20", at bridge on State Highway 92, just below Parks Branch and 7.7 miles southwest of Williamsburg, Ky.	103	1953-54, 1957	10- 9-58 10-31-58 7-24-59	*1.15 *.36 2.39
Roundstone Creek.	Rockcastle River.	Lat 37°17'43", long 84°12'43", ½ mile below bridge on State Highway 490 at Livingston, Ky., and ¼ mile above mouth.	144	1953-54	10- 7-58 10-24-58 7-20-59	*17.4 *16.8 21.4
Rockcastle River.	Cumberland River.	Lat 37°17'38", long 84°12'58", at Louisville & Nashville RR. bridge at Livingston, Ky., and 0.3 mile below Roundstone Creek.	454	1953-54	10- 7-58 10-24-58 11- 3-58 11- 6-58 7-20-59	*47.7 38.2 98.7 57.9 244
Little South Fork Cumberland River.	South Fork Cumberland River.	Lat 36°45'30", long 84°40'20", at bridge on State Highway 92, 7 miles east of Oil Valley, Ky.	-	1953-54	10- 9-58 10-27-58 7-23-59	*7.07 *5.82 42.6
Elk Spring Creek.	Beaver Creek.	Lat 36°49'40", long 84°50'40", at bridge on State Highway 92, at Monticello, Ky.	-		10- 8-58 10-27-58 7-23-59	*.08 .20 1.48
Beaver Creek.	Cumberland River.	Lat 36°49'03", long 84°52'48", at bridge on State Highway 90, 0.1 mile below Elk Spring Creek and 2 miles southwest of Monticello, Ky.	-	1953-54	10- 8-58 10-27-58 7-23-59	*6.78 *6.39 39.5
Otter Creek..	Beaver Creek.	Lat 36°46'19", long 84°58'48", at bridge on State Highway 90, 0.2 mile below Gap Creek and 1¼ miles west of Susie, Ky.	-	1953-54	10- 8-58 10-27-58	*6.76 *5.75
Stewart Creek	Stones River.	Lat 35°59'54", long 86°30'18", 1.3 miles northeast of Smyrna, Rutherford County, Tenn.	69.7	1952-58‡, 1959	10- 8-58 11-18-58	*7.91 b107
Wilson Branch	Nelson Creek.	Lat 35°51'22", long 86°39'55", at bridge on State Highway 96, 0.4 mile west of Triune, Williamson County, Tenn.	3.67		7- 9-59	a.15
McClorys Branch.	Harpeth River	Lat 35°50'21", long 86°43'06", at county road bridge, 0.6 mile above mouth and 1.3 miles west of McDaniel, Williamson County, Tenn. (previously published as 4½ miles northwest of College Grove).	11.4	1953	7- 9-59	a.25
Mayes Creek..	....do.....	Lat 35°53'32", long 86°46'00", at bridge on State Highway 96, 3.6 miles northwest of Arrington, Williamson County, Tenn.	10.2		7- 9-59	a.2

* Base flow. ‡ Operated as a continuous-record gaging station. a Estimated.
b Furnished by Corps of Engineers.

Discharge measurements made at miscellaneous sites during water year 1959--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Cumberland River basin--Continued				
Watson Branch	Harpeth River	Lat 35°54'37", long 86°48'45", at bridge on State Highway 96, 3.3 miles east of Franklin, Williamson County, Tenn.	2.20		7- 9-59	a0.2
Spencer Creek	....do.....	Lat 35°56'35", long 86°51'18", at bridge on U. S. Highway 31, 1.5 miles northeast of Franklin, Williamson County, Tenn.	10.3		7- 9-59	a.5
		Tennessee River basin				
Little River.	French Broad River.	Lat 35°11'32", long 82°36'49", 0.1 mile above High Falls and 3.8 miles northeast of Cedar Mountain, Transylvania County, N. C.	26.8		7-14-59	*77.2
Sinking Creek	Nolichucky River.	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, Greene County, Tenn.	-	1958	10-14-58	*4.74
Richland Creek.	....do.....	Lat 36°05'52", long 82°51'09", at culvert under county road, 0.5 mile above mouth and 4.7 miles south of Greeneville, Greene County, Tenn.	14.9	1944,1947, 1950-52, 1957	10-14-58	*8.28
Bent Creek...	....do.....	Lat 36°11'14", long 83°09'53", at bridge, 0.5 mile above mouth and 2.4 miles southeast of Springvale, Hamblin County, Tenn.	41.2	1954	10-14-58	*4.70
Webb Creek...	Little Pigeon River.	Lat 35°45'31", long 83°23'38", at bridge, 10 ft below Lindsay Branch, at Pittman Center, Sevier County, Tenn.	18.0	1944, 1953-54	9-28-59	*4.42
Beaverdam Creek.	Laurel Creek.	Lat 36°31'14", long 81°55'54", at bridge on U. S. Highway 421, at Shady Valley, Johnson County, Tenn.	14.3	1952-54, 1957	10- 7-58	*4.47
Sinking Creek	Beidleman Creek.	Lat 36°32'43", long 82°08'12", at bridge on county road, 0.5 mile below crossing on U. S. Highway 421, at Ruthton, Sullivan County, Tenn., and 5.0 miles southeast of Bristol.	14.7	1900, 1951-55, 1957	10- 8-58	*7.43
Beck (Back) Creek.	Beaver Creek.	Lat 36°31'08", long 82°15'39", at bridge on U. S. Highway 11E, 100 ft above mouth and 3.0 miles north of Bluff City, Sullivan County, Tenn.	10.8	1957	10- 8-58	*3.53
Roan Creek...	Watauga River	Lat 36°22'37", long 81°53'14", on Butler-Neva road, 1.1 miles below Avery Branch and 1.7 miles southwest of Neva, Johnson County, Tenn.	102	1942-55‡	10- 7-58	*23.2
Stony Creek..	....do.....	Lat 36°19'05", long 82°04'31", at culvert under relocated State Highway 67, 0.1 mile above mouth and 7.0 miles northeast of Hampton, Carter County, Tenn.	5.36	1957	10- 7-58	*1.55
Little Doe River.	Doe River....	Lat 36°16'28", long 82°10'15", at bridge on county road, 1,200 ft above mouth, at Hampton, Carter County, Tenn.	-	1900-1901	10- 7-58	*19.8
Buffalo Creek	Watauga River	Lat 36°19'42", long 82°16'15", at bridge on State Highway 91, 300 ft above mouth, at Riovista, near Elizabethton, Carter County, Tenn.	39.0	1900-1901, 1951-54, 1957	10- 6-58	*12.8
Kendrick Creek.	South Fork Holston River.	Lat 36°29'48", long 82°30'49", 0.1 mile above mouth, 0.7 mile below Straight Branch, and 5.0 miles southeast of Kingsport, Sullivan County, Tenn.	20.2	1953-54, 1957	10- 8-58	*7.64
Horse Creek..	....do.....	Lat 36°30'08", long 82°33'51", at bridge on State Highway 81, 500 ft below Little Horse Creek and about 3.0 miles south of Kingsport, Sullivan County, Tenn.	44.5	1943, 1953-55, 1957	10- 8-58	*4.72
Poor Valley Creek.	Holston River	Lat 36°21'55", long 83°13'16", at bridge on county road, 2.2 miles north of U. S. Highway 11W and Mooresburg, Hawkins County, Tenn.	40.6	1953-55	10- 9-58	*2.27

* Base flow.
‡ Operated as a continuous-record gaging station.
a Estimated.

