Surface Water Supply of the United States 1954

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

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1333

Prepared in cooperation with the States of Georgia, North Carolina, South Carolina, and Virginia, and with other agencies

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

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

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Thomas B. Nolan, *Director*

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Georgia, North Carolina, South Carolina, and Virginia, and with other agencies, by personnel of the Water Resources Division, C. G. Paulsen, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and B. J. Peterson, chief, Annual Reports Section.

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

A. E. Johnson----------Columbia, S. C.
E. B. Rice----------Raleigh, N. C.
M. T. Thomson----------Atlanta, Ga.
D. S. Wallace----------Charlottesville, Va.

CALENDAR FOR WATER YEAR 1954

OCTOBER 1953

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AUGUST 1954

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SEPTEMBER 1954

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CONTENTS

	Page
Scope of work	1
Cooperation	1
Division of work	2
Definition of terms and abbreviations	2
Downstream order of listing gaging stations	3
Explanation of data	3
Accuracy of field data and computed results	7
Publications	8
Records of discharge collected by agencies other than the Geological Survey	11
Hydrologic conditions	11
Gaging-station records	13
James River basin:	
Jackson River (head of James River):	
Bolar Run:	
Bolar Spring at Bolar, Va	13
Muddy Run:	
Muddy Run Spring near Warm Springs, Va	13
Back Creek near Mountain Grove, Va	14
Jackson River at Falling Spring, Va	15
Dunlap Creek near Covington, Va	16
Potts Creek near Covington, Va	17
Smith Creek above old dam, near Clifton Forge, Va	18
Cowpasture River near Clifton Forge, Va	19
Stuart Spring near McDowell, Va	20
James River at Lick Run, Va	20
Craig Creek:	
Johns Creek at Newcastle, Va	21
Craig Creek at Parr, Va	22
Catawba Creek near Catawba, Va	23
James River at Buchanan, Va	25
Purgatory Creek:	
Karnes Spring near Buchanan, Va	26
Calfpasture River (head of Maury River) above Mill Creek, at Goshen, Va	26
Maury River at Rockbridge Baths, Va	27
Kerrs Creek near Lexington, Va	28
Big Spring at Kerrs Creek, Va	29
Maury River near Lexington, Va	29
South River near Riverside, Va	30
Maury River near Buena Vista, Va	31
Pedlar River near Pedlar Mills, Va	32
James River at Holcombs Rock, Va	33
James River at Bent Creek, Va	34
Buffalo River:	
Tye River near Lovingston, Va	35
Piney River at Piney River, Va	36
Buffalo River near Norwood, Va	37
Rockfish River near Greenfield, Va	38
James River at Scottsville, Va	39
Hardware River below Briery Run, near Scottsville, Va	40
Slate River near Arvonia, Va	42
Mechum River (head of Rivanna River):	
North Fork Moormans River near Whitehall, Va	43
South Fork Rivanna River near Earlysville, Va	44
Rivanna River at Palmyra, Va	45
Willis River at Flanagan Mills, Va	46
James River at Cartersville, Va	47
Fine Creek at Fine Creek Mills, Va	48
James River & Kanawha Canal near Richmond, Va	49
James River near Richmond, Va	50
Falling Creek near Drewrys Bluff, Va	51
Appomattox River at Farmville, Va	52
Buffalo Creek near Hampden Sydney, Va	53
Appomattox River at Mattoax, Va	54
Deep Creek near Mannboro, Va	55
Appomattox River near Petersburg, Va	56
Chickahominy River near Providence Forge, Va	57
Dismal Swamp basin:	
Cypress Swamp at Cypress Chapel, Va	58
Lake Drummond in Dismal Swamp, Va	59
Chowan River basin:	
Nottoway River (head of Chowan River) near Rawlings, Va	60
Nottoway River near Stony Creek, Va	61
Stony Creek near Dinwiddie, Va	62
Hunting Quarter Creek:	
Anderson Branch at Sussex, Va	63
Nottoway River near Sebrell, Va	64
Blackwater River near Dendron, Va	66
Blackwater River at Zuni, Va	67
Blackwater River near Franklin, Va	68
North Meherrin River near Lunenburg, Va	69
Meherrin River near Lawrenceville, Va	70
Meherrin River at Emporia, Va	71
Fontaine Creek near Brink, Va	72

Gaging-station records--Continued
Chowan River basin--Continued
Page
Wiccacon Creek:
Ahoskie Creek at Ahoskie, N. C. 73
Roanoke River basin:
South Fork Roanoke River:
Big Springs at Elliston, Va. 73
Roanoke River at Lafayette, Va. 74
Roanoke River at Roanoke, Va. 76
Roanoke River at Niagara, Va. 77
Blackwater River near Union Hall, Va. 78
Roanoke River near Toshes, Va. 79
Pigg River near Toshes, Va. 80
Goose Creek near Huddleston, Va. 81
Roanoke River at Altavista, Va. 82
Otter River near Bedford, Va. 83
Otter River near Evington, Va. 84
Roanoke River at Brookneal, Va. 85
Falling River near Naruna, Va. 86
Cub Creek at Phenix, Va. 87
Roanoke River at Randolph, Va. 88
Roanoke Creek at Saxe, Va. 89
Dan River near Francisco, N. C. 90
Mayo River:
North Mayo River near Spencer, Va. 91
Mayo River near Price, N. C. 92
Dan River near Wentworth, N. C. 93
Smith River near Philpott, Va. 94
Smith River at Bassett, Va. 96
Smith River at Martinsville, Va. 97
Smith River at Spray, N. C. 98
Sandy River near Danville, Va. 99
Dan River at Danville, Va. 100
Dan River at Paces, Va. 101
Banister River:
Georges Creek near Gretna, Va. 102
Banister River at Halifax, Va. 104
Hyco River near Denniston, Va. 105
Roanoke River at Buggs Island, Va. 106
Roanoke River at Roanoke Rapids, N. C. 107
Roanoke River near Scotland Neck, N. C. 108
Pamlico River basin:
Tar River (head of Pamlico River) near Tar River, N. C. 109
Tar River near Nashville, N. C. 110
Sapony Creek near Nashville, N. C. 111
Fishing Creek near Enfield, N. C. 112
Tar River at Tarboro, N. C. 114
Herring Run near Washington, N. C. 115
Neuse River basin:
Eno River (head of Neuse River) at Hillsboro, N. C. 116
Flat River at Bahama, N. C. 118
Dial Creek near Bahama, N. C. 119
Flat River at dam, near Bahama, N. C. 120
Neuse River near Northside, N. C. 122
Neuse River near Clayton, N. C. 124
Middle Creek near Clayton, N. C. 125
Little River near Princeton, N. C. 126
Neuse River near Goldsboro, N. C. 127
Neuse River at Kinston, N. C. 128
Contentnea Creek near Wilson, N. C. 129
Contentnea Creek at Hookerton, N. C. 130
Swift Creek near Vanceboro, N. C. 134
Trent River near Trenton, N. C. 135
New River basin:
New River near Gum Branch, N. C. 136
Cape Fear River basin:
Haw River (head of Cape Fear River) near Benaja, N. C. 137
Reedy Fork:
Horsepen Creek at Battle Ground, N. C. 138
Reedy Fork near Gibsonville, N. C. 139
South Buffalo Creek (head of Buffalo Creek) near Greensboro, N. C. 140
North Buffalo Creek near Greensboro, N. C. 141
Stony Creek near Burlington, N. C. 142
Haw River at Haw River, N. C. 143
Haw River near Pittsboro, N. C. 144
New Hope River near Pittsboro, N. C. 145
West Fork Deep River near High Point, N. C. 146
East Fork Deep River near High Point, N. C. 147
Deep River near Randleman, N. C. 148
Deep River at Ramseur, N. C. 149
Bear Creek at Robbins, N. C. 150
Deep River at Moncure, N. C. 151
Cape Fear River at Lillington, N. C. 152
Little River at Linden, N. C. 153
Rockfish Creek near Hope Mills, N. C. 154
Cape Fear River at lock 3, near Tarheel, N. C. 155
Black River:
Coharie Creek:
Little Coharie Creek near Roseboro, N. C. 156
Black River near Tomahawk, N. C. 157
South River near Parkersburg, N. C. 158
Colly Creek near Kelly, N. C. 159

Gaging-station records--Continued
Cape Fear River basin--Continued Page
Northeast Cape Fear River near Chinquapin, N. C. 160
Waccamaw River basin:
Waccamaw River at Freeland, N. C. 161
Waccamaw River near Longs, S. C. 162
Pee Dee River basin:
Yadkin River (head of Pee Dee River) at Patterson, N. C. 163
Reddies River at North Wilkesboro, N. C. 164
Yadkin River at Wilkesboro, N. C. 165
Fisher River near Copeland, N. C. 166
Forbush Creek near Yadkinville, N. C. 167
Yadkin River at Yadkin College, N. C. 168
South Yadkin River:
Rocky River at Turnersburg, N. C. 169
South Yadkin River near Mocksville, N. C. 170
Hunting Creek near Harmony, N. C. 171
South Yadkin River at Cooleemee, N. C. 172
Third Creek at Cleveland, N. C. 173
Abbotts Creek at Lexington, N. C. 174
Yadkin River at High Rock, N. C. 175
Uwharrie River near Eldorado, N. C. 176
Rocky River near Norwood, N. C. 177
Brown Creek near Polkton, N. C. 178
Little River near Star, N. C. 179
Pee Dee River near Rockingham, N. C. 180
Thompson Creek:
Juniper Creek near Cheraw, S. C. 181
Pee Dee River at Peedee, S. C. 182
Lynches River near Bishopville, S. C. 183
Lynches River at Effingham, S. C. 184
Little Pee Dee River near Dillon, S. C. 185
Drowning Creek (head of Lumber River) near Hoffman, N. C. 186
Lumber River at Boardman, N. C. 187
Little Pee Dee River at Galivants Ferry, S. C. 188
Black River near Gable, S. C. 189
Black River at Kingstree, S. C. 190
Santee River basin:
Catawba River (head of Santee River) near Marion, N. C. 191
Linville River at Branch, N. C. 192
Lower Little River near All Healing Springs, N. C. 193
Catawba River at Catawba, N. C. 195
Henry Fork (head of South Fork Catawba River) near Henry River, N. C. 196
Indian Creek near Laboratory, N. C. 197
South Fork Catawba River:
Long Creek near Bessemer City, N. C. 198
South Fork Catawba River at Lowell, N. C. 199
Catawba River near Rock Hill, S. C. 200
Sugar Creek:
Little Sugar Creek near Charlotte, N. C. 201
Rocky Creek at Great Falls, S. C. 202
Wateree River (continuation of Catawba River) near Camden, S. C. 203
Broad River (head of Congaree River) near Chimney Rock, N. C. 204
Green River near Mill Spring, N. C. 205
Second Broad River at Cliffside, N. C. 206
Broad River near Boiling Springs, N. C. 207
First Broad River near Lawndale, N. C. 208
Broad River near Gaffney, S. C. 209
North Pacolet River at Fingerville, S. C. 210
South Pacolet River Reservoir near Fingerville, S. C. 211
Pacolet River near Fingerville, S. C. 212
Pacolet River near Clifton, S. C. 213
Broad River near Carlisle, S. C. 214
North Tyger River near Fairmont, S. C. 215
Middle Tyger River at Lyman, S. C. 216
North Tyger River near Moore, S. C. 217
South Tyger River near Reidville, S. C. 218
South Tyger River near Woodruff, S. C. 219
Tyger River near Woodruff, S. C. 220
Fairforest Creek near Union, S. C. 221
Enoree River near Enoree, S. C. 222
Broad River at Richtex, S. C. 223
Saluda River near Greenville, S. C. 224
Saluda River near Pelzer, S. C. 225
Saluda River near Ware Shoals, S. C. 226
Reedy River near Greenville, S. C. 227
Reedy River near Ware Shoals, S. C. 228
Lake Greenwood near Chappells, S. C. 229
Saluda River at Chappells, S. C. 230
Saluda River near Silverstreet, S. C. 231
Lake Murray near Columbia, S. C. 232
Saluda River near Columbia, S. C. 233
Santee River:
Lakes Marion-Moultrie diversion canal near Pineville, S. C. 234
Lake Marion near Pineville, S. C. 235
Santee River near Pineville, S. C. 236
Cooper River basin:
Cooper River:
West Branch Cooper River:
Lake Moultrie near Pinopolis, S. C. 237

Gaging-station records--Continued
Edisto River basin: Page
South Fork Edisto River near Montmorenci, S. C. 238
South Fork Edisto River near Denmark, S. C. 239
North Fork Edisto River at Orangeburg, S. C. 240
Edisto River near Branchville, S. C. 241
Edisto River near Givhans, S. C. 242
Combahee River basin:
Salkehatchie River (head of Combahee River) near Miley, S. C. 243
Combahee River near Yemassee, S. C. 244
Broad River basin:
Coosawhatchie River (head of Broad River) near Hampton, S. C. 245
Savannah River basin:
Chattooga River (head of Savannah River) near Clayton, Ga. 246
Panther Creek near Toccoa, Ga. 247
Tugaloo River (continuation of Chattooga River) near Hartwell, Ga. 248
Keowee River (head of Seneca River) near Newry, S. C. 249
Seneca River near Anderson, S. C. 250
Savannah River near Iva, S. C. 251
Rocky River near Calhoun Falls, S. C. 252
South Beaverdam Creek at Dewy Rose, Ga. 253
Savannah River near Calhoun Falls, S. C. 254
Broad River:
North Fork Broad River near Carnesville, Ga. 255
Broad River near Bell, Ga. 256
Little River near Mount Carmel, S. C. 257
Little River near Washington, Ga. 258
Clark Hill Reservoir near Clarks Hill, S. C. 259
Stevens Creek near Modoc, S. C. 260
Augusta Canal near Augusta, Ga. 261
Savannah River at Augusta, Ga. 262
Savannah River at Burtons Ferry Bridge, near Millhaven, Ga. 263
Brier Creek at Millhaven, Ga. 264
Savannah River near Clyo, Ga. 265
Revisions of records for discontinued stations:
Smith Creek near Clifton Forge, Va. 266
Calfpasture River at Goshen, Va. 267
Otter River near Altavista, Va. 268
Miscellaneous discharge measurements. 269
Index. 311

ILLUSTRATIONS

Page
Figure 1. Gaging-station structures: A, James River at Scottsville, Va.; B, Roanoke River at Niagara, Va. 4
2. Map of the United States showing areas covered by the 18 annual volumes on surface water supply. 9
3. Comparison of discharge at three key gaging stations during 1954 water year with median discharge for 25-year period. 12

SURFACE WATER SUPPLY OF SOUTH ATLANTIC SLOPE BASINS, JAMES RIVER TO SAVANNAH RIVER, 1954

SCOPE OF WORK

This volume is one of a series of 18 reports presenting measurements of stage, discharge, and content of streams, lakes, and reservoirs in the United States during the water year ending September 30, 1954. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 13,050 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1954, the Geological Survey and cooperating organizations were maintaining 6,750 gaging stations, including those in Alaska and Hawaii. Discharge measurements only were made at many other points in the 1954 water year, most of which are published at the end of 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:

Georgia: State Department of Mines, Mining and Geology, Garland Peyton, director, and State Highway Department, G. L. Gillis, director.

North Carolina: State Department of Conservation and Development, B. E. Douglas, director; city of Burlington, J. D. Mackintosh, Jr., city manager.

South Carolina: State Highway Department, C. R. McMillan, chief highway commissioner; State Public Service Authority, R. M. Jefferies, general manager; State Development Board, L. W. Bishop, director; State Water Pollution Control Authority, W. T. Linton, executive director; city of Spartanburg, DeFoix Kirby, chairman of commissioners of public works.

Virginia: State Department of Conservation and Development, R. V. Long, director; State Department of Highways, J. A. Anderson, director; city of Norfolk, R. W. Fitzgerald, superintendent, Division of Water Supply; Newport News Waterworks Commission, W. B. Harman, general manager.

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 128 gaging stations, of which 6 were in Georgia, 46 in North Carolina, 26 in South Carolina, and 50 in Virginia.

Assistance was also furnished by the Agricultural Research Service of the United States Department of Agriculture and the Weather Bureau of the United States Department of Commerce.

The following organizations aided in collecting records:

Georgia: City of Augusta.

North Carolina: State Highway and Public Works Commission, State Stream Sanitation Committee, cities of Durham and Gastonia, Carolina Power & Light Co., and Duke Power Co.

South Carolina: Greenwood County Electric Power Commission, South Carolina Electric & Gas Co., and South Carolina Public Service Authority.

Virginia: Appalachian Electric Power Co., Virginia Electric & Power Co., and Camp Manufacturing 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	Address
Georgia a/	Atlanta	644 Peachtree-Seventh Building.
North Carolina	Raleigh	Federal Building.
South Carolina b/	Columbia	210 Creason Building.
Virginia	Charlottesville	Natural Resources Building, University of Virginia.

a/ Except Augusta Canal near Augusta and Savannah River at Augusta, at Burtons Ferry Bridge, near Millhaven, and near Clyo.
b/ Including Augusta Canal near Augusta, Ga., and Savannah River at Augusta, Ga., at Burtons Ferry Bridge, near Millhaven, Ga., and near Clyo, Ga.

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. Provisional records of discharge prior to publication, and other unpublished data concerning the gaging records may usually be obtained from the district office.

DEFINITION OF TERMS AND ABBREVIATIONS

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

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

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

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 specific 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 OF LISTING GAGING STATIONS

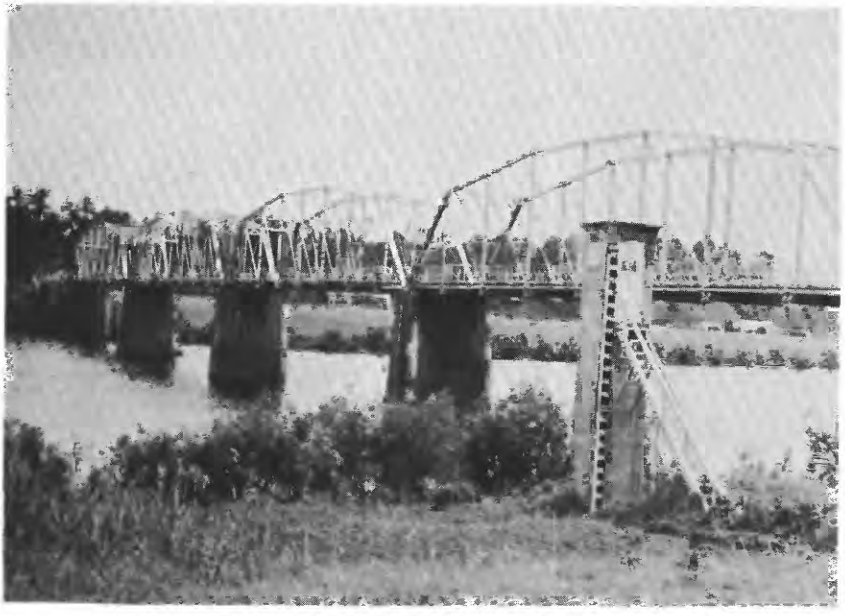
Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records was changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station. If a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

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge. Typical structures in use at gaging stations are shown in figure 1.

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



A. JAMES RIVER AT SCOTTSVILLE, VA.

B. ROANOKE RIVER AT NIAGARA, VA.

FIGURE 1.—GAGING-STATION STRUCTURES.

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 and runoff of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1954 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 Corps of Engineers unless otherwise noted. 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. If 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 non-recording 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 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 values for the maximum day and the minimum day for each month are underlined. If the value 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 values; 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. Runoff 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"). Values 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 values 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 usually given in the first report in which data for the reservoir are published, but it is omitted from succeeding reports.

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.

Runoff 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, values of

cubic feet per second per square mile and runoff in inches are not published unless storage or diversion records are included to indicate the extent of the regulation or diversion, or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

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

PUBLICATIONS

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

Part 1. North Atlantic slope basins, in two volumes:
  A, North Atlantic slope basins, Maine to Connecticut.
  B, North Atlantic slope basins, New York to York River.
2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:
  A, South Atlantic slope basins, James River to Savannah River.
  B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.
3. Ohio River basin, in two volumes:
  A. Ohio River basin except Cumberland and Tennessee River basins.
  B, Cumberland and Tennessee River basins.
4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River basin, in two volumes:
  A, Missouri River basin above Sioux City, Iowa.
  B, Missouri River basin below Sioux City, Iowa.
7. Lower Mississippi River basin.
8. Western Gulf of Mexico basins.
9. Colorado River basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River basin.
13. Snake River basin.
14. Pacific slope basins in Oregon and lower Columbia River basin.

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

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

3. Sets are available for consultation in the offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page 2.

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

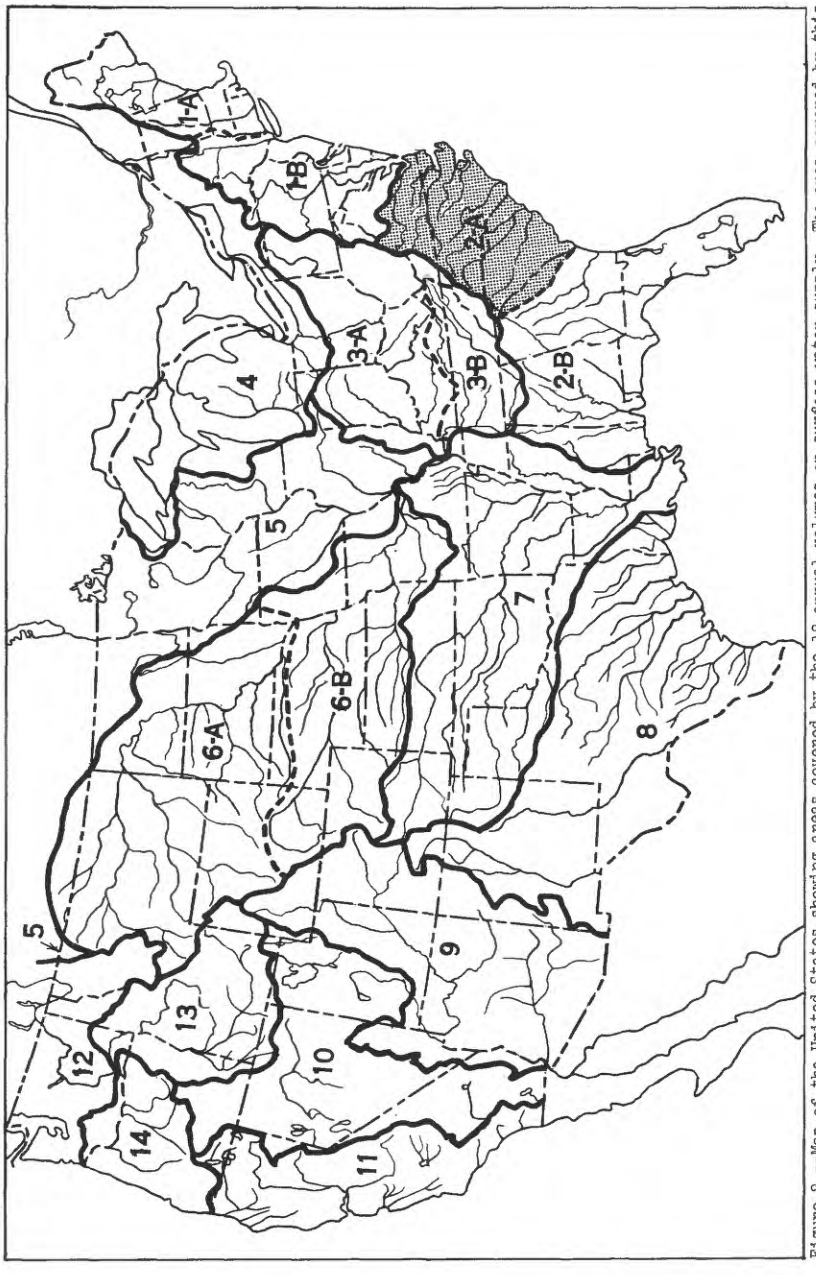


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface water supply. The area covered by this report is shaded.

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

(A = Annual Report; B = Bulletin)

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

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

Numbers of water-supply papers containing results of stream measurements in the South Atlantic slope basins, James River to Savannah River, 1899-1954

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	a35, 36	1911	302	1923	562	1934	757	1945	1032
1900	48	1912	322	1924	582	1935	782	1946	1052
1901	65, 75	1913	352	1925	602	1936	802	1947	1082
1902	a82, 83	1914	382	1926	622	1937	822	1948	1112
1903	a97, 98	1915	402	1927	642	1938	852	1949	1142
1904	b126, 127	1916	432	1928	662	1939	872	1950	1172
1905	b167, 168	1917	452	1929	682	1940	892	1951	1203
1906	b203, 204	1918	472	1930	697	1941	922	1952	1233
1907-8	242	1919-20	502	1931	712	1942	952	1953	1273
1909	262	1921	522	1932	727	1943	972	1954	1333
1910	282	1922	542	1933	742	1944	1002		

a James River only.
b Susquehanna River to Yadkin River.

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

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

Reports also have been published that are compilations of records for various areas usually a single State or drainage basin. These reports contain records previously published (some of which may have been revised), as well as some records not contained in the annual series of water-supply papers. The only such report for any part of the area covered by this report is Water-Supply Paper 197, "Water resources of Georgia, 1895-1905."

Records of discharge have been published also in State reports. Some of these are not

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

State reports containing compilations of records of discharge

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

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

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these special reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier notable floods. The following list gives the numbers and titles of these reports:

Report

WSP 96: Destructive floods in the United States in 1903.
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 846: Maximum discharges at stream-measurement stations through September 1938.
WSP 1066: Floods of August 1940 in southeastern States.
WSP 1137-I: Summary of floods in the United States during 1950.
Cir. 100: Floods in Georgia, frequency and magnitude.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The city of Lynchburg, Va., has collected records of daily discharge of Pedlar River at Pedlar Dam, Va., since August 1921 and the Agricultural Research Service of the United States Department of Agriculture has collected records of runoff from 3 areas of less than 20 acres each near Chatham, Va., since 1938.

HYDROLOGIC CONDITIONS

The water year 1954 was characterized by well below normal runoff for the year over most of the South Atlantic Slope basin, James River to Savannah River. The drought that existed at the beginning of the water year in North Carolina and Virginia was broken by moderate flooding over most of area covered by this report during January. Drought conditions over most the area began again in May and by September reached a severity comparable with the droughts of the early 1930's. Record-low runoff was widespread and water supplies were critical in many communities. For three key gaging stations in the area covered by this report, a comparison of monthly and yearly mean discharges during the 1954 water year with the median discharges for the 25-year period 1921-45 is shown in figure 3 on the following page.

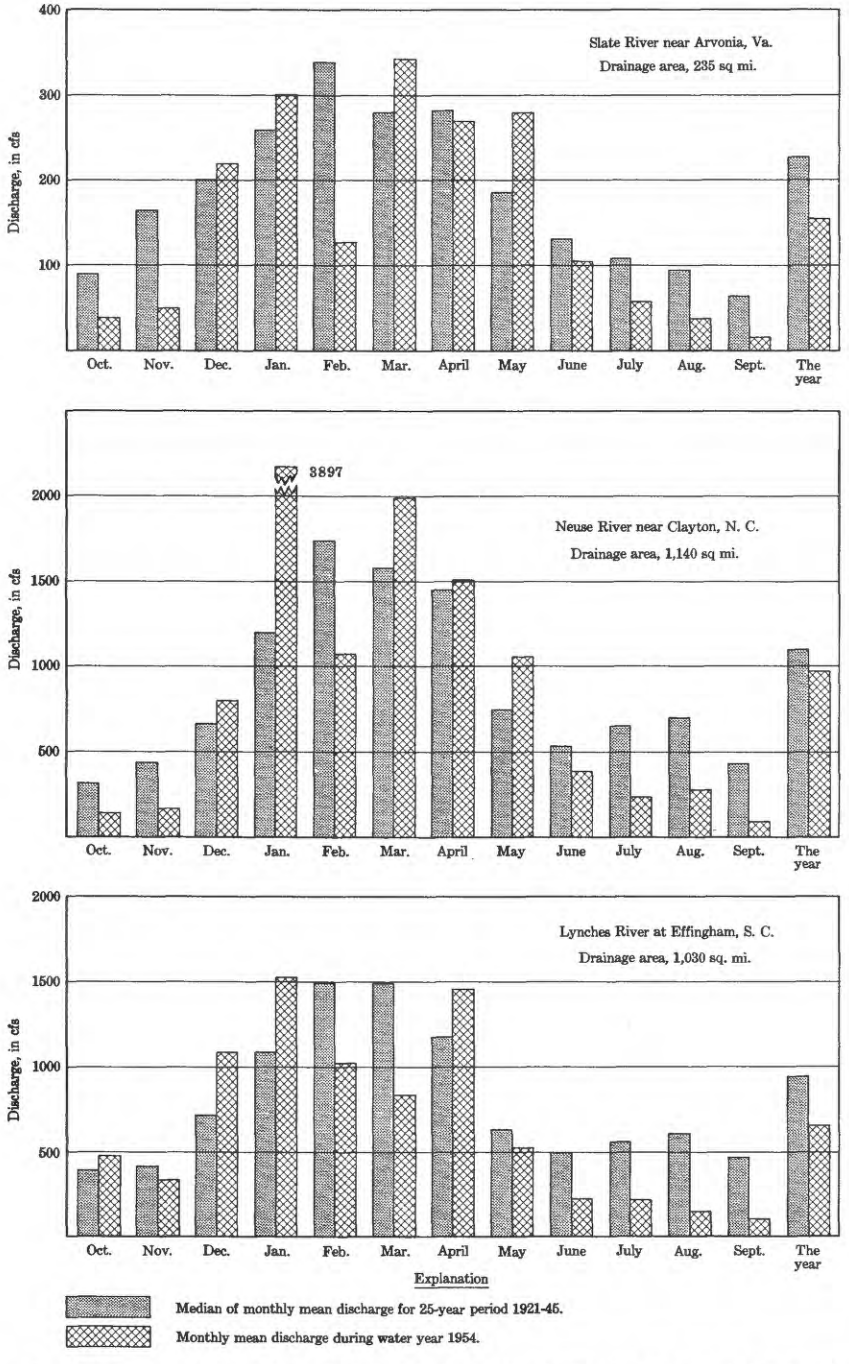

Figure 3. Comparison of discharge at three key gaging stations during 1954 water year with median discharge for 25-year period.

JAMES RIVER BASIN

Bolar Spring at Bolar, Va.

Location.--Lat 38°13'05", long. 79°40'40", in Highland County, 1,000 ft north of Bolar, which is on county line between Bath and Highland Counties.

Records available.--August 1947, October 1949 to September 1954 (discharge measurements only).

Extremes.--1947, 1949-54: Maximum discharge measured, 17.6 cfs Feb. 3, 1950; minimum measured, that of July 12, 1954.

Remarks.--Discharge measurements generally made once a month 75 ft downstream from source.

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

Oct. 5	3.67	May 6	7.56
Nov. 19	3.94	June 8	4.13
Dec. 10	5.18	July 12	3.52
Jan. 4	4.48	Aug. 12	3.99
Feb. 15	3.96	Sept.16	3.71
Apr. 12	6.32		

Muddy Run Spring near Warm Springs, Va.

Location.--Lat 38°06'25", long. 79°45'05", 2.7 miles upstream from Jackson River and 3.9 miles northeast of intersection of U. S. Highway 220 and State Highway 39 at Warm Springs, Bath County.

Records available.--June 1946 to September 1954 (discharge measurements only).

Extremes.--1946-54: Maximum discharge measured, 12.3 cfs Feb. 3, 1950; minimum measured, 2.21 cfs Sept. 11, 1953.

Remarks.--Discharge measurements generally made once a month 50 ft downstream from spring.

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

Oct. 5	2.80	Apr. 12	6.95
Nov. 19	2.80	May 6	5.71
Dec. 10	2.99	June 8	4.37
Jan. 4	2.87	July 6	7.95
Feb. 15	3.60	Sept.16	3.04

Back Creek near Mountain Grove, Va.

Location.--Lat 38°04'10", long. 79°53'50", on left bank 0.4 mile downstream from Cummings Run, 0.9 mile downstream from bridge on State Highway 39, and 2.1 miles south of Mountain Grove, Bath County.

Drainage area.--131 sq mi.

Records available.--October 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 1,707 ft above mean sea level (by barometer).

Extremes.--Maximum discharge during year, 7,790 cfs Mar. 1 (gage height, 8.98 ft), from rating curve extended above 4,000 cfs on basis of slope-area determinations at gage heights, 7.39 and 9.05 ft; minimum, 4.3 cfs Oct. 1 (gage height, 1.86 ft).
1951-54: Maximum discharge, 7,800 cfs Feb. 21, 1953 (gage height, 9.05 ft), from rating curve extended as explained above; minimum, 2.4 cfs Sept. 3, 4, 1953; minimum gage height, 1.73 ft Nov. 7, 8, 1952.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	2.0	3.5	390
1.9	5.8	4.0	690
2.0	11	5.0	1,480
2.3	33	6.0	2,480
2.6	69	7.0	3,710
2.8	114	8.0	5,510
3.0	175		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	10	11	21	85	*4,290	219	92	149	68	38	32
2	5.0	9.4	10	20	81	1,260	219	83	227	53	39	27
3	5.0	8.4	9.4	20	71	704	215	85	175	47	51	24
4	5.0	7.9	11	*20	64	489	197	85	143	45	47	21
5	*5.0	7.4	13	19	57	350	186	77	117	45	47	19
6	5.4	7.4	18	19	52	265	215	*71	94	66	182	17
7	5.4	7.4	63	18	46	215	506	73	77	52	114	16
8	5.8	7.4	51	17	39	182	506	77	68	81	71	15
9	5.8	7.4	43	18	41	153	360	73	73	87	58	17
10	6.3	7.4	*83	21	40	140	273	75	64	66	52	16
11	6.8	7.4	73	39	40	134	227	73	79	53	*44	15
12	6.8	7.4	66	57	34	456	*189	73	102	*46	37	14
13	7.4	7.4	106	50	27	795	153	68	89	40	32	13
14	7.4	7.4	204	54	30	858	134	77	104	35	29	12
15	7.4	7.4	200	66	*33	690	134	179	175	2,580	27	11
16	7.4	7.4	120	424	31	450	162	236	153	935	27	*10
17	7.4	*7.4	75	506	33	317	599	211	126	355	27	9.4
18	7.4	6.8	56	273	37	248	548	189	123	219	33	8.9
19	7.4	6.8	52	186	37	275	380	255	120	223	29	12
20	7.4	6.8	44	169	40	802	281	308	106	153	27	33
21	7.4	7.4	38	312	484	596	219	244	85	186	29	38
22	7.4	8.9	35	832	627	406	182	197	69	137	31	36
23	7.4	22	34	711	350	312	162	162	62	102	28	27
24	7.4	21	35	390	248	236	159	137	57	75	34	22
25	7.9	21	33	265	200	204	182	117	*45	58	47	19
26	7.9	19	30	211	169	317	149	128	40	51	35	17
27	8.9	18	28	200	143	360	137	560	556	44	33	14
28	10	16	28	182	140	308	131	375	256	39	44	13
29	12	13	26	149	-	252	114	265	137	38	44	12
30	11	12	25	128	-	223	102	204	89	60	37	11
31	10	-	23	102	-	204	-	153	-	43	35	-
Total	223.5	310.6	1,643.4	5,499	3,279	16,491	7,220	5,002	3,760	6,082	1,408	551.3
Mean	7.21	10.4	53.0	177	117	532	241	161	125	196	45.4	18.4
Cfsm	0.055	0.079	0.405	1.35	0.893	4.06	1.84	1.23	0.954	1.50	0.347	0.140
In.	0.06	0.09	0.47	1.56	0.93	4.68	2.05	1.42	1.06	1.73	0.40	0.16

Calendar year 1953: Max 5,220 Min 2.8 Mean 145 Cfsm 1.11 In. 15.08
Water year 1953-54: Max 4,290 Min 4.7 Mean 141 Cfsm 1.08 In. 14.61

Peak discharge (base, 1,400 cfs).--Mar. 1 (9 a.m.) 7,790 cfs (8.98 ft); July 15 (1 p.m.) 7,790 cfs (8.97 ft).
* Discharge measurement made on this day.

Jackson River at Falling Spring, Va.

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

Drainage area.--409 sq mi.

Records available.--April 1925 to September 1954. Prior to October 1934, published as "at Barber."

Gage.--Water-stage recorder. Datum of gage is 1,333.49 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1934, chain gage at same site and datum.

Average discharge.--29 years, 482 cfs.

Extremes.--Maximum discharge during year, 12,600 cfs Mar. 1 (gage height, 11.55 ft); minimum, 70 cfs Oct. 24, 25, Sept. 14-17 (gage height, 2.92 ft).
1925-54: Maximum discharge, 24,700 cfs Mar. 17, 1936 (gage height, 14.74 ft), from rating curve extended above 17,000 cfs on basis of records for other stations in James River basin; minimum, 36 cfs Oct. 12, 1946 (gage height, 2.65 ft); minimum daily, 58 cfs Sept. 28-30, Oct. 1, 3, 5, 1930.

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

Revisions (water years).--WSP 952: 1926(M), 1927, 1928(M), 1929-30, 1932-40.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.9	66	6.0	1,370
3.3	151	8.0	3,060
3.5	204	10.0	7,500
4.0	345	11.0	10,600
5.0	765		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	76	86	103	288	*8,500	615	313	373	193	a150	111
2	80	74	86	96	266	3,640	595	310	495	164	a140	107
3	78	74	82	96	253	1,780	575	296	419	146	a160	101
4	78	72	92	96	236	1,300	519	*296	359	288	a150	94
5	78	70	99	*99	220	958	495	274	310	201	a140	90
6	*78	70	107	99	204	738	535	258	274	215	a250	86
7	74	72	207	94	188	595	848	253	242	190	285	82
8	74	72	*212	92	159	523	1,020	261	220	193	212	82
9	74	74	159	90	161	451	820	258	212	236	180	82
10	74	74	282	94	156	404	660	253	212	196	164	84
11	74	74	258	133	154	380	575	244	204	164	*149	82
12	74	74	215	182	146	580	511	239	247	146	135	76
13	74	74	313	169	126	1,340	443	231	226	*135	124	74
14	74	74	545	188	122	1,640	*394	253	316	126	115	70
15	74	74	575	193	130	1,470	380	401	280	2,480	111	*70
16	72	72	390	906	*133	1,040	412	511	519	2,160	109	70
17	72	*72	285	1,180	137	765	962	471	352	820	111	72
18	72	74	199	660	137	615	1,080	447	356	507	126	76
19	74	74	193	491	137	555	820	575	332	535	126	78
20	74	74	182	401	133	1,640	638	685	296	427	120	138
21	72	76	164	535	344	1,440	535	575	255	531	126	177
22	72	82	149	1,520	*1,240	1,020	475	495	226	447	126	133
23	72	105	142	1,710	765	792	487	419	201	345	126	118
24	70	118	126	958	555	660	555	373	180	272	126	101
25	72	118	122	685	483	555	660	329	*167	234	174	92
26	72	109	120	575	408	738	531	313	146	204	142	90
27	76	107	120	555	366	848	459	864	526	182	128	86
28	96	103	115	503	332	738	435	820	535	164	124	84
29	111	94	115	431	-	638	387	595	310	159	140	82
30	90	90	113	376	-	595	345	511	234	a150	124	78
31	82	-	107	332	-	575	-	404	-	a160	115	-
Total	2,389	2,466	5,960	13,642	7,979	37,513	17,766	12,527	9,024	12,370	4,508	2,766
Mean	77.1	82.2	192	440	285	1,210	592	404	301	399	145	92.2
Cfsm	0.189	0.201	0.469	1.08	0.697	2.96	1.45	0.988	0.736	0.976	0.355	0.225
In.	0.22	0.22	0.54	1.24	0.73	3.41	1.62	1.14	0.82	1.13	0.41	0.25

Calendar year 1953: Max 9,880 Min 64 Mean 402 Cfsm 0.983 In. 13.32
Water year 1953-54: Max 8,500 Min 70 Mean 353 Cfsm 0.863 In. 11.73

Peak discharge (base, 4,000 cfs).--Mar. 1 (4:30 p.m.) 12,600 cfs (11.55 ft); July 15 (8:30 p.m.) 9,300 cfs (10.60 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for Dunlap Creek near Covington and Back Creek near Mountain Grove.

Dunlap Creek near Covington, Va.

Location.--Lat 37°48'10", long. 80°02'50", on right bank 20 ft downstream from bridge on U. S. Highway 60, 2.2 miles downstream from Ogle Creek, and 3.0 miles west of Covington, Alleghany County.

Drainage area.--166 sq mi.

Records available.--December 1928 to September 1954.

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

Average discharge.--25 years (1929-54), 156 cfs.

Extremes.--Maximum discharge during year, 7,770 cfs Mar. 1 (gage height, 10.10 ft); minimum, 12 cfs Sept. 16-19; minimum gage height, 0.94 ft Sept. 18, 19.
1928-54: Maximum discharge, 8,370 cfs Mar. 17, 1936 (gage height, 10.52 ft, from floodmarks), from rating curve extended above 4,500 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum observed, 8 cfs Aug. 27, 28, 30, 1932 (gage height, 0.88 ft).

Remarks.--Records good. Occasional diurnal fluctuation caused by dam above station.

Revisions (water years).--WSP 972: 1929-30, 1932-34, 1942.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	10	3.0	550
1.0	15	4.0	1,130
1.5	74	5.0	1,840
2.0	179	7.0	3,720
2.5	321	8.0	4,830

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	17	17	17	78	4,590	216	119	105	16	37	18
2	13	17	17	17	72	*1,040	243	111	97	17	40	17
3	13	17	17	17	59	710	224	103	84	17	43	17
4	13	17	20	17	56	450	189	*101	72	17	37	15
5	13	17	21	18	49	304	172	85	66	17	38	15
6	*14	17	22	18	44	232	179	78	56	14	56	14
7	14	17	32	18	41	186	530	72	51	15	51	14
8	14	17	*33	18	36	156	460	74	44	20	41	14
9	14	17	38	18	36	132	304	67	46	18	38	14
10	14	17	76	21	35	119	232	67	43	16	35	14
11	14	17	56	37	34	111	198	64	43	15	*32	14
12	14	17	52	62	32	107	172	62	40	14	29	14
13	14	17	89	58	29	109	143	59	43	*14	28	13
14	14	17	191	56	28	224	*130	309	44	13	26	*13
15	14	17	143	49	28	321	124	1,290	40	18	25	13
16	14	17	80	939	*27	243	121	618	85	16	23	12
17	15	*17	51	467	29	189	282	364	62	14	22	12
18	15	17	41	201	29	161	311	311	51	14	21	12
19	15	17	40	138	28	147	240	585	44	1,060	21	14
20	15	17	31	111	27	203	191	446	40	289	20	45
21	16	18	27	109	76	221	161	318	37	740	19	56
22	15	19	25	826	221	191	141	246	34	1,360	19	33
23	15	23	23	710	170	172	132	198	30	615	20	27
24	16	21	21	304	136	147	172	163	29	240	23	22
25	16	20	19	213	115	134	679	138	*25	154	20	21
26	16	19	20	213	99	451	392	212	24	111	19	21
27	17	19	19	201	84	428	272	585	23	84	25	20
28	20	18	18	158	164	290	216	287	22	66	28	19
29	20	18	18	126	-	226	170	203	21	54	22	19
30	18	17	17	105	-	206	141	158	19	49	21	18
31	17	-	17	89	-	191	-	124	-	42	21	-
Total	465	532	1,291	5,351	1,862	12,391	7,117	7,617	1,420	5,149	900	570
Mean	15.0	17.7	41.6	173	66.5	400	237	246	47.3	166	29.0	19.0
Cfsm	0.090	0.107	0.251	1.04	0.401	2.41	1.43	1.48	0.285	1.00	0.175	0.114
In.	0.10	0.12	0.29	1.20	0.42	2.78	1.60	1.71	0.32	1.15	0.20	0.13

Calendar year 1953: Max 3,120 Min 12 Mean 122 Cfsm 0.735 In. 9.95
Water year 1953-54: Max 4,590 Min 12 Mean 122 Cfsm 0.735 In. 10.02

Peak discharge (base, 2,000 cfs).--Mar. 1 (6 a.m.) 7,770 cfs (10.10 ft); July 19 (10 a.m.) 2,560 cfs (5.83 ft); July 22 (2 p.m.) 2,200 cfs (5.40 ft).
* Discharge measurement made on this day.

Potts Creek near Covington, Va.

Location.--Lat 37°44'10", long. 80°01'55", near center of span on downstream side of highway bridge, 0.2 mile upstream from Hays Creek and 3.2 miles southwest of Covington, Alleghany County. Prior to July 1, 1954, at site 80 ft downstream.

Drainage area.--158 sq mi.

Records available.--December 1928 to September 1954.

Gage.--Wire-weight gage and crest-stage indicator; gage read twice daily. Datum of gage is 1,259.23 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 1, 1954, chain gage 80 ft downstream at same datum.

Average discharge.--25 years (1929-54), 173 cfs.

Extremes.--Maximum discharge during year, 9,350 cfs Mar. 1 (gage height, 9.90 ft); minimum observed, 18 cfs Sept. 6 (gage height, 1.03 ft).
1928-54: Maximum discharge observed, 9,710 cfs Jan. 23, 1935 (gage height, 10.10 ft), from rating curve extended above 4,000 cfs on basis of velocity-area studies; minimum, 13 cfs Nov. 29, 1930; minimum gage height, that of Sept. 6, 1954.

Remarks.--Records fair.

Revisions (water years).--WSP 727: 1931.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16, Mar. 1-7)

1.0	17	2.5	425
1.2	28	3.0	730
1.4	53	4.0	1,500
1.7	122	6.0	3,270
2.0	224	8.0	5,960

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	24	29	29	68	*4,550	243	87	87	27	46	26
2	19	24	28	29	68	912	243	79	81	26	42	23
3	19	25	28	30	62	560	243	81	76	26	68	21
4	19	25	30	32	59	402	224	*92	74	27	53	21
5	19	26	29	*30	53	320	187	85	64	26	47	20
6	*20	26	35	30	47	262	180	76	53	26	85	19
7	20	26	39	30	42	243	*621	79	49	26	87	21
8	21	26	*49	30	39	209	320	79	47	37	52	21
9	21	27	61	29	42	173	262	72	*35	30	45	21
10	21	27	59	35	42	153	224	76	42	30	40	21
11	20	27	61	42	39	144	202	72	45	28	*37	21
12	20	27	53	42	35	134	187	68	40	27	34	21
13	20	27	72	39	34	131	153	68	39	*27	32	21
14	20	27	147	38	35	187	*138	209	72	27	30	*21
15	20	28	116	45	37	554	141	660	150	38	30	21
16	20	28	66	569	*37	180	122	402	111	32	29	21
17	20	*28	53	1,120	42	167	187	320	81	28	28	21
18	20	28	50	150	43	147	262	320	74	27	29	21
19	21	28	45	108	43	153	224	425	68	1,100	28	22
20	21	28	39	76	68	340	194	340	61	912	30	122
21	21	28	37	100	*320	300	173	320	53	1,500	37	85
22	22	32	37	350	402	262	160	243	50	1,020	39	34
23	22	47	32	939	262	217	141	209	39	560	34	32
24	22	52	35	262	187	180	138	170	36	340	37	27
25	22	38	32	180	153	153	153	160	35	202	46	26
26	24	32	31	224	122	588	128	105	32	147	300	25
27	26	31	30	191	85	281	122	262	30	100	340	24
28	34	31	30	153	94	262	116	173	28	72	281	24
29	31	31	32	122	-	224	105	163	27	64	81	24
30	27	30	32	94	-	209	94	134	26	57	30	24
31	24	-	30	74	-	224	-	100	-	50	27	-
Total	676	884	1,447	5,222	2,560	12,821	5,887	5,729	1,705	6,639	2,124	851
Mean	21.8	29.5	46.7	168	91.4	414	196	185	56.8	214	68.5	28.4
Cfsm	0.138	0.187	0.296	1.06	0.578	2.62	1.24	1.17	0.359	1.35	0.434	0.180
In.	0.16	0.21	0.34	1.22	0.60	3.02	1.38	1.35	0.40	1.56	0.50	0.20

Calendar year 1953: Max 3,560 Min 19 Mean 156 Cfsm 0.987 In. 13.38
Water year 1953-54: Max 4,550 Min 19 Mean 128 Cfsm 0.810 In. 10.94

Peak discharge (base, 2,400 cfs).--Jan. 17 (time unknown) 5,640 cfs (7.80 ft); Jan. 23 (time unknown) 2,870 cfs (5.60 ft); Mar. 1 (time unknown) 9,350 cfs (9.90 ft); Mar. 26 (time unknown) 2,870 cfs (5.65 ft); Apr. 7 (time unknown) 2,680 cfs (5.35 ft).
* Discharge measurement made on this day.

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

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

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

Records available.--May 1947 to September 1954.

Gage.--Staff gage and crest-stage indicator; gage read twice daily. Altitude of gage is 1,406 ft (by barometer).

Average discharge.--7 years, 19.5 cfs.

Extremes.--Maximum discharge during year, 282 cfs Mar. 1 (gage height, 4.08 ft); minimum, 1.4 cfs Sept 16-18; minimum gage height, 1.06 ft Sept. 18.
1947-54: Maximum discharge observed, 1,200 cfs Dec. 7, 1950 (gage height, 7.30 ft); minimum, 1.4 cfs July 31, 1952, Aug. 31 to Sept. 3, 1953, Sept. 16-18, 1954; minimum gage height, 1.05 ft Aug. 29, Sept. 5, 1948.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-27		Oct. 28 to Sept. 30			
1.0	0.9	1.0	1.1	1.6	9.1
1.1	1.5	1.1	1.6	1.7	13
1.2	2.5	1.2	2.2	2.0	35
1.3	4.0	1.3	3.1	2.5	85
		1.4	4.4	3.0	135
		1.5	6.3	3.5	185

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.7	2.9	2.6	9.1	160	22	21	5.7	2.1	1.7	1.7
2	1.6	2.7	2.9	2.6	8.5	*105	21	18	5.4	2.0	1.8	1.7
3	1.7	2.7	2.9	2.6	8.0	70	21	16	5.2	2.0	2.2	1.6
4	1.7	2.6	4.0	2.6	6.9	53	18	*14	4.8	2.6	2.0	1.6
5	1.7	2.6	4.6	*2.6	6.1	41	19	12	4.4	2.2	2.0	1.6
6	1.9	2.7	4.4	2.6	5.7	33	23	11	4.1	2.1	2.4	1.6
7	2.0	2.7	11	2.5	5.2	27	39	11	3.8	2.0	2.0	1.6
8	2.1	2.6	4.8	2.5	5	23	39	10	4.3	2.4	1.8	1.6
9	2.2	2.7	6.3	2.5	5.0	19	38	11	*3.8	2.1	2.0	1.6
10	2.2	2.6	8.3	2.8	4.4	16	33	9.9	3.4	2.0	*1.8	1.6
11	2.2	2.7	*5.5	3.6	4.4	14	28	8.8	3.9	2.0	1.8	1.6
12	2.2	2.7	11	3.1	4.1	13	24	8.5	3.4	2.0	1.7	1.5
13	2.3	2.7	17	6.3	4	13	19	8.0	2.9	*1.8	1.7	1.5
14	2.3	2.7	30	6.3	4	26	*16	9.9	4.4	1.8	1.7	1.5
15	2.4	2.7	17	7.4	3.6	30	14	16	3.4	3.9	1.7	*1.5
16	2.4	2.7	9.9	45	*3.4	27	14	24	3.1	2.6	1.7	1.4
17	2.4	2.7	6.9	37	5.4	24	26	23	4.1	2.1	1.8	1.4
18	2.4	*2.7	6	23	4.6	21	30	22	5.7	2.0	1.8	1.4
19	2.5	2.8	6	16	4.1	21	28	29	5.5	2.9	2.0	1.5
20	2.5	2.8	5	12	4.1	46	24	32	5.2	2.4	1.8	3.4
21	2.6	2.9	3.6	12	90	43	21	30	4.0	3.9	2.4	2.1
22	2.8	3.6	3.6	33	*75	37	19	26	3.6	3.1	2.0	1.8
23	2.8	5.5	3.2	47	49	31	19	21	3.2	2.7	2.0	1.7
24	3.1	3.5	3	33	37	28	26	17	3.4	2.2	2.4	1.7
25	3.1	3.9	3	26	30	24	85	14	2.7	2.1	2.9	1.8
26	3.1	3.4	2.9	26	23	33	70	11	2.5	2.0	2.4	1.8
27	3.4	3.1	2.9	26	17	32	51	11	2.9	1.8	2.1	1.7
28	4.6	3.1	2.9	21	17	31	41	9.1	2.4	1.8	2.1	1.7
29	3.5	3.0	2.9	18	-	28	29	8.0	2.2	1.8	2.0	1.7
30	3.0	2.9	2.8	14	-	26	24	6.9	2.2	2.4	1.8	1.7
31	2.7	-	2.6	11	-	23	-	6.1	-	1.9	1.8	-
Total	77.0	88.7	199.8	452.6	443.6	1,116	881	475.2	115.6	70.7	61.3	50.6
Mean	2.48	2.96	6.45	14.6	15.8	36.0	29.4	15.3	3.85	2.28	1.98	1.69
Cfsm	0.200	0.239	0.520	1.18	1.27	2.90	2.37	1.23	0.310	0.184	0.160	0.136
In.	0.23	0.27	0.60	1.36	1.32	3.34	2.64	1.42	0.35	0.21	0.18	0.15

Calendar year 1953: Max 302 Min 1.4 Mean 14.4 Cfsm 1.16 In. 15.74
Water year 1953-54: Max 160 Min 1.4 Mean 11.0 Cfsm 0.887 In. 12.07

Peak discharge (base, 200 cfs).--Mar. 1 (time unknown) 282 cfs (4.08 ft).
* Discharge measurement made on this day.

Cowpasture River near Clifton Forge, Va.

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

Drainage area.--456 sq mi.

Records available.--May 1907 to August 1908, March 1925 to September 1954.

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

Average discharge.--29 years (1925-54), 522 cfs.

Extremes.--Maximum discharge during year, 12,100 cfs Mar. 2 (gage height, 11.43 ft); minimum, 64 cfs Sept. 15 (gage height, 1.72 ft).

1907-8, 1925-54: Maximum discharge, 34,200 cfs Mar. 18, 1936 (gage height, 18.62 ft), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin; minimum, 38 cfs Sept. 2, 1932 (gage height, 1.70 ft).

Flood in March 1913 reached a stage of 20.8 ft, from floodmarks (discharge, about 45,000 cfs), from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin.

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

Revisions (water years).--WSP 952: 1925(M), 1926-40, 1941(M). WSP 972: 1913(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-28		Oct. 29 to Mar. 1				Mar. 2 to Sept. 30			
1.7	55	1.8	64	4.0	1,140	1.7	60	4.0	1,200
1.9	93	2.0	105	5.0	2,000	2.0	129	5.0	2,050
		2.5	256	7.0	4,350	2.5	295	7.0	4,350
		3.0	485	9.0	7,440	3.0	525	9.0	7,440

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	101	90	101	295	*6,590	640	a400	308	107	110	88
2	72	90	86	101	264	6,680	688	a400	287	100	107	83
3	72	84	86	94	252	2,100	652	a400	291	95	113	80
4	72	84	92	94	234	1,400	580	a380	249	225	102	76
5	72	80	108	94	213	1,000	542	a360	227	210	102	74
6	*72	80	122	97	197	798	574	*a350	207	185	110	74
7	70	80	346	*94	178	646	*817	329	188	168	116	73
8	70	80	356	94	160	552	1,040	329	179	164	113	71
9	70	80	245	92	154	485	851	324	170	155	*102	69
10	70	80	*338	94	149	437	688	299	170	149	97	71
11	72	80	434	122	152	409	592	283	170	126	95	73
12	74	80	325	181	144	446	530	272	198	116	90	69
13	74	80	518	194	133	1,040	465	256	217	113	85	67
14	74	80	950	220	122	1,480	413	279	194	*107	83	67
15	74	80	985	207	122	784	*390	422	294	540	83	*65
16	76	80	534	629	130	1,080	413	525	489	1,180	83	65
17	76	78	338	1,180	163	804	1,740	500	381	427	83	65
18	76	*78	245	708	*194	664	1,690	465	399	268	97	65
19	76	78	200	449	175	646	1,040	547	368	234	90	65
20	76	78	256	375	166	2,720	778	810	308	217	102	100
21	76	80	200	518	2,530	2,000	622	791	245	252	116	126
22	76	84	152	1,660	*2,630	1,280	530	634	201	295	102	121
23	76	112	144	1,910	1,220	935	485	515	173	224	100	92
24	76	112	138	950	818	752	573	432	*146	188	107	88
25	76	135	130	654	636	646	1,120	372	135	161	135	76
26	74	115	120	612	524	893	772	329	121	144	176	73
27	76	103	110	816	429	1,000	610	485	141	129	138	71
28	76	101	110	752	370	830	542	634	170	118	113	71
29	115	97	105	558	-	720	a500	461	135	116	107	71
30	122	90	105	434	-	646	a450	399	113	121	121	69
31	112	-	105	361	-	586	-	372	-	116	95	-
Total	2,415	2,660	8,073	14,447	12,754	41,049	21,327	13,354	6,874	6,770	3,273	2,318
Mean	77.9	88.7	260	466	456	1,324	711	431	229	218	106	77.3
Cfsm	0.171	0.195	0.570	1.02	1.00	2.90	1.56	0.945	0.502	0.478	0.232	0.170
In.	0.20	0.22	0.66	1.18	1.04	3.34	1.74	1.09	0.56	0.55	0.27	0.19

Calendar year 1953: Max 8,960 Min 60 Mean 471 Cfsm 1.03 In. 14.02
Water year 1953-54: Max 6,680 Min 65 Mean 371 Cfsm 0.814 In. 11.04

Peak discharge (base, 5,000 cfs).--Mar. 2 (4 a.m.) 12,100 cfs (11.43 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, and records for Jackson River at Falling Spring and James River at Lick Run.

Stuart Spring near McDowell, Va.

Location.--Lat 38°29'15", long. 79°26'05", on west side of State Highway 614, 5 miles east of McDowell, Highland County.
Records available.--August 1947, October 1949 to September 1954 (discharge measurements only).
Extremes.--1947, 1949-54: Maximum discharge measured, 33.0 cfs Mar. 24, 1953; minimum measured, 1.18 cfs Aug. 28, 1947.
Remarks.--Discharge measurements generally made once a month 300 to 400 ft below source of spring.

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

Jan. 8..... 3.78	Mar. 31..... 4.81	July 12..... 2.22
Feb. 1..... 2.57	May 3..... 3.26	Aug. 2..... 2.17
Mar. 7..... 3.11	June 7..... 2.47	Sept. 7..... 1.87

James River at Lick Run, Va.

Location.--Lat 37°46'25", long. 79°47'05", on right bank 10 ft downstream from old highway bridge at Lick Run, Botetourt County, 1,000 ft downstream from bridge on U. S. Highway 220, 0.9 mile downstream from confluence of Cowpasture and Jackson Rivers, 1.8 miles south of Iron Gate, and at mile 338.9.
Drainage area.--1,369 sq mi.
Records available.--April 1925 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 978.30 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1928, chain gage at same site and datum.
Average discharge.--29 years, 1,575 cfs.
Extremes.--Maximum discharge during year, 33,400 cfs Mar. 2 (gage height, 18.82 ft); minimum, 175 cfs Sept. 18 (gage height, 1.50 ft).
1925-54: Maximum discharge, 66,600 cfs Mar. 18, 1936 (gage height, 25.65 ft), from rating curve extended above 33,000 cfs on basis of records for other stations in James River basin; minimum, 153 cfs Oct. 11, 1930.
Flood in November 1877 reached a stage of about 33 ft (discharge, about 120,000 cfs). Flood in March 1913 reached a stage of 30.4 ft, from floodmarks (discharge, about 98,000 cfs).
Remarks.--Records good.
Revisions (water years).--WSP 757: Drainage area. WSP 852: 1936-37. WSP 972: 1927, 1930(M), 1932(M), 1935-36.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.5	175	6.0	4,650
2.0	435	10.0	11,600
3.0	1,135	16.0	25,600
4.0	1,980		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	217	251	246	297	1,060	23,300	2,030	1,300	1,180	424	401	281
2	222	237	237	287	928	*20,000	2,180	1,220	1,180	367	378	261
3	222	227	237	276	868	7,220	2,080	1,220	1,180	340	424	256
4	213	222	251	276	760	5,100	1,900	1,220	1,020	474	378	242
5	203	222	281	271	690	3,680	1,760	*1,140	905	618	378	237
6	198	222	307	271	632	2,770	1,800	1,060	760	447	429	232
7	*194	222	638	271	566	2,290	2,580	972	670	483	599	232
8	189	222	816	261	502	1,940	3,680	980	612	453	514	217
9	189	222	632	256	459	1,720	2,970	972	586	435	*389	213
10	194	222	823	266	453	1,550	2,400	912	534	453	356	213
11	198	222	*1,060	345	453	1,420	2,030	965	547	378	340	213
12	203	222	875	453	429	1,380	1,850	816	586	345	313	203
13	208	222	1,260	418	401	2,560	1,640	781	670	323	281	198
14	208	222	2,100	345	367	3,750	1,460	852	1,180	*307	271	198
15	208	222	2,400	477	367	4,500	1,380	2,860	1,020	554	271	*198
16	208	*222	1,510	2,620	378	3,390	1,420	2,770	1,380	5,560	266	194
17	208	222	1,020	4,350	447	2,520	3,320	2,180	1,340	1,940	261	194
18	208	222	651	2,460	*471	2,080	4,200	1,940	1,260	1,180	281	180
19	208	222	424	1,640	459	1,900	3,040	2,520	1,180	2,460	287	194
20	208	222	502	1,340	453	5,100	2,340	2,900	1,020	2,060	302	318
21	208	222	465	1,420	4,280	5,400	1,980	2,580	838	2,080	340	521
22	208	232	424	4,010	5,720	3,600	1,760	2,130	664	2,970	297	424
23	208	313	406	6,880	3,390	2,700	1,640	1,760	560	2,580	302	313
24	208	313	372	3,460	2,290	2,290	1,900	1,550	*471	1,380	323	281
25	208	345	323	2,290	1,900	1,940	3,390	1,340	435	980	395	246
26	213	307	281	2,080	1,640	2,550	2,700	1,220	395	718	459	232
27	217	281	328	2,290	1,380	3,320	2,130	2,440	389	560	367	227
28	256	276	334	2,030	1,640	2,700	1,850	2,640	1,100	483	418	222
29	323	261	313	1,680	-	2,290	1,640	1,940	725	447	345	222
30	313	251	313	1,380	-	2,080	1,420	1,590	508	418	356	213
31	271	-	313	1,220	-	1,980	-	1,380	-	453	307	-
Total	6,739	7,290	20,142	45,920	33,383	129,020	66,470	50,150	24,895	32,670	11,028	7,375
Mean	217	243	650	1,481	1,192	4,162	2,216	1,618	830	1,054	356	246
Cfsm	0.159	0.178	0.475	1.08	0.871	3.04	1.62	1.18	0.606	0.770	0.260	0.180
In.	0.18	0.20	0.55	1.24	0.91	3.50	1.81	1.36	0.68	0.89	0.30	0.20

Calendar year 1953: Max 24,300 Min 180 Mean 1,405 Cfsm 1.03 In. 13.96
Water year 1953-54: Max 23,300 Min 180 Mean 1,192 Cfsm 0.871 In. 11.82

Peak discharge (base, 12,000 cfs).--Mar. 2 (1:30 a.m.) 33,400 cfs (18.82 ft).
* Discharge measurement made on this day.

Johns Creek at Newcastle, Va.

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

Drainage area.--106 sq mi.

Records available.--April 1926 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,254.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1937, chain gage at same site and datum.

Average discharge.--28 years, 125 cfs.

Extremes.--Maximum discharge during year, 3,100 cfs Mar. 1 (gage height, 8.79 ft); minimum, 7.6 cfs Sept. 18, 19 (gage height, 2.43 ft).
1926-54: Maximum discharge observed, 8,000 cfs Jan. 23, 1935 (gage height, 10.80 ft), from rating curve extended above 3,200 cfs on basis of velocity-area studies; minimum, 6 cfs Dec. 5, 1946 (gage height, 2.72 ft), result of freezeup; minimum daily, 7 cfs Aug. 11, Sept. 3, 6, 7, 1930.

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

Revisions (water years).--WSP 972: 1935-36(M), 1940(M). WSP 1203: 1928, 1935.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 28

2.4	7	4.5	175
2.8	18	5.0	275
3.1	31	5.5	450
3.5	58	6.0	680
4.0	110		

Mar. 1 to Sept. 30

4.5	175	7.0	1,140
5.0	270	8.0	1,980
6.0	581	8.5	2,600

Note.--Same as preceding table below 4.5 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	13	14	20	75	2,180	210	57	44	16	14	14
2	9.0	12	14	17	67	*702	194	55	41	15	15	13
3	8.6	13	14	18	61	455	176	53	38	15	22	12
4	8.6	13	16	17	56	359	151	64	35	14	17	11
5	8.8	13	18	18	52	264	142	*61	32	15	16	10
6	9.0	13	21	*17	47	210	139	56	30	14	36	10
7	*8.6	13	30	16	42	170	248	53	27	13	37	9.6
8	8.6	13	32	18	39	147	274	56	24	*14	24	9.0
9	8.8	13	*30	17	36	127	212	53	23	15	20	9.0
10	9.6	14	63	19	35	114	174	53	21	15	*17	9.0
11	12	14	49	40	35	102	154	49	20	13	15	9.0
12	10	14	42	65	32	94	135	47	20	12	14	9.0
13	10	14	108	52	b30	85	*114	45	21	12	13	*9.3
14	11	14	196	42	b29	100	102	86	170	11	13	9.0
15	11	14	128	46	28	101	94	359	76	11	12	8.8
16	11	14	69	469	28	96	94	298	63	11	12	8.6
17	10	14	50	272	47	88	217	218	61	14	11	8.0
18	11	*14	b36	147	64	86	200	204	79	13	11	7.8
19	11	14	b28	110	55	110	166	320	78	160	21	8.8
20	11	14	b26	88	52	418	146	275	65	76	16	33
21	10	14	b22	85	366	278	130	234	a56	95	16	28
22	11	17	b20	367	370	210	120	182	a44	220	13	18
23	11	20	b20	436	224	180	109	150	a37	139	15	14
24	12	32	b18	212	174	152	99	127	*a32	64	20	12
25	12	21	b18	169	146	137	95	108	27	40	22	11
26	13	18	b18	248	121	291	85	91	24	30	16	10
27	13	16	b20	198	99	254	80	82	21	25	25	10
28	19	16	22	154	118	210	74	72	18	21	39	9.9
29	22	15	20	126	-	181	67	63	17	18	25	9.6
30	18	15	20	104	-	181	62	56	16	17	18	9.3
31	14	-	18	88	-	194	-	47	-	16	16	-
Total	351.9	454	1,200	3,695	2,528	8,276	4,263	3,674	1,260	1,164	581	349.7
Mean	11.4	15.1	38.7	119	90.3	267	142	119	42.0	37.5	18.7	11.7
Cfsm	0.108	0.142	0.365	1.12	0.852	2.52	1.34	1.12	0.396	0.354	0.176	0.110
In.	0.12	0.16	0.42	1.29	0.89	2.90	1.50	1.29	0.44	0.41	0.20	0.12

Calendar year 1953: Max 3,370 Min 8.0 Mean 116 Cfsm 1.09 In. 14.88
Water year 1953-54: Max 2,180 Min 7.8 Mean 76.2 Cfsm 0.719 In. 9.74

Peak discharge (base, 2,100 cfs).--Mar. 1 (5 a.m.) 3,100 cfs (8.79 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Craig Creek at Parr.
b Stage-discharge relation affected by ice.

Craig Creek at Parr, Va.

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

Drainage area.--331 sq mi.

Records available.--April 1925 to September 1954.

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

Average discharge.--29 years, 379 cfs.

Extremes.--Maximum discharge during year, 12,000 cfs Mar. 1 (gage height, 13.42 ft); minimum, 32 cfs Oct. 3-6, Sept. 17-19; minimum gage height, 3.35 ft Sept. 17-19.
1925-54: Maximum discharge, 19,100 cfs Jan. 23, 1935 (gage height, 17.0 ft, from graph based on gage readings), from rating curve extended above 11,000 cfs; minimum, 26 cfs Dec. 23, 1943 (gage height, 3.26 ft), result of freezeup.

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

Revisions (water years).--WSP 852: 1937. WSP 892: 1935-36. WSP 1203: 1935(M), 1938(M).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 28				Mar. 1 to Sept. 30			
3.3	26	5.0	510	3.3	28	6.0	1,130
3.5	44	5.5	785	3.5	48	8.0	2,900
4.0	123	6.0	1,200	4.0	128	10.0	5,660
4.5	265	7.0	2,230	4.5	265	11.0	7,460
				5.0	510		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	52	48	55	211	7,240	460	188	140	45	60	53
2	33	48	48	52	185	*3,180	488	175	122	45	58	49
3	32	46	48	52	168	1,500	477	170	113	44	81	46
4	32	45	51	52	155	1,130	422	175	105	42	80	44
5	32	45	54	51	142	857	375	*186	98	40	68	42
6	32	45	57	*51	133	686	360	173	93	42	67	40
7	*34	46	70	50	123	565	416	163	87	45	75	38
8	34	46	78	50	110	472	752	163	82	44	93	37
9	35	46	*88	49	98	395	636	161	80	40	74	37
10	36	46	91	52	102	346	516	153	76	39	*64	36
11	37	48	128	63	98	310	450	149	74	40	56	35
12	39	48	119	104	93	277	400	142	72	37	51	35
13	40	48	128	128	88	252	*341	137	71	36	47	34
14	41	48	255	95	81	255	301	149	94	*36	46	*34
15	40	48	455	133	79	289	285	510	199	37	45	34
16	41	48	232	484	81	281	285	818	173	34	45	33
17	41	48	160	1,000	*91	265	390	626	120	34	42	32
18	41	*48	110	488	115	252	658	504	120	37	41	32
19	41	48	82	305	130	255	543	697	133	258	41	33
20	41	48	b74	232	125	912	450	714	128	390	46	58
21	41	50	b68	202	671	990	380	626	113	277	53	105
22	42	51	b64	360	1,290	714	336	510	97	422	54	68
23	42	63	b60	1,480	702	582	310	400	84	592	49	65
24	41	64	b58	686	510	488	293	328	*75	305	51	52
25	42	81	55	472	406	406	281	281	68	191	76	46
26	42	66	55	532	328	466	273	245	62	142	109	42
27	45	57	58	620	273	587	252	217	58	109	75	41
28	49	54	66	477	242	499	235	197	52	90	86	39
29	52	51	58	360	-	430	220	178	49	78	111	39
30	64	50	57	289	-	416	205	163	46	69	81	38
31	61	-	56	245	-	444	-	153	-	64	62	-
Total	1,257	1,532	3,031	9,269	6,830	25,761	11,790	9,451	2,884	3,704	1,987	1,337
Mean	40.5	51.1	97.8	299	244	831	393	305	96.1	119	64.1	44.6
Cfsm	0.122	0.154	0.295	0.903	0.737	2.51	1.19	0.921	0.290	0.360	0.194	0.135
In.	0.14	0.17	0.34	1.04	0.77	2.89	1.33	1.06	0.32	0.42	0.22	0.15

Calendar year 1953: Max 7,510 Min 32 Mean 338 Cfsm 1.02 In. 13.84
Water year 1953-54: Max 7,240 Min 32 Mean 216 Cfsm 0.653 In. 8.85

Peak discharge (base, 4,200 cfs).--Mar. 1 (4 p.m.) 12,000 cfs (13.42 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Catawba Creek near Catawba, Va.