Discharge measurements made at miscellaneous sites during water year 1959--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
Beaver Creek.	Holston River	Lat 36°04'36", long 83°37'36", at bridge on U. S. Highway 11E, 4.0 miles east of Strawberry Plains, Jefferson County, Tenn.	-	1952, 1957	10-14-58	*2.87
Richland Creek.	....do.....	Lat 36°08'17", long 83°40'12", 0.7 mile east of New Hope Church, 1.5 miles above mouth, and 2.5 miles southeast of Blaine, Grainger County, Tenn.	-		10- 9-58	*6.06
Second Creek.	Tennessee River.	Lat 35°59'29", long 83°57'04", at culvert under Heiskell St., 1.15 miles north of Rule High School at Knoxville, Knox County, Tenn., and 3.5 miles above mouth.	3.49	1944, 1953-54, 1957	10- 9-58	*1.34
Goose Creek..	....do.....	Lat 35°56'28", long 83°55'01", 0.2 miles northwest of intersection of Blount Ave. and Maryville Pike and 0.2 mile southeast of Southern Ry. bridge over Blount Ave., at Knoxville, Knox County, Tenn.	-	1957	10- 9-58	*1.63
Third Creek..	....do.....	Lat 35°57'28", long 83°58'17", below culvert under Papermill Rd., 0.1 mile west of Knoxville city limits, Knox County, Tenn., and 3.5 miles above mouth.	11.1	1944, 1953-54, 1957	10- 9-58	*4.79
Fourth Creek.	....do.....	Lat 35°55'23", long 83°59'46", at Eastern State Hospital, 0.75 mile south of Bearden Post Office, Knox County, Tenn.	6.46	1953-54, 1957	10- 9-58	*4.11
Pistol Creek.	Little River.	Lat 35°44'16", long 83°58'42", at Best St. at Maryville, Blount County, Tenn., 11.4 miles above mouth.	-	1954	10- 9-58	*3.39
Ten Mile Creek.	Tennessee River.	Lat 35°54'01", long 84°04'25", below culvert on Williams Rd., 0.3 mile northwest of Ebenezer, Knox County, Tenn.	13.2	1944, 1953-54, 1957	10- 9-58	*7.34
Town Creek...	....do.....	Lat 35°47'35", long 84°15'44", at bridge on U. S. Highway 11 at Lenoir City, Loudon County, Tenn.	9.62	1953-54, 1957	10-10-58	*3.35
Little Tennessee River.	....do.....	Lat 35°10'21", long 83°22'20", at bridge at Franklin, Macon County, N. C., 0.2 mile above Cullasaja River.	201		10-20-58	*170
Scott Creek..	Tuckasegee River.	Lat 35°24'08", long 83°10'36", at bridge, 1.0 mile northeast of Beta, Jackson County, N. C., and 1.2 miles below Buff Creek.	37.6	1958	10- 2-58 10-20-58	*49.8 *33.2
Long Creek...	Cheoah River.	Lat 35°19'44", long 83°48'40", at bridge, 0.5 mile north of Robbinsville, Graham County, N. C., and 1.1 miles below Atoah Creek.	11.8	1944, 1953-55, 1958	10- 1-58	*26.0
Abrams Creek.	Little Tennessee River.	Lat 35°36'40", long 83°56'06", in Great Smoky Mountain National Park, at Abrams Creek ranger station, 5.5 miles northeast of Chilhowee, Blount County, Tenn.	-		10- 9-58	*24.2
Citico Creek.	....do.....	Lat 35°31'54", long 84°06'12", at county highway bridge, 0.1 mile above Smoky Branch and 0.5 mile south of Citico Beach, Monroe County, Tenn.	67.1	1900, 1944, 1953-54, 1957	10- 9-58	*16.7
Ninemile Creek.	....do.....	Lat 35°36'23", long 84°10'23", at county highway bridge, 4.0 miles east of Vonore, Blount County, Tenn., and 4.9 miles above mouth.	57.6	1953-54	10- 9-58	*17.1
Tellico River	....do.....	Lat 35°33'33", long 84°13'32", 0.1 mile below Notchy Creek, 2.3 miles southeast of Vonore, Monroe County, Tenn., and 4.2 miles above mouth.	271	1948-52‡, 1954, 1957	10- 9-58	*96.8
Bat Creek....	....do.....	Lat 35°38'36", long 84°15'12", at bridge on State Highway 72, 2.5 miles above mouth and 4.5 miles north of Vonore, Monroe County, Tenn.	30.7	1953-55, 1957	10-10-58	*11.6
Steekee Creek	....do.....	Lat 35°44'17", long 84°20'06", at bridge on State Highway 72, at Loudon, Loudon County, Tenn.	7.25	1944, 1950-51, 1953-55, 1957	10-10-58	*2.22