Location.--Lat 37°28'05", long. 80°00'20", on right bank 80 ft above highway bridge, 1.0 mile downstream from Little Catawba Creek, 1.9 miles west of Haymakertown, and 8.2 miles northeast of Catawba, Roanoke County. Prior to Aug. 1, 1953, at site 80 ft downstream.
Drainage area.--34 sq mi, approximately.
Records available.--September 1943 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 1,299.96 ft above mean sea level, datum of 1929. Prior to Aug. 1, 1953, staff gage at site 80 ft downstream at same datum.
Average discharge.--11 years, 38.5 cfs (adjusted for pumpage since October 1952).
Extremes.--1952-53: Maximum discharge during year, 2,870 cfs Mar. 24 (gage height, 5.46 ft), from rating curve extended above 620 cfs by logarithmic plotting; minimum, 3.0 cfs Aug. 22, Sept. 2; minimum gage height, 0.80 ft Oct. 29 to Nov. 4.
1953-54: Maximum discharge during year, 5,670 cfs Mar. 1 (gage height, 6.58 ft), from rating curve extended above 620 cfs by logarithmic plotting; minimum, 2.7 cfs July 16; minimum gage height, 1.27 ft Sept. 13.
1943-54: Maximum discharge, that of Mar. 1, 1954; minimum, 2.2 cfs Sept. 7-11, 1944 (gage height, 0.54 ft).
Flood in August 1940 reached a stage of 13.26 ft, from information by observer.
Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Lone Star Cement Co. pumps about 0.4 cfs below gage and returns it above the gage pool.

Rating tables, Oct. 1, 1952, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1, 1952, to July 31, 1953				Aug. 1 to Dec. 13, 1953		Dec. 14, 1953, to Aug. 24, 1954				Aug. 25 to Sept. 30, 1954	
0.7	4.0	1.5	95	1.4	3.2	1.3	2.9	2.5	90	1.3	3.7
.8	7.2	2.0	220	1.5	4.9	1.4	4.3	3.0	188	1.4	5.2
.9	11	2.5	403	1.6	8.0	1.5	6.2	3.5	354	1.5	7.0
1.0	18	3.0	650	1.8	17	1.6	9.0	4.0	695	1.7	13
1.2	40	4.0	1,300			1.8	18	5.0	1,760		
						2.0	32				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	6.2	16	58	36	46	54	37	a14	a8	4.6	3.5
2	8.3	6.2	16	53	33	48	51	37	a13	a7	7.7	3.2
3	9.4	6.2	16	79	31	42	46	32	a12	a7	11	3.4
4	8.6	6.2	16	66	29	233	43	29	a 11	a7	6.1	3.2
5	8.6	6.8	30	54	27	192	39	28	a 11	a8	5.5	4.2
6	7.9	6.8	30	43	27	124	46	39	a 11	a9	4.7	4.7
7	8.6	6.8	27	*40	66	93	192	62	a13	a9	5.8	4.0
8	7.9	6.8	26	43	48	85	105	58	a14	*a10	10	3.7
9	12	6.8	*22	48	40	69	*79	53	a13	a9	9.6	3.7
10	14	7.2	40	156	38	58	73	45	a15	a8	6.4	*3.5
11	11	7.9	264	105	*36	*54	66	39	a16	a7	5.5	3.5
12	9.0	8.3	91	75	38	58	58	37	a15	a6	4 9	3.9
13	8.3	7.5	71	58	36	111	58	34	a13	a6	4.9	4.0
14	8.3	6.8	62	50	32	91	54	32	a12	a6	4.6	3.7
15	*8.3	9.8	42	42	93	126	45	29	a13	a5	4.6	3.7
16	8.3	9.0	37	39	75	95	53	27	a14	a5	4.2	3.5
17	8.3	8.3	28	34	73	85	45	27	a17	a5	4.4	3.5
18	8.3	7.5	27	40	64	113	43	27	a25	a5	4.4	3.5
19	8.3	*9.8	27	39	56	103	40	42	a20	a5	4.2	3.5
20	7.5	126	25	36	85	89	40	109	a18	a5	3.9	3.9
21	7.5	95	54	77	358	73	38	64	a15	a5	3.9	4.0
22	7.5	109	40	73	220	71	36	51	a13	a5	3.5	3.9
23	7.5	50	38	66	131	140	34	45	a12	a5	3.9	3.5
24	7.5	33	33	109	99	1,010	32	43	a10	a5	3.9	3.5
25	6.8	30	30	84	85	236	30	a35	a9	a5	3.7	3.5
26	6.8	27	29	67	73	151	33	a25	a9	a4	3.7	3.7
27	6.8	29	26	56	58	117	34	*a20	a9	a4	3.7	4.2
28	6.8	20	25	53	51	95	31	a20	a9	a4	3.5	4.2
29	6.2	16	23	48	-	79	29	a18	a9	a4	3.4	3.9
30	6.2	16	20	42	-	71	33	a16	a9	a4	3.4	3.7
31	6.2	-	54	38	-	62	-	a15	-	*a6	3.4	-
Total	254.6	691.9	1,285	1,871	2,038	4,020	1,560	1,175	394	188	157.0	111.9
Mean	8.21	23.1	41.5	60.4	72.8	130	52.0	37.9	13.1	6.06	5.06	3.73
(†)	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Adjusted for pumpage												
Mean	7.81	22.7	41.1	60.0	72.4	129.6	51.6	37.5	12.7	5.66	4.66	3.33
Cfsm	0.230	0.668	1.21	1.76	2.13	3.81	1.52	1.10	0.374	0.166	0.137	0.098
In.	0.26	0.75	1.40	2.03	2.22	4.39	1.70	1.27	0.42	0.19	0.16	0.11

	Observed			Adjusted			
Calendar year 1952:	Max 462	Min 6.2	Mean 42.3	Mean 41.9	Cfsm 1.23	In. 16.78
Water year 1952-53:	Max 1,010	Min 3.2	Mean 37.7	Mean 37.3	Cfsm 1.10	In. 14.90

Peak discharge (base, 600 cfs).--Dec. 11 (time unknown) 678 cfs (3.05 ft); Feb. 21 (time unknown) 765 cfs (3.15 ft); Mar. 24 (about 3 a.m.) 2,870 cfs (5.46 ft).
* Discharge measurement made on this day.
† Pumpage, equivalent in cubic feet per second, by Lone Star Cement Co.
a Doubtful or no gage-height record; discharge estimated on basis of 3 discharge measurements and records for Craig Creek at Parr.

Catawba Creek near Catawba, Va.--Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	4.0	4.7	5.2	15	*1,390	28	16	12	a5	4.7	4.9
2	3.9	4.2	4.6	5.6	13	152	28	14	11	a5	5.6	4.6
3	3.9	4.2	4.6	5.6	12	93	27	15	10	a4	5.8	4.4
4	3.9	4.2	5.5	5.4	11	65	26	16	10	a4	4.7	4.3
5	4.0	4.2	6.1	5.6	11	52	25	*14	9.0	a4	10	4.3
6	4.6	4.2	6.1	*5.6	9.8	44	24	13	8.4	a5	11	4.2
7	*4.4	4.2	8.0	5.4	9.0	38	34	12	8.2	a5	7.0	4.2
8	4.0	4.4	6.8	5.6	8.4	34	34	13	8.2	*a6	5.4	4.2
9	4.0	4.4	*7.4	5.4	8.4	30	31	12	8.2	4.9	4.9	4.0
10	4.0	4.4	12	6.2	8.2	26	28	12	8.2	4.3	*4.5	4.2
11	4.0	4.4	8.0	14	7.9	23	27	11	7.9	4.3	4.3	4.2
12	4.0	4.2	11	10	7.3	22	25	11	7.3	4.2	4.2	4.2
13	4.0	4.2	14	8.2	7.3	21	*23	10	7.0	4.0	4.2	*3.8
14	3.9	4.2	28	7.6	7.0	25	21	25	21	3.9	4.2	4.2
15	4.0	4.2	16	10	7.3	23	20	59	17	3.9	4.2	4.2
16	4.0	4.0	10	61	7.0	21	20	48	9.8	4.0	4.0	4.2
17	4.2	4.0	7.0	34	*8.7	20	23	39	17	3.9	3.7	4.2
18	4.4	*4.2	6.8	20	8.2	19	21	39	21	3.6	3.9	3.8
19	4.6	4.2	6.5	14	7.3	36	20	45	15	25	3.9	4.4
20	4.6	4.2	6.5	12	8.2	92	19	39	11	14	3.7	11
21	4.4	4.6	6.8	14	162	59	18	34	9.0	19	3.9	6.8
22	4.6	6.4	7.0	104	*60	47	17	29	8.2	16	4.5	5.2
23	4.6	7.4	6.5	62	39	40	16	25	7.6	13	4.9	4.9
24	4.6	6.1	5.2	38	31	36	16	22	*6.8	8.2	5.1	4.6
25	4.6	5.5	5.6	34	25	32	19	20	6.5	6.5	12	4.6
26	4.7	5.2	5.6	52	21	30	23	18	6.0	5.8	7.8	4.4
27	5.2	4.7	5.6	39	18	26	22	16	5.6	5.4	8.3	4.4
28	4.9	4.7	6.0	29	98	24	20	14	5.4	5.1	6.8	4.4
29	4.6	4.6	6.2	23	-	23	18	17	a5	7.0	5.7	4.4
30	4.2	4.7	6.0	20	-	23	17	16	a5	6.0	5.2	4.3
31	4.0	-	5.6	17	-	23	-	13	-	4.7	4.9	-
Total	132.5	138.1	245.7	678.4	636.0	2,589	690	687	292.3	214.7	173.0	139.5
Mean	4.27	4.60	7.93	21.9	22.7	83.5	23.0	22.2	9.74	6.93	5.58	4.65
(†)	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
Adjusted for pumpage												
Mean	3.87	4.20	7.53	21.5	22.3	83.1	22.6	21.8	9.34	6.53	5.18	4.25
Cfsm	0.114	0.124	0.221	0.632	0.656	2.44	0.665	0.641	0.275	0.192	0.152	0.125
In.	0.13	0.14	0.25	0.73	0.68	2.81	0.74	0.74	0.31	0.22	0.18	0.14

	Observed			Adjusted		
Calendar year 1953:	Max 1,010	Min 3.2	Mean 33.0	Mean 32.6	Cfsm 0.959	In. 13.01
Water year 1953-54:	Max 1,390	Min 3.6	Mean 18.1	Mean 17.7	Cfsm 0.521	In. 7.07

Peak discharge (base, 600 cfs).--Mar. 1 (2 a.m.) 5,670 cfs (6.58 ft).

* Discharge measurement made on this day.

† Pumpage, equivalent in cubic feet per second, by Lone Star Cement Co.

a No gage-height record; discharge estimated on basis of 1 discharge measurement and records for Craig Creek at Parr.

James River at Buchanan, Va.

Location.--Lat 37°31'50", long. 79°40'45", on left bank at Chesapeake and Ohio Railway station at Buchanan, Botetourt County, 300 ft upstream from bridge on U. S. Highway 11, 1,000 ft upstream from Purgatory Creek, 1½ miles downstream from Looney Creek, and at mile 301.2.

Drainage area.--2,084 sq mi.

Records available.--August 1895 to September 1954 in reports of Geological Survey. February 1898 to September 1916, some of which has been revised, in Virginia Geological Survey Bulletin 31.

Gage.--Water-stage recorder. Datum of gage is 802.56 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 21, 1903, wire-weight gage at same site; datum lowered 2 ft on Apr. 3, 1897. Nov. 21, 1903, to July 1, 1927, chain gage at same site and datum.

Average discharge.--55 years (1898-1912, 1913-54), 2,502 cfs.

Extremes.--Maximum discharge during year, 46,400 cfs Mar. 2 (gage height, 18.75 ft); minimum, 275 cfs Sept. 19 (gage height, 1.65 ft).

1895-1954: Maximum discharge, about 105,000 cfs Mar. 27, 1913 (gage height, 31 ft, from floodmarks), from rating curve extended above 53,000 cfs by logarithmic plotting and comparison with records for other stations in James River basin; minimum, 255 cfs on several days in September 1932 (gage height, 1.60 ft).

Flood in November 1877 reached a stage of 34.9 ft, from floodmark (discharge, about 125,000 cfs).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Records of water temperatures and sediment loads for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 602: 1917-24. WSP 757: Drainage area. WSP 952: 1913(M). WSP 972: 1935-36. See also Records available.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 28				June 29 to Sept. 30			
1.7	310	4.0	2,280	1.6	254	2.5	790
2.0	480	6.0	5,700	2.0	440	3.0	1,230
2.5	820	10.0	15,800				
3.0	1,230	16.0	35,600				

Note.--Same as preceding table above 3.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	353	450	a380	462	1,480	20,400	2,520	1,680	1,530	584	584	435
2	348	420	a380	450	1,320	*34,500	2,790	1,530	1,330	514	584	405
3	353	392	a380	438	1,190	11,800	2,720	1,530	1,430	470	726	380
4	348	381	a380	426	1,120	7,520	2,520	1,580	1,310	435	605	370
5	342	375	a430	426	1,060	5,290	2,340	1,530	1,150	619	556	350
6	332	364	a490	426	980	4,070	2,340	1,430	1,040	626	605	340
7	315	370	a540	420	908	3,270	2,720	1,320	940	528	598	331
8	*310	370	892	414	828	2,720	4,430	1,300	868	605	766	327
9	321	370	980	409	772	2,400	4,070	1,300	820	542	668	318
10	321	370	916	414	719	2,120	a3,000	1,250	772	542	556	314
11	332	375	1,020	498	719	1,950	2,790	1,230	740	521	488	309
12	337	375	1,260	576	691	1,840	2,520	1,160	748	458	452	309
13	342	375	1,180	677	656	2,280	2,220	1,090	836	420	420	*300
14	348	375	2,000	635	621	3,710	2,000	1,140	1,120	*400	395	296
15	348	375	2,940	614	582	5,090	*1,900	2,510	1,250	400	390	296
16	348	*375	2,220	1,540	588	4,070	1,900	4,250	1,530	4,180	385	296
17	348	a380	1,530	5,700	670	3,100	2,820	3,360	1,630	2,760	380	288
18	348	a380	1,080	3,890	*719	2,580	5,090	2,790	1,480	1,530	380	283
19	348	a380	764	2,340	756	2,340	4,160	3,020	1,430	1,950	390	279
20	342	a380	684	1,900	748	5,620	3,180	3,980	1,320	3,620	476	380
21	337	a380	748	1,630	5,170	7,760	2,650	3,800	1,150	2,460	556	591
22	342	a380	691	2,800	8,250	7,520	2,280	3,100	996	2,940	570	758
23	342	a380	621	9,250	5,380	5,700	2,120	2,520	860	4,070	458	570
24	342	a400	582	5,400	3,440	3,180	2,170	2,170	*740	2,280	440	440
25	342	a470	528	3,360	2,650	2,650	3,270	1,950	656	1,480	549	400
26	342	a520	468	2,790	2,280	2,650	3,440	1,730	614	1,120	598	355
27	348	a470	450	3,180	1,950	4,070	2,650	1,990	558	894	696	340
28	375	a430	516	2,940	1,730	3,530	2,280	3,100	714	742	854	336
29	444	a410	504	2,400	-	3,100	2,120	2,460	1,080	647	703	336
30	510	a390	486	2,000	-	2,720	1,900	2,000	734	584	570	327
31	492	-	474	1,730	-	2,580	-	1,780	-	563	521	-
Total	11,000	11,862	26,514	60,135	47,977	172,130	82,910	65,580	31,376	39,484	16,919	11,059
Mean	355	395	855	1,940	1,713	5,553	2,764	2,115	1,046	1,274	546	369
Cfsm	0.170	0.190	0.410	0.931	0.822	2.66	1.33	1.01	0.502	0.611	0.262	0.177
In.	0.20	0.21	0.47	1.07	0.86	3.07	1.48	1.16	0.56	0.70	0.30	0.20

Calendar year 1953: Max 39,300 Min 310 Mean 2,111 Cfsm 1.01 In. 13.74
Water year 1953-54: Max 34,500 Min 279 Mean 1,581 Cfsm 0.759 In. 10.28

Peak discharge (base, 21,000 cfs).--Mar. 2 (12:30 a.m.) 46,400 cfs (18.75 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and records for station at Lick Run.

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Karnes Spring near Buchanan, Va.

Location.--Lat 37°35'55", long. 79°40'50", 4.7 miles north of Buchanan, Botetourt County.
Records available.--July 1928, August 1947, October 1949 to September 1954 (discharge measurements only).
Extremes.--1928, 1947, 1949-54: Maximum discharge measured, 21.4 cfs July 7, 1953; minimum measured, that of Sept. 13, 1954.
Remarks.--Discharge measurements generally made once a month near mouth of spring.

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

Nov. 16	2.36	May 3	4.49
Dec. 7	2.71	June 24	3.04
Jan. 7	1.59	July 15	2.44
Feb. 18	2.29	Aug. 9	2.04
Apr. 15	6.09	Sept.13	1.44

Calfpasture River above Mill Creek, at Goshen, Va.

Location.--Lat 37°59'15", long. 79°29'40", on left bank 20 ft upstream from highway bridge at Goshen, Rockbridge County, and 400 ft upstream from Mill Creek.
Drainage area.--147 sq mi.
Records available.--January 1939 to September 1954.
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,384.84 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944.
Average discharge.--15 years, 164 cfs.
Extremes.--Maximum discharge during year, 10,900 cfs Mar. 1 (gage height, 10.74 ft); minimum, 2.1 cfs Oct. 9 (gage height, 1.36 ft).
1939-54: Maximum discharge, 14,800 cfs June 18, 1949 (gage height, 12.14 ft), from rating curve extended above 9,200 cfs by logarithmic plotting; minimum, 1.8 cfs Oct. 9, 1941 (gage height, 1.22 ft).
Remarks.--Records good except those below 30 cfs, which are fair. Discharge given herein includes diversion 50 ft above control by Stillwater Worsted Mill.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-27, July 2-15, July 25 to Sept. 16)

1.2	2.0	2.4	40	5.0	1,270
1.3	3.0	2.6	65	6.0	2,280
1.5	5.1	3.0	150	8.0	5,420
1.8	10	3.4	310		
2.2	25	4.0	640		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	8.2	9.8	23	116	*5,260	185	116	107	21	13	8.1
2	*2.7	7.4	9.6	22	104	*1,960	196	596	94	18	13	7.6
3	2.8	6.9	9.0	22	94	718	199	392	79	20	13	7.2
4	2.5	6.5	11	*21	86	497	182	365	67	25	13	6.7
5	2.5	6.2	16	21	77	343	164	280	57	22	10	6.5
6	2.7	6.4	19	20	68	252	164	*220	49	24	10	6.1
7	2.5	6.5	161	19	61	202	280	178	43	20	9.6	5.8
8	2.7	6.4	116	18	52	174	354	174	38	21	7.9	5.4
9	2.3	6.2	79	16	50	145	285	145	140	20	7.6	5.4
10	2.8	6.1	188	17	48	128	220	138	82	19	7.4	5.4
11	3.4	6.1	*174	26	44	120	192	125	90	17	*6.9	5.2
12	3.5	6.1	125	19	40	154	*164	116	145	15	6.2	4.8
13	3.5	6.1	244	19	36	290	140	107	111	15	5.8	4.6
14	3.5	6.1	382	23	32	486	125	102	587	13	5.8	4.3
15	3.7	6.1	338	27	*31	519	118	150	376	*133	5.8	4.3
16	3.7	6.1	199	127	30	376	132	206	280	88	6.2	*4.8
17	3.8	5.9	135	354	43	265	1,150	210	228	54	8.5	5.1
18	3.8	5.9	102	232	48	213	790	192	321	42	7.6	5.1
19	3.7	*5.8	75	174	46	196	464	216	321	39	7.6	5.4
20	3.4	5.8	74	148	46	1,030	321	596	228	36	8.3	10
21	3.4	6.2	62	206	1,420	694	236	497	157	58	10	12
22	3.5	6.7	57	404	1,080	442	192	354	114	43	10	9.4
23	3.7	15	50	436	480	310	168	252	88	34	9.6	7.2
24	3.7	17	39	310	305	236	199	192	67	28	10	6.7
25	3.7	15	32	224	228	199	244	154	*52	24	25	6.7
26	3.6	12	29	202	182	236	228	130	44	23	28	6.5
27	3.8	12	27	343	148	270	192	125	42	21	22	6.2
28	8.2	11	29	285	130	252	171	123	30	18	17	6.1
29	29	11	27	210	-	220	145	123	27	17	12	5.8
30	16	10	26	168	-	192	130	164	24	18	11	5.8
31	10	-	24	138	-	182	-	125	-	17	9.8	-
Total	150.8	242.7	2,868.4	4,274	5,125	16,561	7,730	6,863	4,088	963	337.6	190.2
Mean	4.86	8.09	92.5	138	183	534	258	221	136	31.1	10.9	6.34
Cfsm	0.033	0.055	0.629	0.939	1.24	3.63	1.76	1.50	0.925	0.212	0.074	0.043
In.	0.04	0.06	0.73	1.08	1.29	4.18	1.96	1.73	1.03	0.24	0.09	0.05

Calendar year 1953: Max 4,790 Min 2.3 Mean 141 Cfsm 0.959 In. 12.99
Water year 1953-54: Max 5,260 Min 2.3 Mean 135 Cfsm 0.918 In. 12.48

Peak discharge (base, 2,500 cfs).--Feb. 21 (5:30 p.m.) 2,990 cfs (6.52 ft); Mar. 1 (6 p.m.) 10,900 cfs (10.74 ft).
* Discharge measurement made on this day.

Maury River at Rockbridge Baths, Va.

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

Drainage area.--329 sq mi.

Records available.--October 1928 to September 1954. Prior to October 1945, published as North River at Rockbridge Baths.

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

Average discharge.--25 years (1929-54), 361 cfs.

Extremes.--Maximum discharge during year, 14,400 cfs Mar. 1 (gage height, 9.75 ft); minimum, 20 cfs Oct. 2, 3, Sept. 12-18; minimum gage height, 0.97 ft Oct. 2, 3.
1928-54: Maximum discharge, 33,000 cfs Mar. 17, 1936 (gage height, 13.07 ft), from rating curve extended above 16,000 cfs by logarithmic plotting; minimum, 11 cfs Nov. 28, 1930 (gage height, 0.76 ft).

Remarks.--Records good.

Revisions (water years).--WSP 972: 1929-40, 1941(M). WSP 1002: 1930(m).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	17	4.0	1,480
1.0	22	5.0	2,370
1.2	38	6.0	3,650
1.4	69	7.0	5,500
1.6	116	8.0	8,000
2.0	250	9.0	11,300
3.0	770		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	33	34	50	250	9,400	430	312	189	48	38	31
2	*21	30	34	48	227	*4,140	410	1,110	160	44	36	28
3	20	28	33	48	204	1,840	405	*865	138	43	39	26
4	21	28	38	*48	182	1,280	370	800	124	83	36	25
5	22	28	50	48	169	935	360	638	108	64	34	24
6	23	28	65	48	153	728	410	523	96	108	39	23
7	21	28	365	47	136	594	606	435	87	64	36	23
8	21	29	234	47	114	506	710	425	80	58	34	23
9	22	29	153	46	116	415	600	345	319	60	32	22
10	22	28	414	48	106	370	490	317	186	50	31	22
11	23	28	*317	80	104	326	430	278	185	44	*29	22
12	24	28	215	70	94	523	*370	258	262	42	28	20
13	24	28	405	60	82	830	304	230	197	38	27	20
14	25	28	730	76	78	1,180	266	227	637	36	27	20
15	25	28	672	76	*82	1,110	254	405	512	*727	27	20
16	24	28	385	350	76	830	286	474	457	423	28	20
17	25	28	254	800	114	655	1,800	457	479	150	31	*20
18	25	28	182	512	130	556	1,520	425	572	101	31	20
19	25	*28	163	370	114	556	935	611	550	94	30	21
20	26	29	130	317	111	2,260	694	*1,220	400	84	29	34
21	25	30	108	415	3,380	1,520	556	1,000	274	192	32	41
22	26	32	104	913	2,450	970	468	740	200	141	36	30
23	26	87	91	1,040	1,180	746	410	567	156	98	34	26
24	26	65	78	666	800	584	490	440	122	76	33	23
25	26	50	84	506	622	518	935	355	101	62	56	23
26	26	44	69	534	501	694	746	282	87	53	67	23
27	27	41	65	830	395	655	600	258	89	47	44	23
28	31	38	62	666	326	606	523	234	78	43	36	22
29	76	36	58	490	-	523	425	238	60	38	41	22
30	56	35	56	385	-	462	365	312	53	42	37	21
31	36	-	55	304	-	425	-	230	-	43	35	-
Total	842	1,028	5,703	9,938	12,296	36,737	17,168	15,011	6,958	3,196	1,093	718
Mean	27.2	34.3	184	321	439	1,185	572	484	232	103	35.3	23.9
Cfsm	0.083	0.104	0.559	0.976	1.33	3.60	1.74	1.47	0.705	0.313	0.107	0.073
In.	0.10	0.12	0.64	1.13	1.38	4.15	1.94	1.70	0.79	0.36	0.12	0.08

Calendar year 1953: Max 7,530 Min 20 Mean 337 Cfsm 1.02 In. 13.90
Water year 1953-54: Max 9,400 Min 20 Mean 303 Cfsm 0.921 In. 12.51

Peak discharge (base, 4,500 cfs).--Feb. 21 (5 p.m.) 6,290 cfs (7.35 ft); Mar. 1 (8 p.m.) 14,400 cfs (9.75 ft).

* Discharge measurement made on this day.

Kerrs Creek near Lexington, Va.

Location.--Lat 37°49'35", long. 79°26'35", on right bank 1.4 miles upstream from mouth and 2.9 miles north of Lexington, Rockbridge County. Prior to Oct. 1, 1953, at site 1,000 ft downstream.

Drainage area.--34 sq mi.

Records available.--January 1927 to September 1954 (fragmentary prior to August 1930).

Gage.--Water-stage recorder. Datum of gage is 980.32 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1953, chain or wire-weight gage at site 1,000 ft downstream at different datum.

Average discharge.--24 years (1930-54), 37.9 cfs.

Extremes.--Maximum discharge during year, 6,700 cfs Mar. 1 (gage height, 9.28 ft), from rating curve extended above 570 cfs on basis of records for former site 1,000 ft downstream and logarithmic plotting; minimum, 5 cfs Jan. 12, Sept. 1-9, 12-18; minimum gage height, 2.32 ft Jan. 12, result of freezeup.

1927-54: Maximum discharge, 23,000 cfs Sept. 10, 1950 (gage height, 13.8 ft, site and datum then in use), from rating curve extended above 800 cfs on basis of slope-area determinations at gage heights 9.3 and 13.8 ft, and contracted-opening determination at gage height 13.8 ft; minimum, 4 cfs on many days in August and September 1932, Sept. 12, 1934, July 17, Nov. 21, 1938. Extremes in this paragraph refer to site and datum then in use.

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

Revisions (water years).--WSP 1203: 1927-29, 1930-34(M), 1935-40, 1941(M), 1942, 1943-48(M), 1949.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.3	5	3.3	80
2.4	6	4.0	250
2.6	11	5.0	590
2.8	20	6.0	1,250
3.0	37		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	8	7	7	13	*1,220	34	29	13	10	7	5
2	7	8	7	7	12	185	31	27	13	10	8	5
3	7	7	7	7	11	122	29	*28	12	10	11	5
4	7	7	8	7	11	75	27	28	12	10	8	5
5	7	7	10	7	10	56	29	23	11	10	8	5
6	7	7	10	7	10	53	30	20	10	9	9	5
7	7	7	*17	*7	9	41	70	20	10	9	8	5
8	*7	7	10	7	8	35	50	20	*13	10	7	5
9	7	7	11	7	9	32	41	18	15	9	7	5
10	7	7	18	7	8	30	36	18	13	9	7	6
11	7	7	12	10	8	28	33	17	13	8	*7	6
12	7	7	12	9	8	28	30	17	11	8	7	5
13	7	7	16	8	7	27	27	16	13	8	7	5
14	7	7	31	8	8	45	25	21	16	8	7	5
15	7	7	18	8	8	41	*26	36	23	*24	7	5
16	7	*7	13	28	8	34	29	28	38	12	7	5
17	7	7	11	29	10	31	66	25	52	10	7	*5
18	7	7	10	17	8	28	47	26	57	10	9	5
19	7	7	10	15	*8	95	39	29	32	12	7	6
20	7	7	9	13	9	182	34	31	23	10	7	10
21	7	7	9	15	*492	84	32	27	18	11	8	7
22	7	8	9	42	120	59	28	24	16	10	8	6
23	7	11	8	32	63	49	28	22	15	10	7	6
24	7	8	8	22	47	42	149	19	13	9	7	6
25	7	8	7	19	37	41	142	18	13	8	8	6
26	7	7	8	32	32	70	72	16	12	8	8	6
27	7	7	7	34	26	50	52	16	20	8	6	6
28	8	7	7	24	26	45	44	15	13	8	6	6
29	12	7	7	20	-	41	36	14	11	7	6	6
30	9	7	7	17	-	37	32	14	11	8	6	6
31	8	-	7	14	-	35	-	13	-	7	6	-
Total	226	219	331	486	1,026	2,941	1,348	675	542	300	228	169
Mean	7.29	7.30	10.7	15.7	36.6	94.9	44.9	21.8	18.1	9.68	7.35	5.63
Cfsm	0.214	0.215	0.315	0.462	1.08	2.79	1.32	0.641	0.532	0.285	0.216	0.166
In.	0.25	0.24	0.36	0.53	1.12	3.22	1.47	0.74	0.59	0.33	0.25	0.19

Calendar year 1953: Max 732 Min 7 Mean 33.4 Cfsm 0.982 In. 13.33
Water year 1953-54: Max 1,220 Min 5 Mean 23.3 Cfsm 0.685 In. 9.29

Peak discharge (base, 600 cfs).--Feb. 21 (6 a.m.) 1,720 cfs (6.56 ft); Mar. 1 (4 a.m.) 6,700 cfs (9.28 ft); Apr. 24 (6 p.m.) 1,130 cfs (5.83 ft).

* Discharge measurement made on this day.

Big Spring at Kerrs Creek, Va.

Location.--Lat 37°50'50", long. 79°28'30", 1.3 miles east of town of Kerrs Creek, Rockbridge County.
Records available.--August 1947, October 1949 to September 1954 (discharge measurements only).
Extremes.--1947, 1949-54: Maximum discharge measured, 9.41 cfs Apr. 9, 1951; minimum measured, that of Jan. 7, 1954.
Remarks.--Discharge measurements generally made once a month at bridge on State Highway 623.

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

Oct. 8.....4.38	Feb. 19.....3.79	July 15.....4.48
Nov. 16.....4.49	Apr. 15.....6.65	Aug. 10.....4.00
Dec. 7.....4.21	May 3.....6.91	Sept. 17.....4.33
Jan. 7.....3.60	June 8.....4.10	

Maury River near Lexington, Va.

Location.--Lat 37°48'49", long. 79°26'42", on right bank 900 ft upstream from Lime Kiln highway bridge, 0.2 mile downstream from Kerrs Creek, and 2.8 miles upstream from Lexington, Rockbridge County.
Drainage area.--487 sq mi.
Records available.--August 1925 to September 1954. Prior to October 1945, published as North River near Lexington.
Gage.--Water-stage recorder. Datum of gage is 906.56 ft above mean sea level (levels by Corps of Engineers).
Average discharge.--26 years (1928-54), 510 cfs.
Extremes.--Maximum discharge during year, 14,900 cfs Mar. 1 (gage height, 14.22 ft); minimum, 48 cfs Sept. 13-19 (gage height, 1.85 ft).
1925-54: Maximum discharge, 40,000 cfs Mar. 18, 1936 (gage height, 23.58 ft, from floodmarks), from rating curve extended above 9,000 cfs by logarithmic plotting and on basis of records for other stations in James River basin; minimum, 34 cfs Sept. 6, 1930, Sept. 18, 1932.
Remarks.--Records good except those for period of no gage-height record, which are fair.
Revisions (water year).--WSP 952: 1936(M). WSP 972: 1936.

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

Day	Oct.	Nov.	Dec.	Jan..	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	72	a70	94	324	9,920	590	403	287	100	92	66
2	55	69	a70	87	291	*5,680	550	1,040	256	94	87	60
3	54	66	a70	85	262	2,300	545	980	228	89	118	55
4	52	82	a80	85	238	1,580	502	890	206	121	89	52
5	54	62	a100	85	225	1,160	494	725	188	125	81	52
6	56	62	a200	85	206	920	535	*600	171	160	92	51
7	*58	62	*a400	83	188	752	725	502	160	128	89	51
8	56	62	339	80	171	640	890	494	155	118	80	61
9	56	*64	222	80	163	545	780	420	347	114	76	52
10	58	66	458	81	158	489	645	387	*287	103	74	51
11	60	66	450	114	150	441	575	347	245	92	*67	51
12	60	64	309	125	142	540	512	328	328	*85	61	50
13	60	64	454	72	132	920	441	298	294	83	60	49
14	60	64	780	109	123	1,300	403	298	638	80	58	48
15	61	64	862	112	125	1,330	379	446	585	875	58	48
16	62	64	498	286	125	1,010	403	530	565	729	58	*48
17	62	64	336	890	142	808	1,680	516	575	270	61	48
18	62	64	228	615	182	675	1,780	489	660	188	71	48
19	62	62	179	446	166	686	1,130	635	640	171	66	50
20	64	62	206	375	158	2,700	835	1,260	502	160	64	82
21	64	66	168	*424	3,660	1,940	675	1,200	367	252	71	107
22	66	69	160	843	3,360	1,300	570	890	287	238	85	74
23	66	a130	150	1,260	1,510	1,010	507	690	235	182	76	60
24	66	a110	132	780	980	808	614	545	197	145	71	54
25	66	a90	105	600	780	715	1,160	454	168	125	95	52
26	66	a80	114	570	620	890	890	383	150	109	125	52
27	67	a75	112	950	502	862	725	339	155	100	107	52
28	80	a70	107	808	424	780	630	320	145	92	80	51
29	125	a70	105	600	-	700	525	376	109	85	78	51
30	135	a70	100	480	-	640	458	498	107	89	80	51
31	89	-	98	391	-	585	-	347	-	96	72	-
Total	2,058	2,115	7,662	11,695	15,507	44,626	21,148	17,630	9,237	5,398	2,442	1,677
Mean	66.4	70.5	247	377	554	1,440	705	569	308	174	78.8	55.9
Cfsm	0.136	0.145	0.507	0.774	1.14	2.96	1.45	1.17	0.632	0.357	0.162	0.115
In.	0.16	0.16	0.58	0.89	1.19	3.41	1.62	1.35	0.71	0.41	0.19	0.13

Calendar year 1953: Max 8,630 Min 52 Mean 461 Cfsm 0.947 In. 12.85
Water year 1953-54: Max 9,920 Min 48 Mean 387 Cfsm 0.795 In. 10.80

Peak discharge (base, 5,000 cfs).--Feb. 21 (8 p.m.) 7,100 cfs (9.77 ft); Mar. 1 (9:30 p.m.) 14,900 cfs (14.22 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and records for stations at Rockbridge Baths and near Buena Vista.

South River near Riverside, Va.

Location.--Lat 37°47'00", long. 79°21'35", on right bank 20 ft upstream from highway bridge, 1.1 miles southwest of Riverside, Rockbridge County, 1.9 miles upstream from mouth, and 4 miles east of Lexington.

Drainage area.--111 sq mi.

Records available.--October 1949 to September 1954.

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

Average discharge.--5 years, 132 cfs.