* Base flow.
‡ Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during water year 1959--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
Hines Creek..	Tennessee River.	Lat 35°47'35", long 84°21'47", at bridge on county road, 2.5 miles above mouth, 5.0 miles southwest of Eaton crossroad and 5.0 miles west of Lenoir City, Loudon County, Tenn.	-		10-10-58	*2.07
Big Sycamore Creek.	Clinch River.	Lat 36°24'45", long 83°30'08", at bridge on U. S. Highway 25E, 1.7 miles southeast of Springdale, Claiborne County, Tenn., and 5.5 miles southeast of Tazewell.	34.8	1944, 1953	10-10-58	*1.38
Coal Creek...	....do.....	Lat 36°13'14", long 84°09'27", at bridge on U. S. Highway 25W, at Lake City, Anderson County, Tenn.	24.5	1932-34‡, 1944, 1949-55, 1957	10-10-58	*1.36
Buffalo Creek	....do.....	Lat 36°11'05", long 84°03'41", at culvert under Norris Freeway (State Highway 71), 1.0 mile southeast of Norris, Anderson County, Tenn.	9.45	1947-50‡, 1951-55, 1957	10-10-58	*.64
Byrd Creek...	Daddys Creek.	Lat 35°55'24", long 84°56'08", at county road bridge, 2.3 miles southeast of Darton, Cumberland County, Tenn.	27.9		10-21-58	*.48
Little Sewee Creek.	Sewee Creek..	Lat 35°35'54", long 84°42'13", at county road bridge, 1.6 miles southwest of Center Point, Meigs County, Tenn.	32.3		10-21-58	*8.41
Hardin Creek.	Decatur Creek	Lat 35°28'55", long 84°48'52", at bridge on State Highway 58, 1.0 mile northeast of Goodfield and 2.5 miles southwest of Decatur, Meigs County, Tenn.	1.56		3-27-59	707
Coldwater Branch.	Goodfield Creek.	Lat 35°28'11", long 84°49'27", at culvert under State Highway 58 at Goodfield, 3.5 miles southwest of Decatur, Meigs County, Tenn.	5.25		3-27-59	†1,530
Bitter Creek.	Brasstown Creek.	Lat 34°54'37", long 83°52'03", at bridge in Union County, 0.1 mile above mouth and 2.0 miles southwest of Young Harris, Ga.	4.78		5-31-59	†840
Brasstown Creek.	Hiwassee River.	Lat 34°54'42", long 83°51'56", at bridge on U. S. Highway 76, 0.1 mile below Bitter Creek and 1.8 miles southwest of Young Harris, Towns County, Ga.	12.6		5-31-59	†2,280
Do.....	....do.....	Lat 34°56'23", long 83°51'23", at bridge on State Highway 66, 20 ft below Byers Creek and 0.7 mile northwest of Young Harris, Towns County, Ga.	20.3		5-31-59	†3,990
Corn Creek...	Brasstown Creek.	Lat 34°56'25", long 83°50'55", at bridge on U. S. Highway 76, 0.4 mile above mouth and 0.5 mile north of Young Harris, Towns County, Ga.	2.87		5-31-59	†355
Brasstown Creek.	Hiwassee River.	Lat 34°58'24", long 83°52'55", at bridge on State Highway 66 at Welch, Towns County, Ga., 0.4 mile below Crooked Creek.	34.5		5-31-59	†4,560
Do.....	....do.....	Lat 35°02'24", long 83°57'34", at bridge, 0.1 mile northwest of Brasstown, Clay County, N. C., and 0.8 mile above mouth.	83.1		5-31-59	†6,380
Butternut Creek.	Nottely River	Lat 34°54'00", long 83°55'05", at culvert on U. S. Highway 76, 1.6 miles above Right Prong and 2.8 miles northeast of Blairsville, Union County, Ga.	.98		5-31-59	†249
Do.....	....do.....	Lat 34°52'34", long 83°58'10", at bridge on U. S. Highway 19, 0.6 mile west of Blairsville, Union County, Ga., and 0.7 mile below Little Creek.	11.1		5-31-59	†1,730
North Mouse Creek.	Hiwassee River.	Lat 35°27'38", long 84°38'25", at bridge on State Highway 30, 3.1 miles northwest of Athens, McMinn County, Tenn.	35.0		3-27-59	†3,560
Spring Creek.	North Mouse Creek.	Lat 35°28'20", long 84°40'33", at bridge on State Highway 30, 1.7 miles southeast of Idlewild, McMinn County, Tenn.	2.74		3-27-59	†723

* Base flow. † Peak flow. ‡ Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during water year 1959--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
Spring Creek.	North Mouse Creek.	Lat 35°22'00", long 84°45'48", at bridge on county road, 3.0 miles northwest of Sanford, McMinn County, Tenn.	11.8		3-27-59	†1,710
Rogers Creek.	Hiwassee River.	Lat 35°28'50", long 84°41'55", at bridge on State Highway 30, 0.3 mile east of Idlewild, McMinn County, Tenn.	11.4		3-27-59	†3,070
Do.....	....do.....	Lat 35°26'15", long 84°44'15", at bridge on County Road 4374, 4.5 miles northwest of Riceville, McMinn County, Tenn.	16.6		3-27-59	†4,290
Price Creek tributary.	Price Creek..	Lat 35°24'30", long 84°49'56", at culvert on county road, 1.3 miles southeast of Shiloh School, Meigs County, Tenn.	.43		3-27-59	†108
Price Creek..	Hiwassee River.	Lat 35°23'40", long 84°50'32", 0.4 mile below bridge on county road and 1.5 miles southeast of Shiloh School, Meigs County, Tenn.	2.05		3-27-59	†1,230
Agency Creek.	....do.....	Lat 35°23'32", long 84°53'47", at bridge on State Highway 4247, 0.3 mile east of Big Spring, Meigs County, Tenn.	10.1	1954	3-27-59	†3,210
Agency Creek tributary.	Agency Creek.	Lat 35°23'35", long 84°54'05", at bridge on State Highway 58, 0.15 mile south of Big Spring, Meigs County, Tenn.	1.79		3-27-59	†598
Mountain Creek.	Tennessee River.	Lat 35°07'32", long 85°18'27", at bridge on Morrison Spring Rd., 1.3 miles west of Red Bank and 2.6 miles east of Signal Mountain, Hamilton County, Tenn.	3.34		8- 4-59	*.32
Do.....	....do.....	Lat 35°05'54", long 85°19'42", at bridge on U. S. Highway 127, at Glendale, 2.0 miles southeast of Signal Mountain, Hamilton County, Tenn.	5.07		8- 4-59	*.25
Big Brush Creek c/.	Sequatchie River.	Lat 35°24'25", long 85°22'04", at bridge on State Highway 28, 2.5 miles northeast of Dunlap, Sequatchie County, Tenn.	47.7	1932, 1952	10-22-58	0
Factory Creek	Big Creek....	Lat 35°22'02", long 87°09'04", at bridge on county road, 0.2 mile above Brownlow Creek and 2.4 miles northwest of Campbellsville, Giles County, Tenn.	28.9		10- 3-58	9.44
Big Creek....	Richland Creek.	Lat 35°20'58", long 87°08'19", 0.2 mile below Rhea Branch and 1.0 mile northwest of Campbellsville, Giles County, Tenn.	62.8		10- 3-58	21.1
Do.....	....do.....	Lat 35°17'23", long 87°03'46", at Sanders Lake, 1.6 miles northwest of Riversburg, Giles County, Tenn.	85.2	1952-54, 1956	10- 3-58	27.3
Richland Creek.	Elk River....	Lat 35°16'20", long 87°02'42", at bridge on county road, at Riversburg, Giles County, Tenn.	160		10- 3-58	51.4
Factory Creek	Shoal Creek..	Lat 35°10'32", long 87°35'36", at county road bridge, 0.4 mile southwest of McCrory School and 4.5 miles northwest of West Point, Lawrence County, Tenn.	52.4		10-21-58	*37.4
Do.....	....do.....	Lat 35°07'17", long 87°32'48", at county road bridge, 1.2 miles southwest of West Point, Lawrence County, Tenn.	71.9		11- 6-58	*44.4
Shipman Creek	Duck River...	Lat 35°24'30", long 86°16'58", just below unnamed tributary, 0.5 mile below Ledford's Mill, Moore County, Tenn.	1.60		5- 8-59	*3.91
Do.....	....do.....	Lat 35°25'40", long 86°17'42", just below Renegar Branch at Willow Grove, Bedford County, Tenn.	3.13		5- 8-59	*4.81
Sinking Creek	....do.....	Lat 35°28'59", long 86°36'19", at bridge on State Highway 64, 1.1 miles southeast of Wheel, Bedford County, Tenn.	18.1		10-22-58	*.19
Rutherford Creek.	....do.....	Lat 35°40'23", long 86°58'42", 1.0 mile below Double Branch and 3.2 miles south of town of Carters Creek, Maury County, Tenn.	68.8	1953-58‡	1- 9-59	*109

* Base flow.
† Peak flow.
c Published as Brush Creek in WSP 728.

Discharge measurements made at miscellaneous sites during water year 1959--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Tennessee River basin--Continued				
Mill Creek...	Piney River..	Lat 35°53'21", long 87°21'55", 100 ft above mouth of North Fork and 1¼ miles southwest of Wrigley, Hickman County, Tenn.	-	1950-51, 1954	2-20-59	*14.3
North Fork Mill Creek.	Mill Creek...	Lat 35°53'21", long 87°21'58", 100 ft above mouth and 1¼ miles southwest of Wrigley, Hickman County, Tenn.	2.34	1950-52	2-20-59	*7.39
Mill Creek...	Piney River..	Lat 35°52'14", long 87°26'18", just above Bell Branch, 1.4 miles east of Graham, Hickman County, Tenn.	-		2-20-59	*44.3
Bell Branch..	Mill Creek...	Lat 35°52'11", long 87°20'19", at mouth, 1.4 miles east of Graham, Hickman County, Tenn.	-		2-20-59	*10.1
Mill Creek...	Piney River..	Lat 35°52'24", long 87°27'55", 150 ft below bridge on State Highway 48 at Graham, Hickman County, Tenn., and 1.0 mile north of Nunnelly (published in 1950 as "at Nunnelly").	-	1950-51	2-20-59	*61.4
Cypress Creek	Tennessee River.	Lat 37°01'24", long 88°18'39", at Illinois Central RR. bridge, 0.6 mile west of Gilbertsville, Ky.	27.6	1958	10-28-58 4-29-59	0 1.35
East Fork Clarks River.	Clarks River.	Lat 36°34'52", long 88°18'53", at bridge on U. S. Highway 641, 1.0 miles above Middle Fork Clarks River and 1.4 miles south of Murray, Ky.	45.6	1949-51, 1958	10-29-58 4-29-59	0 2.56
West Fork Clarks River.	....do.....	Lat 36°53'03", long 88°33'11", at bridge on State Highway 131, at Kaler, Ky.	-	1957-58	10-28-58 4-30-59	*13.7 *38.4

* Base flow.

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 1955-59 measurements were made at several springs, most of which were measured during the 1950-54 study. The results of discharge measurements during the 1959 water year, showing the yield and the water temperature, are given in the following table:

Discharge measurements of springs in Tennessee, water year October 1958 to September 1959

Spring	Location	Tributary to--	Date	Discharge (gallons per minute)	Temperature (degrees Fahrenheit)		Remarks
					Air	Water	
		Anderson County					
Bear Creek Spring No. 1.	Lat 35°57'26", long 84°18'03", on Bear Creek Valley Road, 2¾ miles northeast of intersection with State Highway 95, near Oak Ridge.	Bear Creek to East Fork Poplar Creek to Poplar Creek to Clinch River.	Apr. 16	498	71	53	
			May 5	247	75	55	
			June 3	229	69	55	
			July 6	95	76	55	
			Aug. 4	60	79	56	
			Sept. 9	65	79	56	
Bear Creek Spring No. 2.	Lat 35°56'13", long 84°20'23", in triangle formed by intersection of Bear Creek Valley Road and State Highway 95, near Oak Ridge.	....do.....	Apr. 16	368	71	53	
			May 5	151	75	55	
			June 3	140	75	56	
			July 6	68	76	56	
			Aug. 4	54	76	57	
			Sept. 9	48	77	57	
		Giles County					
Watson (Spring No. 112 in WSP 677).	Lat 35°22'51", long 87°09'25", 3.3 miles northwest of Campbellsville.	Brownlow Creek to Factory Creek to Big Creek to Richland Creek to Elk River.	Oct. 3	1,310	-	58	
			Oct. 3	1,350	-	58	
		Hamilton County					
Morrison and Reed.	Lat 35°08'05", long 85°18'20", 1.3 miles west of Red Bank and 2.3 miles east of Signal Mountain.	Mountain Creek to Tennessee River.	Aug. 4	90	-	-	Clear.
		Loudon County					
Kirkland.....	Lat 35°43'07", long 84°19'21", 2.0 miles southeast of Loudon, along State Highway 72.	Clear Branch to Tennessee River.	Oct. 29	395	51	58	
		Moore County					
Ledford.....	Lat 35°24'43", long 86°16'36", 6.5 miles northwest of Tullahoma.	Shipman Creek to Duck River.	May 8	175	68	58	Clear.
		Sequatchie County					
Barkers.....	Lat 35°22'40", long 85°21'55", 1.5 miles northeast of Dunlap.	Big Brush Creek to Sequatchie River.	Aug. 18	2,970	76	57	Clear.
Gravity Water Co.	Lat 35°22'10", long 85°23'24", on Spring St. in Dunlap.	Coops Creek to Sequatchie River.	Aug. 18	126	76	59	Clear.
Clack's.....	Lat 35°22'12", long 85°23'12", on Spring St. in Dunlap.	....do.....	Aug. 18	255	78	58	Clear.
		Warren County					
Tom Sain.....	Lat 35°34'30", long 85°53'00", 2.8 miles southeast of Morrison.	West Fork Hickory Creek to Barren Fork.	Jan. 20	4,490	54	46	Clear.