Extremes.--Maximum discharge during year, 4,000 cfs Mar. 1 (gage height, 8.78 ft); minimum, 12 cfs Sept. 16-18 (gage height, 2.00 ft).
1949-54: Maximum discharge, that of Mar. 1, 1954; minimum, that of Sept. 16-18, 1954.
Flood in March 1936 reached a stage of about 13.7 ft, from information by local residents.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-27		Oct. 28 to Feb. 28				Mar. 1 to Sept. 30			
2.0	13	2.1	15	3.5	200	2.0	12	4.0	280
2.2	25	2.3	28	4.0	304	2.1	15	4.5	452
		2.6	61	4.5	470	2.5	43	5.0	679
		3.0	120			3.0	87	6.0	1,260
						3.5	164	8.0	3,010

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	21	22	28	86	*2,310	142	78	93	27	25	17
2	17	20	22	28	78	1,220	125	73	85	25	25	16
3	17	19	22	29	72	754	114	76	77	28	37	15
4	17	19	24	27	67	486	107	102	72	35	27	14
5	16	19	27	27	61	350	113	83	67	31	25	14
6	17	19	31	27	59	275	112	*81	63	33	29	14
7	*17	20	*100	25	53	233	126	80	59	29	26	14
8	18	20	56	25	*51	199	119	79	59	35	23	14
9	18	*20	49	24	54	172	112	74	66	33	22	14
10	19	20	114	27	49	153	106	72	*59	27	*21	14
11	19	20	90	35	49	142	105	68	75	26	19	14
12	18	20	78	26	45	143	99	66	59	*26	19	13
13	18	20	93	30	41	131	93	63	59	25	18	13
14	18	20	214	30	43	174	88	73	72	24	17	13
15	18	20	186	29	43	188	*89	93	57	124	18	13
16	18	19	125	78	41	176	93	86	57	82	18	*12
17	19	19	93	106	53	158	184	82	56	47	20	12
18	18	19	68	80	47	143	201	85	57	39	22	12
19	18	19	67	75	43	149	180	89	53	45	22	14
20	19	19	61	78	43	318	153	182	47	41	20	36
21	18	21	56	*86	386	283	133	604	45	55	19	31
22	18	22	54	111	*356	236	122	416	41	47	19	20
23	19	60	48	125	226	205	113	270	40	41	20	17
24	19	32	41	108	176	180	109	199	37	37	19	16
25	19	27	36	98	147	172	107	160	36	33	19	16
26	19	25	38	111	126	216	112	135	33	32	19	16
27	21	24	36	154	108	203	98	114	33	29	22	16
28	42	24	35	142	100	192	93	102	31	27	24	15
29	41	23	34	123	-	199	88	178	29	26	25	15
30	33	24	32	110	-	162	82	180	29	40	20	15
31	24	-	32	94	-	154	-	109	-	29	18	-
Total	629	674	1,984	2,096	2,703	10,076	3,518	4,152	1,648	1,178	677	475
Mean	20.3	22.5	64.0	67.6	96.5	325	117	134	54.9	38.0	21.8	15.8
Cfsm	0.183	0.203	0.577	0.609	0.869	2.93	1.05	1.21	0.495	0.342	0.196	0.142
In.	0.21	0.23	0.67	0.70	0.90	3.38	1.17	1.40	0.55	0.39	0.23	0.16

Calendar year 1953: Max 1,170 Min 14 Mean 121 Cfsm 1.09 In. 14.78
Water year 1953-54: Max 2,310 Min 12 Mean 81.7 Cfsm 0.736 In. 9.99

Peak discharge (base, 800 cfs).--Mar. 1 (10 a.m.) 4,000 cfs (8.78 ft); May 21 (8 a.m.) 808 cfs (5.25 ft).
* Discharge measurement made on this day.

Maury River near Buena Vista, Va.

Location.--Lat 37°45'45", long. 79°23'30", on right bank 0.5 mile downstream from South River and 2.8 miles northwest of Buena Vista, Rockbridge County.

Drainage area.--649 sq mi.

Records available.--March 1939 to September 1954. Prior to October 1945, published as North River near Buena Vista.

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

Average discharge.--15 years, 675 cfs.

Extremes.--Maximum discharge during year, 15,600 cfs Mar. 1 (gage height, 13.80 ft); minimum, 68 cfs Sept. 6, 16; minimum gage height, 1.60 ft Sept. 6.
1939-54: Maximum discharge, 22,400 cfs Sept. 10, 1950 (gage height, 16.2 ft); minimum, 20 cfs Oct. 10, 1941 (gage height, 1.23 ft), occurred during filling of a small reservoir 2 miles upstream.
Flood of Mar. 18, 1936, reached a stage of about 22 ft, from information by local residents.

Remarks.--Records good.

Revisions (water years).--WSP 952: 1940-41.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.6	68	4.0	1,000
1.7	85	6.0	2,600
2.1	170	8.0	4,880
2.5	290	10.0	7,950
3.0	472	12.0	11,700

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	114	104	140	436	10,300	728	510	409	145	122	102
2	87	106	104	136	390	6,980	677	1,050	369	136	116	97
3	85	102	102	134	362	2,890	677	1,100	334	140	150	90
4	85	99	110	131	334	2,030	628	1,000	306	155	129	87
5	85	97	129	129	313	1,510	628	840	280	184	118	83
6	87	95	148	129	290	1,210	652	*702	258	190	122	80
7	*87	97	*398	127	264	1,000	810	604	243	184	124	83
8	87	99	440	122	*243	840	1,000	581	234	170	114	85
9	87	*97	303	122	231	728	902	523	373	162	106	88
10	88	97	489	127	225	652	754	480	*394	150	*102	78
11	90	95	581	158	213	604	702	444	340	136	100	76
12	90	95	409	170	201	628	628	417	390	*129	97	73
13	90	94	506	134	187	1,040	558	387	372	122	94	71
14	90	94	935	136	178	1,400	514	394	657	118	92	70
15	92	94	1,070	152	178	*1,580	*493	532	677	757	92	70
16	92	94	652	309	178	1,250	510	628	628	1,030	94	*68
17	94	95	456	968	201	1,000	1,620	628	652	365	95	70
18	94	95	316	728	240	840	2,120	581	702	252	108	70
19	94	95	264	549	225	810	1,400	677	702	237	106	71
20	94	95	290	472	213	2,890	1,040	1,320	581	222	102	118
21	94	99	249	*493	3,550	2,380	810	1,780	444	297	102	148
22	94	102	234	803	3,720	1,580	702	1,280	358	316	118	112
23	94	145	216	1,470	1,780	1,280	628	968	300	243	112	92
24	94	184	192	935	1,210	1,040	677	754	258	201	106	83
25	94	140	168	702	935	902	1,320	628	225	173	106	80
26	94	127	165	677	754	1,070	1,000	545	198	158	158	78
27	95	116	165	1,000	628	1,070	840	476	207	143	155	78
28	134	112	158	968	540	1,000	728	444	195	134	129	78
29	160	108	155	728	-	902	628	468	168	129	120	76
30	187	106	150	604	-	810	558	724	150	140	116	73
31	138	-	148	506	-	754	-	493	-	134	110	-
Total	3,064	3,188	9,806	13,959	18,219	52,970	24,932	21,958	11,404	7,052	3,515	2,528
Mean	98.8	106	316	450	651	1,709	831	708	380	227	113	84.3
Cfsm	0.152	0.163	0.487	0.693	1.00	2.63	1.28	1.09	0.586	0.350	0.174	0.130
In.	0.18	0.18	0.56	0.80	1.04	3.03	1.43	1.26	0.65	0.40	0.20	0.14

Calendar year 1953: Max 9,020 Min 85 Mean 603 Cfsm 0.929 In. 12.59
Water year 1953-54: Max 10,300 Min 68 Mean 473 Cfsm 0.729 In. 9.87

Peak discharge (base, 6,200 cfs).--Feb. 21 (9 p.m.) 7,110 cfs (9.48 ft); Mar. 1 (1:30 p.m.) 15,600 cfs (13.80 ft).
* Discharge measurement made on this day.

Pedlar River near Pedlar Mills, Va.

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

Drainage area.--91 sq mi, approximately.

Records available.--July 1942 to September 1954.

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

Average discharge.--12 years, 119 cfs (adjusted).

Extremes.--Maximum discharge during year, 2,500 cfs Mar. 1 (gage height, 7.52 ft); minimum, 2.6 cfs Sept. 18, 19 (gage height, 1.83 ft).
1942-54: Maximum discharge, 11,200 cfs Aug. 8, 1942 (gage height, 14.1 ft, from floodmark in gage well), from rating curve extended above 2,200 cfs by logarithmic plotting; minimum, 2.3 cfs Sept. 8, 1944 (gage height, 1.83 ft).

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	2.0	2.8	108
1.9	4.0	3.5	290
2.0	8.0	5.0	973
2.2	19	6.0	1,480
2.4	38		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	12	10	18	65	1,320	81	52	39	12	7.2	6.0
2	6.4	12	10	17	62	597	70	51	35	12	40	5.6
3	6.0	11	10	17	55	336	66	54	31	21	61	4.8
4	6.0	10	15	17	52	226	60	78	29	82	16	4.4
5	6.4	10	18	17	48	176	63	51	27	27	14	4.0
6	6.8	10	132	16	44	147	65	*44	24	18	17	3 8
7	*7.2	10	*133	16	38	127	78	41	23	15	14	3.4
8	7.6	10	38	16	*34	112	76	42	24	20	11	3.2
9	8.0	*10	30	15	35	98	65	39	48	23	*10	3.2
10	9.0	10	112	16	34	87	60	39	*41	16	8.5	3.2
11	9.0	10	46	81	31	78	60	36	51	14	7.6	3.2
12	9.0	10	91	41	30	74	60	35	35	*13	6.8	3.0
13	9.0	10	104	30	25	74	55	32	27	12	6.4	2.8
14	9.0	10	354	25	25	102	54	51	28	12	6.4	2.8
15	9.0	10	192	27	28	89	*54	121	114	38	6.8	2.8
16	9.5	10	118	213	28	*74	83	81	58	25	6.4	*2.8
17	10	10	78	166	44	68	184	62	58	15	6.0	2.8
18	10	10	52	95	39	65	154	55	60	13	13	2.8
19	10	10	45	74	29	117	125	63	45	26	11	3.0
20	10	10	44	66	31	574	106	79	31	22	13	9.0
21	10	12	42	*68	696	254	93	106	24	31	12	10
22	12	14	41	190	360	184	85	81	20	27	11	6.0
23	12	18	35	181	202	154	81	70	18	20	10	4.4
24	12	16	25	134	147	134	87	60	16	15	9.0	4.0
25	12	13	21	112	125	127	79	54	14	12	8.0	4.0
26	12	12	21	145	104	123	74	49	14	11	9.5	4.0
27	14	12	23	176	81	104	68	45	17	10	9.5	4.0
28	41	12	21	134	78	95	63	44	15	9.5	11	4.0
29	114	10	21	104	-	89	58	57	13	8.5	11	3.6
30	21	11	22	89	-	85	55	72	12	9.5	9.0	3.6
31	14	-	19	76	-	83	-	48	-	8.5	7.2	-
Total	438.3	335	1,923	2,392	2,570	5,973	2,362	1,792	991	598.0	389.3	124.4
Mean	14.1	11.2	62.0	77.2	98.8	193	78.7	57.8	33.0	19.3	12.6	4.15
(†)	+7.9	+10.1	+24.7	+12.0	+12.1	+12.3	+12.3	+14.8	+13.5	+13.4	+8.8	+4.5

Adjusted for diversion and change in contents in Lynchburg Reservoir

Mean	22.0	21.3	66.7	89.2	104	205	91.0	72.6	46.5	32.7	21.4	8.65
Cfsm	0.242	0.234	0.953	0.980	1.14	2.25	1.00	0.798	0.511	0.359	0.235	0.095
In.	0.28	0.26	1.10	1.13	1.19	2.59	1.12	0.92	0.57	0.41	0.27	0.11

	Observed			Adjusted		
Calendar year 1953:	Max 1,650	Min 4.4	Mean 104	Mean 117	Cfsm 1.29	In. 17.39
Water year 1953-54:	Max 1,320	Min 2.8	Mean 54.5	Mean 66.7	Cfsm 0.733	In. 9.95

Peak discharge (base, 1,300 cfs).--Feb. 21 (11:30 a.m.) 1,370 cfs (5.78 ft); Mar. 1 (8:30 a.m.) 2,500 cfs (7.52 ft).

* Discharge measurement made on this day.

† Diversion and change in contents, equivalent in cubic feet per second, in Lynchburg Reservoir; furnished by city of Lynchburg.

James River at Holcombs Rock, Va.

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

Drainage area.--3,250 sq mi.

Records available.--January 1900 to September 1915 (gage heights only), December 1926 to September 1954. Published as "at Salt Creek" December 1926 to June 1931.

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

Average discharge.--26 years (1927-30, 1931-54), 3,705 cfs.

Extremes.--Maximum discharge during year, 62,700 cfs Mar. 2 (gage height, 22.8 ft); minimum, 240 cfs Oct. 2 (gage height, 3.50 ft); minimum daily, 391 cfs Sept. 16.

1926-54: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 30.78 ft), from rating curve extended above 57,000 cfs on basis of records for other stations in James River basin; minimum, 100 cfs Sept. 21, 1941 (gage height, 3.02 ft); minimum daily, 223 cfs July 28, 1930.

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

Remarks.--Records good. Flow regulated by powerplants above station.

Revisions (water years).--WSP 972: 1913(M), 1932-33, 1935(M), 1936. WSP 1203: 1928(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.7	345	10.0	11,800
4.4	933	15.0	27,100
6.0	3,370	21.0	53,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	528	690	636	754	2,460	21,800	3,810	2,540	2,480	1,010	676	722
2	466	620	586	754	2,220	51,500	3,810	2,620	2,140	861	847	674
3	480	594	560	717	1,980	*18,800	3,900	3,120	1,910	717	1,280	603
4	466	568	699	773	1,860	11,800	3,720	3,030	2,040	892	930	558
5	577	528	681	717	1,760	8,790	3,540	2,860	1,740	820	900	456
6	473	528	932	717	1,610	6,830	3,280	2,540	1,590	892	793	480
7	473	560	1,310	726	1,500	5,400	3,630	*2,300	1,380	956	850	568
8	*459	544	1,400	654	1,310	4,540	5,010	2,220	1,320	811	800	512
9	452	536	1,600	672	*1,290	3,990	5,800	2,220	1,310	1,040	1,020	473
10	466	*560	1,800	708	1,220	3,630	4,820	2,140	1,530	802	1,000	480
11	488	528	1,980	980	1,150	3,200	4,170	1,980	1,420	717	689	428
12	466	568	2,300	956	1,130	3,030	3,720	1,980	1,150	902	703	442
13	459	528	2,220	902	1,040	3,120	3,370	1,840	1,320	*611	654	468
14	504	594	3,540	1,030	992	5,200	3,000	1,850	1,620	681	584	404
15	520	528	4,630	1,060	992	6,830	2,800	2,620	2,380	717	518	440
16	512	560	4,080	1,610	1,090	6,410	2,780	5,200	2,460	3,320	548	391
17	496	560	2,620	5,760	1,030	5,200	3,540	5,010	2,620	4,820	626	*415
18	496	520	2,060	6,200	1,100	4,170	7,910	4,080	2,540	2,460	528	397
19	496	568	1,540	4,080	1,170	3,810	6,830	3,900	2,540	2,130	552	404
20	496	552	1,150	3,030	1,210	7,910	5,200	5,400	2,380	2,860	651	552
21	496	586	1,210	2,620	7,100	11,800	4,260	6,410	2,140	3,380	772	654
22	496	602	1,190	3,370	15,900	8,790	3,630	5,400	1,910	3,360	744	811
23	504	744	1,170	9,230	9,670	6,620	3,280	4,350	1,180	4,300	818	923
24	496	744	980	8,570	6,410	5,400	3,200	3,580	1,000	3,380	692	699
25	496	802	853	5,400	4,720	4,630	4,170	3,140	1,000	2,210	674	620
26	496	782	851	4,260	3,990	4,350	5,200	2,830	912	1,630	790	488
27	568	773	811	4,720	3,370	4,820	4,350	2,400	912	1,310	843	594
28	690	672	782	5,010	2,940	5,400	3,540	3,750	892	1,100	1,300	488
29	811	628	840	4,170	-	5,010	3,280	3,700	1,000	967	1,430	528
30	773	663	792	3,280	-	4,170	2,940	3,320	1,280	788	868	438
31	764	-	782	2,860	-	3,900	-	2,660	-	810	787	-
Total	16,363	18,230	46,585	86,290	82,214	250,850	122,490	100,990	50,096	51,254	24,867	16,110
Mean	528	608	1,503	2,784	2,936	8,092	4,083	3,258	1,670	1,653	802	537
Cfsm	0.163	0.187	0.462	0.857	0.903	2.49	1.26	1.00	0.514	0.509	0.247	0.165
In.	0.19	0.21	0.53	0.99	0.94	2.87	1.41	1.15	0.57	0.59	0.28	0.18

Calendar year 1953: Max 52,500 Min 450 Mean 3,261 Cfsm 1.00 In. 13.61
Water year 1953-54: Max 51,500 Min 391 Mean 2,374 Cfsm 0.730 In. 9.91

Peak discharge (base, 25,500 cfs).--Mar. 2 (6 a.m.) 62,700 cfs (22.8 ft).
* Discharge measurement made on this day.

James River at Bent Creek, Va.

Location.--Lat 37°32', long. 78°50', on left bank 100 ft downstream from highway bridge at town of Bent Creek, Appomattox County, 150 ft downstream from Bent Creek, 1 mile downstream from Gladstone, and at mile 222.9.

Drainage area.--3,671 sq mi.

Records available.--March 1925 to September 1954.

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

Average discharge.--29 years, 4,149 cfs.

Extremes.--Maximum discharge during year, 61,600 cfs Mar. 2 (gage height, 16.78 ft); minimum, 388 cfs Oct. 15 (gage height, 2.44 ft); minimum daily, 445 cfs Oct. 15.
1925-54: Maximum discharge, 115,000 cfs Mar. 18, 1936 (gage height, 23.02 ft), from rating curve extended above 74,000 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum, 222 cfs Oct. 13, 14, 1930 (gage height, 2.21 ft); minimum daily, 222 cfs Oct. 13, 1930.

Remarks.--Records good. Flow regulated by powerplants above station.

Revisions (water years).--WSP 742: 1931(m). WSP 757: Drainage area. WSP 972: 1935-36. WSP 1066: 1940. WSP 1203: 1942.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.5	445	8.0	14,900
3.0	1,080	11.0	27,600
3.5	1,960	15.0	49,500
4.0	3,020	16.0	56,000
5.0	5,420		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	700	978	788	993	3,300	10,700	4,530	3,330	2,670	1,380	904	800
2	712	922	978	1,020	2,650	52,100	4,440	2,760	2,620	1,120	866	827
3	675	775	775	993	2,890	27,200	4,540	3,410	2,190	1,130	*1,160	775
4	591	800	800	922	2,490	14,500	4,390	3,920	2,120	985	1,270	725
5	675	738	827	1,010	2,330	10,800	4,250	3,330	2,040	975	1,140	651
6	603	725	935	1,010	2,180	8,330	3,810	3,120	1,880	1,040	894	688
7	725	800	2,660	908	2,010	7,310	3,860	2,560	1,750	1,060	1,240	567
8	675	725	1,470	964	1,990	5,810	4,660	2,660	1,470	1,140	978	579
9	615	725	1,800	840	1,720	4,930	6,940	2,540	1,650	1,020	814	567
10	675	*627	3,280	840	1,780	4,240	5,860	2,240	1,780	1,380	993	500
11	651	700	2,380	1,270	1,640	3,910	5,320	2,340	1,620	965	964	500
12	651	725	2,680	1,360	1,700	3,700	4,560	2,080	1,720	734	854	500
13	651	750	3,540	1,180	1,460	3,580	4,080	2,180	1,570	1,340	881	500
14	511	750	7,820	1,100	1,440	4,780	3,700	2,400	1,730	684	725	511
15	445	750	5,510	1,440	1,350	6,990	3,340	2,990	2,220	854	775	467
16	544	775	5,680	3,710	1,320	7,740	3,860	4,220	2,960	1,390	579	522
17	615	775	3,790	4,180	1,400	6,720	4,740	5,840	2,960	5,430	579	*489
18	663	788	2,650	7,940	1,540	5,100	6,530	5,120	3,020	3,260	881	467
19	663	725	2,230	6,220	1,490	4,700	8,330	4,500	2,650	2,500	964	478
20	663	712	1,520	3,760	1,600	6,560	7,130	5,820	2,600	2,970	627	533
21	663	814	1,390	3,360	2,960	12,500	5,240	7,560	2,420	4,720	738	688
22	663	814	1,540	5,540	14,500	10,800	4,620	6,570	2,130	2,980	800	788
23	675	840	1,580	7,720	11,200	8,330	4,160	5,660	1,790	3,860	868	993
24	688	950	1,430	11,500	8,030	6,970	3,720	4,660	1,360	4,690	1,040	950
25	675	1,130	1,230	7,930	6,560	5,700	3,780	3,720	1,010	2,460	738	762
26	700	1,070	1,000	6,210	4,860	5,090	5,680	3,240	1,070	2,220	750	738
27	675	908	1,240	5,740	4,300	5,230	5,730	3,110	1,130	1,720	868	725
28	1,280	950	940	6,370	3,660	6,260	4,400	3,180	1,070	1,280	1,190	603
29	1,670	788	1,060	5,500	-	6,070	3,800	4,380	1,050	1,120	1,580	603
30	1,480	840	1,120	4,700	-	5,580	*3,440	3,980	1,280	966	1,450	579
31	922	-	1,030	3,680	-	4,460	-	3,320	-	1,130	738	-
Total	22,794	24,369	65,673	109,910	94,350	276,690	143,440	116,740	57,530	58,503	28,848	19,075
Mean	735	812	2,118	3,545	3,370	8,925	4,781	3,766	1,918	1,887	931	636
Cfsm	0.200	0.221	0.577	0.966	0.918	2.43	1.30	1.03	0.522	0.514	0.254	0.173
In.	0.23	0.25	0.67	1.11	0.96	2.80	1.45	1.19	0.58	0.59	0.29	0.19

Calendar year 1953: Max 50,200 Min 445 Mean 3,915 Cfsm 1.07 In. 14.46
Water year 1953-54: Max 52,100 Min 445 Mean 2,789 Cfsm 0.760 In. 10.31

Peak discharge (base, 26,500 cfs).--Mar. 2 (2 p.m.) 61,600 cfs (16.78 ft).
* Discharge measurement made on this day.

Tye River near Lovingston, Va.

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

Drainage area.--92 sq mi, approximately.

Records available.--August 1938 to September 1954.

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

Average discharge.--16 years, 151 cfs.

Extremes.--Maximum discharge during year, 1,760 cfs Mar. 1 (gage height, 5.46 ft); minimum, 3.2 cfs Sept. 13 (gage height, 0.56 ft).
1938-54: Maximum discharge, 9,670 cfs Sept. 19, 1944 (gage height, 13.7 ft); minimum, that of Sept. 13, 1954; minimum gage height, 0.29 ft Oct. 4, 1943.

Remarks.--Records good.

Revisions (water years).--WSP 892: 1938.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 17 to May 20, May 29 to June 10, July 3-15)

Oct. 1 to Dec. 5		Dec 6 to Sept. 30			
0.6	7.0	0.5	2.0	1.6	129
.7	12	.6	4.0	2.0	235
1.0	34	.7	8.0	3.0	555
1.4	84	.9	23	4.0	940
1.7	142	1.2	58		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	20	23	50	99	808	141	83	80	37	17	11
2	8.5	19	22	50	97	555	127	80	73	34	14	8.0
3	8.5	18	22	49	90	415	118	82	68	84	20	7.2
4	8.5	17	28	48	83	334	112	95	66	77	19	6.8
5	8.5	16	48	48	80	274	121	78	61	43	16	6.0
6	8.5	16	194	46	75	238	121	*75	58	40	18	4.8
7	*9.0	17	*310	43	68	204	121	75	54	35	17	4.0
8	9.0	18	134	43	*66	185	110	76	54	43	12	4.0
9	9.5	*17	117	40	70	163	101	72	64	45	*10	4.0
10	10	18	268	44	66	148	99	70	*111	33	8.7	4.0
11	10	18	163	70	64	136	99	67	110	29	8.0	3.8
12	9.5	18	210	53	60	139	95	66	80	*28	7.2	3.4
13	9.5	17	227	48	53	129	90	61	118	25	6.8	3.2
14	9.5	17	538	53	55	163	90	80	125	22	6.4	3.6
15	10	16	331	54	58	139	*94	118	92	101	7.2	3.6
16	10	16	229	143	57	*125	123	95	78	87	7.2	*3.6
17	9.5	16	174	134	83	118	245	85	85	52	7.6	3.6
18	10	16	136	97	67	112	193	90	94	43	19	3.4
19	10	16	116	95	60	158	166	99	82	49	17	3.8
20	10	16	104	99	62	538	146	191	70	46	15	18
21	10	22	97	*106	822	370	131	379	64	50	19	28
22	10	24	94	148	538	301	121	268	61	49	17	14
23	11	134	85	125	352	262	121	213	58	40	15	10
24	11	54	73	118	277	227	116	174	54	33	14	8.0
25	12	40	67	118	229	215	108	153	52	29	14	7.2
26	12	32	66	143	193	215	108	139	49	26	14	6.8
27	13	28	61	166	163	185	99	125	48	22	14	6.8
28	63	27	57	148	148	174	94	118	43	20	17	5.6
29	48	25	55	134	-	163	90	156	39	18	19	5.2
30	41	24	54	125	-	151	88	118	38	21	19	4.8
31	25	-	53	112	-	146	-	88	-	21	19	-
Total	443.0	752	4,156	2,750	4,135	7,490	3,588	3,669	2,129	1,282	434.1	206.2
Mean	14.3	25.1	134	88.7	148	242	120	118	71.0	41.4	14.0	6.87
Cfsm	0.155	0.273	1.46	0.964	1.61	2.63	1.30	1.28	0.772	0.450	0.152	0.075
In.	0.18	0.30	1.68	1.11	1.68	3.03	1.45	1.48	0.86	0.52	0.18	0.08

Calendar year 1953: Max 1,870 Min 7.0 Mean 148 Cfsm 1.61 In. 21.84
Water year 1953-54: Max 822 Min 3.2 Mean 85.0 Cfsm 0.924 In. 12.55

Peak discharge (base, 1,200 cfs).--Feb. 21 (11:30 a.m.) 1,720 cfs (5.42 ft); Mar. 1 (9:30 a.m.) 1,760 cfs (5.46 ft).
* Discharge measurement made on this day.

Piney River at Piney River, Va.

Location.--Lat 37°42'10", long. 79°01'40", on right bank 20 ft downstream from bridge on State Highway 151, 0.2 mile southwest of Piney River Post Office, Nelson County, 1.7 miles downstream from Indian Creek, and 2.5 miles southeast of Lowesville.

Drainage area.--48 sq mi, approximately.

Records available.--July 1949 to September 1954.

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

Average discharge.--5 years, 85.5 cfs.

Extremes.--Maximum discharge during year, 608 cfs Mar. 1 (gage height, 3.36 ft); minimum, 1.8 cfs Sept. 18 (gage height, 0.72 ft).
1949-54: Maximum discharge, 2,740 cfs Dec. 7, 1950 (gage height, 6.08 ft); minimum, that of Sept. 18, 1954.
Flood in June 1949 reached a stage of 9.9 ft, from floodmarks.

Remarks.--Records good except those for period of no gage-height record or periods of backwater from temporary dam, which are fair.

Rating table, water year 1953-54, except periods of backwater from temporary dam (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 20 to Nov. 22)

0.6	1.0	1.3	33
.7	2.0	1.5	58
.8	4.0	2.0	145
.9	6.8	2.5	281
1.0	10	3.0	460
1.1	16		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	7.4	13	27	75	422	82	55	48	14	6.5	6.2
2	3.2	6.5	12	28	69	397	75	53	43	14	6.0	6.0
3	3.4	6.0	12	29	66	316	69	53	39	43	7.1	c5
4	3.2	6.0	16	26	62	246	68	54	37	33	6.5	a4.5
5	3.8	6.0	29	26	57	199	69	48	35	22	6.0	c4
6	3.8	5.7	67	25	52	166	68	*44	37	20	7.1	c3.5
7	*3.8	5.7	*119	24	46	143	71	43	34	18	6.0	3.0
8	3.6	6.2	80	22	*41	125	65	43	32	23	5.4	2.8
9	4.0	*6.2	75	22	41	111	64	39	34	18	*4.8	2.8
10	3.8	6.5	137	23	38	100	61	38	*33	22	4.3	a2
11	3.8	6.5	109	45	35	91	61	37	38	16	4.3	a2
12	4.3	6.8	a100	27	33	85	58	35	30	*14	4.0	c2
13	3.8	6.5	a140	27	29	78	58	33	29	14	3.8	c2
14	3.8	6.5	a250	31	30	86	57	43	37	12	3.6	2.6
15	4.3	7.1	a200	31	29	75	*55	50	31	31	4.0	2.4
16	4.6	6.8	a150	78	28	*69	66	41	30	a20	3.8	*2.4
17	4.3	a7	a120	71	33	66	98	38	37	a16	4.3	2.4
18	a4.5	a7	a100	64	30	64	88	40	45	a12	7.1	1.9
19	a4.5	a7	a80	62	28	115	90	43	37	13	6.2	2.2
20	4.8	a7	72	61	28	243	88	62	33	12	6.5	7.8
21	5.1	a9	64	*61	392	197	85	85	30	13	7.4	21
22	5.4	17	58	88	333	174	80	85	28	12	14	a10
23	6.2	52	50	82	237	151	78	83	26	11	7.1	a7
24	5.4	24	44	80	186	135	78	78	25	9.4	6.2	a5
25	5.4	18	40	82	151	127	78	72	22	9.0	6.2	a4
26	6.2	16	40	88	131	119	72	66	21	8.1	6.0	a3.5
27	7.8	14	38	90	113	105	68	61	19	7.4	6.0	a3.5
28	25	14	37	85	107	100	64	57	18	7.1	9.0	c3.5
29	17	14	33	82	-	93	62	71	16	6.5	14	c3
30	14	13	32	82	-	90	58	64	16	7.8	13	c3
31	9.0	-	29	80	-	86	-	50	-	7.1	7.1	-
Total	185.0	321.4	2,346	1,649	2,500	4,574	2,134	1,664	940	485.4	203.3	131.0
Mean	5.97	10.7	75.7	53.2	89.3	148	71.1	53.7	31.3	15.7	6.56	4.37
Cfsm	0.124	0.223	1.58	1.11	1.86	3.08	1.48	1.12	0.652	0.327	0.137	0.091
In.	0.14	0.25	1.82	1.28	1.94	3.55	1.65	1.29	0.73	0.38	0.16	0.10

Calendar year 1953: Max 1,170 Min 3.0 Mean 84.9 Cfsm 1.77 In. 24.01
Water year 1953-54: Max 422 Min 1.9 Mean 46.9 Cfsm 0.977 In. 13.29

Peak discharge (base, 500 cfs).--Feb. 21 (11 a.m.) 608 cfs (3.34 ft); Mar. 1 (8 a.m.) 608 cfs (3.36 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and records for Tye River near Lovingston.
c Backwater from temporary dam.

Buffalo River near Norwood, Va.

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

Drainage area.--360 sq mi, approximately.

Records available.--March 1940 to September 1954.

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

Average discharge.--14 years, 492 cfs.

Extremes.--Maximum discharge during year, 3,490 cfs Dec. 14 (gage height, 5.14 ft); minimum, 25 cfs Sept. 17 (gage height, 1.78 ft).
1940-54: Maximum discharge, 33,500 cfs Oct. 15, 1942, Sept. 19, 1944 (gage height, 18.1 ft, from floodmarks), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, that of Sept. 17, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 6, July 27 to Sept. 30				Dec. 7 to July 26			
1.7	15	2.2	113	2.1	57	3.2	760
1.8	27	2.6	320	2.2	82	4.0	1,760
2.0	60	2.7	390	2.5	195	5.0	3,250
				2.8	365		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	104	89	182	480	1,480	365	272	250	122	62	72
2	55	95	86	177	460	1,970	332	267	230	115	74	60
3	53	89	83	172	433	1,700	320	272	215	108	158	55
4	53	83	98	168	408	1,310	294	326	210	414	89	51
5	55	81	153	164	382	1,050	294	262	195	168	*72	47
6	55	81	377	159	358	826	306	245	177	150	76	46
7	55	81	1,270	150	332	650	320	235	172	132	74	42
8	*55	81	*433	143	306	570	320	240	172	143	62	39
9	56	81	313	140	*278	490	300	230	190	190	55	38
10	58	*83	954	143	235	442	289	225	203	146	51	38
11	62	83	550	220	225	399	289	215	*278	132	46	36
12	60	81	732	250	210	382	289	210	200	129	40	33
13	58	81	1,010	143	195	358	272	200	172	*102	39	30
14	56	81	2,560	230	195	490	272	225	294	92	38	30
15	58	81	1,420	205	200	416	272	365	382	134	38	30
16	60	81	894	580	200	*352	346	294	289	267	39	30
17	60	81	630	727	235	326	760	256	235	136	38	*26
18	60	78	460	500	225	313	620	245	289	115	72	26
19	60	78	416	433	205	320	530	272	262	136	174	27
20	62	76	390	424	200	1,630	480	472	225	143	186	34
21	62	95	352	433	1,500	1,110	450	918	200	154	92	78
22	62	117	332	674	1,620	870	416	600	186	146	104	65
23	67	305	300	918	1,150	760	399	470	177	122	86	49
24	69	202	267	716	918	650	399	399	159	105	76	40
25	67	145	235	661	771	600	365	352	154	92	86	38
26	67	121	245	826	630	580	358	320	150	72	133	36
27	76	107	235	930	530	490	339	294	143	74	78	34
28	253	101	225	760	470	450	326	278	140	69	89	34
29	376	92	215	672	-	416	313	294	126	67	101	33
30	230	92	210	600	-	399	*284	470	122	67	89	32
31	133	-	195	540	-	382	-	278	-	76	89	-
Total	2,609	3,037	15,729	13,040	13,351	22,181	10,919	10,001	6,197	4,118	2,506	1,229
Mean	84.2	101	507	421	477	716	364	323	207	133	80.8	41.0
Cfsm	0.234	0.281	1.41	1.17	1.32	1.99	1.01	0.897	0.575	0.369	0.224	0.114
In.	0.27	0.31	1.63	1.35	1.38	2.29	1.13	1.03	0.64	0.43	0.26	0.13

Calendar year 1953: Max 4,370 Min 40 Mean 479 Cfsm 1.33 In. 18.05
Water year 1953-54: Max 2,560 Min 26 Mean 287 Cfsm 0.797 In. 10.85

Peak discharge (base, 3,000 cfs).--Dec. 14 (9 a.m.) 3,490 cfs (5.14 ft).
* Discharge measurement made on this day.

Rockfish River near Greenfield, Va.

Location.--Lat 37°52'10", long. 78°49'25", on left bank 50 ft downstream from bridge on State Highway 634, 2.8 miles downstream from confluence of North and South Forks, and 4.1 miles south of Greenfield, Nelson County.

Drainage area.--96 sq mi, approximately.

Records available.--April 1943 to September 1954.

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

Average discharge.--11 years, 139 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Mar. 1 (gage height, 6.68 ft); minimum, 2.0 cfs Sept. 16, 17 (gage height, 1.25 ft).

1943-54: Maximum discharge, 13,700 cfs Sept. 19, 1944 (gage height, 17.2 ft), from rating curve extended above 8,500 cfs on basis of slope-area determinations at gage heights 17.2 and 23.4 ft; minimum, that of Sept. 16, 17, 1954; minimum gage height, 1.25 ft Sept. 17, 18, 19, 1946, Sept. 16, 17, 1954.

Flood of Oct. 15, 1942, reached a stage of 23.4 ft, from floodmarks (discharge, about 30,000 cfs).

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

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 5		Dec. 6 to Sept. 30			
1.3	4.0	1.2	1.0	2.0	78
1.4	8.0	1.3	3.0	2.5	156
1.6	22	1.4	7.0	3.0	235
1.8	44	1.5	13	4.0	455
2.0	73	1.6	21	5.0	750
		1.8	44	6.0	1,150

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	19	16	36	80	800	110	105	67	21	a 11	6.6
2	6.0	17	16	34	76	430	102	95	59	19	a10	5.4
3	6.0	16	16	34	72	332	95	89	54	19	a12	4.6
4	6.0	16	18	33	67	262	89	93	52	34	a 11	3.8
5	6.0	15	26	33	63	216	91	82	46	30	a9	3.4
6	6.8	15	125	33	59	188	91	*76	43	34	a 11	2.8
7	*6.8	16	*223	30	54	165	89	72	41	24	a9	2.6
8	6.4	16	89	29	*53	146	84	72	40	43	a8	2.4
9	6.8	*16	67	29	52	132	76	67	63	41	*a7	2.4
10	7.2	16	135	31	50	122	74	65	*46	28	6.2	2.4
11	7.2	15	91	56	48	113	74	61	59	24	5.4	2.6
12	7.6	14	103	36	46	141	72	58	47	*23	5.0	2.8
13	7.6	14	124	40	43	132	68	56	41	20	4.6	2.6
14	7.6	14	434	36	41	177	67	67	53	19	4.2	2.4
15	8.0	14	216	36	41	162	*67	100	89	93	4.6	2.4
16	8.6	14	148	100	41	*146	90	82	56	63	5.0	*2.0
17	8.6	14	114	108	56	134	248	74	70	40	4.2	2.2
18	8.6	14	93	84	46	125	186	76	97	31	9.4	2.8
19	8.6	14	82	76	43	145	158	84	84	30	9.4	3.0
20	8.6	14	74	82	44	608	138	136	68	28	7.6	5.4
21	9.2	17	68	*84	550	344	126	262	56	26	14	7.6
22	9.8	21	65	119	332	262	116	205	50	27	15	5.0
23	10	47	58	111	228	226	113	168	44	25	12	3.4
24	10	31	52	102	183	197	107	138	38	21	10	3.0
25	10	25	48	105	152	183	136	119	1	19	9.4	3.0
26	10	21	46	138	134	168	165	105	30	17	7.6	3.0
27	12	20	44	142	116	146	165	95	28	15	7.0	2.8
28	48	19	43	122	110	135	139	86	25	13	8.2	3.0
29	60	16	41	108	-	125	124	132	21	12	8.2	2.6
30	32	16	40	100	-	116	114	93	21	15	7.6	2.2
31	21	-	37	89	-	114	-	74	-	13	10	-
Total	377.4	536	2,752	2,196	2,880	6,692	3,374	3,087	1,522	867	262.6	100.2
Mean	12.2	17.9	88.8	70.8	103	216	112	99.6	50.7	28.0	8.47	3.34
Cfsm	0.127	0.186	0.925	0.738	1.07	2.25	1.17	1.04	0.528	0.292	0.088	0.035
In.	0.15	0.21	1.07	0.85	1.11	2.59	1.30	1.20	0.59	0.34	0.10	0.04

Calendar year 1953: Max 1,910 Min 5.2 Mean 129 Cfsm 1.34 In. 18.27
Water year 1953-54: Max 800 Min 2.0 Mean 67.5 Cfsm 0.703 In. 9.55

Peak discharge (base, 1,200 cfs).--Mar. 1 (10 a.m.) 1,460 cfs (6.68 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and records for Tye River near Lovingston.

James River at Scottsville, Va.

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

Drainage area.--4,571 sq mi.

Records available.--February 1925 to September 1954.

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

Average discharge.--29 years, 5,161 cfs.

Extremes.--Maximum discharge during year, 62,900 cfs Mar. 3 (gage height, 18.9 ft); minimum, 450 cfs Sept. 16, 17 (gage height, 2.00 ft); minimum daily, 474 cfs Sept. 16.
1925-54: Maximum discharge, 133,000 cfs Sept. 19, 1944 (gage height, 26.0 ft); minimum, 302 cfs Oct. 1, 1930 (gage height, 1.46 ft); minimum daily, 307 cfs Oct. 15, 1930.
Data for some outstanding floods prior to establishment of this station are given in the following table:

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

Remarks.--Records good. Flow regulated by powerplants above station. Records of water temperatures and sediment loads for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 727: 1931(m). WSP 757: Drainage area. WSP 972: 1913(M), 1936(M), 1940(M). WSP 1066: 1940.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	450	5.0	4,630
2.2	575	8.0	11,500
2.5	810	12.0	25,900
3.0	1,360	16.0	45,100

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	718	1,090	905	1,360	3,990	9,420	5,210	4,080	3,460	1,370	1,120	759
2	695	1,090	886	1,290	3,630	43,900	5,010	3,460	3,030	1,450	926	802
3	702	1,030	1,020	1,300	3,280	44,800	4,820	3,370	2,860	1,200	989	802
4	665	876	876	1,320	3,030	18,900	5,010	4,720	2,450	1,590	1,440	759
5	605	876	936	1,220	2,780	13,000	4,820	*4,170	2,370	1,440	1,310	710
6	665	810	1,060	1,310	2,610	10,100	4,720	3,720	2,210	1,280	1,140	658
7	598	838	3,420	1,220	2,370	8,400	4,260	3,460	2,290	1,190	1,000	672
8	710	905	3,120	1,200	2,290	7,060	4,720	3,200	1,620	1,310	1,260	568
9	688	829	2,210	1,170	2,210	6,010	6,010	3,120	*1,980	1,760	1,010	575
10	642	838	3,660	1,120	1,980	5,610	7,060	2,780	2,140	1,240	867	582
11	688	725	*3,990	1,360	2,140	5,010	6,010	2,940	2,060	1,450	858	504
12	688	802	3,200	2,140	*1,910	4,630	5,210	2,690	2,210	1,030	*867	498
13	688	793	5,010	1,690	1,840	4,260	4,630	2,370	1,760	848	793	498
14	688	848	10,100	1,340	1,620	4,720	*4,350	2,690	1,910	1,390	810	480
15	582	838	9,600	1,620	1,690	6,850	3,990	3,200	2,690	867	695	*498
16	530	*838	6,640	3,280	1,690	7,720	4,350	4,080	3,900	1,360	742	474
17	590	867	6,010	6,850	1,690	7,720	6,430	6,010	3,030	2,460	598	492
18	658	848	4,080	6,640	1,840	6,640	6,430	5,810	3,540	5,210	650	510
19	688	838	3,030	7,720	1,690	5,410	9,110	5,210	3,280	2,940	926	510
20	688	793	2,370	*5,410	1,760	7,280	7,940	5,810	3,030	2,530	1,190	510
21	688	802	2,140	3,810	2,290	11,200	7,060	9,600	2,940	4,080	848	562
22	672	958	2,210	4,540	13,000	13,300	5,410	8,400	2,610	3,990	978	688
23	688	1,010	2,060	8,400	15,700	9,850	6,220	6,640	2,450	3,280	936	768
24	680	1,220	2,060	11,200	10,400	8,170	4,630	5,410	1,980	4,260	947	947
25	695	1,190	1,760	9,350	7,940	7,060	4,440	5,010	1,480	3,810	1,120	896
26	680	1,250	1,560	7,940	*6,220	6,430	5,410	4,170	1,180	2,290	829	759
27	734	1,200	1,440	7,500	5,010	5,810	6,850	3,630	1,230	2,140	848	718
28	1,020	1,020	1,560	7,060	4,630	6,220	5,410	3,460	1,230	1,690	896	695
29	2,060	1,030	1,360	6,850	-	6,850	4,630	4,170	1,190	1,250	1,290	605
30	2,450	867	1,420	5,410	-	6,430	4,260	5,010	1,170	1,000	1,690	605
31	1,560	-	1,440	5,010	-	5,610	-	4,260	-	1,010	1,360	-
Total	25,103	27,919	91,133	127,630	111,230	314,370	164,410	136,650	69,280	62,715	30,933	19,104
Mean	810	931	2,940	4,117	3,972	10,140	5,480	4,408	2,309	2,023	998	637
Cfsm	0.177	0.204	0.643	0.901	0.869	2.22	1.20	0.964	0.505	0.443	0.218	0.139
In.	0.20	0.23	0.74	1.04	0.90	2.56	1.34	1.11	0.56	0.51	0.25	0.16

Calendar year 1953: Max 56,400 Min 530 Mean 4,774 Cfsm 1.04 In. 14.18
Water year 1953-54: Max 44,800 Min 474 Mean 3,234 Cfsm 0.708 In. 9.60

Peak discharge (base, 27,000 cfs).--Mar. 3 (12:30 a.m.) 62,900 cfs (18.9 ft).
* Discharge measurement made on this day.

Hardware River below Briery Run, near Scottsville, Va.

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

Drainage area.--116 sq mi.

Records available.--December 1938 to September 1954.

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

Average discharge.--15 years (1939-54), 128 cfs.

Extremes.--1952-53: Maximum discharge during water year, 2,440 cfs Nov. 20 (gage height, 11.07 ft); minimum, 12 cfs Sept. 3-5; minimum gage height, 1.45 ft Sept. 4.
1953-54: Maximum discharge during water year, 2,660 cfs Mar. 1 (gage height, 12.14 ft); minimum, 6.1 cfs Sept. 9; minimum gage height, 1.45 ft Sept. 9, 13.
1938-54: Maximum discharge, 23,000 cfs Sept. 19, 1944 (gage height, 23.8 ft, from floodmark in gage house), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow; minimum, 2.8 cfs Oct. 1, 1941 (gage height, 1.34 ft); minimum daily, 4.8 cfs Oct. 5, 1941.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Prior to November 1947, occasional small diurnal fluctuation at low flow caused by dam and gristmill 2.5 miles above station.

Revisions (water years).--WSP 952: 1941(M). WSP 1002: 1940, 1943. WSP 1032: 1940, 1944.

Rating tables, Oct. 1, 1952, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 20 to Apr. 3, 1954)

Oct. 1 to Nov. 19, 1952		Nov. 20, 1952, to Feb. 28, 1954				Mar. 1 to Sept. 30, 1954			
1.9	39	1.4	9.0	3.0	190	1.4	6.0	2.5	104
2.3	85	1.6	20	5.0	532	1.5	7.0	3.0	170
2.6	130	1.8	35	7.0	940	1.6	10	5.0	460
3.0	190	2.0	54	10.0	1,990	1.8	25	7.0	830
4.0	352	2.5	116			2.0	44	10.0	1,590

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	51	99	279	134	138	220	220	85	47	35	a13
2	56	51	96	176	a120	142	205	157	85	48	33	a13
3	72	51	96	175	a120	148	198	140	76	43	51	a12
4	57	52	94	151	a110	334	188	133	75	41	*40	a12
5	54	50	113	130	a110	370	180	134	73	42	42	12
6	54	50	130	122	a110	228	178	136	70	49	45	26
7	53	49	106	117	a130	205	514	138	103	46	41	24
8	53	48	99	*112	156	190	272	127	95	42	44	19
9	57	49	95	282	a140	187	220	124	82	41	56	17
10	73	56	103	640	a130	176	205	120	85	40	44	17
11	88	64	496	370	a110	166	187	113	94	38	33	19
12	76	57	235	235	a110	168	198	108	71	35	32	19
13	64	52	170	188	a110	640	496	106	73	34	29	30
14	60	51	140	164	a110	316	352	103	71	33	27	24
15	58	342	126	148	a150	258	250	104	*69	32	25	21
16	57	168	116	138	250	460	242	111	65	31	24	21
17	56	97	110	127	180	298	212	111	81	29	23	19
18	54	90	104	145	150	280	198	106	119	28	24	20
19	54	96	100	133	138	307	198	122	103	27	23	19
20	52	1,700	96	122	a130	250	182	451	a90	46	20	18
21	50	1,150	110	176	a600	228	175	182	a80	46	19	18
22	52	460	104	212	a500	220	166	146	a70	33	18	19
23	52	258	96	163	a350	205	160	130	a75	66	18	18
24	53	187	95	581	a250	*a500	157	117	a75	42	20	17
25	53	157	90	388	a180	*1,080	151	111	a60	34	18	17
26	52	138	89	235	*a170	1,070	163	102	a60	33	17	16
27	51	124	85	198	160	442	152	94	a60	33	16	16
28	51	*113	82	178	145	334	142	87	a50	30	a15	17
29	51	104	81	*158	-	280	*138	86	*a50	29	a15	16
30	50	104	86	145	-	*250	170	86	49	27	a14	16
31	*50	-	177	139	-	228	-	84	-	28	*a13	-
Total	1,767	6,019	3,819	6,527	5,053	10,098	6,469	4,089	2,294	1,173	874	545
Mean	57.0	201	123	211	180	326	216	132	76.5	37.8	28.2	18.2
Cfsm	0.491	1.73	1.06	1.82	1.55	2.81	1.86	1.14	0.659	0.326	0.243	0.157
In.	0.57	1.93	1.22	2.10	1.61	3.24	2.08	1.31	0.74	0.38	0.28	0.18

Calendar year 1952: Max 3,000 Min 48 Mean 214 Cfsm 1.84 In. 25.07
Water year 1952-53: Max 1,700 Min 12 Mean 133 Cfsm 1.15 In. 15.64

Peak discharge (base, 1,500 cfs).--Nov. 20 (7 p.m.) 2,440 cfs (11.07 ft); Mar. 26 (1 a.m.) 2,270 cfs (10.70 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 4 discharge measurements and records for Rivanna River at Palmyra.

Hardware River below Briery Run, near Scottsville, Va.--Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	26	26	33	63	*1,260	86	54	53	*19	8.2	9.1
2	15	24	26	33	61	414	79	51	42	19	7.9	7.6
3	15	24	26	33	56	219	77	48	37	18	9.4	6.8
4	15	23	28	31	52	166	72	53	36	65	8.8	6.5
5	15	24	30	31	51	127	74	47	33	28	8.5	6.5
6	15	26	36	31	48	109	77	45	31	27	14	6.5
7	15	29	183	30	46	98	74	44	31	23	11	6.3
8	15	29	61	29	42	89	69	47	31	37	8.2	6.2
9	*14	29	46	29	47	81	66	44	*117	66	7.9	6.3
10	15	28	93	33	42	78	62	44	52	26	7.9	6.4
11	16	26	60	57	42	72	62	42	75	22	7.9	6.5
12	16	24	67	42	*40	92	62	41	55	19	*7.6	6.3
13	15	26	107	41	37	101	57	39	42	18	7.3	6.2
14	15	27	586	47	40	205	*56	46	41	16	7.3	6.4
15	16	27	198	43	41	156	59	87	38	48	7.6	6.6
16	16	*27	96	140	40	114	191	79	36	57	7.9	6.9
17	16	26	72	133	49	99	332	56	41	26	7.9	7.0
18	15	25	51	75	41	89	162	52	50	20	14	7.0
19	15	25	62	66	39	86	110	56	41	20	16	22
20	16	24	60	64	39	*344	87	159	35	20	9.7	12
21	16	26	50	65	81	198	77	310	32	19	10	13
22	16	33	49	98	94	148	72	114	30	21	24	8.8
23	16	34	44	107	63	131	68	79	30	19	19	7.9
24	16	37	40	91	56	118	66	67	28	15	13	7.6
25	16	30	35	93	54	113	63	57	25	13	11	7.6
26	16	28	44	178	*51	108	104	54	24	11	10	7.6
27	19	26	43	212	47	99	74	50	24	10	9.4	7.6
28	53	26	38	123	46	94	63	46	20	9.7	11	7.6
29	104	25	37	93	-	91	56	47	19	9.1	18	7.6
30	46	*26	*37	80	-	87	*55	60	19	9.1	11	7.6
31	26	-	35	69	-	86	-	44	-	8.8	*26	-
Total	649	810	2,346	2,230	1,408	5,272	2,612	2,062	1,168	738.7	347.4	238.0
Mean	20.9	27.0	75.7	71.9	50.3	170	87.1	66.5	38.9	23.8	11.2	7.93
Cfsm	0.180	0.233	0.653	0.620	0.434	1.47	0.751	0.573	0.335	0.205	0.097	0.068
In.	0.21	0.26	0.75	0.71	0.45	1.70	0.84	0.66	0.37	0.24	0.11	0.08

Calendar year 1953: Max 1,080 Min 12 Mean 112 Cfsm 0.966 In. 13.14
Water year 1953-54: Max 1,260 Min 6.2 Mean 54.5 Cfsm 0.470 In. 6.38

Peak discharge (base, 1,500 cfs).--Mar. 1 (2 p.m.) 2,660 cfs (12.14 ft).
* Discharge measurement made on this day.

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Slate River near Arvonia, Va.

Location.--Lat 37°42'10", long. 78°22'40", on left bank 100 ft upstream from Bumpers Bridge, 1.8 miles northwest of Arvonia, Buckingham County, 2.9 miles upstream from Hunts Creek, and 3.8 miles upstream from mouth.

Drainage area.--235 sq mi.

Records available.--April 1926 to September 1954.

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

Average discharge.--27 years (1926-35, 1936-54), 228 cfs.

Extremes.--Maximum discharge during year, 4,350 cfs Mar. 1 (gage height, 11.61 ft); minimum, 10 cfs Sept. 17, 18; minimum gage height, 1.70 ft Sept. 18.
1926-54: Maximum discharge, 13,600 cfs Sept. 6, 1935 (gage height, 22.18 ft, from floodmarks), from rating curve extended above 5,500 cfs on basis of velocity-area studies; minimum, 2 cfs Sept. 28 to Oct. 2, 1930.

Remarks.--Records good except those for period of no gage-height record, which are fair. Prior to October 1947, occasional diurnal fluctuation at low flow caused by gristmill 5.4 miles above station.

Revisions (water years).--WSP 972: 1928-29, 1932, 1933-34(M), 1935.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	53	49	a80	136	a2,400	132	120	*136	*46	28	28
2	20	46	49	a75	129	a1,800	130	114	116	44	25	24
3	19	44	48	a70	122	a1,000	121	114	103	45	34	22
4	19	43	49	a70	114	a600	114	230	101	178	47	19
5	19	42	59	a70	109	a350	114	160	97	92	37	17
6	20	42	66	a70	103	a200	122	124	90	88	36	16
7	21	47	181	a70	98	a190	120	112	85	68	38	15
8	22	53	131	a70	92	a180	119	114	84	60	32	14
9	22	58	84	a70	96	a160	112	111	96	102	27	12
10	24	60	375	a65	94	a140	104	112	95	59	25	13
11	a26	57	234	a90	91	a130	104	106	98	50	24	13
12	a26	53	160	a120	88	a130	106	102	97	46	24	13
13	a26	49	378	a110	81	a170	103	100	84	44	21	12
14	a26	46	2,080	a90	83	a270	102	110	82	41	20	12
15	a28	46	1,080	a250	85	a300	103	406	180	65	19	12
16	a30	46	258	a550	85	198	753	427	400	113	19	11
17	a28	46	171	a650	93	164	2,380	258	213	63	19	10
18	a26	46	122	a500	100	150	902	202	150	48	26	10
19	a30	46	119	a400	88	144	352	194	140	48	48	19
20	a28	45	129	a300	85	306	254	1,050	102	60	45	24
21	a28	46	106	a200	242	266	206	2,080	84	54	64	20
22	a30	53	104	a300	429	190	176	532	75	54	153	24
23	a30	61	102	a500	214	165	160	288	69	55	56	23
24	a30	70	93	a800	164	152	174	214	66	49	45	18
25	a34	66	84	a950	154	144	178	171	60	42	40	16
26	a36	58	79	a700	*144	144	254	150	57	38	36	16
27	a38	53	88	a650	126	135	194	134	54	35	32	16
28	a60	50	82	a650	119	126	160	124	51	32	31	16
29	a150	49	82	*a450	-	125	134	117	46	30	61	16
30	*a200	*49	*82	196	-	124	*125	370	45	29	43	14
31	76	-	81	162	-	*122	-	202	-	*31	*33	-
Total	1,194	1,523	6,805	9,328	3,564	10,675	8,108	8,648	3,156	1,809	1,188	495
Mean	38.5	50.8	220	301	127	344	270	279	105	58.4	38.3	16.5
Cfsm	0.164	0.216	0.936	1.28	0.540	1.46	1.15	1.19	0.447	0.249	0.163	0.070
In.	0.19	0.24	1.08	1.48	0.56	1.68	1.28	1.37	0.50	0.29	0.19	0.08

Calendar year 1953: Max 2,080 Min 16 Mean 178 Cfsm 0.757 In. 10.27
Water year 1953-54: Max 2,400 Min 10 Mean 155 Cfsm 0.660 In. 8.94

Peak discharge (base, 2,100 cfs).--Dec. 14 (11 a.m.) 2,620 cfs (8.90 ft); Mar. 1 (about 3 p.m.) 4,350 cfs (11.61 ft); Apr. 17 (11:30 a.m.) 2,620 cfs (8.93 ft); May 21 (4 a.m.) 2,800 cfs (9.16 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for Rivanna River at Palmyra and Willis River at Flanagan Mills.

North Fork Moormans River near Whitehall, Va.

Location.--Lat 38°08'25", long. 78°45'05", on left bank 0.5 mile upstream from confluence with South Fork, 0.8 mile upstream from city of Charlottesville Dam, and 5.1 miles west of Whitehall, Albemarle County.

Drainage area.--11.4 sq mi.

Records available.--December 1951 to September 1954.

Gage.--Water-stage recorder. Concrete control since November 1952. Altitude of gage is 999 ft (by barometer).

Extremes.--Maximum discharge during year, 603 cfs Mar. 1 (gage height, 4.93 ft); no flow Oct. 10-16.
1951-54: Maximum discharge, that of Mar. 1, 1954; no flow Oct. 10-16, 1953.
Flood of Oct. 15, 1942, reached a stage of 11.7 ft, from floodmarks (discharge, 7,620 cfs, by slope-area determination of peak flow).

Remarks.--Records good except those for periods of doubtful or no gage-height record and periods of indefinite stage-discharge relation, which are poor.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 14

0.19	0	1.1	1.3
.2	.01	1.2	2.4
.4	.02	1.4	6.8
.7	.03	1.6	13
.9	.10	1.8	22
1.0	.55	1.9	28

Dec. 15 to Sept. 30

1.3	3.8	2.0	32
1.4	5.7	2.5	76
1.6	11	3.0	140
1.8	20	4.0	333

Note.--Same as preceding table below 1.2 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*a0.02	0.56	0.55	1.2	5.7	333	8.9	9.5	13	2.0	e0.12	e0.13
2	a.02	e.42	.55	1.1	5.1	123	7.5	8.9	9.5	1.8	e.12	e.10
3	a.02	e.29	.42	1.1	4.8	65	7.3	9.2	7.8	1.8	e.12	e.09
4	a.02	e.29	.55	1.0	4.4	41	7.1	9.5	6.8	2.0	e.12	e.09
5	a.02	e.16	.55	1.0	3.7	27	7.1	7.8	5.7	1.8	e.12	e.07
6	a.02	e.16	1.3	1.0	3.4	22	7.5	7.3	4.9	1.6	e.16	e.06
7	a.02	e.16	9.9	.91	3.0	18	8.0	7.1	4.6	1.8	e.55	e.06
8	a.01	e.16	4.2	.79	2.5	15	8.0	6.8	4.6	2.1	e.16	*e.05
9	a.01	e.16	2.6	.79	2.7	13	7.3	6.6	5.9	1.9	e.14	a.04
10	a0	e.16	4.6	1.2	2.5	12	6.8	6.4	4.4	1.5	e.13	a.04
11	a0	e.16	4.2	2.0	2.4	10	7.3	5.7	6.6	1.3	e.10	a.03
12	a0	e.29	3.2	1.8	2.1	12	7.3	5.5	4.9	1.1	e.10	a.03
13	a0	e.29	4.6	1.2	1.8	13	6.8	5.1	4.6	.91	e.09	a.03
14	a0	e.16	24	1.2	1.8	21	6.8	5.7	5.5	.67	e.09	a.03
15	a0	e.16	11	1.5	1.9	*26	6.6	8.0	5.1	57	e.07	a.02
16	a0	*e.16	6.4	6.2	1.9	24	7.3	6.8	4.8	2.8	e.07	a.02
17	a.01	e.16	4.4	8.9	5.7	20	42	6.4	8.9	1.5	e.07	a.01
18	a.02	e.16	3.1	5.7	4.8	18	45	7.1	15	1.2	e.08	a.01
19	a.02	e.16	2.4	4.8	4.2	16	34	9.8	14	1.2	e.09	a.01
20	a.03	e.16	2.1	4.4	4.0	24	25	31	10	1.0	*e.09	a.01
21	e.05	e.29	2.0	4.0	40	20	20	89	8.0	1.1	e.08	a.01
22	e.07	e.56	*1.9	5.5	41	18	16	57	*6.2	*1.3	e.09	a.01
23	e.08	12	*1.8	5.7	24	16	15	33	5.3	.91	e.12	a.01
24	e.09	3.2	1.8	5.5	17	14	13	23	4.4	e.56	e.13	a.01
25	e.10	1.6	1.5	5.9	13	13	12	18	3.5	e.55	e.14	a.01
26	e.11	1.1	1.4	13	*9.8	13	*17	13	3.4	e.42	e.14	a.01
27	e.14	.91	1.3	18	7.8	10	16	11	3.2	e.16	e.15	a.01
28	1.6	.67	1.3	*14	7.3	9.8	15	9.5	2.5	e.16	e.16	a.01
29	6.6	.56	1.3	10	-	9.2	13	8.9	2.2	e.15	e.15	a.01
30	2.1	.55	1.3	10	-	8.9	11	7.5	2.1	e.15	e.14	a.01
31	.9	-	1.3	6.8	-	9.2	-	9.4	-	e.14	e.15	-
Total	12.08	25.82	107.52	146.19	228.3	994.1	411.6	449.5	187.4	92.58	4.04	1.03
Mean	0.390	0.861	3.47	4.72	8.15	32.1	13.7	14.5	6.25	2.99	0.130	0.034
Cfsm	0.034	0.076	0.304	0.414	0.715	2.82	1.20	1.27	0.548	0.262	0.011	0.0030
In.	0.04	0.08	0.35	0.48	0.74	3.25	1.34	1.46	0.61	0.30	0.01	0.003

Calendar year 1953: Max 357 Min 0 Mean 14.2 Cfsm 1.25 In. 16.86
Water year 1953-54: Max 333 Min 0 Mean 7.29 Cfsm 0.639 In. 8.66

Peak discharge (base, 150 cfs).--Mar. 1 (8 a.m.) 603 cfs (4.93 ft).
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of 5 discharge measurements and records for South Fork Rivanna River near Earlysville.
e Stage-discharge relation indefinite; discharge estimated on basis of 5 discharge measurements and records for South Fork Rivanna River near Earlysville.

South Fork Rivanna River near Earlysville, Va.

Location.--Lat 38°07'30", long. 78°31'05", on left bank 0.3 mile upstream from Fishing Creek, 3.0 miles southwest of Earlysville, Albemarle County, and 8.7 miles upstream from confluence with North Fork.

Drainage area.--216 sq mi.

Records available.--December 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 369 ft (by barometer).

Extremes.--Maximum discharge during year, 9,560 cfs Mar. 1 (gage height, 15.55 ft); minimum observed, 2.2 cfs Sept. 18 (gage height, 0.71 ft).
1951-54: Maximum discharge, that of Mar. 1, 1954; minimum, that of Sept. 18, 1954. Flood, probably in October 1942, reached a stage of about 33 ft, from information by local resident.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some diurnal fluctuation, mostly at medium flow, by city of Charlottesville reservoir on Moormans River for municipal water supply which averages about 6 cfs.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13		Dec. 14 to Sept. 30			
1.0	12	0.7	2.0	2.5	195
1.2	23	.8	4.0	3.0	313
1.5	48	1.0	12	5.0	1,008
2.0	116	1.2	23	7.0	2,060
2.5	214	1.5	48	10.0	4,300
3.0	349	2.0	106		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*13	40	34	52	109	3,840	160	102	175	22	9.2	16
2	16	36	34	52	104	1,250	136	94	97	21	8.8	9.2
3	16	33	33	52	96	664	131	103	75	43	8.8	6.8
4	16	32	36	52	88	461	120	109	68	27	9.6	5.6
5	17	31	41	52	84	357	123	*85	62	24	9.2	4.4
6	17	32	69	52	80	278	130	81	57	22	13	3.8
7	18	37	323	51	75	255	131	77	55	20	16	3.6
8	17	36	124	50	69	222	123	83	57	26	a8	*3.2
9	18	33	87	50	73	195	112	76	97	33	a7	3.0
10	19	33	130	56	68	181	104	76	63	24	a6	3.0
11	20	31	105	91	67	167	108	74	96	20	a5	3.0
12	20	31	94	69	64	204	106	69	74	18	*4.4	3.0
13	20	30	148	67	60	226	98	65	60	17	4.0	a2.8
14	19	30	833	66	62	332	98	70	55	16	3.8	a2.8
15	17	30	346	65	64	329	98	115	64	116	4.0	a2.6
16	*17	*30	189	138	62	274	115	96	59	82	5.2	a2.6
17	17	30	130	217	81	245	300	76	69	32	6.8	a2.4
18	17	30	103	143	73	224	313	74	94	24	4.8	2.2
19	17	30	110	133	65	215	264	100	84	22	5.2	26
20	18	30	97	116	65	664	217	304	69	21	7.2	12
21	20	34	80	116	375	414	183	*596	60	20	6.0	11
22	19	44	75	154	410	324	164	398	*50	*22	7.6	8.8
23	19	132	69	187	254	286	156	278	43	21	11.0	5.6
24	19	77	62	160	199	247	164	213	38	17	9.2	4.4
25	19	55	58	152	169	228	136	171	34	14	8.0	3.8
26	19	47	68	217	*145	222	*193	140	32	14	8.4	3.8
27	20	41	63	262	124	183	147	116	30	12	7.6	3.8
28	77	39	58	*199	115	171	130	103	26	11	7.6	3.6
29	318	36	57	160	-	162	116	109	22	10	9.6	3.4
30	77	35	57	142	-	152	110	145	22	9.6	9.2	3.2
31	47	-	55	123	-	151	-	88	-	9.6	53	-
Total	1,003	1,185	3,768	3,496	3,300	13,113	4,486	4,286	1,887	790.2	283.2	169.4
Mean	32.4	39.5	122	113	118	423	150	138	62.9	25.5	9.14	5.65
Cfsm	0.150	0.183	0.565	0.523	0.546	1.96	0.694	0.639	0.291	0.118	0.042	0.026
In.	0.17	0.20	0.65	0.60	0.57	2.26	0.77	0.74	0.32	0.14	0.05	0.03

Calendar year 1953: Max 3,560 Min 7.2 Mean 217 Cfsm 1.00 In. 13.67
Water year 1953-54: Max 3,840 Min 2.2 Mean 103 Cfsm 0.477 In. 6.50

Peak discharge (base, 2,000 cfs).--Mar. 1 (11:30 a.m.) 9,560 cfs (15.55 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for North Fork Moormans River near Whitehall and Rivanna River at Palmyra.

Rivanna River at Palmyra, Va.

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

Drainage area.--675 sq mi.

Records available.--May 1934 to September 1954.

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

Average discharge.--20 years, 738 cfs.

Extremes.--Maximum discharge during year, 9,800 cfs Mar. 2 (gage height, 16.24 ft); minimum, 11 cfs Sept. 14, 15 (gage height, 2.36 ft).
1934-54: Maximum discharge, 78,000 cfs Oct. 16, 1942 (gage height, 36.5 ft at site then in use, 37.4 ft at present site); minimum, that of Sept. 14, 15, 1954; minimum gage height, 1.53 ft Oct. 9, 1941, site then in use.

Remarks.--Records fair.

Revisions (water years).--WSP 802: 1936(M). WSP 852: 1937. WSP 892: 1934-35.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 6		Dec. 7 to Sept. 30			
2.6	37	2.4	12	4.0	550
2.9	67	2.5	18	4.5	900
3.2	130	2.7	39	5.0	1,450
3.6	280	3.0	95	9.0	4,400
3.8	390	3.3	185	13.0	6,950
		3.6	320		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	101	88	144	331	3,610	402	342	290	84	26	48
2	43	82	88	141	310	6,620	402	320	348	84	26	60
3	41	77	84	141	305	2,120	370	*300	270	82	26	32
4	40	74	84	141	280	1,320	348	348	248	176	39	23
5	40	72	94	138	261	884	342	326	221	129	33	20
6	40	72	110	138	248	736	353	280	197	105	37	17
7	42	82	608	138	234	631	370	266	*189	93	41	16
8	42	103	502	132	209	568	353	266	193	102	39	16
9	*43	101	*295	129	213	508	331	266	266	147	*37	a15
10	43	97	358	135	*213	466	300	256	300	115	29	a13
11	45	90	392	213	205	430	295	243	280	95	25	a12
12	47	84	310	217	197	466	*295	234	353	80	22	a12
13	47	82	424	126	174	598	285	221	256	72	20	*a12
14	48	81	2,240	160	164	1,040	270	225	217	*65	17	12
15	48	81	1,580	185	182	1,100	270	305	248	146	17	*12
16	49	81	645	353	189	799	534	414	290	408	16	12
17	50	81	454	592	213	673	1,650	326	238	205	17	12
18	50	79	300	466	248	592	1,110	285	261	115	29	12
19	50	79	256	392	213	538	785	300	270	91	48	12
20	50	79	290	386	201	1,700	645	926	238	87	34	15
21	50	81	275	380	310	1,130	550	3,220	201	80	25	22
22	50	101	248	436	868	806	490	1,170	178	78	26	28
23	51	122	225	568	659	694	448	764	164	80	27	23
24	51	244	197	514	520	610	448	598	157	74	29	22
25	52	170	164	472	448	562	430	502	138	61	35	19
26	52	128	147	624	402	538	460	448	126	51	65	17
27	53	108	185	844	358	490	538	386	120	46	42	16
28	128	99	174	694	315	442	454	348	108	39	34	15
29	318	94	164	514	-	419	392	326	95	37	29	15
30	*378	88	160	436	-	402	358	442	87	33	29	14
31	151	-	154	392	-	392	-	353	-	31	27	-
Total	2,236	2,913	11,295	10,341	8,470	31,884	14,278	15,006	6,547	3,091	946	574
Mean	72.1	97.1	364	334	302	1,029	476	484	218	99.7	30.5	19.1
Cfsm	0.107	0.144	0.539	0.495	0.447	1.52	0.705	0.717	0.323	0.148	0.045	0.028
In.	0.12	0.16	0.62	0.57	0.47	1.75	0.79	0.83	0.36	0.17	0.05	0.03

Calendar year 1953: Max 8,210 Min 40 Mean 624 Cfsm 0.924 In. 12.54
Water year 1953-54: Max 6,620 Min 12 Mean 295 Cfsm 0.437 In. 5.92

Peak discharge (base, 6,000 cfs).--Mar. 2 (4 a.m.) 9,800 cfs (16.24 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for South Fork Rivanna River near Earlysville.

Willis River at Flanagan Mills, Va.

Location.--Lat 37°40', long. 78°11', on left bank 15 ft upstream from highway bridge, a quarter of a mile downstream from Flanagan Mills, Cumberland County, half a mile downstream from Trices Lake, and 4 miles downstream from Reynolds Creek.

Drainage area.--247 sq mi.

Records available.--April 1926 to January 1935, September 1936 to September 1954.

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

Average discharge.--26 years (1926-34, 1936-54), 245 cfs.

Extremes.--Maximum discharge during year, 2,320 cfs May 22 (gage height, 14.45 ft); minimum, 10 cfs Sept. 17, 18 (gage height, 2.79 ft).
1926-35, 1936-54: Maximum discharge, 9,580 cfs Apr. 27, 1937 (gage height, 23.86 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of velocity-area studies, with backwater correction; minimum, 2 cfs Sept. 30, Oct. 1, 4, 12, 1930.

Remarks.--Records good. Complete regulation of flow from Trices Lake, tributary to Willis River, slightly affects flow at gage.