INDEX

Page

Accuracy of field data and computed results..... 7-8
Acre-foot, definition of..... 3
Adams, Tenn., Red River near..... 53
  Sulphur Fork Red River near..... 54
Agencies other than the Geological Survey, records collected by.... 11
Allen Creek near Hazelwood, N. C..... 79
Alpine, Tenn., West Fork Obey River near..... 33
Antioch, Tenn., Mill Creek near..... 48
Apalachia Lake, N. C., contents of...216,220
Arthur, Tenn., Powell River near..... 140
Asheville, N. C., French Broad River at..... 13,70

Barbourville, Ky., Cumberland River at..... 18
Bear Creek, at Bishop, Ala..... 197
  near Hackleburg, Ala..... 193
  near Red Bay, Ala..... 194
Bear Creek Lake, N. C., capacity of... 219
Beaver Creek near Bristol, Va..... 96
Beaverdam Creek at Damascus, Va..... 92
Beech River, near Darden, Tenn..... 11
  near Lexington, Tenn..... 11
Beetree Creek near Swannanoa, N. C.... 68
Bell Buckle, Tenn., Wartrace Creek at..... 200
Belleview, Tenn., Harpeth River at.... 50
Bent Creek, N. C., French Broad River at..... 66
Benton, Ky., East Fork Clarks River near..... 212
Benton, Tenn., South Chestuee Creek near..... 168
Berea Creek near Leedy, Miss..... 11
Big Bigby Creek at Sandy Hook, Tenn... 204
Big Creek near Rogersville, Tenn..... 107
Big Laurel Creek near Stackhouse, N. C..... 73
Big Moccasin Creek near Gate City, Va..... 104
Big Nance Creek at Courtland, Ala..... 189
Big Rock Creek at Lewisburg, Tenn..... 202
Big Sandy River at Bruceton, Tenn..... 209
Big Stone Gap, Va., Powell River at... 138
Billows, Ky., Rockcastle River at..... 23
Biltmore, N. C., Swannanoa River at..... 69
Birdsong Creek near Holladay, Tenn.... 11
Birdtown, N. C., Oconaluftee River at. 124
Bishop, Ala., Bear Creek at..... 197
Blairsville, Ga., Nottely River near.. 155
Blantyre, N. C., French Broad River at..... 64
Blue Ridge, Ga., Toccoa River near.... 160
Blue Ridge Lake, Ga., contents of....216,220
Bodenham, Tenn., Weakley Creek near... 185
Boone Lake, Tenn., contents of.....213,219
Bradley Creek (tributary to East Fork Stones River) at Lascassas Tenn..... 44
Bradley Creek (tributary to Elk River) near Prairie Plains, Tenn..... 181
Bradshaw Creek at Frankewing, Tenn.... 184
Brevard, N. C., Davidson River near... 63
Bristol, Va., Beaver Creek near..... 96
Browns Creek near Chesterfield, Tenn.. 11
Bruceton, Tenn., Big Sandy River at... 209
Bryson City, N. C., Noland Creek near. 126
  Tuckasegee River at..... 125
Buck Creek near Shopville, Ky..... 26
Buffalo River, near Flat Woods, Tenn.. 207
  near Lobelville, Tenn..... 208
Bullrun Creek near Halls Crossroads, Tenn..... 142
Burnett Lake, N. C., capacity of..... 218
Byrdstown, Tenn., Wolf River near..... 34

Cadiz, Ky., Little River near..... 58
Calderwood Lake, Tenn., capacity of... 219
Calfkiller River below Sparta, Tenn... 37

Page

Candler, N. C., Hominy Creek at..... 67
Cane Branch near Parkers Lake, Ky..... 24
Cane Creek near Shady Hill, Tenn..... 11
Cane River near Sioux, N. C..... 84
Caney Creek near Grissom Chapel, Miss.. 11
Caney Fork near Rock Island, Tenn..... 39
Canton, N. C., East Fork Pigeon River near..... 77
  Pigeon River at..... 78
Carthage, Tenn., Cumberland River at... 40
Cedar Cliff Lake, N. C., capacity of... 219
Cedar Creek (triburary to Bear Creek) near Pleasant Site, Ala..... 195
Cedar Creek (tributary to Clinch River) near Lebanon, Va..... 131
Celina, Tenn., Cumberland River at..... 35
Celo, N. C., South Toe River near..... 83
Center Hill Reservoir, Tenn., contents of..... 60,61
Cfs-day, definition of..... 3
Chambers Creek near Kendrick, Miss..... 11
Charleston, Tenn., Hiwassee River above 167
Chase, Ala., Flint River near..... 177
Chattanooga, Tenn., Tennessee River at..... 171
  Tennessee River near..... 173
Chattanooga Creek near Flintstone, Ga.. 172
Chatuge Lake, N. C., contents of.....215,220
Cheatham Dam, Tenn., Cumberland River below..... 52
Cheatham Lake, Tenn., capacity of..... 61
Cheoah Lake, N. C., capacity of..... 219
Cherokee Lake, Tenn., contents of.....214,219
Chestuee Creek, at Dentville, Tenn..... 11
  at Zion Hill, Tenn..... 11
Chickamauga, Tenn., South Chickamauga Creek near..... 170
Chickamauga Lake, Tenn., contents of..217,221
Chilhowie, Va., South Fork Holston River near..... 91
Chilhowie Dam, Tenn., Little Tennessee River below..... 127
Chilhowie Lake, Tenn., contents of....215,220
Clarks River, East Fork, at Murray, Ky. 211
  East Fork near Benton, Ky..... 212
Clear Creek near Garth, Ala..... 11
Clear Fork near Robbins, Tenn..... 28
Cleveland, Va., Clinch River at..... 132
Clinch River, above Tazewell, Tenn..... 137
  at Cleveland, Va..... 132
  at Richlands, Va..... 130
  at Speers Ferry, Va..... 135
  below Norris Dam, Tenn..... 141
  near Scarboro, Tenn..... 143
  North Fork, at Duffield, Va..... 136
Coeburn, Va., Guest River at..... 133
Coke Creek near Chapel Hill, Miss..... 11
Cold Mill Creek near Cross Roads, Miss. 11
Collins River near McMinnville, Tenn... 38
Columbia, Tenn., Duck River at..... 203
Contents, definition of..... 3
Control, definition of..... 3
Cooperation, record of..... 1
Copper Creek near Gate City, Va..... 134
Copperhill, Tenn., Davis Mill Creek at..... 163
  Ocoee River at..... 161
Corbin, Ky., Laurel River at..... 21
Courtland, Ala., Big Nance Creek at.... 189
Cove Creek, N. C., Jonathan Creek near. 80
Coweeta Creek basin, N. C., records of. 11
Cubic feet per second per square mile, definition of..... 3
Cubic foot per second, definition of... 3
Cullasaja River, at Cullasaja, N. C.... 117
  at Highlands, N. C..... 116
Cumberland, Ky., Poor Fork at..... 14
Cumberland Falls, Ky., Cumberland River at..... 20
Cumberland River, at Barbourville, Ky.. 18
  at Carthage, Tenn..... 40
  at Celina, Tenn..... 35
  at Cumberland Falls, Ky..... 20