Revisions (water years).--WSP 872: 1936-37. WSP 892: 1928-29, 1932-34(M), 1935. WSP 972: 1937, 1940. WSP 1203: 1929.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 19, May 23 to Sept. 30				Apr. 20 to May 22			
2.7	8	4.0	70	4.2	97	10.0	1,040
2.9	13	5.0	154	5.0	180	13.0	1,720
3.2	27	6.0	292	6.0	296	15.0	2,720
3.5	42	8.0	651	8.0	651		

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	116	50	71	218	632	124	127	128	33	14	19
2	24	74	52	69	184	1,040	124	115	99	34	13	18
3	20	57	50	68	166	1,380	120	*147	86	34	17	17
4	17	*53	50	69	148	1,540	108	689	81	36	23	18
5	*17	48	57	69	138	575	104	372	76	53	31	15
6	16	46	67	70	133	316	112	264	70	42	30	15
7	17	49	143	68	120	240	112	174	*66	42	24	13
8	18	56	184	65	112	204	112	152	64	37	24	13
9	20	61	*138	66	108	184	116	137	65	39	*19	32
10	19	64	112	65	*108	166	104	134	66	42	18	40
11	19	64	108	84	104	148	98	120	68	40	16	50
12	23	59	112	120	104	138	98	112	71	34	20	38
13	24	55	172	116	95	138	94	102	63	30	22	*21
14	22	54	746	89	91	198	90	111	61	*28	16	14
15	24	50	900	99	94	*332	89	469	76	29	13	12
16	26	50	765	518	98	292	403	900	116	46	13	11
17	24	49	448	689	100	191	1,000	784	85	48	12	10
18	23	52	166	*727	116	160	1,120	537	94	38	15	13
19	26	52	116	389	112	148	1,160	304	82	36	21	10
20	25	49	104	204	100	198	727	727	71	34	29	12
21	25	51	104	184	378	277	270	1,590	62	37	30	14
22	27	54	104	575	803	225	213	2,200	55	38	28	16
23	27	60	104	1,000	765	166	186	1,670	50	38	127	17
24	28	67	96	1,140	480	148	180	765	46	36	75	16
25	28	68	86	1,430	244	138	169	247	44	29	41	19
26	32	68	79	1,080	211	133	480	184	44	26	32	12
27	30	61	74	960	178	128	304	154	39	22	30	13
28	56	57	76	1,000	154	120	208	128	37	18	29	12
29	240	52	77	*980	-	116	158	124	36	21	23	12
30	340	51	76	537	-	112	135	148	34	20	23	11
31	211	-	76	277	-	*112	-	154	-	18	21	-
Total	1,472	1,747	5,492	12,878	5,662	9,895	8,318	13,841	2,035	1,058	849	533
Mean	47.5	58.2	177	415	202	319	277	446	67.8	34.1	27.4	17.8
Cfsm	0.192	0.236	0.717	1.68	0.818	1.29	1.12	1.81	0.274	0.138	0.111	0.072
In.	0.22	0.26	0.83	1.94	0.85	1.49	1.25	2.09	0.31	0.16	0.13	0.08

Calendar year 1953: Max 1,540 Min 16 Mean 201 Cfsm 0.814 In. 11.04
Water year 1953-54: Max 2,200 Min 10 Mean 175 Cfsm 0.709 In. 9.61

Peak discharge (base, 1,700 cfs).--May 22 (7 a.m.) 2,320 cfs (14.45 ft).
* Discharge measurement made on this day.

James River at Cartersville, Va.

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

Drainage area.--6,242 sq mi.

Records available.--January 1899 to September 1954.

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

Average discharge.--54 years (1899-1904, 1905-54), 7,146 cfs.

Extremes.--Maximum discharge during year, 63,600 cfs Mar. 3 (gage height, 18.75 ft); minimum, 519 cfs Sept. 18 (gage height, 0.31 ft); minimum daily, 537 cfs Sept. 17, 18.
1899-1954: Maximum discharge, 180,000 cfs Sept. 20, 1944 (gage height, 29.6 ft, from floodmark in gage well); minimum, 320 cfs Sept. 22, 1932; minimum daily, 348 cfs Oct. 5, 1930; minimum gage height, 0.10 ft Oct. 2, 1941.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Flow regulated by powerplants above station.

Revisions (water years).--WSP 582: Drainage area. WSP 972: 1936(M). WSP 1203: 1901-2(M), 1924-25(M), 1928(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.3	510	7.0	14,400
1.0	1,420	10.0	24,100
2.0	3,080	14.0	40,200
5.0	9,000	18.0	59,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	820	1,800	1,230	1,790	5,200	8,420	6,000	4,720	4,820	1,520	1,150	1,320
2	808	1,450	1,240	1,740	4,450	38,000	6,000	4,630	3,930	1,630	1,180	950
3	796	1,390	1,230	1,720	4,020	58,700	5,600	3,930	3,590	1,690	1,070	1,010
4	796	1,290	1,290	1,710	3,680	30,200	5,600	5,010	3,340	1,640	1,150	924
5	760	1,150	1,260	1,720	3,500	18,400	5,600	*5,800	2,820	1,870	1,550	885
6	700	1,160	1,370	1,630	3,250	13,900	5,600	4,630	2,740	1,800	1,440	808
7	772	1,160	2,030	1,630	3,080	11,100	5,400	4,270	2,660	1,640	1,260	748
8	724	1,230	5,600	1,610	2,910	9,500	5,010	3,840	a2,500	1,560	1,210	748
9	820	1,310	3,250	1,560	2,740	7,840	5,600	3,760	a2,300	2,480	*1,340	680
10	796	1,230	3,080	1,550	2,660	6,800	7,620	3,760	a2,500	2,400	1,160	680
11	772	1,230	*5,200	a1,800	2,480	6,000	6,800	3,160	a2,600	1,640	1,070	700
12	808	1,080	4,100	a2,300	*a2,480	5,800	6,200	3,340	a2,600	1,660	1,130	610
13	820	1,120	5,010	a2,000	2,570	5,600	5,400	3,000	a2,700	1,420	1,020	582
14	833	1,150	13,000	a1,800	2,320	6,000	*5,010	3,080	a2,700	1,320	950	573
15	820	1,160	18,700	a2,000	2,230	8,520	4,720	4,020	a2,800	1,520	937	*546
16	736	1,180	9,250	a4,000	2,200	9,500	5,200	5,800	3,590	*1,770	820	555
17	680	1,180	7,840	a8,000	2,200	*a9,400	12,400	6,200	4,360	1,930	872	537
18	724	1,180	5,600	a8,400	2,320	8,290	12,700	7,200	3,500	4,640	820	537
19	796	1,150	4,100	8,760	2,400	6,800	10,800	6,600	3,840	4,020	872	573
20	833	1,150	3,590	*7,410	a2,230	8,060	11,600	7,620	3,590	2,820	1,180	610
21	846	1,130	2,910	5,200	3,080	13,000	9,250	19,000	3,340	2,740	1,390	620
22	846	1,210	2,740	5,010	8,740	16,200	7,000	15,600	3,250	4,630	1,180	660
23	820	1,400	2,660	8,520	18,400	13,300	6,200	11,600	2,820	3,590	1,290	808
24	859	1,500	2,480	11,300	14,200	10,500	5,800	8,520	2,740	3,680	1,230	911
25	846	1,740	2,480	13,900	9,750	9,000	5,400	6,600	2,140	4,360	1,210	1,080
26	859	1,640	2,210	11,600	7,840	7,840	6,000	5,400	1,800	3,340	1,320	980
27	859	1,580	2,030	12,400	6,200	7,000	7,620	4,820	1,520	2,130	1,080	846
28	1,230	1,480	1,980	10,800	5,400	6,800	7,200	4,360	1,580	1,920	1,070	808
29	2,230	1,370	1,960	9,250	-	7,620	5,800	4,180	1,550	1,740	1,100	784
30	3,760	1,310	1,870	7,620	-	7,410	5,010	5,600	1,500	1,370	1,630	680
31	3,080	-	1,870	6,200	-	7,000	-	6,200	-	1,120	1,720	-
Total	31,849	39,110	123,160	164,930	132,530	382,500	204,140	186,250	85,720	71,590	36,401	22,753
Mean	1,027	1,304	3,973	5,320	4,733	12,340	6,805	6,008	2,857	2,309	1,174	758
Cfsm	0.165	0.209	0.636	0.852	0.758	1.98	1.09	0.963	0.458	0.370	0.188	0.121
In.	0.19	0.23	0.73	0.98	0.79	2.28	1.22	1.11	0.51	0.43	0.22	0.14

Calendar year 1953: Max 71,400 Min 680 Mean 6,187 Cfsm 0.991 In. 13.46
Water year 1953-54: Max 58,700 Min 537 Mean 4,057 Cfsm 0.650 In. 8.83

Peak discharge (base, 40,000 cfs).--Mar. 3 (11:30 a.m.) 63,600 cfs (18.75 ft).
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of 1 discharge measurement, high-water mark, and records for station at Scottsville.

Fine Creek at Fine Creek Mills, Va.

Location.--Lat 37°35'52", long. 77°49'12", on right bank 75 ft downstream from highway bridge at Fine Creek Mills, Powhatan County, 0.8 mile upstream from mouth, and 6.7 miles northeast of Powhatan. Prior to Oct. 28, 1953, at site 75 ft upstream.

Drainage area.--23 sq mi, approximately.

Records available.--July 1944 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 28, 1953, chain gage or inclined staff gage and crest-stage indicator at site 75 ft upstream at same datum.

Average discharge.--10 years, 20.6 cfs.

Extremes.--Maximum discharge during year, 230 cfs June 15 (gage height, 3.16 ft); minimum, 0.4 cfs Sept. 11 (gage height, 1.56 ft).
1944-54: Maximum discharge, 1,650 cfs Aug. 4, 1948 (gage height, 7.0 ft, from floodmark); minimum, that of Sept. 11, 1954.

Remarks.--Records good.

Revisions (water years).--WSP 1203: 1948.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-27		Oct. 28 to Sept. 30			
1.5	0.4	1.5	0.1	2.0	15
1.6	2.6	1.6	.6	2.1	26
1.7	7.0	1.7	1.5	2.3	56
		1.8	3.6	2.5	92
		1.9	7.8	2.8	150

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	3.1	4.0	5.5	13	63	16	9.5	8.8	4.4	1.0	1.2
2	2.6	2.9	4.0	5.5	13	54	12	8.8	7.2	3.6	1.3	1.1
3	2.6	2.6	4.0	5.5	12	34	12	*8.8	7.2	3.3	3.3	1.0
4	2.6	*2.6	5.1	5.5	11	32	11	18	10	6.4	1.6	1.0
5	*2.6	2.4	7.8	5.5	11	36	12	12	7.8	5.1	1.5	.9
6	2.6	2.9	6.8	5.5	10	19	11	9.5	7.2	4.7	1.8	.8
7	2.6	4.0	12	5.5	9.5	17	11	8.8	*6.8	3.6	1.3	.7
8	2.6	5.5	7.8	5.5	8.8	16	25	11	6.8	4.4	1.1	.6
9	2.6	5.1	*6.0	5.5	9.5	15	30	10	6.4	5.5	*1.1	.7
10	2.6	4.4	8.8	5.5	*8.8	14	17	9.5	6.4	4.7	1.5	.8
11	2.6	3.6	6.8	10	9.5	13	15	8.3	6.4	3.6	1.1	.6
12	2.6	3.6	8.3	7.8	8.8	14	*12	7.8	6.4	2.9	1.0	.8
13	2.6	3.6	13	5.5	8.3	15	11	7.2	5.5	2.4	1.0	*.6
14	2.6	3.6	71	5.5	8.8	40	10	7.2	7.2	*1.8	.9	.6
15	2.6	3.6	30	9.5	9.5	*29	10	63	35	2.9	1.0	.7
16	2.6	3.6	13	42	9.5	19	59	59	114	6.4	.9	.8
17	2.6	3.6	9.5	24	12	17	102	32	17	3.1	.9	.8
18	2.6	3.6	7.2	*12	11	15	88	43	12	2.4	8.4	.8
19	2.6	3.6	6.4	11	10	15	30	41	9.5	2.4	4.4	.8
20	2.6	3.6	6.4	9.5	9.5	20	22	98	7.8	2.4	2.2	.9
21	2.2	4.7	6.8	12	45	16	17	140	6.8	2.0	3.6	1.0
22	2.6	5.5	7.2	73	48	14	15	98	6.0	2.6	2.4	1.0
23	2.6	7.2	6.8	119	24	13	13	27	5.5	2.4	2.4	.8
24	2.6	6.8	6.0	50	18	12	14	20	5.5	1.5	1.8	.8
25	3.9	6.0	5.5	29	17	12	14	16	5.1	1.4	1.5	.8
26	5.2	5.1	5.1	46	15	12	17	13	5.1	1.3	1.8	.7
27	6.1	4.4	5.5	90	13	12	27	12	6.8	1.2	1.8	.8
28	4.1	4.4	5.5	79	14	11	16	11	4.7	1.0	1.8	.8
29	9.4	4.0	5.5	29	-	11	12	12	4.4	1.0	1.8	.6
30	7.2	4.0	5.5	20	-	11	11	13	4.4	1.0	1.6	.6
31	4.0	-	5.5	16	-	11	-	9.5	-	1.0	1.5	-
Total	102.4	123.6	302.8	754.8	397.5	632	672	843.9	349.7	92.4	59.3	24.1
Mean	3.30	4.12	9.77	24.3	14.2	20.4	22.4	27.2	11.7	2.98	1.91	0.803
Cfsm	0.143	0.179	0.425	1.06	0.617	0.887	0.974	1.18	0.509	0.130	0.083	0.035
In.	0.16	0.20	0.49	1.22	0.64	1.02	1.09	1.36	0.57	0.15	0.10	0.04

Calendar year 1953: Max 183 Min 0.8 Mean 14.7 Cfsm 0.639 In. 8.70
Water year 1953-54: Max 140 Min 0.6 Mean 11.9 Cfsm 0.517 In. 7.04

Peak discharge (base, 200 cfs).--June 15 (11 p.m.) 230 cfs (3.16 ft).
* Discharge measurement made on this day.

James River & Kanawha Canal near Richmond, Va.

Location.--Lat 37°33'52", long. 77°34'28", on left bank 75 ft downstream from canal bridge, 400 ft downstream from headgates, 1,200 ft north of north end of Bosher Dam on James River, 1.6 miles (corrected) upstream from Huguenot Memorial Bridge, and 2.0 miles (corrected) west of city limits of Richmond, Henrico County.

Records available.--September 1936 to September 1954.

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

Average discharge.--18 years, 882 cfs.

Extremes.--Maximum discharge during year, 1,390 cfs Mar. 2 (gage height, 9.53 ft); no flow at times when headgates were closed.
1936-54: Maximum gage height, 19.7 ft Sept. 20, 1944 (discharge not determined); no flow at times when headgates were closed.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Canal diverts from James River 1,200 ft above Bosher Dam and discharges into river at several points below gaging station near Richmond. Figures given show flow in canal only; for record of flow of James River near Richmond see following page.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	790	890	830	870	1,010	1,050	1,050	1,010	1,010	830	a0	850
2	790	850	830	850	970	1,130	1,030	990	970	830	a400	830
3	770	830	830	850	950	1,130	750	990	950	830	a700	790
4	770	*790	830	850	950	1,130	297	*990	890	850	a900	790
5	770	790	830	850	910	1,090	1,030	1,030	305	850	a1,100	790
6	*790	790	830	850	296	1,110	1,030	990	930	870	a1,100	790
7	770	790	850	850	930	1,110	1,030	970	910	850	a400	770
8	770	770	950	850	930	1,070	1,010	970	*910	850	a0	752
9	770	790	*990	850	910	1,070	1,030	950	910	850	a400	734
10	770	790	930	850	*910	1,070	1,050	950	910	890	*a800	716
11	770	810	970	850	910	1,030	1,070	950	910	850	810	698
12	770	830	1,010	870	910	1,010	1,050	930	930	830	810	716
13	770	830	970	890	890	1,010	*1,030	930	930	a800	810	662
14	770	830	1,070	890	890	1,030	1,010	930	910	a800	810	*609
15	770	830	1,070	890	890	*1,070	1,010	970	910	*a850	790	575
16	790	830	1,010	890	890	1,090	1,030	1,030	970	810	790	526
17	770	830	1,050	1,030	890	1,090	1,070	1,050	990	830	790	478
18	752	830	1,050	*1,070	890	1,070	1,010	1,050	970	850	810	463
19	752	830	990	1,070	890	1,050	1,030	1,010	970	990	790	476
20	770	830	950	1,050	890	726	1,090	1,030	950	a650	790	494
21	790	830	950	1,010	930	1,070	1,070	1,050	950	a800	830	510
22	790	830	910	1,010	1,030	1,050	1,050	1,010	930	a1,000	830	510
23	790	830	910	1,010	1,090	1,070	1,050	1,050	930	a1,000	830	526
24	790	850	910	1,030	1,030	1,070	1,050	1,030	910	a1,000	830	609
25	790	850	910	1,010	1,050	1,070	1,030	970	890	a1,100	830	662
26	790	850	890	1,010	1,070	1,070	1,030	990	870	a100	830	662
27	790	850	870	1,050	1,050	1,050	1,070	990	850	a100	830	680
28	790	850	870	1,050	1,010	1,030	1,050	930	830	a500	810	698
29	830	850	870	1,050	-	1,070	1,030	270	830	a550	810	680
30	910	830	870	1,050	-	1,070	1,030	1,010	850	a400	810	680
31	950	-	870	1,010	-	1,070	-	1,050	-	a200	850	-
Total	24,454	24,780	28,670	29,310	25,966	32,826	30,167	30,070	26,955	23,510	22,890	19,728
Mean	789	826	925	945	927	1,059	1,006	970	898	758	738	658
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 1,130 Min 165 Mean 928 Cfsm - In. -
Water year 1953-54: Max 1,130 Min 0 Mean 875 Cfsm - In. -

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements and records for stations at Cartersville and near Richmond.

James River near Richmond, Va.

Location.--Lat 37°33'47", long. 77°32'50", on left bank 0.1 mile upstream from Huguenot Memorial Bridge, 0.5 mile (corrected) west of city limits of Richmond, Henrico County, 1.7 miles downstream from Bosher Dam, 3.3 miles upstream from Powhite Creek, and at mile 111.7.

Drainage area.--6,757 sq mi.

Records available.--October 1934 to September 1954.

Gage.--Water-stage recorder. Control consists of two dams at Williams Island. Datum of gage is 98.82 ft above mean sea level, datum of 1929.

Average discharge.--19 years (1935-54), 7,619 cfs (includes flow in James River & Kanawha Canal).

Extremes.--Maximum discharge during year, 58,700 cfs Mar. 3 (gage height, 14.54 ft); minimum daily, 46 cfs Oct. 7-10, 18-21, Sept. 8-24.
1934-54: Maximum discharge, 175,000 cfs Mar. 19, 1936 (gage height, 23.42 ft); minimum daily, 46 cfs Sept. 18-20, 25-27, Oct. 1-4, 7, 1941, Sept. 8, 9, 12, 1944, Aug. 31 to Sept. 6, 1953, and that of Oct. 7-10, 18-21, 1953, Sept. 8-24, 1954.

Remarks.--Records good. City of Richmond diverts average of 46 cfs from gage pool. Flow regulated by powerplants above station. James River & Kanawha Canal diverts water around station (see preceding page). Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 972: 1936(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.1	46	4.0	2,000
2.94	46	5.0	4,600
3.0	70	7.0	11,500
3.1	140	10.0	26,600
3.5	880	14.0	54,700

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	2,020	650	1,280	5,600	5,740	5,890	4,460	4,460	670	1,130	922
2	119	1,030	550	1,150	4,460	27,800	5,450	4,200	3,670	670	754	550
3	112	733	590	1,130	4,060	53,200	5,300	3,930	3,150	733	530	262
4	98	712	610	1,070	3,670	42,700	5,740	3,930	2,840	838	392	167
5	98	610	712	1,090	3,280	19,900	5,020	5,160	3,020	922	294	133
6	*70	550	650	1,070	3,540	14,200	4,880	4,880	2,120	1,150	431	112
7	46	550	880	1,010	2,790	11,100	4,880	4,080	1,920	1,030	880	70
8	46	530	2,810	1,030	2,480	9,140	4,600	3,800	*1,820	859	1,170	46
9	46	570	4,020	964	2,300	7,880	4,880	3,410	1,730	817	817	46
10	46	650	2,400	964	2,180	6,680	5,740	3,280	1,450	1,860	570	46
11	91	570	3,540	985	2,100	6,040	6,850	3,150	1,900	1,520	372	46
12	70	550	4,460	1,130	1,920	5,300	5,740	2,890	1,950	985	221	46
13	70	431	2,320	1,500	1,800	5,160	*5,160	2,890	1,900	880	208	46
14	98	450	7,700	1,680	1,800	5,300	4,600	2,710	1,950	650	221	46
15	105	470	18,900	1,450	1,730	7,020	4,330	2,970	1,450	470	180	*46
16	105	490	12,400	1,820	1,590	8,960	4,880	4,880	3,540	*670	126	46
17	54	490	7,880	5,270	1,590	*8,780	9,330	6,040	3,800	859	58	46
18	46	490	6,360	7,530	1,590	8,420	15,100	7,190	3,410	1,130	62	46
19	46	490	4,200	7,700	1,780	7,190	10,300	6,680	3,280	4,330	167	46
20	46	490	3,020	*8,060	1,800	6,680	11,500	7,360	3,150	2,760	98	46
21	46	530	2,790	5,890	2,000	9,900	9,140	16,400	2,840	1,950	221	46
22	133	490	2,300	5,600	4,600	14,200	7,700	19,400	2,580	2,550	590	46
23	133	570	2,050	8,060	16,500	14,200	5,890	13,300	2,400	3,540	392	46
24	119	754	2,020	12,000	16,000	10,700	5,450	9,520	1,950	2,450	470	46
25	133	901	1,850	14,200	10,700	8,780	5,160	7,020	1,800	3,150	431	62
26	140	1,070	1,750	12,400	8,240	7,700	5,020	5,740	1,340	3,410	392	208
27	140	1,010	1,480	12,800	6,680	6,850	6,040	4,600	1,030	2,200	550	431
28	180	922	1,300	12,800	5,160	6,040	7,360	4,060	733	1,450	353	275
29	712	817	1,450	9,900	-	6,360	6,040	4,460	733	1,260	262	194
30	2,200	712	1,260	8,600	-	6,850	5,020	4,200	733	1,030	248	140
31	3,020	-	1,220	6,360	-	6,520	-	5,450	-	1,030	775	-
Total	8,501	20,652	104,122	156,473	121,940	365,290	192,990	182,020	68,649	47,623	13,365	4,308
Mean	274	688	3,359	5,048	4,355	11,780	6,433	5,872	2,288	1,536	431	144
(†)	789	826	925	945	927	1,059	1,006	970	898	758	738	658

Adjusted for diversion in James River & Kanawha Canal

Mean	1,063	1,514	4,284	5,993	5,282	12,839	7,439	6,842	3,186	2,294	1,169	802
Cfsm	0.157	0.224	0.634	0.887	0.782	1.90	1.10	1.01	0.472	0.339	0.173	0.119
In.	0.18	0.25	0.73	1.02	0.81	2.19	1.23	1.16	0.53	0.39	0.20	0.13

	Observed			Adjusted			
Calendar year 1953:	Max 63,500	Min 46	Mean 5,733	Mean 6,661	Cfsm 0.986	In. 13.37
Water year 1953-54:	Max 53,200	Min 46	Mean 3,523	Mean 4,398	Cfsm 0.651	In. 8.82

Peak discharge (base, 50,000 cfs).--Mar. 3 (11:30 p.m.) 58,700 cfs (14.54 ft).
* Discharge measurement made on this day.
† Mean monthly discharge, in cubic feet per second, of James River & Kanawha Canal near Richmond.

Falling Creek near Drewrys Bluff, Va.

Location.--Lat 37°27'40", long. 77°28'00", on left bank 300 ft downstream from highway bridge, 600 ft downstream from Chesterfield County Reservoir, 2.4 miles northeast of town of Drewrys Bluff, Chesterfield County, 2.7 miles downstream from Pocoshock Creek, and 3.7 miles upstream from mouth.

Drainage area.--54 sq mi, approximately.

Records available.--September 1942 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 60 ft (from topographic map). Prior to Oct. 1, 1952, water-stage recorder at site 300 ft upstream at different datum.

Average discharge.--12 years, 53.4 cfs (unadjusted).

Extremes.--Maximum discharge during year, 932 cfs May 21 (gage height, 5.19 ft); minimum, 0.12 cfs Sept. 6, 7; minimum gage height, 1.54 ft Sept. 7.
1942-54: Maximum discharge, 7,270 cfs July 18, 1945 (gage height, 10.1 ft, site and datum then in use); minimum, 0.12 cfs Aug. 13, 1953, Sept. 6, 7, 1954; minimum gage height, that of Sept. 7, 1954.

Remarks.--Records good. Chesterfield County diverts up to 1.5 cfs for water supply from reservoir 600 ft upstream from gage.

Revisions (water years).--WSP 1032: 1943-44(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-29		Oct. 30 to Sept. 30					
1.9	1.5	1.5	0.10	2.1	3.9	3.0	70
2.1	3.8	1.6	.14	2.2	5.7	3.5	130
2.2	5.7	1.7	.38	2.3	9.2	4.0	265
2.3	10	1.8	.90	2.4	14	4.5	480
2.5	22	1.9	1.50	2.6	31	5.0	790
2.6	28						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	13	7.4	16	53	97	34	53	29	0.22	0.31	0.28
2	3.4	9.7	8.2	13	49	120	35	43	26	.14	.31	.16
3	3.0	6.8	7.1	13	46	94	30	42	21	.13	7.7	.13
4	3.0	5.2	8.5	14	42	102	27	*62	17	.14	3.5	.13
5	2.9	*5.3	13	13	38	78	30	48	14	.19	1.8	.13
6	*2.9	9.2	15	13	35	63	32	37	14	.14	1.2	.12
7	3.4	11	22	13	32	54	31	32	13	.19	.80	.13
8	2.9	12	20	12	30	47	33	32	*11	.28	.48	.13
9	2.6	12	19	11	29	43	34	31	11	.28	.38	.13
10	2.9	12	18	12	28	41	29	28	9.7	.28	*.24	.15
11	2.6	11	*16	17	*27	38	27	25	11	.28	.21	.13
12	2.6	9.2	19	18	27	37	26	22	9.2	.21	.21	.19
13	3.0	8.2	50	13	26	36	*25	20	8.8	.28	.24	.13
14	3.5	7.8	235	13	25	96	24	34	14	.19	.26	*.13
15	3.2	7.8	125	22	24	102	23	108	11	*.28	.24	.16
16	2.8	7.4	62	114	24	*66	145	116	10	5.6	.21	.14
17	2.6	7.4	31	91	24	50	300	81	13	3.9	.21	.21
18	2.4	6.8	26	52	24	45	212	64	13	2.6	15	.14
19	2.4	6.0	22	38	21	40	107	93	11	2.3	9.7	.14
20	2.3	6.4	20	36	21	68	76	307	7.4	1.8	4.8	.14
21	2.1	6.8	20	68	90	63	62	612	6.4	1.4	10	.13
22	1.8	8.8	20	264	172	46	55	290	5.2	1.4	5.3	.14
23	1.7	14	20	293	101	40	48	115	4.4	1.2	3.5	.16
24	1.6	16	17	144	68	36	41	79	3.8	.80	2.3	.37
25	1.7	15	16	115	50	36	46	61	3.2	.54	1.7	.69
26	1.7	14	15	148	47	36	325	48	2.8	.28	1.2	.69
27	3.1	11	15	218	38	33	370	39	2.6	.19	.90	.69
28	3.3	10	14	160	36	31	124	36	1.9	.21	.90	.69
29	26	8.5	14	99	-	29	81	35	1.3	.21	.90	.69
30	32	8.2	14	78	-	28	64	62	15	.21	1.1	.54
31	16	-	13	64	-	27	-	38	-	.28	.54	-
Total	149.1	286.5	922.2	2,195	1,227	1,722	2,496	2,693	320.7	26.15	76.14	7.79
Mean	4.81	9.55	29.7	70.8	43.8	55.5	83.2	86.9	10.7	0.844	2.46	0.260
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 527 Min 0.13 Mean 44.2 Cfsm - In. -
Water year 1953-54: Max 612 Min 0.12 Mean 33.2 Cfsm - In. -

Peak discharge (base, 500 cfs).--Apr. 26 (11 p.m.) 558 cfs (4.63 ft); May 21 (9 a.m.) 932 cfs (5.19 ft).

* Discharge measurement made on this day.

Appomattox River at Farmville, Va.

Location.--Lat 37°18', long. 78°23', on left bank 15 ft downstream from highway bridge 1,000 ft north of town limits of Farmville, Prince Edward County, and 1¼ miles downstream from Buffalo Creek.

Drainage area.--306 sq mi.

Records available.--March 1926 to September 1954.

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

Average discharge.--28 years, 296 cfs.

Extremes.--Maximum discharge during year, 3,060 cfs Jan. 23 (gage height, 15.28 ft); minimum, 14 cfs Aug. 25 (gage height, 3.07 ft).
1926-54: Maximum discharge, 21,000 cfs Aug. 15, 1940 (gage height, 23.60 ft), from rating curve extended above 12,000 cfs by logarithmic plotting; minimum, 3.8 cfs Sept. 25, 1941; minimum daily, 9 cfs Sept. 20, 1932.

Remarks.--Records good. Diurnal fluctuation at low flow caused by mills above station.

Revisions (water years).--WSP 972: 1927-37, 1938(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 30 to Dec. 7)

Oct. 1 to Aug. 21				Aug. 22 to Sept. 30	
3.3	33	6.0	360	3.2	20
3.6	54	8.0	685	3.6	45
4.0	92	11.0	1,350	4.0	80
4.5	148	14.0	2,200	4.4	120
5.0	215	15.0	2,800	4.8	172

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	111	86	114	243	1,170	187	134	123	68	37	31
2	60	90	86	113	229	2,200	187	129	*113	67	48	28
3	59	82	86	115	215	912	168	*144	104	64	129	27
4	60	*80	90	116	201	574	158	236	105	71	98	27
5	*61	80	115	114	187	405	156	187	104	71	61	23
6	59	80	121	110	180	308	161	141	93	102	67	23
7	62	88	224	109	169	264	162	130	90	92	66	58
8	61	94	250	105	157	243	160	130	90	77	54	171
9	62	94	*166	105	161	222	154	126	90	90	52	110
10	64	90	187	108	*156	208	143	124	92	78	49	32
11	65	86	264	156	152	194	143	121	90	69	*47	77
12	65	83	173	180	146	180	*144	116	88	64	43	41
13	63	83	292	112	137	174	138	113	92	58	48	*25
14	62	82	902	126	137	338	134	140	146	*55	38	22
15	65	83	1,160	180	140	*420	136	450	467	58	40	21
16	65	99	435	1,020	140	285	356	745	888	71	37	21
17	65	95	257	1,230	170	229	1,450	465	480	66	36	20
18	65	85	170	*526	180	208	1,230	278	285	56	40	24
19	66	82	174	300	149	201	534	271	208	69	66	24
20	66	82	168	250	142	335	345	420	161	85	56	83
21	67	91	158	322	416	352	271	1,010	134	96	177	93
22	67	109	160	1,340	725	250	236	606	118	99	154	63
23	68	104	152	2,660	420	222	208	338	110	79	59	44
24	70	117	136	1,300	278	208	194	243	101	68	51	39
25	72	104	122	608	250	201	180	194	94	59	35	40
26	72	97	120	806	222	201	174	158	89	52	44	41
27	72	91	128	1,330	194	187	171	148	86	49	41	41
28	102	89	123	978	174	174	156	140	80	48	38	38
29	271	87	122	480	-	173	142	143	72	45	40	36
30	430	87	120	345	-	170	135	174	68	44	39	34
31	208	-	118	285	-	169	-	156	-	39	34	-
Total	2,757	2,725	6,865	15,643	6,070	11,377	8,113	7,910	4,861	2,109	1,824	1,357
Mean	88.9	90.8	221	505	217	367	270	255	162	68.0	58.8	45.2
Cfsm	0.291	0.297	0.722	1.65	0.709	1.20	0.882	0.833	0.529	0.222	0.192	0.148
In.	0.34	0.33	0.83	1.90	0.74	1.38	0.98	0.96	0.59	0.26	0.22	0.17

Calendar year 1953: Max 1,400 Min 35 Mean 225 Cfsm 0.735 In. 9.98
Water year 1953-54: Max 2,660 Min 20 Mean 196 Cfsm 0.641 In. 8.70

Peak discharge (base, 3,500 cfs).--No peak above base.
* Discharge measurement made on this day.

Buffalo Creek near Hampden Sydney, Va.

Location.--Lat 37°15', long. 78°29', on left bank 20 ft downstream from bridge on State Highway 626, 0.8 mile upstream from Locket Creek, 2 miles northwest of Hampden Sydney, Prince Edward County, and 6 miles southwest of Farmville.

Drainage area.--70 sq mi, approximately.

Records available.--August 1946 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 340 ft (by barometer). Prior to Aug. 19, 1953, staff gage at same site and datum.

Average discharge.--8 years, 69.0 cfs.

Extremes.--Maximum discharge during year, 1,580 cfs Jan. 23 (gage height, 6.57 ft); minimum, 5.1 cfs Sept. 18 (gage height, 1.38 ft).
1946-54: Maximum discharge, 4,040 cfs Nov. 21, 1952 (gage height, 7.77 ft); minimum, that of Sept. 18, 1954.
Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

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

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-28		Oct. 29 to Sept. 30			
1.6	14	1.4	5.5	5.0	320
1.8	22	1.6	11	5.5	472
2.1	37	1.9	25	6.0	820
		3.5	110	6.5	1,500
		4.0	160		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a17	34	24	32	58	392	52	32	34	20	a10	8.0
2	a17	29	26	31	57	576	46	32	*32	18	a12	7.5
3	a17	28	25	33	54	160	42	*32	31	18	a25	7.2
4	a17	*27	30	32	52	122	39	46	32	20	a19	7.0
5	*a17	26	41	31	50	85	40	35	29	24	a14	6.8
6	18	26	38	31	48	72	40	30	27	38	a15	6.0
7	19	30	78	30	46	68	42	29	26	24	a14	5.5
8	19	32	52	28	44	62	41	31	26	25	a12	5.8
9	20	30	*40	29	44	58	40	30	26	27	a 11	6.5
10	20	29	42	29	*42	56	38	30	27	22	a 11	7.2
11	20	28	38	49	41	52	38	28	26	20	*a10	7.2
12	20	26	42	44	39	50	*38	28	26	16	9.2	6.0
13	19	26	65	40	38	50	38	26	26	15	8.6	*a6
14	20	26	236	36	38	116	38	42	54	*15	8.6	a6
15	20	26	180	54	38	*97	38	150	58	15	9.2	5.8
16	20	26	72	310	38	68	103	186	263	a20	7.5	5.5
17	20	26	54	252	50	60	254	85	138	a17	7.0	5.5
18	20	25	54	*85	44	56	192	80	65	a15	8.6	5.5
19	20	25	54	68	40	54	85	94	51	a17	11	6.2
20	20	26	48	60	38	78	65	119	40	a20	10	22
21	19	32	44	94	119	65	55	215	34	a22	22	28
22	20	34	46	334	156	55	50	115	32	a25	13	14
23	20	32	42	938	78	52	46	70	29	a20	12	10
24	21	30	38	216	62	50	44	56	26	a17	10	9.2
25	21	30	38	137	58	49	42	49	25	a16	10	9.5
26	20	28	42	222	52	50	39	45	24	a15	15	9.5
27	20	27	37	290	48	46	38	41	24	a14	11	9.5
28	34	26	35	152	46	44	37	40	22	a13	10	8.3
29	97	26	35	91	-	44	33	39	20	a12	11	8.0
30	100	26	34	75	-	43	32	39	20	a 11	9.5	8.9
31	46	-	34	65	-	44	-	36	-	a 11	8.3	-
Total	798	842	1,664	3,918	1,518	2,874	1,725	1,910	1,293	582	364.5	258.1
Mean	25.7	28.1	53.7	126	54.2	92.7	57.5	61.6	43.1	18.8	11.8	8.60
Cfsm	0.367	0.401	0.767	1.80	0.774	1.32	0.821	0.880	0.616	0.269	0.169	0.123
In.	0.42	0.45	0.88	2.08	0.81	1.52	0.92	1.01	0.69	0.31	0.19	0.14

Calendar year 1953 : Max 550 Min 11 Mean 57.3 Cfsm 0.819 In. 11.11
Water year 1953-54 : Max 938 Min 5.5 Mean 48.6 Cfsm 0.694 In. 9.42

Peak discharge (base, 500 cfs).--Jan. 23 (3:30 a.m.) 1,580 cfs (6.57 ft); Mar. 1 (11 p.m.) 1,340 cfs (6.40 ft).
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of 2 discharge measurements, recorded range in stage, and records for Appomattox River at Farmville.