Page
Cumberland River, at Dover, Tenn..... 56
at Smithland, Ky..... 59
at Williamsburg, Ky..... 19
below Cheatham Dam, Tenn..... 52
below Old Hickory, Tenn..... 43
near Harlan, Ky..... 15
near Pineville, Ky..... 17
near Rowena, Ky..... 31
South Fork, near Stearns, Ky..... 29
Cumberland River basin, crest-stage stations in..... 226
gaging-station records in..... 14-59
low-flow partial-record stations in..... 222
measurements at miscellaneous sites in.....231-232
reservoirs in..... 60-61
Cypress Swamp drainage ditch near Gilbertsville, Ky..... 11

Daddys Creek near Hebbertsburg, Tenn.. 146
Dale Hollow Reservoir, Tenn., contents of..... 60,61
Damascus, Va., Beaverdam Creek at..... 92
Data, accuracy of..... 7-8
explanation of..... 4-7
Davidson River near Brevard, N. C..... 63
Davis Mill Creek at Copperhill, Tenn..... 163
Davy Crockett Lake, Tenn., capacity of..... 219
Decatur, Tenn., Sewee Creek near..... 149
Dial Ga., Toccoa River near..... 159
Dillsboro, N. C., Tuckasegee River at..... 123
Doe River at Elizabethton, Tenn..... 99
Donelson, Tenn., Stones River above... 47
Douglas Dam, Tenn., French Broad River below..... 88
Douglas Lake, Tenn., contents of.....213,219
Dover, Tenn., Cumberland River at..... 56
Drainage area, definition of..... 3
Drakes Creek above Hendersonville, Tenn..... 42
Duck River, above Hurricane Mills, Tenn.....13,206
at Columbia, Tenn..... 203
below Manchester, Tenn..... 199
near Shelbyville, Tenn..... 201
Ducktown, Tenn., North Potato Creek near..... 164
Duffield, Va., North Fork Clinch River at..... 136

East Fork Lake, N. C., capacity of.... 219
Elizabethton, Tenn., Doe River at..... 99
Watauga River at..... 100
Elk River, above Fayetteville, Tenn... 183
near Pelham, Tenn..... 180
near Prospect, Tenn..... 187
Embreeville, Tenn., Nolichucky River at..... 85
Emf, Tenn., Ocoee River at..... 165
Emory River at Oakdale, Tenn..... 148

Falkville, Ala., Flint Creek near..... 179
Fayetteville, Tenn., Elk River above.. 183
Fightingtown Creek at McCaysville, Ga.. 162
First Creek at Mineral Springs Avenue, at Knoxville, Tenn..... 112
Flat Woods, Tenn., Buffalo River near. 207
Flint Creek near Falkville, Ala..... 179
Flint River near Chase, Ala..... 177
Flintstone, Ga., Chattanooga Creek near..... 178
Floods, reports on..... 11
Florence, Ala., Tennessee River at.... 191
Fontana Lake, N. C., contents of.....214,220
Fort Loudoun Lake, Tenn., contents of.....214,219
Fort Patrick Henry Lake, Tenn., contents of.....213,219
Frankewing, Tenn., Bradshaw Creek at.. 184
French Broad River, at Asheville, N. C..... 13,70
at Bent Creek, N. C..... 66
at Blantyre, N. C..... 64
at Marshall, N. C..... 72
at Rosman, N. C..... 62
below Douglas Dam, Tenn..... 88
near Knoxville, Tenn..... 90

Page
French Broad River near Newport, Tenn. 74

Gaging station, definition of..... 2
Gate City, Va., Big Moccasin Creek near..... 104
Copper Creek near..... 134
North Fork Holston River near..... 105
Geraldine, Ala., Town Creek near..... 175
Good Springs, Ala., Sugar Creek near... 188
Great Falls Lake, Tenn., contents of... 60,61
Greenwood, Ky., Helton Branch at..... 25
Guest River at Coeburn, Va..... 133
Guntersville Lake, Ala., contents of..217,221

Hackleburg, Ala., Bear Creek near..... 193
Hales Bar Lake, Tenn., contents of....217,221
Halls Crossroads, Tenn., Bullrun Creek near..... 142
Halltown, Ala., Little Bear Creek near..... 196
Harlan, Ky., Cumberland River near..... 15
Harmon Creek near Lexington, Tenn..... 11
Harpeth River, at Belleview, Tenn..... 50
near Kingston Springs, Tenn..... 51
Hayesville, N. C., Hiwassee River near. 152
Hazelwood, N. C., Allen Creek near..... 79
West Fork Pigeon River near..... 75
Hebbertsburg, Tenn., Daddys Creek near. 146
Helton Branch at Greenwood, Ky..... 25
Hendersonville, Tenn., Drakes Creek above..... 42
Hepco, N. C., Pigeon River near..... 81
Highlands, N. C., Cullasaja River at... 116
Hilham, Tenn., Roaring River near..... 36
Hiwassee Lake, N. C., contents of.....216,220
Hiwassee River, above Charleston, Tenn. 167
above Murphy, N. C..... 153
at Presley, Ga.....150-151
below Chatuge Dam, near Hayesville, N. C..... 152
near McFarland, Tenn..... 158
Holston River, at Surgoinsville, Tenn.. 106
Middle Fork, at Sevenmile Ford, Va... 94
near Jefferson City, Tenn..... 109
near Knoxville, Tenn..... 111
North Fork, at Holston, Va..... 103
near Gate City, Va..... 105
near Saltville, Va.....13,102
South Fork, at Kingsport, Tenn..... 101
at Riverside, near Chilhowie, Va... 91
at Vestal, Va..... 93
below South Holston Dam, Tenn..... 95
Hominy Creek at Candler, N. C..... 67
Hopkinsville, Ky., South Fork Little River at..... 57
Horse Creek near Savannah, Tenn..... 11
Hurricane Mills, Tenn., Duck River above.....13,206
Hydrologic conditions..... 12
graph of..... 13

Indian Creek near Cerro Gordo, Tenn.... 11
Iron City, Tenn., Shoal Creek at..... 190
Ivy River near Marshall, N. C..... 71
Ivylog, Ga., Nottely River near..... 156

Jamestown, Tenn., East Fork Obey River near..... 32
Jefferson City, Tenn., Holston River near..... 109
Mill Spring near..... 110
Mossy Spring near..... 108
Jonathan Creek near Cove Creek, N. C... 80
Jonesville, Va., Powell River near..... 139