Appomattox River at Mattoax, Va.

Location.--Lat 37°25'17", long. 77°51'33", on right bank 75 ft upstream from Southern Railway bridge at Mattoax, Amelia County, 0.3 mile upstream from Skinquarter Creek, and 3.7 miles upstream from Flat Creek.

Drainage area.--729 sq mi.

Records available.--August 1900 to December 1905, March 1926 to September 1954.

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

Average discharge.--33 years, 727 cfs.

Extremes.--Maximum discharge during year, 4,200 cfs May 21 (gage height, 19.06 ft); minimum, 34 cfs Sept. 17, 18 (gage height, 4.63 ft).
1900-1905, 1926-54: Maximum discharge, 35,000 cfs Aug. 18, 1940 (gage height, 35.3 ft, from floodmark in gage house), from rating curve extended above 20,000 cfs on basis of records for stations at Farmville and near Petersburg; minimum, 11 cfs Oct. 2, 1930 (gage height, 3.52 ft).

Remarks.--Records good.

Revisions (water years).--WSP 782: Drainage area. WSP 892: 1938. WSP 972: 1928, 1932, 1934-38.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 30 to Nov. 22, Jan. 31 to Feb. 22, Feb. 24 to Mar. 1, Mar. 6 to Apr. 7, Aug. 4-23)

Oct. 1 to Apr. 19				Apr. 20 to Sept. 30			
5.2	92	9.0	855	4.6	32	9.0	835
6.0	205	13.0	2,000	5.0	65	13.0	2,000
7.0	372	18.0	3,750	6.0	171	19.0	4,150
				7.0	319		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	404	183	259	780	961	382	297	354	117	67	67
2	105	251	183	251	680	2,390	414	287	287	116	60	61
3	96	183	183	243	606	2,630	404	*268	252	113	74	54
4	95	*162	183	243	558	2,890	372	308	238	108	140	50
5	93	151	205	251	510	2,970	362	392	231	111	195	48
6	*92	148	235	243	474	1,130	353	366	213	116	142	45
7	92	151	292	235	438	805	353	277	*201	111	112	40
8	92	163	353	228	414	680	372	259	195	137	103	38
9	95	183	438	220	393	606	353	244	189	127	98	73
10	95	183	*353	220	*382	546	335	244	183	124	87	171
11	99	176	308	251	372	498	317	231	189	129	*112	126
12	100	172	414	308	362	474	*308	225	183	113	89	66
13	102	163	414	353	335	462	308	219	171	100	78	*87
14	100	161	1,190	235	325	582	300	225	177	*91	70	62
15	99	159	1,940	300	325	1,080	292	705	274	94	71	42
16	95	159	2,030	955	325	1,000	739	1,840	783	103	63	36
17	96	161	1,080	1,970	344	*705	2,190	2,060	1,620	106	60	39
18	96	183	594	2,290	382	558	2,800	1,240	1,100	104	107	36
19	96	172	393	1,650	382	510	2,870	861	580	101	76	52
20	95	162	353	780	344	546	2,760	1,940	379	97	75	40
21	95	165	393	730	541	655	965	3,990	277	120	113	56
22	96	176	362	1,830	1,470	705	731	4,030	231	136	368	125
23	98	212	353	2,940	1,780	546	605	3,790	207	137	618	123
24	99	235	335	3,010	1,010	486	528	1,420	183	128	189	90
25	103	228	308	3,260	705	450	474	731	171	110	120	68
26	105	228	275	3,600	594	426	580	580	159	95	98	60
27	106	205	275	3,600	522	426	541	474	154	84	81	60
28	124	198	283	2,830	462	414	460	418	142	78	80	59
29	205	183	275	2,630	-	393	379	379	133	70	76	60
30	502	183	267	1,350	-	382	330	366	124	70	72	55
31	805	-	267	955	-	372	-	418	-	66	71	-
Total	4,291	5,660	14,717	38,220	15,815	27,258	22,177	29,084	9,580	3,312	3,765	1,989
Mean	138	189	475	1,233	565	879	739	938	319	107	121	66.3
Cfsm	0.189	0.259	0.652	1.69	0.775	1.21	1.01	1.29	0.438	0.147	0.166	0.091
In.	0.22	0.29	0.75	1.95	0.81	1.40	1.13	1.49	0.49	0.17	0.19	0.10

Calendar year 1953: Max 3,230 Min 52 Mean 584 Cfsm 0.801 In. 10.88
Water year 1953-54: Max 4,030 Min 36 Mean 482 Cfsm 0.661 In. 8.99

Peak discharge (base, 4,000 cfs).--May 21 (8 p.m.) 4,200 cfs (19.06 ft).
* Discharge measurement made on this day.

Deep Creek near Mannboro, Va.

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

Drainage area.--156 sq mi.

Records available.--September 1946 to September 1954.

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

Average discharge.--8 years, 139 cfs.

Extremes.--Maximum discharge during year, 1,300 cfs May 22 (gage height, 7.98 ft); minimum, 2.4 cfs Sept. 17, 18 (gage height, 0.65 ft).
1946-54: Maximum discharge, 7,140 cfs Sept. 25, 1947 (gage height, 13.1 ft, from floodmarks); minimum, that of Sept. 17, 18, 1954.
Flood in August 1940 reached a stage of 14.8 ft (discharge, 10,000 cfs, from rating curve extended above 3,800 cfs), from information by local resident.

Remarks.--Records good.

Revisions (water years).--WSP 1203: 1948 (calendar year figures only).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 1-20)

Oct. 1 to Jan. 22				Jan. 23 to Sept. 30			
1.1	16	4.0	243	0.6	1.0	4.0	260
1.5	33	5.0	393	.7	3.0	5.0	402
2.0	63	6.0	615	1.0	14	6.0	615
3.0	139	7.0	900	1.5	38	7.0	900
				2.0	69	8.0	1,300
				3.0	148		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	67	39	55	117	238	101	82	58	20	8.0	10
2	22	49	38	53	113	702	97	72	52	20	10	8.8
3	21	41	38	53	109	587	87	*65	47	20	80	7.2
4	20	*38	40	56	101	419	80	84	44	40	101	6.4
5	*21	37	67	55	94	299	81	82	40	39	49	5.7
6	20	37	78	54	89	184	85	64	37	26	29	5.1
7	20	44	114	53	84	153	82	57	*36	22	22	4.5
8	20	51	106	49	77	134	80	57	35	20	17	3.9
9	18	51	*79	49	82	121	73	58	37	26	15	4.8
10	19	47	69	51	*78	117	68	58	41	34	31	4.8
11	20	43	66	70	75	109	68	54	38	26	*50	5.1
12	20	41	68	85	72	101	*69	50	35	22	34	4.2
13	20	38	157	61	63	101	65	48	34	18	20	*3.3
14	19	38	518	64	68	196	63	66	60	*16	15	2.8
15	19	38	868	88	69	306	63	216	50	17	14	2.8
16	20	38	514	404	69	*184	224	494	121	29	13	2.6
17	20	38	152	718	72	134	623	516	242	22	11	2.6
18	20	37	93	*420	72	117	868	241	136	18	13	2.8
19	20	36	82	157	67	113	526	218	65	23	14	3.9
20	20	36	83	134	65	144	194	538	50	43	45	4.2
21	20	39	78	218	151	144	130	1,000	42	35	49	11
22	20	49	85	330	506	113	109	1,100	36	28	32	12
23	20	55	83	774	491	101	94	514	34	27	25	9.6
24	21	63	72	718	189	97	84	184	32	22	21	7.2
25	22	59	62	355	139	94	80	130	30	18	18	6.0
26	23	56	59	394	117	96	109	101	28	16	16	5.4
27	23	49	61	552	101	91	477	88	26	13	14	4.8
28	25	44	59	505	93	87	384	77	24	12	13	4.5
29	121	41	60	254	-	84	126	70	22	10.	13	4.2
30	207	39	61	163	-	84	94	68	20	9.2	12	3.6
31	118	-	59	139	-	84	-	70	-	8.0	12	-
Total	1,023	1,339	4,008	7,131	3,423	5,534	5,284	6,522	1,552	699.2	816.0	163.8
Mean	33.0	44.6	129	230	122	179	176	210	51.7	22.6	26.3	5.46
Cfsm	0.212	0.286	0.827	1.47	0.782	1.15	1.13	1.35	0.331	0.145	0.169	0.035
In.	0.24	0.32	0.95	1.70	0.81	1.33	1.26	1.56	0.37	0.17	0.19	0.04

Calendar year 1953: Max 1,000 Min 4.8 Mean 121 Cfsm 0.776 In. 10.53
Water year 1953-54: Max 1,100 Min 2.6 Mean 103 Cfsm 0.660 In. 8.94

Peak discharge (base, 1,200 cfs).--May 22 (3:30 a.m.) 1,300 cfs (7.98 ft).
* Discharge measurements made on this day.

Appomattox River near Petersburg, Va.

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

Drainage area.--1,335 sq mi.

Records available.--May 1927 to September 1954.

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

Average discharge.--26 years (1927-30, 1931-54), 1,218 cfs.

Extremes.--Maximum discharge during year, 7,650 cfs May 23 (gage height, 9.57 ft); minimum, 46 cfs Sept. 18 (gage height, 1.84 ft).
1927-54: Maximum discharge, 28,000 cfs Aug. 20, 1940 (gage height, 18.15 ft); minimum, 19 cfs Sept. 21-27, 1932.

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

Revisions (water years).--WSP 757: 1932-33, drainage area. WSP 802: 1936(M). WSP 972: 1932, 1934-35.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	36	3.5	685
2.0	64	4.0	1,100
2.2	104	8.0	5,500
2.5	190	10.0	8,250
3.0	385		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	890	a300	a400	a1,500	1,290	715	636	715	212	90	100
2	190	520	a300	a400	a1,300	3,310	768	589	636	206	88	96
3	172	371	a300	a400	a1,100	4,190	752	556	550	209	98	86
4	160	305	a300	a400	a1,000	4,190	700	*615	508	221	180	78
5	154	*272	a340	a400	a920	4,080	664	738	479	215	313	70
6	160	268	a400	a400	a860	2,870	692	708	457	218	272	64
7	157	264	a450	a400	a800	1,430	685	615	420	209	199	61
8	154	276	a500	a400	a740	1,190	671	538	410	193	151	57
9	154	296	a600	a400	a720	1,060	657	532	395	224	125	58
10	154	313	a500	a410	a680	968	622	514	390	235	*120	68
11	160	309	a450	a450	*a660	908	596	508	390	228	117	155
12	163	292	a600	a560	650	840	582	479	385	221	166	163
13	172	280	a800	a640	608	800	576	462	376	199	148	102
14	166	268	a1,500	a520	576	1,090	570	490	400	175	104	*78
15	166	264	a2,700	a490	570	1,780	556	1,140	502	*160	90	94
16	163	256	a3,000	a1,500	582	*1,780	1,100	2,980	892	166	82	70
17	166	260	a2,500	a3,000	589	1,330	3,530	3,640	1,480	196	80	54
18	166	260	a1,300	a3,500	629	1,050	4,900	2,870	2,100	193	90	49
19	166	268	a800	*a3,000	650	925	4,900	1,730	1,100	172	133	49
20	163	264	a600	1,550	629	976	4,080	3,530	715	166	130	63
21	163	260	a700	a1,400	1,020	1,100	2,660	3,600	550	184	166	78
22	160	268	a600	a2,000	2,760	1,120	1,170	7,500	457	202	215	64
23	160	a300	a600	a4,000	3,200	1,000	959	7,500	390	206	492	108
24	166	a400	a560	a4,400	2,430	857	832	6,670	353	206	538	145
25	169	a400	a520	a4,600	1,430	792	760	2,160	318	199	268	117
26	172	a360	a480	a5,000	1,160	776	1,240	1,160	292	169	184	92
27	181	a330	a450	a5,000	1,010	745	1,880	942	272	148	154	76
28	184	a310	a450	a5,000	891	722	1,730	816	249	127	127	70
29	428	a300	a430	a5,500	-	700	984	745	238	109	107	68
30	730	a300	a420	a2,500	-	678	722	692	228	100	109	68
31	1,040	-	a410	a1,800	-	664	-	715	-	94	107	-
Total	6,874	9,724	23,840	58,420	29,664	45,211	41,253	56,370	16,647	5,762	5,243	2,501
Mean	222	324	769	1,885	1,059	1,458	1,375	1,818	555	186	169	83.4
Cfsm	0.166	0.243	0.576	1.41	0.793	1.09	1.03	1.36	0.416	0.139	0.127	0.062
In.	0.19	0.27	0.66	1.63	0.83	1.26	1.15	1.57	0.46	0.16	0.15	0.07

Calendar year 1953: Max 5,760 Min 63 Mean 986 Cfsm 0.739 In. 10.02
Water year 1953-54: Max 7,500 Min 49 Mean 826 Cfsm 0.619 In. 8.40

Peak discharge (base, 5,000 cfs).--Jan. 27 (time unknown) 5,380 cfs (7.94 ft); Apr. 19 (2 a.m.) 5,020 cfs (7.62 ft); May 23 (9 a.m.) 7,650 cfs (9.57 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 2 discharge measurements, recorded range in stage, and records for station at Mattoax and Deep Creek near Mannboro.

Chickahominy River near Providence Forge, Va.

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

Drainage area.--249 sq mi.

Records available.--January 1942 to September 1954.

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

Average discharge.--12 years, 247 cfs.

Extremes.--Maximum discharge during year, 767 cfs Jan. 29 (gage height, 7.63 ft); minimum, 3.4 cfs Aug. 1; minimum gage height, 1.63 ft Sept. 28, 29.
1942-54: Maximum discharge, 5,750 cfs July 21, 1945 (gage height, 10.6 ft); minimum, that of Aug. 1, 1954; minimum gage height, 1.56 ft Aug. 25, 26, 1943.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 17				Aug. 18 to Sept. 30	
1.7	3.2	4.0	176	1.6	4.5
1.8	5.5	6.0	395	1.8	10
2.0	13	7.0	568	2.0	19
2.5	44	8.0	955	2.5	48

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	90	63	93	568	395	149	158	140	13	4.1	11
2	27	97	56	89	546	410	144	158	118	13	5.3	9.4
3	23	99	51	85	526	369	144	*158	118	13	12	8.5
4	19	95	48	82	488	369	140	158	104	15	35	7.6
5	19	*72	54	81	410	369	140	136	72	17	32	7.0
6	*19	55	58	80	320	369	140	118	50	16	21	6.2
7	19	62	69	78	248	382	144	113	*40	14	13	6.0
8	20	73	81	75	212	395	140	122	36	13	9.9	6.0
9	20	82	88	72	194	382	140	131	35	16	8.4	6.0
10	20	92	89	71	180	344	144	140	35	18	*8.0	6.0
11	19	100	*90	75	*167	297	144	131	34	17	9.5	7.9
12	18	98	95	82	154	248	*136	111	34	18	25	9.4
13	18	89	113	83	144	216	122	93	38	13	22	*11
14	16	77	154	84	136	216	111	89	66	*9.9	13	9.4
15	16	66	180	101	131	221	103	118	87	9.9	8.7	7.9
16	16	59	208	158	126	*226	108	140	78	18	6.6	7.0
17	16	55	242	185	126	236	176	144	69	23	5.9	7.3
18	16	53	253	208	122	242	226	162	73	25	11	7.3
19	16	49	253	*221	122	253	270	190	70	19	14	7.0
20	16	46	253	216	118	285	286	286	66	14	28	7.0
21	15	45	286	231	149	297	320	525	57	11	36	7.0
22	14	43	297	286	242	275	410	725	40	9.9	39	7.6
23	13	56	255	369	275	231	488	686	31	9.5	43	8.5
24	13	75	203	395	308	208	488	568	26	9.1	28	7.9
25	14	80	154	410	308	203	425	488	22	8.0	18	6.8
26	14	90	140	455	297	208	320	470	19	6.9	14	5.8
27	15	93	126	506	332	194	264	488	19	6.2	12	5.8
28	18	91	113	686	369	180	242	425	17	5.3	11	5.5
29	29	83	106	767	-	162	212	332	15	4.6	11	6.2
30	58	72	100	725	-	154	172	253	14	4.1	12	6.5
31	72	-	97	620	-	144	-	185	-	4.1	12	-
Total	665	2,237	4,376	7,669	7,318	8,481	6,448	8,001	1,623	393.5	528.4	222.5
Mean	21.5	74.6	141	247	261	274	215	258	54.1	12.7	17.0	7.42
Cfsm	0.086	0.300	0.566	0.992	1.05	1.10	0.863	1.04	0.217	0.051	0.068	0.030
In.	0.10	0.34	0.65	1.14	1.09	1.27	0.96	1.20	0.24	0.06	0.08	0.03

Calendar year 1953: Max 1,000 Min 5.5 Mean 195 Cfsm 0.783 In. 10.63
Water year 1953-54: Max 767 Min 4.1 Mean 131 Cfsm 0.526 In. 7.16

Peak discharge (base, 1,000 cfs).--No peak above base.
* Discharge measurement made on this day.

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Cypress Swamp at Cypress Chapel, Va.

Location.--Lat 36°37'30", long. 76°36'10", on right bank 10 ft upstream from bridge on State Highway 32, 0.5 mile downstream from Dragon Swamp, 0.8 mile northwest of Cypress Chapel, Nansemond County, and 6.5 miles south of Suffolk.

Drainage area.--23 sq mi.

Records available.--October 1953 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Extremes.--Maximum discharge during year, 552 cfs Jan. 23 (gage height, 5.67 ft); no flow at times during year.

Remarks.--Records fair.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 12, 13)

2.1	0	3.4	52
2.2	.2	3.7	82
2.3	.5	4.0	130
2.5	1.6	5.0	350
2.6	2.6	5.5	500
2.7	4.0	6.0	720
3.0	24		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.8	12	36	40	45	8.6	9.8			
2		0	.8	9.2	33	85	46	3.9	2.7			
3		0	.8	7.2	31	67	32	2.7	1.5			
4		0	.8	6.0	29	92	24	2.2	.6			
5		0	1.4	5.3	25	76	21	1.7	.2			
6		0	1.8	4.6	23	50	20	1.2	0			
7		0	2.4	4.0	20	38	24	.8	0			
8		0	*2.4	3.7	18	31	27	2.4	0			
9		0	2.3	3.6	17	28	30	18	0			
10		0	2.6	3.4	16	24	24	12	0			
11		0	3.0	9.8	16	21	18	3.4	0			
12		0	3.9	10	14	18	*14	2.2	0			
13		0	24	*13	11	16	10	1.5	0			
14		0	57	16	9.8	86	7.2	12	0			
15		0	85	54	10	172	5.3	46	0			
16		0	56	228	*10	76	4.0	62	4.8			
17		0	29	252	10	47	7.2	43	4.2			
18		0	17	114	10	36	36	24	1.5			
19		0	11	63	9.2	30	33	21	.6			
20		0	9.8	50	6.6	37	20	39	.1			
21		0	12	63	21	43	12	89	0			
22		0	15	162	158	31	7.2	132	0			
23		0	15	484	116	23	3.7	55	0			
24		.2	14	274	58	*20	3.0	29	0			
25		.9	12	180	45	17	2.2	*16	0			
26		1.1	15	152	38	16	1.6	6.0	0			
27		.8	16	114	30	13	15	3.0	0			
28		.6	14	86	25	19	50	2.6	0			
29		.6	12	63	-	25	26	24	0			
30		.8	14	49	-	26	14	35	0			
31		-	14	42	-	32	-	30	-			
Total	0	5.0	464.8	2,537.8	845.6	1,335	582.4	729.2	26.0	0	0	0
Mean	0	0.17	15.0	81.9	30.2	43.1	19.4	23.5	0.87	0	0	0
Cfsm	0	0.0074	0.652	3.56	1.31	1.87	0.843	1.02	0.038	0	0	0
In.	0	0.008	0.75	4.10	1.36	2.16	0.94	1.18	0.04	0	0	0

Calendar year 1953: Max - Min - Mean - Cfsm - In. -
Water year 1953-54: Max 484 Min 0 Mean 17.9 Cfsm 0.778 In. 10.54

Peak discharge (base, 200 cfs).--Jan. 17 (12:30 a.m.) 311 cfs (4.85 ft); Jan. 23 (11 a.m.) 552 cfs (5.67 ft); Mar. 15 (3:30 a.m.) 206 cfs (4.38 ft).
* Discharge measurement made on this day.

Lake Drummond in Dismal Swamp, Va.

Location.--Lat 36°35'40", long. 76°26'20", on left bank in outlet canal, in Norfolk County, 200 ft upstream from dam and gates, 0.5 mile downstream from Lake Drummond, 2.5 miles east of Nansemond County line, 3.1 miles north of North Carolina State line, and 20 miles southwest of Norfolk.

Records available.--May 1926 to September 1954.

Gage.--Staff gage read twice daily. Altitude of gage is 15 ft (from topographic map).

Extremes.--Maximum gage height during year, 5.40 ft Jan. 28-30; minimum, 2.40 ft Sept. 29, 30.

1926-54: Maximum gage height, 6.09 ft Oct. 7, 1929; minimum, -0.67 ft Nov. 3, 1952.

Revisions (water years).--WSP 1032: 1934-43.

Gage height, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.52	3.74	3.88	4.80	5.28	5.04	5.04	4.97	4.99	4.38	3.80	3.27
2	4.53	3.71	3.86	4.85	5.15	5.04	5.01	4.98	4.98	4.34	3.78	3.18
3	4.49	3.70	3.81	4.88	5.00	5.07	5.04	4.95	4.96	4.29	3.80	3.18
4	4.46	3.67	3.82	4.90	5.01	5.12	4.99	4.96	4.99	4.24	3.81	3.14
5	4.41	3.63	3.87	4.94	5.00	5.04	5.01	4.95	5.01	4.19	3.78	3.09
6	4.39	3.80	3.87	4.97	5.07	5.08	5.02	4.93	4.99	4.25	3.80	3.06
7	4.43	3.83	3.86	4.99	5.00	5.04	5.07	4.92	4.94	4.17	3.76	3.01
8	4.38	3.77	3.87	5.02	4.99	5.02	5.08	4.94	4.86	4.15	3.72	2.98
9	4.36	3.78	3.87	5.04	5.02	5.06	5.05	4.95	4.80	4.19	3.64	2.94
10	4.36	3.77	3.87	5.09	5.04	5.06	5.04	5.00	4.77	4.20	3.62	2.90
11	4.34	3.75	3.87	5.12	5.07	5.05	5.06	4.95	4.79	4.17	3.64	3.08
12	4.29	3.87	3.90	5.10	5.06	5.07	5.03	4.93	4.76	4.14	3.60	3.01
13	4.25	3.82	3.96	5.05	5.01	5.09	5.02	4.93	4.72	4.08	3.57	2.97
14	4.24	3.84	4.10	5.00	5.03	5.12	5.06	4.97	4.67	4.08	3.51	2.92
15	4.23	3.82	4.16	5.02	5.04	5.11	5.04	5.07	4.62	4.07	3.47	2.88
16	4.17	3.82	4.20	5.01	5.04	5.01	5.03	5.11	4.80	4.10	3.43	2.86
17	4.17	3.81	4.21	5.00	5.07	5.01	5.03	5.12	4.78	4.08	3.42	2.81
18	4.13	3.80	4.26	4.97	5.04	5.02	5.05	5.10	4.77	4.07	3.38	2.80
19	4.10	3.77	4.31	4.97	5.05	5.05	5.00	5.11	4.75	4.09	3.38	2.79
20	4.07	3.77	4.32	4.99	5.06	5.06	5.05	5.10	4.71	4.10	3.34	2.75
21	4.02	3.77	4.34	5.03	5.11	5.11	5.07	5.06	4.68	4.07	3.28	2.69
22	4.01	3.76	4.37	5.03	5.17	5.10	5.08	5.03	4.66	4.05	3.29	2.72
23	3.97	3.77	4.39	5.12	5.07	5.08	5.14	5.07	4.63	4.07	3.24	2.66
24	3.95	3.82	4.43	5.21	5.03	5.07	5.12	5.07	4.52	4.07	3.25	2.62
25	3.90	3.85	4.47	5.24	5.02	5.10	5.05	5.09	4.58	4.00	3.22	2.61
26	3.90	3.88	4.53	5.33	5.00	5.12	5.04	5.09	4.54	3.98	3.17	2.55
27	3.86	3.89	4.58	5.36	5.01	5.02	5.06	5.08	4.50	3.96	3.14	2.47
28	3.82	3.89	4.63	5.40	4.97	5.03	5.04	5.09	4.47	3.93	3.10	2.46
29	3.83	3.89	4.67	5.40	-	5.00	5.00	5.03	4.42	3.91	3.11	2.42
30	3.84	3.88	4.70	5.39	-	5.05	5.00	5.02	4.38	3.89	3.18	2.40
31	3.79	-	4.73	5.36	-	5.02	-	5.00	-	3.85	3.30	-

Nottoway River near Rawlings, Va.

Location.--Lat 36°59'00", long. 77°48'00", on right bank at downstream side of bridge on State Highway 612, at Harpers Bridge, 2.6 miles northwest of Rawlings, Brunswick County.

Drainage area.--323 sq mi.

Records available.--October 1950 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 174 ft (by barometer).

Extremes.--Maximum discharge during year, 2,110 cfs May 22 (gage height, 6.67 ft); minimum, 1.6 cfs Sept. 17-19; minimum gage height, 1.93 ft Sept. 14-19.
1950-54: Maximum discharge, 6,020 cfs Nov. 21, 1952 (gage height, 12.14 ft), from rating curve extended above 1,500 cfs by logarithmic plotting; minimum, that of Sept. 17-19, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-29		Oct. 30 to Sept. 30			
2.4	25	1.9	1.0	3.0	156
2.6	40	2.1	7.0	3.5	344
2.7	55	2.2	13	4.0	574
		2.4	31	7.0	2,290
		2.7	74		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	121	67	101	272	449	288	190	197	36	53	6.7
2	32	82	67	93	253	1,280	276	180	173	36	30	5.5
3	29	67	69	93	241	1,310	237	170	156	32	44	4.3
4	27	62	69	93	230	790	208	245	146	49	52	3.7
5	27	59	112	93	215	569	204	237	130	53	41	4.0
6	27	66	137	95	201	404	208	190	118	48	34	3.7
7	28	80	173	91	187	336	212	166	110	34	29	3.1
8	27	82	187	89	187	300	201	156	107	31	22	2.8
9	27	74	*150	84	170	276	201	163	121	40	19	3.1
10	27	71	134	89	170	260	180	166	121	53	130	3.7
11	28	69	121	115	170	241	176	163	156	48	107	4.3
12	27	64	121	146	163	226	208	153	121	40	53	4.6
13	27	60	230	*124	150	219	190	140	104	31	31	*4.0
14	26	60	633	101	146	352	176	197	256	28	23	2.2
15	*26	60	1,230	163	*146	606	173	408	194	27	20	1.9
16	27	59	529	650	146	408	197	790	180	35	19	1.9
17	27	59	276	1,390	153	304	952	763	215	28	15	1.6
18	27	57	197	709	146	272	1,690	462	166	22	13	1.6
19	27	*57	150	348	140	253	1,230	448	134	24	10	1.6
20	27	59	146	288	137	284	444	639	110	40	15	3.4
21	27	64	146	495	301	300	340	1,650	95	*43	26	4.0
22	27	74	150	1,110	1,010	*256	292	2,050	84	53	16	5.5
23	27	78	150	1,570	682	230	256	790	*78	57	37	4.9
24	28	82	134	1,230	378	219	234	426	71	41	35	4.6
25	29	82	118	554	304	212	219	336	66	31	21	4.0
26	29	84	112	709	268	215	208	*284	60	24	*51	3.7
27	29	78	110	1,030	234	212	304	253	57	20	14	3.7
28	31	72	107	871	212	204	378	226	49	16	12	3.7
29	46	69	107	481	-	194	256	219	41	13	9.4	3.4
30	215	67	107	365	-	194	*208	284	39	10	8.2	3.4
31	212	-	107	312	-	241	-	241	-	11	7.0	-
Total	1,256	2,118	6,146	13,682	7,012	11,616	10,346	12,785	3,655	1,054	960.6	108.6
Mean	40.5	70.6	198	441	250	375	345	412	122	34.0	31.0	3.62
Cfsm	0.125	0.219	0.613	1.37	0.774	1.16	1.07	1.28	0.378	0.105	0.096	0.011
In.	0.14	0.24	0.71	1.58	0.81	1.34	1.19	1.48	0.42	0.12	0.11	0.01

Calendar year 1953: Max 2,420 Min 16 Mean 254 Cfsm 0.786 In. 10.67
Water year 1953-54: Max 2,050 Min 1.6 Mean 194 Cfsm 0.601 In. 8.15

Peak discharge (base, 2,500 cfs).--No peak above base.
* Discharge measurement made on this day.

Nottoway River near Stony Creek, Va.

Location.--Lat 36°54'00", long. 77°24'00", on left bank 15 ft downstream from bridge on U. S. Highway 301, 1.8 miles upstream from Island Swamp, 3.3 miles south of town of Stony Creek, Sussex County, and 4.4 miles upstream from Stony Creek.

Drainage area.--586 sq mi.

Records available.--March 1930 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 58 ft (by barometer). Prior to Oct. 11, 1934, chain gage at same site and datum.

Average discharge.--24 years, 542 cfs.

Extremes.--Maximum discharge during year, 6,270 cfs May 22 (gage height, 16.32 ft); minimum, 6.6 cfs Sept. 30 (gage height, 1.73 ft).
1930-54: Maximum discharge, 25,200 cfs Aug. 17, 1940 (gage height, 23.66 ft), from rating curve extended above 13,000 cfs by logarithmic plotting on basis of records for stations on Appomattox River; minimum, 5 cfs Sept. 2, 5, 1932 (gage height, 0.62 ft).

Remarks.--Records good.

Revisions (water years).--WSP 802: 1935(M). WSP 972: 1931(M), 1932, 1934-35, 1939.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 19 to July 1)

Oct. 1 to Jan. 23				Jan. 24 to June 16				June 17 to Sept. 30			
2.1	33	4.5	456	2.7	107	13.0	3,360	1.7	6.2	3.0	129
2.5	65	6.0	870	4.0	350	15.0	4,820	1.8	7.5	3.5	217
3.0	129	8.0	1,510	7.0	1,170	16.0	5,900	2.0	17	4.0	330
3.5	217	11.0	2,550					2.3	41	7.0	1,170
								2.5	62		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	200	75	113	434	458	930	259	294	60	21	20
2	50	122	74	106	386	1,410	724	229	227	59	27	24
3	49	87	74	101	362	1,950	508	210	193	58	44	17
4	48	73	76	100	338	1,650	410	235	174	52	45	14
5	52	67	79	103	316	1,140	362	338	158	52	41	16
6	43	72	106	101	284	752	374	284	142	67	46	20
7	42	74	148	103	274	570	362	231	131	58	39	16
8	39	86	173	99	249	495	350	482	125	53	39	14
9	42	90	*184	95	249	434	362	305	120	50	35	14
10	44	91	166	91	237	398	350	243	153	47	37	14
11	49	86	145	103	231	374	305	219	190	49	98	23
12	48	75	150	129	225	338	316	204	214	52	106	21
13	43	77	202	152	212	327	338	190	155	49	66	16
14	*46	75	724	137	199	804	294	259	284	50	44	14
15	46	68	1,410	152	200	1,510	274	752	446	41	39	*12
16	46	70	1,310	1,050	*208	1,020	263	1,240	1,530	45	26	10
17	44	70	508	1,780	212	620	812	1,240	900	49	26	9.8
18	48	70	290	1,650	212	495	1,990	1,050	318	53	35	9.8
19	38	70	206	668	202	434	2,160	990	251	39	25	12
20	42	70	167	430	193	446	1,080	1,650	198	*38	22	8.8
21	46	70	157	456	440	508	558	4,640	159	45	40	12
22	46	73	160	1,270	2,020	446	434	5,440	139	55	122	17
23	41	96	164	2,290	1,710	374	374	3,190	*123	87	48	17
24	47	100	159	2,190	870	338	327	1,110	111	74	35	12
25	48	103	142	1,270	570	316	294	620	101	51	*39	9.8
26	51	101	126	1,110	470	305	294	470	97	46	43	7.5
27	46	96	118	1,950	398	305	422	386	90	32	31	7.4
28	38	87	116	1,880	338	294	*508	327	79	39	30	7.0
29	57	83	114	1,050	-	284	446	294	73	34	26	6.8
30	56	77	114	671	-	274	305	294	70	24	19	7.1
31	176	-	114	520	-	495	-	398	-	22	22	-
Total	1,572	2,579	7,751	21,920	12,039	19,564	16,526	27,779	7,245	1,530	1,316	409.0
Mean	50.7	86.0	250	707	430	631	551	896	242	49.4	42.5	13.6
Cfsm	0.087	0.147	0.427	1.21	0.734	1.08	0.940	1.53	0.413	0.084	0.073	0.023
In.	0.10	0.16	0.49	1.40	0.76	1.24	1.05	1.76	0.46	0.10	0.08	0.03

Calendar year 1953: Max 3,600 Min 22 Mean 413 Cfsm 0.705 In. 9.57
Water year 1953-54: Max 5,440 Min 6.8 Mean 329 Cfsm 0.561 In. 7.63

Peak discharge (base, 3,500 cfs).--May 22(1 a.m.) 6,270 cfs (16.32 ft).
* Discharge measurement made on this day.

Stony Creek near Dinwiddie, Va.

Location.--Lat 37°04'00", long. 77°36'10", near center of span on upstream side of bridge on U. S. Highway 1, 1.2 miles southwest of Dinwiddie, Dinwiddie County, 1.7 miles downstream from Chamberlains Bed Creek, and 5.7 miles downstream from confluence of White Oak and Butterwood Creeks.

Drainage area.--111 sq mi.

Records available.--September 1946 to September 1954. Published as "at Dinwiddie" September 1946 to September 1947 and October 1949 to September 1950.

Gage.--Wire-weight gage and crest-stage indicator; gage read once daily. Altitude of gage is 131 ft (by barometer).

Average discharge.--8 years, 98.1 cfs.