Kentucky Lake, Ky., contents of.....218,221
Kingsport, Tenn., South Fork Holston River at..... 101
Kingston Springs, Tenn., Harpeth River near..... 51
Knoxville, Tenn., First Creek at..... 112
French Broad River near..... 90
Holston River near..... 111
Tennessee River at..... 113

Lake Cumberland, Ky., contents of..... 60,61
Lake Logan, change in contents..... 76
Lake Walters, N. C., capacity of..... 218
Lancing, Tenn., Obed River near..... 147
Lascassas, Tenn., Bradley Creek at..... 44
Laurel River at Corbin, Ky..... 21

Page
Lebanon, Tenn., Spring Creek near..... 41
Lebanon, Va., Cedar Creek near..... 131
Leipers Fork, Tenn., West Harpeth
River near..... 49
Lewisburg, Tenn., Big Rock Creek at... 202
Lick Creek at Mohawk, Tenn..... 87
Limestone Creek near Athens, Ala..... 11
Little Bear Creek near Halltown, Ala.. 196
Little Dry Creek near Garth, Ala..... 11
Little Pigeon River at Sevierville,
Tenn..... 89
Little River (tributary to Cumberland
River) near Cadiz, Ky..... 58
South Fork, at Hopkinsville, Ky..... 57
Little River (tributary to Tennessee
River) near Maryville, Tenn..... 114
Little Tennessee River, at McGhee,
Tenn..... 129
at Needmore, N. C..... 118
below Chilhowee Dam, Tenn..... 127
near Prentiss, N. C..... 115
Little Yellow Creek near Burnsville,
Miss..... 11
Lobelville, Tenn., Buffalo River near. 208
London, Ky., Wood Creek near..... 22

McCaysville, Ga., Fightingtown Creek
at..... 162
McFarland, Tenn., Hiwassee River near. 158
McGhee, Tenn., Little Tennessee River
at..... 129
McMinnville, Tenn., Collins River
near..... 38
Manchester, Tenn., Duck River below... 199
Map of the United States..... 9
Marshall, N. C., French Broad River at
Ivy River near..... 71
Maryville, Tenn., Little River near... 114
Melton Branch near Oak Ridge, Tenn.... 145
Middle Creek near Englewood, Tenn..... 11
Middlesboro, Ky., Yellow Creek near... 16
Middleton Creek near Milledgeville,
Tenn..... 11
Mill Creek near Antioch, Tenn..... 48
Mill Spring near Jefferson City, Tenn. 110
Millican Creek near Douglas Dam, Tenn. 11
Mills River near Mills River, N. C.... 65
Mohawk, Tenn., Lick Creek at..... 87
Mossy Spring near Jefferson City,
Tenn..... 108
Muddy Creek near Fort Loudon Dam,
Tenn..... 11
Mulberry Creek, West Fork at Mul-
berry, Tenn..... 182
Murfreesboro, Tenn., West Fork Stones
River near..... 45
Murphy, N. C., Hiwassee River above... 153
Murray, Ky., East Fork Clarks River
at..... 211

Nantahala Lake, N. C., contents of...214,219
Nantahala River, at Nantahala, N. C... 120
near Rainbow Springs, N. C..... 119
Needmore, N. C., Little Tennessee
River at..... 118
New River at New River, Tenn..... 27
Newport, Tenn., French Broad River
near..... 74
Pigeon River at..... 82
Noland Creek near Bryson City, N. C... 126
Nolichucky Dam, Tenn., Nolichucky
River below..... 86
Nolichucky River, at Embreeville,
Tenn..... 85
below Nolichucky Dam, Tenn..... 86
Norris Dam, Tenn., Clinch River below. 141
Norris Lake, Tenn., contents of.....215,220
North Potato Creek near Ducktown,
Tenn..... 164
Nottely Lake, Ga., contents of.....216,220
Nottely River, at Nottely Dam, near
Ivylog, Ga..... 156
near Blairsville, Ga..... 155

Oak Ridge, Tenn., Melton Branch near.. 145
Whiteoak Creek near..... 144
Oakdale, Tenn., Emory River at..... 148
Obed River near Lancing, Tenn..... 147
Obey River, East Fork, near Jamestown,
Tenn..... 32
West Fork, near Alpine, Tenn..... 33

Page
Ocoee No. 3 Lake, Tenn., contents of..216,220
Ocoee River, at Copperhill, Tenn..... 161
at Emf, Tenn..... 165
at Parksville, Tenn..... 166
Oconaluftee River at Birdtown, N. C.... 124
Old Hickory, Tenn., Cumberland River
below..... 43
Old Hickory Lake, Tenn., contents of... 60,61
Oostanaula Creek near Sanford, Tenn.... 169
Order of listing gaging stations..... 3-4

Paducah, Ky., Tennessee River near..... 210
Paint Rock River near Woodville, Ala... 176
Parker Branch near Leicester, N. C..... 11
Parkers Lake, Ky., Cane Branch near.... 24
Parksville, Tenn., Ocoee River at..... 166
Parksville (Ocoee No. 1) Lake, Tenn.,
contents of.....217,220
Partial-record station, definition of.. 3
Pelham, Tenn., Elk River near..... 180
Persimmon Creek at Persimmon Creek Dam,
near Letitia, N. C..... 11
Pickwick Lake, Tenn., contents of.....218,221
Pigeon River, at Canton, N. C..... 78
at Newport, Tenn..... 82
East Fork, near Canton, N. C..... 77
near Hepco, N. C..... 81
West Fork, above Lake Logan, near
Hazelwood, N. C..... 75
below Lake Logan, near Waynesville,
N. C..... 76
Pigeon River basin, N. C., records of.. 11
Pine Tree Branch, near Lexington, Tenn. 11
Pineville, Ky., Cumberland River
near..... 17
Piney Creek near Lexington, Tenn..... 11
Piney River at Vernon, Tenn..... 205
Pitman Creek at Somerset, Ky..... 30
Pleasant Site, Ala., Cedar Creek
near..... 195
Pond Creek No. 1 near Wilson Dam, Ala.. 11
Pond Creek No. 2 near Wilson Dam, Ala.. 11
Poor Fork at Cumberland, Ky..... 14
Poor Valley Creek near Spruce Pine
School, Tenn..... 11
Powell River, at Big Stone Gap, Va..... 138
near Arthur, Tenn..... 140
near Jonesville, Va..... 139
Prairie Plains, Tenn., Bradley Creek
near..... 181
Prentiss, N. C., Little Tennessee River
near..... 115
Presley, Ga., Hiwassee River at.....150-151
Prospect, Tenn., Elk River near..... 187
Publications on streamflow, by
Geological Survey..... 8-11
Pulaski, Tenn., Richland Creek near.... 186

Queens Creek Lake, capacity of..... 120

Rainbow Springs, N. C., Nantahala River
near..... 119
Red Bay, Ala., Bear Creek near..... 194
Red River, near Adams, Tenn..... 53
Sulphur Fork, near Adams, Tenn..... 54
Richland Creek near Pulaski, Tenn..... 186
Richlands, Va., Clinch River at..... 130
Roaring River near Hilham, Tenn..... 36
Robbins, Tenn., Clear Fork near..... 28
Rock Island, Tenn., Caney Fork near.... 39
Rockcastle River at Billows, Ky..... 23
Rogersville, Tenn., Big Creek near..... 107
Rosman, N. C., French Broad River at... 62
Rowena, Ky., Cumberland River near..... 31
Runoff in inches, definition of..... 3

Saltville, Va., North Fork Holston
River near.....13,102
Sandy Hook, Tenn., Big Bigby Creek at.. 204
Sanford, Tenn., Oostanaula Creek near.. 169
Santeetlah Lake, N. C., contents of...215,220
Savannah, Tenn., Tennessee River at.... 198
Scarboro, Tenn., Clinch River near..... 143
Scott Creek above Sylva, N. C..... 122
Sequatchie River near Whitwell, Tenn... 174
Sevenmile Ford, Va., Middle Fork
Holston River at..... 94
Sevierville, Tenn., Little Pigeon River
at..... 89
Sewee Creek near Decatur, Tenn..... 149
Shelbyville, Tenn., Duck River near.... 201

Page
Shiloh, Tenn., Yellow Creek near..... 55
Shoal Creek at Iron City, Tenn..... 190
Shopville, Ky., Buck Creek near..... 26
Sioux, N. C., Cane River near..... 84
Smithland, Ky., Cumberland River at... 59
Smyrna, Tenn., Stones River near..... 46
Snake Creek near Adamsville, Tenn..... 11
Somerset, Ky., Pitman Creek at..... 30
South Chestuee Creek near Benton, Tenn..... 168
South Chickamauga Creek near Chickamauga, Tenn..... 170
South Holston Dam, Tenn., South Fork Holston River below..... 95
South Holston Lake, Tenn., contents of.....213,219
South Toe River near Celo, N. C..... 83
Sparta, Tenn., Calfkiller River below. 37
Speers Ferry, Va., Clinch River at.... 135
Spring Creek near Lebanon, Tenn..... 41
Springs in Tennessee, discharge measurements of..... 237
Stackhouse, N. C., Big Laurel Creek near..... 73
Stage-discharge relation, definition of..... 3
Station numbers..... 3-4
Stearns, Ky., South Fork Cumberland River near..... 29
Stones River, above Donelson, Tenn.... 47
near Smyrna, Tenn..... 46
West Fork, near Murfreesboro, Tenn.. 45
Sugar Creek near Good Springs, Ala.... 188
Sugar Grove, N. C., Watauga River near..... 97
Sulphur Fork. See Red River, Sulphur Fork.
Surgoinsville, Tenn., Holston River at 106
Swannanoa, N. C., Beetree Creek near.. 68
Swannanoa River at Biltmore, N. C..... 69
Sylva, N. C., Scott Creek above..... 122

Tazewell, Tenn., Clinch River above... 137
Tellico River at Tellico Plains, Tenn. 128
Tennessee, springs in, discharge measurements of..... 237
Tennessee Creek project lakes..... 219
Tennessee River, at Chattanooga, Tenn. 171
at Florence, Ala..... 191
at Hales Bar, near Chattanooga, Tenn 173
at Knoxville, Tenn..... 113
at Savannah, Tenn..... 198
at Whitesburg, Ala..... 178
near Paducah, Ky..... 210
Tennessee River basin, crest-stage partial-record stations in.....227-230
gaging-station records in.....62-212
low-flow partial-record stations in.....223-225
measurements at miscellaneous sites in.....232-236
reservoirs in.....213-221
Terms and abbreviations, definition of..... 2-3
Thorpe Lake, N. C., contents of.....214-219
Toccoa River, near Blue Ridge, Ga..... 160
near Dial, Ga..... 159

Page
Tomotla, N. C., Valley River at..... 154
Town Creek near Geraldine, Ala..... 175
Tuckasegee River, at Bryson City, N. C..... 125
at Dillsboro, N. C..... 123
at Tuckasegee, N. C..... 121
Turkey Creek (tributary to Beech River) near Decaturville, Tenn..... 11
Turkey Creek (tributary to Tennessee River) near Savannah, Tenn..... 11
Turtletown Creek at Turtletown, Tenn... 157
Tuscumbia Spring at Tuscumbia, Ala..... 192

Valley River at Tomotla, N. C..... 154
Vernon, Tenn., Piney River at..... 205
Vestal, Va., South Fork Holston River at..... 93

WSP, definition of..... 3
Walker Switch Creek near Burnsville, Miss..... 11
Wartrace Creek at Bell Buckle, Tenn.... 200
Watauga Lake, Tenn., contents of.....213-219
Watauga River, at Elizabethton, Tenn... 100
below Wilbur Dam, Tenn..... 98
near Sugar Grove, N. C..... 97
Watts Bar Lake, Tenn., contents of....215,220
Waynesville, N. C., West Fork Pigeon River near..... 76
Weakley Creek near Bodenham, Tenn..... 185
West Flint Creek near Hartselle, Ala..... 11
West Harpeth River near Leipers Fork, Tenn..... 49
Wheeler Lake, Ala., contents of.....218,221
White Creek near Sharps Chapel, Tenn... 11
White Oak Creek near Milledgeville, Tenn..... 11
Whiteoak Creek below Oak Ridge National Laboratory, near Oak Ridge, Tenn..... 144
Whitesburg, Ala., Tennessee River at..... 178
Whitewell, Tenn., Sequatchie River near..... 174
Wilbur Dam, Tenn., Watauga River below..... 98
Williamsburg, Ky., Cumberland River at..... 19
Wilson Lake, Ala., contents of.....218,221
Wolf Creek Lake, capacity of..... 219
Wolf River near Byrdstown, Tenn..... 34
Wood Creek near London, Ky..... 22
Woods Reservoir, Tenn., contents of.....217-218,221
Woodville, Ala., Paint Rock River near..... 176
Work, division of..... 2
scope of..... 1

Yellow Creek (tributary to Cumberland River) near Middlesboro, Ky..... 16
Yellow Creek (tributary to Cumberland River) near Shiloh, Tenn..... 55
Yellow Creek (tributary to Tennessee River) near Burnsville, Cairo, and Doskie, Miss..... 11

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