Extremes.--Maximum discharge during year, 1,510 cfs May 21 (gage height, 9.08 ft); minimum observed, 0.1 cfs Sept. 14-30.
1946-54: Maximum discharge observed, 2,530 cfs Jan. 29, 1952 (gage height, 10.93 ft); minimum observed, that of Sept. 14-30, 1954.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct 1 to Dec. 8, May 22 to Sept. 30				Dec. 9 to May 21	
0.8	0.1	1.5	15	1.4	14
.9	.4	1.9	47	1.6	27
1.0	1.0	2.5	131	1.9	59
1.1	2.5	3.5	291	3.0	230
1.2	4.7	4.0	368	7.0	842
1.3	7.3	7.0	842	9.0	1,470

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	17	11	23	81	83	133	47	33	8.4	3.8	0.6
2	9.2	14	11	21	74	329	102	39	30	7.0	3.6	.5
3	7.0	13	11	21	70	350	77	37	27	6.8	5.5	.4
4	6.3	11	11	20	65	289	63	52	25	34	5.0	.2
5	6.0	9.9	13	21	60	165	60	73	21	19	4.0	.2
6	5.5	11	17	21	54	117	66	59	20	11	4.3	.2
7	5.5	13	20	20	52	93	60	46	19	9.9	4.0	.3
8	5.7	15	22	20	51	81	58	40	18	8.8	3.4	.2
9	5.7	15	26	19	48	76	53	37	17	13	2.7	.2
10	5.5	17	*25	19	46	72	48	36	17	12	2.7	.2
11	5.5	17	24	23	46	66	59	35	21	11	2.4	.3
12	5.2	15	26	26	42	62	69	32	39	11	2.4	.2
13	5.2	13	59	*29	39	59	66	32	34	8.4	7.0	*.2
14	5.2	13	329	19	39	117	55	44	46	7.0	5.5	.1
15	*4.5	12	357	27	*39	230	52	125	108	6.3	4.3	.1
16	4.5	11	245	385	40	157	53	149	176	8.8	2.4	.1
17	4.5	11	80	302	40	90	371	149	383	7.7	3.4	.1
18	4.3	11	59	173	38	77	230	141	116	7.3	2.5	.1
19	4.3	*10	46	94	38	70	141	157	54	7.0	2.2	.1
20	4.3	10	32	76	36	86	96	329	42	6.5	2.0	.1
21	4.5	11	32	275	94	94	72	1,160	30	*6.3	3.2	.1
22	4.5	12	33	399	441	*77	57	728	23	9.5	2.4	.1
23	4.5	16	34	580	315	65	54	368	*20	12	1.8	.1
24	4.5	16	30	399	157	59	52	154	17	11	1.9	.1
25	4.5	16	27	245	102	55	49	93	15	9.5	1.4	.1
26	4.7	15	26	315	84	58	102	*69	14	8.0	*1.2	.1
27	4.7	13	26	469	73	55	110	57	12	6.5	1.0	.1
28	5.2	13	24	343	65	53	90	48	11	5.7	.9	.1
29	7.3	11	24	181	-	53	70	45	9.9	5.0	.8	.1
30	9.5	11	24	125	-	51	*54	42	8.8	4.3	.8	.1
31	17	-	23	99	-	73	-	38	-	3.8	.8	-
Total	186.8	392.9	1,727	4,789	2,329	3,362	2,622	4,461	1,406.7	292.5	89.3	5.4
Mean	6.03	13.1	55.7	154	83.2	108	87.4	144	46.9	9.44	2.88	0.18
Cfsm	0.054	0.118	0.502	1.39	0.750	0.973	0.787	1.30	0.423	0.085	0.026	0.0016
In.	0.06	0.13	0.58	1.60	0.78	1.12	0.88	1.50	0.47	0.10	0.03	0.002

Calendar year 1953: Max 1,500 Min 0.7 Mean 94.1 Cfsm 0.848 In. 11.52
Water year 1953-54: Max 1,160 Min 0.1 Mean 59.4 Cfsm 0.535 In. 7.25

Peak discharge (base, 1,200 cfs).--May 21 (time unknown) 1,510 cfs (9.08 ft).
* Discharge measurement made on this day.

Anderson Branch at Sussex, Va.

Location.--Lat 36°55'10", long. 77°15'45", on right bank 20 ft downstream from bridge on State Highway 40, 1 mile east of Sussex, Sussex County, and 1.5 miles upstream from mouth.

Drainage area.--5.4 sq mi, approximately.

Records available.--October 1948 to September 1954.

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

Average discharge.--6 years, 3.84 cfs.

Extremes.--Maximum discharge during year, 100 cfs May 21 (gage height, 5.63 ft); no flow for many days.
1948-54: Maximum discharge, 126 cfs Sept. 12, 1950 (gage height, 6.12 ft); no flow for prolonged periods.

Remarks.--Records poor.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 17 to Mar. 30)

2.6	0	3.5	5.0
2.7	.1	3.8	11
2.9	.3	4.0	18
3.0	.5	4.5	42
3.1	1.0	5.0	67
3.2	1.6	5.2	77
3.3	2.4		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				a0	a4.0	14	20	4.1	1.6	0		
2				a0	a3.6	21	13	2.5	.8	0		
3				a0	a3.3	18	8.8	1.6	.4	0		
4				a0	a3.1	21	5.9	5.2	.3	0		
5				a0	a3.0	16	5.4	4.8	.2	0		
6				a0	a2.7	11	5.0	2.8	.1	0		
7				a0	a2.5	8.8	4.6	1.6	0	0		
8				a0	a2.4	7.4	4.2	9.0	0	0		
9				a0	a2.3	6.4	4.1	6.8	0	0		
10				a0	a2.2	5.9	2.9	4.1	0	0		
11				a0	a2.1	4.9	2.9	2.1	0	0		
12				a0	a2.0	4.2	4.6	1.2	0	0		
13				a0	a1.9	4.0	2.9	.7	0	0		
14				.1	a1.8	22	2.3	5.4	3.6	0		
15				.3	a1.6	26	2.0	22	1.8	0		
16				8.0	*a1.5	15	1.9	30	.5	0		
17				10	1.7	9.9	5.4	17	.3	0		
18				5.0	1.4	7.8	5.9	14	.2	0		
19				3.7	1.2	6.8	4.1	18	.1	0		
20				2.8	1.1	8.4	2.2	30	0	0		
21				4.5	19	7.4	1.6	77	0	0		
22				12	46	*5.2	1.2	34	0	8.4		
23				30	26	4.5	.9	17	0	4.1		
24				19	16	3.8	.6	9.7	0	.2		
25				14	12	3.6	.5	*6.4	0	0		
26				23	9.5	3.4	1.8	4.1	0	0		
27				24	7.2	2.7	36	2.8	0	0		
28				20	6.1	2.7	*26	2.0	0	0		
29				a15	-	2.7	12	2.0	0	0		
30				a9.0	-	2.9	6.8	13	0	0		
31				a6.0	-	16	-	4.1	-	0		
Total	0	0	0	206.4	187.2	293.4	195.5	355.0	9.9	12.7	0	0
Mean	0	0	0	6.66	6.69	9.46	6.52	11.5	0.33	0.41	0	0
Cfsm	0	0	0	1.23	1.24	1.75	1.21	2.13	0.061	0.076	0	0
In.	0	0	0	1.42	1.29	2.02	1.35	2.46	0.07	0.09	0	0

Calendar year 1953: Max 32 Min 0 Mean 2.63 Cfsm 0.487 In. 6.61
Water year 1953-54: Max 77 Min 0 Mean 3.45 Cfsm 0.639 In. 8.70

Peak discharge (base, 50 cfs).--Feb 22 (4 a.m.) 52 cfs (4.71 ft); May 21 (5 a.m.) 100 cfs (5.63 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Stony Creek near Dinwiddie.

Nottoway River near Sebrell, Va.

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

Drainage area.--1,451 sq mi.

Records available.--September 1941 to September 1954.

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

Average discharge.--13 years, 1,200 cfs.

Extremes.--Maximum discharge during year, 10,100 cfs May 25 (gage height, 18.70 ft); minimum, 18 cfs Sept. 25 (gage height, 3.17 ft).

1941-54: Maximum discharge, 25,000 cfs July 22, 1945 (gage height, 24.5 ft); minimum observed, 12 cfs Oct. 23, 1941 (gage height, 3.30 ft).

Flood in August 1940 reached a stage of 29.7 ft, from floodmarks (discharge, 48,000 cfs, from rating curve extended above 25,000 cfs by logarithmic plotting).

Revisions.--The maximum discharge for the water year 1944 has been revised to 6,410 cfs Mar. 11, 1944 (gage height, 16.7 ft, from graph based on gage readings), superseding figure published in WSP 1002.

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

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1942, 1944, 1948, and 1949, superseding figures published in WSP 952, 1002, 1112, and 1142, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1942		1944-Con.		1948-Con.	
Mar. 7	1,120	Apr. 17	5,580	Dec. 15	1,460
16	1,220			31	2,650
May 8	356	1947			
12	334	Nov. 6	1,460	1949	
13	268	7	1,600	Jan. 4	5,800
June 25	312	25	2,280	Feb. 3	2,700
28	142			Mar. 9	1,560
		1948		27	2,200
1943		Feb. 1	1,460	May 23	630
Dec. 29	818	Mar. 12	5,470	July 4	4,250
		Nov. 18	598	8	820
1944		28	2,200	Sept. 21	848
Jan. 9	1,470	29	2,610	23	604
Apr. 12	1,910	Dec. 1	3,800	26	630

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
March 1942	37,130	2,830	334	1,198	0.826	0.95
May	9,310	736	116	300	.207	.24
June	3,918	312	77	131	.090	.10
Water year 1941-42	142,895	2,960	16	391	.269	3.68
Calendar year 1942	215,961	2,960	73	592	.408	5.55
December 1943	6,931	845	124	224	.154	.18
Calendar year 1943	343,405	6,800	37	941	.649	8.79
January 1944	32,506	2,760	420	1,049	.723	.83
April	91,400	5,580	1,500	3,047	2.10	2.34
Water year 1943-44	383,176	6,280	48	1,047	.722	9.82
Calendar year 1944	460,679	6,280	51	1,259	.868	11.79
November 1947	54,920	3,560	356	1,831	1.26	1.41
Calendar year 1947	384,751	4,170	86	1,054	.726	9.86
February 1948	104,990	9,020	1,460	3,620	2.49	2.68
March	93,830	5,690	1,870	3,027	2.09	2.41
Water year 1947-48	548,448	9,020	107	1,498	1.03	14.04
November 1948	31,510	3,170	216	1,050	.724	.81
December	91,320	6,410	1,170	2,946	2.03	2.34
Calendar year 1948	582,272	9,020	107	1,591	1.10	14.91
January 1949	88,160	7,620	1,330	2,844	1.96	2.26
February	77,890	4,360	1,630	2,782	1.92	2.00
March	53,090	2,400	1,140	1,713	1.18	1.36
May	47,980	3,980	578	1,548	1.07	1.23
July	55,554	4,590	268	1,792	1.24	1.43
September	43,150	4,680	404	1,438	.991	1.11
Water year 1948-49	589,649	7,620	166	1,615	1.11	15.13
Calendar year 1949	534,894	7,620	191	1,465	1.01	13.72

Nottoway River near Sebrell, Va.--Continued

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 1		Nov. 2 to Sept. 30			
3.3	32	3.1	14	9.0	1,530
3.7	86	3.2	20	13.0	3,150
4.1	158	3.5	57	16.0	5,580
		4.0	126	19.0	10,700
		6.0	604		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	74	135	272	a940	1,740	1,460	1,670	1,190	a140	a60	a45
2	125	198	128	270	a900	1,850	2 010	a1,000	906	a140	a70	a40
3	106	188	124	263	a800	2,370	2,090	a600	708	a130	a100	a35
4	88	139	126	251	a740	2,830	1,740	a700	617	a130	a110	a32
5	78	112	131	244	a700	3,150	1,420	a800	539	a140	a100	a35
6	74	107	133	241	a650	3,380	1,250	a700	450	a150	a110	a37
7	74	103	135	236	a600	3,150	1,190	a540	390	a160	a100	a40
8	61	103	164	234	a560	2,490	1,120	a800	*a350	142	a95	a32
9	56	103	244	236	a560	1,930	1,060	a1,100	a300	133	a85	a32
10	50	118	299	236	a560	1,560	996	a800	a350	128	a100	a32
11	50	130	306	234	a540	1,320	936	a600	a450	a130	a150	a36
12	53	135	287	*248	a520	1,190	906	a500	a500	a140	a200	a45
13	*57	133	306	270	a500	1,060	906	a450	a350	a130	a250	a35
14	58	123	462	306	a480	1,250	906	a600	a600	a130	a150	*22
15	54	121	792	366	a500	2,050	848	a1,500	a1,000	a120	a100	24
16	52	118	a2,000	643	a520	2,740	792	a2,500	a2,000	a120	a70	24
17	53	*109	a1,500	a1,500	604	3,050	792	a2,800	a2,200	a130	a64	23
18	53	106	a1,200	a3,500	604	2,960	1,250	a2,600	a1,500	a140	a80	21
19	50	104	906	a2,500	591	2,410	2,130	a2,200	a700	a120	a60	20
20	53	103	656	a1,500	578	1,970	2,490	a3,500	a500	*a110	a50	20
21	49	103	552	a1,000	630	1,710	2,650	a5,000	a400	a120	a90	21
22	40	103	565	a2,000	1,420	1,600	2,130	a6,000	a350	a150	a200	22
23	49	115	474	a4,000	2,490	*1,460	1,290	a7,000	a300	a180	a250	20
24	52	133	438	a4,500	3,010	1,250	966	a8,000	a270	a200	*a120	19
25	48	146	414	a3,000	3,510	1,120	792	a9,000	a250	a150	100	18
26	43	154	366	a2,500	3,580	1,030	708	8,000	a220	a120	a120	21
27	49	166	330	a3,500	2,870	966	1,390	5,470	a200	a80	a90	21
28	53	166	306	a4,000	2,130	906	2,290	3,380	a180	a100	a70	20
29	61	158	292	a3,000	-	876	2,610	2,010	a170	a80	a60	19
30	52	146	282	a1,500	-	848	2,410	1,490	a150	a60	a50	22
31	52	-	277	a1,000	-	966	-	1,420	-	a56	a70	-
Total	1,937	3,817	14,330	43,550	32,087	57,182	43,528	82,730	18,090	3,959	3,324	833
Mean	62.5	127	462	1,405	1,146	1,845	1,451	2,669	603	128	107	27.8
Cfsm	0.043	0.088	0.318	0.968	0.790	1.27	1.00	1.84	0.416	0.088	0.074	0.019
In.	0.05	0.10	0.37	1.12	0.82	1.46	1.12	2.12	0.46	0.10	0.09	0.02

Calendar year 1953: Max 4,760 Min 33 Mean 917 Cfsm 0.632 In. 8.60
Water year 1953-54: Max 9,000 Min 18 Mean 837 Cfsm 0.577 In. 7.83

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Nottoway River near Stony Creek and Blackwater River near Franklin.

Blackwater River near Dendron, Va.

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

Drainage area.--285 sq mi.

Records available.--January 1942 to September 1954.

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

Average discharge.--12 years, 274 cfs.

Extremes.--Maximum discharge during year, 1,660 cfs May 23 (gage height, 5.66 ft); no flow for many days during October, August, and September.
1942-54: Maximum discharge, 4,710 cfs July 21, 1945 (gage height, 8.90 ft); no flow at times.
Flood of August 1940 reached a stage of 13.1 ft, from Corps of Engineers floodmarks (discharge, 10,000 cfs, from rating curve extended above 4,800 cfs by logarithmic plotting).

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 15-28)

0.8	0	1.5	12	2.9	107
.9	.3	1.9	24	3.5	273
1.0	1.8	2.1	30	4.0	500
1.1	3.2	2.5	51	5.0	1,150
1.3	7.3	2.7	71	6.0	1,960

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.7	28	84	693	644	242	290	340	9.1	0	
2	.4	.4	26	76	620	644	236	239	298	6.9	0	
3	.3	.3	23	70	536	674	239	254	270	a6.4	0	
4	.2	.3	22	66	450	778	227	280	236	a8.0	0	
5	.2	.3	25	60	398	778	221	258	212	a9.0	0	
6	.2	3.4	25	57	370	638	215	245	187	a10	0	
7	.2	3.4	26	53	340	590	218	221	157	a8.0	0	
8	.2	2.6	26	50	301	542	224	236	121	a7.0	.2	
9	.2	1.9	27	48	270	506	224	254	84	a5.0	.6	
10	.2	3.6	30	47	242	483	212	276	58	a4.0	.8	
11	.2	4.0	34	50	221	434	204	261	49	a3.0	.8	
12	.1	4.4	40	*55	201	384	209	308	38	a2.5	.6	
13	.1	4.8	63	53	184	340	198	336	34	a2.0	.3	
14	*0	5.0	154	51	173	384	190	336	45	a2.0	.2	
15	0	5.2	230	81	165	444	179	348	40	a2.0	0	
16	0	5.4	298	192	157	518	168	455	38	a2.5	0	
17	0	5.2	324	254	154	542	168	778	41	a2.5	0	
18	0	*5.0	284	328	147	500	162	940	42	a3.0	0	
19	0	4.6	233	370	141	466	157	764	47	a3.0	0	
20	0	4.4	176	324	136	483	154	771	65	a5.0	0	
21	0	4.0	149	304	181	500	157	1,080	152	*a9.0	0	
22	0	4.2	147	362	344	455	176	1,460	248	7.3	0	
23	0	8.8	149	596	560	403	209	1,660	242	6.2	0	
24	0	13	152	732	719	*340	218	1,540	190	4.8	0	
25	0	21	147	771	700	301	204	1,420	126	3.4	0	
26	0	27	141	712	626	276	179	*1,260	70	2.6	0	
27	0	30	129	680	620	261	179	1,080	41	1.6	0	
28	0	32	117	712	632	245	195	842	27	1.0	0	
29	.2	33	109	752	-	233	258	626	19	.4	0	
30	.8	31	103	745	-	224	324	466	13	.2	0	
31	1.0	-	95	726	-	233	-	366	-	.1	0	
Total	5.2	268.9	3,532	9,461	10,281	14,243	6,146	19,650	3,530	137.5	3.5	0
Mean	1.17	8.96	114	305	367	459	205	634	118	4.44	0.11	0
Cfsm	0.0006	0.031	0.400	1.07	1.29	1.61	0.719	2.22	0.414	0.016	0.0004	0
In.	0.0007	0.03	0.46	1.23	1.34	1.86	0.80	2.56	0.46	0.02	0.005	0

Calendar year 1953: Max 1,180 Min 0 Mean 176 Cfsm 0.618 In. 8.35
Water year 1953-54: Max 1,660 Min 0 Mean 184 Cfsm 0.646 In. 8.76

Peak discharge (base, 1,000 cfs).--May 23 (12:30 p.m.) 1,660 cfs (5.66 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Zuni and near Franklin.

Blackwater River at Zuni, Va.

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

Drainage area.--448 sq mi.

Records available.--January 1943 to September 1954.

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

Average discharge.--11 years, 411 cfs.

Extremes.--Maximum discharge observed during year, 2,320 cfs May 23 (gage height, 10.90 ft); no flow Sept. 28-30.
1943-54: Maximum discharge, 5,200 cfs July 25, 1945 (gage height, 15.05 ft); no flow Sept. 10-18, 1944, Sept. 28-30, 1954.
Flood in August 1940 reached a stage of 23.2 ft.

Remarks.--Records fair except those below 20 cfs, which are poor.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	0.0	2.0	17
.7	.04	2.5	32
.8	.26	3.0	50
.9	.71	5.0	149
1.0	1.2	6.0	244
1.2	3.4	6.5	350
1.6	8.6	8.0	900
1.7	10	11.0	2,380

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	4.6	72	163	1,030	900	515	244	740	32	2.7	0.3
2	15	3.9	72	156	985	900	660	280	515	29	2.3	.3
3	9.2	3.4	77	156	940	940	780	325	445	28	2.1	.3
4	6.6	3.4	77	143	860	985	820	325	350	35	2.1	.3
5	4.8	4.6	77	137	780	1,030	780	300	300	38	1.9	.3
6	3.9	6.4	77	132	700	1,120	410	280	280	38	1.6	.3
7	4.1	11	82	132	660	1,030	380	280	280	35	1.2	.2
8	3.9	14	*87	127	585	985	350	380	188	23	1.0	.1
9	3.4	24	82	122	515	940	380	445	156	15	.9	.1
10	3.2	23	77	127	445	900	380	585	143	12	.8	.1
11	3.0	26	77	127	410	820	325	445	132	11	.7	.2
12	3.0	28	107	*132	380	700	350	380	122	10	.6	.3
13	2.7	26	208	137	350	620	325	325	102	8.6	.5	.2
14	*2 5	24	208	143	300	700	300	480	82	7.5	.4	.2
15	2.5	23	325	179	280	1,030	280	515	77	7.2	.3	.2
16	2.3	20	380	300	*260	985	260	740	77	8.9	a.4	.1
17	2.1	20	410	515	244	940	244	820	72	10	a.4	*.1
18	1.2	*23	445	660	244	900	260	860	67	11	a.5	.1
19	1.2	23	445	700	231	860	280	1,030	64	12	a.6	.1
20	1.2	26	445	740	219	860	260	1,160	62	*9.7	a.8	.1
21	1.2	29	410	740	244	780	231	1,440	60	8.9	a1.0	.1
22	1.1	50	410	820	445	740	208	1,920	*77	10	1.2	.1
23	1.1	50	380	1,120	585	700	188	2,320	127	30	a.9	.1
24	1.1	82	350	1,210	700	*660	188	2,140	137	16	a.6	.1
25	1.1	87	325	1,300	860	620	179	*2,020	156	8.6	*a.5	.1
26	1.1	87	325	1,390	900	550	179	1,820	179	6.9	a.4	.1
27	1.0	82	445	1,390	940	480	280	1,620	137	5.8	a.3	.1
28	1.0	82	410	1,390	860	410	280	1,390	64	4.8	a.2	0
29	1.2	77	380	1,340	-	380	*260	1,260	46	4.6	.2	0
30	2.3	72	350	1,210	-	380	244	1,080	a40	4.1	.3	0
31	3.4	-	325	1,120	-	380	-	900	-	3.4	.3	-
Total	117.4	1,035.3	7,940	18,058	15,952	24,225	10,576	28,109	5,277	484.0	27.7	4.6
Mean	3.79	34.5	256	583	570	781	353	907	176	15.6	0.89	0.15
Cfsm	0.0085	0.077	0.571	1.30	1.27	1.74	0.788	2.02	0.393	0.035	0.002	0.00033
In.	0.01	0.09	0.66	1.50	1.32	2.01	0.88	2.33	0.44	0.04	0.002	0.0004

Calendar year 1953: Max 1,260 Min 0.5 Mean 259 Cfsm 0.578 In. 7.85
Water year 1953-54: Max 2,320 Min 0 Mean 306 Cfsm 0.683 In. 9.28

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations near Dendron and Franklin.

Blackwater River near Franklin, Va.

Location.--Lat 36°45'44", long. 76°53'55", on right bank 0.4 mile south of town of Burdette, 0.5 mile (revised) upstream from Black Creek, 3.3 miles downstream from Corrowaugh Swamp, and 6 miles north of Franklin, Southampton County.

Drainage area.--613 sq mi.

Records available.--August 1944 to September 1954.

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

Average discharge.--10 years, 575 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 2,940 cfs May 23 (gage height, 10.64 ft); minimum, 1.9 cfs Sept. 28 (gage height, 0.56 ft).
1944-54: Maximum discharge, 5,360 cfs July 25, 1945 (gage height, 13.4 ft, from graph based on gage readings); minimum, 0.4 cfs Sept. 10, 11, 1944 (gage height, 0.36 ft).

Remarks.--Records poor. Diversion above station by city of Norfolk for municipal supply some years.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	1.0	5.0	375
.7	4.2	6.0	565
.9	8.5	7.0	835
1.0	11	8.0	1,200
2.0	60	9.0	1,760
3.0	140	11.0	3,260
4.0	240		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a40	a 11	71	180	1,460	1,070	835	464	1,110	44	22	10
2	a24	a9.0	68	170	1,350	1,160	895	439	960	37	20	4.6
3	a17	a8.0	66	160	1,200	1,250	895	423	807	31	18	9.2
4	a14	a7.0	68	145	1,110	1,400	865	415	630	32	14	8.5
5	a13	a9.0	78	130	1,030	1,460	779	391	483	30	12	6.2
6	a12	a10	93	126	960	1,460	723	367	399	30	12	3.4
7	a 11	a13	103	116	865	1,460	669	351	328	29	11	2.7
8	10	a15	*101	108	807	1,350	630	504	276	33	10	2.7
9	9.0	a18	93	103	723	1,200	604	779	225	43	11	3.0
10	7.8	a20	89	100	695	1,070	591	895	185	119	9.8	3.5
11	6.9	a23	87	101	643	960	578	835	180	107	8.3	2.7
12	7.4	26	91	121	591	895	552	723	185	41	7.4	2.0
13	*8.0	27	150	135	539	835	515	578	145	26	6.2	3.5
14	5.8	18	294	130	493	995	493	552	112	26	5.4	*8.5
15	5.2	18	300	180	447	1,640	464	695	96	36	4.8	12
16	6.2	21	591	450	*423	1,700	431	925	145	70	4.2	12
17	5.8	*23	591	835	407	1,580	415	1,110	175	103	3.7	10
18	5.8	24	578	960	391	1,400	423	1,110	165	47	3.4	14
19	5.8	26	565	960	375	1,250	431	1,110	121	36	3.4	14
20	6.0	36	539	960	351	1,160	423	1,250	93	*32	3.5	18
21	5.8	36	515	960	391	1,070	399	1,880	77	28	3.5	24
22	4.0	33	483	1,070	835	995	351	2,700	*67	44	3.2	16
23	3.5	36	447	1,520	1,030	925	307	2,940	61	87	2.8	8.5
24	3.7	42	399	1,820	995	895	270	2,940	77	81	*2.5	3.7
25	5.2	81	336	1,950	1,030	835	246	2,700	126	48	2.0	2.7
26	8.0	108	282	2,020	1,110	779	252	2,380	170	34	2.0	3.5
27	15	110	246	2,090	1,110	723	314	2,160	175	26	2.8	3.0
28	23	97	225	2,090	1,110	669	447	1,880	135	22	2.2	2.5
29	23	83	215	2,020	-	617	*493	1,640	85	20	3.7	3.0
30	a20	74	205	1,820	-	591	483	1,520	58	19	7.1	a2.5
31	a15	-	195	1,640	-	669	-	1,350	-	20	12	-
Total	346.9	1,062.0	8,166	25,170	22,471	34,063	15,773	38,006	7,851	1,381	233.9	219.9
Mean	11.2	35.4	263	812	803	1,099	526	1,226	262	44.5	7.55	7.33

Adjusted for diversion by city of Norfolk

Mean	11.2	35.4	282	836	803	1,099	526	1,226	262	44.5	7.55	7.33
Cfsm	0.018	0.058	0.460	1.36	1.31	1.79	0.858	2.00	0.427	0.073	0.012	0.012
In.	0.02	0.06	0.53	1.57	1.36	2.06	0.96	2.31	0.48	0.08	0.01	0.01

	Observed			Adjusted			
Calendar year 1953:	Max 1,400	Min 2.0	Mean 315	Mean 326	Cfsm 0.532	In. 7.14	
Water year 1953-54:	Max 2,940	Min 2.0	Mean 424	Mean 428	Cfsm 0.698	In. 9.45	

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Zuni and near Dendron.

North Meherrin River near Lunenburg, Va.

Location.--Lat 36°59', long. 78°21', on right bank at downstream side of bridge on State Highway 40, 0.5 mile downstream from Tusekiah Creek, 4 miles upstream from Juniper Creek, and 5 miles northwest of Lunenburg, Lunenburg County.

Drainage area.--60 sq mi, approximately.

Records available.--August 1946 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 333.7 ft above mean sea level, levels by Corps of Engineers. Prior to July 5, 1951, wire-weight gage at same site and datum.

Average discharge.--8 years, 48.3 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs Apr. 16 (gage height, 15.13 ft); no flow Sept. 5-21.
1946-54: Maximum discharge, 3,340 cfs Oct. 31, 1949 (gage height, 18.25 ft, from graph based on gage readings), from rating curve extended above 1,600 cfs by logarithmic plotting; no flow Sept. 5-21, 1954.
Flood in August 1940 reached a stage of 48 ft, from information by local resident.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	0.0	1.8	25
.7	.1	2.2	51
.8	.3	3.0	129
.9	.6	4.0	271
1.0	1.3	6.0	624
1.2	3.8	9.0	1,160
1.5	12.		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	4.8	5.1	8.3	24	741	34	19	12	3.2	0.9	0.3
2	3.0	4.3	5.1	8.3	23	126	24	18	13	3.1	9	.2
3	2.8	4.3	5.1	8.6	22	148	22	17	12	3.1	2.5	.1
4	2.7	4.1	6.1	8.6	20	100	19	22	12	3.1	3.8	.1
5	3.0	4.1	12	8.6	18	54	26	17	11	3.2	2.8	0
6	3.1	4.3	10	8.6	18	42	24	16	10	4.1	3.1	0
7	3.1	5.9	*24	8.3	16	35	22	15	9.8	3.8	3.0	0
8	3.1	6.1	12	8.6	16	30	22	16	10	3.8	2.2	0
9	3.0	6.4	8.8	8.0	16	27	19	15	11	7.2	36	0
10	3.1	5.9	10	8.3	16	26	18	16	11	6.4	34	0
11	3.1	5.4	9.8	22	15	24	18	15	9.4	4.6	2.7	0
12	*3.0	5.1	17	16	14	22	18	14	8.6	4.1	1.4	0
13	2.8	5.1	36	16	13	22	17	14	7.8	3.5	1.1	0
14	2.8	5.1	342	11	14	187	17	25	10	3.1	1.0	0
15	3.0	5.1	40	98	*14	62	17	211	13	3.5	1.0	0
16	3.1	*5.1	20	606	14	38	1,110	202	9.4	4.6	.9	0
17	3.1	4.8	15	75	17	32	804	54	8.8	4.6	.7	0
18	3.1	4.8	14	34	15	28	163	45	9.1	3.5	.5	0
19	3.1	4.8	11	26	14	27	78	95	8.3	*3.8	.6	0
20	3.2	5.1	11	25	14	63	53	283	6.9	5.4	.7	0
21	3.2	6.9	12	340	342	37	43	268	*5.9	5.4	.8	0
22	3.0	8.6	12	492	112	29	37	68	5.1	5.6	.6	.6
23	3.0	8.3	11	141	48	26	33	40	4.6	4.8	*.6	.5
24	3.2	9.8	9.8	69	36	24	30	28	4.6	3.8	.7	.5
25	3.2	7.5	10	123	30	24	28	22	4.1	3.1	.7	.4
26	3.2	6.4	9.8	296	26	24	63	19	3.8	2.8	.6	.4
27	3.5	5.6	9.4	194	22	22	*80	16	4.1	2.4	.4	.4
28	3.7	5.4	8.8	71	22	21	30	15	3.4	2.3	.5	.4
29	17	5.1	9.1	42	-	20	22	15	3.1	1.6	1.0	.4
30	15	5.1	9.1	33	-	20	21	14	3.2	1.2	.9	.4
31	6.7	-	8.8	28	-	22	-	12	-	1.1	.6	-
Total	124.9	169.3	723.8	2,842.2	971	2,103	2,912	1,646	245.0	115.8	107.2	4.7
Mean	4.03	5.64	23.3	91.7	34.7	67.8	97.1	53.1	8.17	3.74	3.46	0.16
Cfsm	0.067	0.094	0.388	1.53	0.578	1.13	1.62	0.885	0.136	0.062	0.058	0.0027
In.	0.08	0.10	0.45	1.76	0.60	1.30	1.81	1.02	0.15	0.07	0.07	0.003

Calendar year 1953: Max 1,040 Min 1.3 Mean 36.8 Cfsm 0.613 In. 8.32
Water year 1953-54: Max 1,110 Min 0 Mean 32.8 Cfsm 0.547 In. 7.41

Peak discharge (base, 850 cfs).--Dec. 14 (6:30 a.m.) 948 cfs (7.82 ft); Jan. 16 (5 a.m.) 1,410 cfs (10.26 ft); Jan. 21 (5 a.m.) 930 cfs (7.70 ft); Jan. 22 (2:30 p.m.) 1,090 cfs (8.56 ft); Feb. 21 (3 p.m.) 1,150 cfs (8.86 ft); Mar. 1 (11 a.m.) 2,040 cfs (13.23 ft); Apr. 16 (8 a.m.) 2,500 cfs (15.13 ft); Apr. 17 (6:30 a.m.) 1,530 cfs (10.88 ft).

* Discharge measurement made on this day.

Meherrin River near Lawrenceville, Va.

Location.--Lat 36°43'00", long. 77°49'55", on right bank 50 ft upstream from Gholson Bridge, 0.6 mile upstream from Allen Creek, and 3 miles southeast of Lawrenceville, Brunswick County.

Drainage area.--553 sq mi.

Records available.--December 1928 to September 1954.

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

Average discharge.--25 years (1929-54), 497 cfs.

Extremes.--Maximum discharge during year, 4,350 cfs Mar. 2 (gage height, 15.70 ft); minimum, 5.3 cfs Sept. 27; minimum gage height, 0.97 ft Sept. 20, 27.
1928-54: Maximum discharge, 38,000 cfs Aug. 17, 1940 (gage height, 42.0 ft, from floodmark), from rating curve extended above 13,000 cfs on basis of velocity-area studies and records for Nottoway River near Stony Creek; minimum, 5 cfs Sept. 23, 24, 1932 (gage height, 0.72 ft); minimum daily, 5 cfs Sept. 24, 1932.

Remarks.--Records good.

Revisions (water years).--WSP 972: 1932(M), 1935.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	5.0	2.5	143
1.0	6.5	3.5	322
1.1	9.0	5.0	669
1.2	13	7.0	1,200
1.3	19	11.0	2,560
1.5	32	15.0	4,080
1.9	68		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	110	72	104	343	1,100	466	183	180	52	24	16
2	52	75	72	102	312	4,040	524	176	153	50	25	15
3	51	79	69	102	292	1,560	364	163	133	49	52	15
4	45	75	71	99	272	1,610	302	218	129	52	46	15
5	38	67	91	108	252	925	262	234	120	51	44	13
6	36	68	96	96	234	596	262	187	115	45	34	13
7	42	74	*93	97	216	478	282	159	104	43	34	12
8	42	71	137	102	204	409	262	180	110	42	32	12
9	41	65	139	91	200	364	322	154	107	48	31	15
10	41	65	122	97	195	332	386	157	107	53	31	16
11	41	70	106	*112	188	312	282	154	130	53	103	13
12	*40	67	120	136	178	282	272	146	126	46	108	12
13	38	65	252	147	168	272	262	139	107	40	75	11
14	38	64	1,500	119	162	1,330	234	214	137	42	56	10
15	42	61	1,830	214	165	2,030	234	466	133	43	42	*8.0
16	41	*58	455	2,340	165	769	262	873	372	58	31	6.8
17	38	59	252	3,360	170	512	3,470	769	154	74	24	6.5
18	39	62	176	744	167	420	3,850	409	120	52	22	6.4
19	39	60	133	420	162	375	1,090	375	117	*50	20	6.2
20	36	57	146	322	156	386	608	512	104	53	26	5.9
21	38	65	146	866	516	478	444	2,480	89	57	25	6.2
22	40	78	140	2,330	2,330	398	375	1,550	92	80	28	7.0
23	38	78	140	3,850	925	*322	332	620	93	66	*86	6.5
24	42	87	133	1,490	501	302	292	*398	84	59	45	6.8
25	35	87	116	795	386	282	262	302	69	47	37	5.9
26	38	79	111	1,430	332	272	252	252	69	40	26	5.8
27	38	71	110	2,290	282	272	364	212	65	35	20	5.8
28	40	70	108	1,280	252	272	332	190	57	38	19	6.5
29	51	71	117	669	-	252	243	175	57	31	21	6.4
30	78	65	116	478	-	243	207	292	59	28	21	6.4
31	140	-	104	398	-	252	-	302	-	28	18	-
Total	1,410	2,123	7,273	24,788	9,725	21,447	17,099	12,641	3,492	1,505	1,206	291.1
Mean	45.5	70.8	235	800	347	692	570	408	116	48.5	38.9	9.70
Cfsm	0.082	0.128	0.425	1.45	0.627	1.25	1.03	0.738	0.210	0.088	0.070	0.018
In.	0.09	0.14	0.49	1.67	0.65	1.44	1.15	0.85	0.23	0.10	0.08	0.02

Calendar year 1953: Max 4,950 Min 21 Mean 394 Cfsm 0.712 In. 9.69
Water year 1953-54: Max 4,040 Min 5.8 Mean 282 Cfsm 0.510 In. 6.91

Peak discharge (base, 4,500 cfs).--No peak above base.
* Discharge measurement made on this day.

Meherrin River at Emporia, Va.

Location.--Lat 36°41'20", long. 77°32'20", on left bank at downstream side of bridge on U. S. Highway 301, in Emporia, Greensville County.

Drainage area.--749 sq mi.

Records available.--January 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 68 ft (by barometer).

Extremes.--Maximum discharge during year, 5,860 cfs May 21 (gage height, 17.63 ft); minimum, 11 cfs Oct. 13, Sept. 29 (gage height, 1.12 ft).
1951-54: Maximum discharge, 11,200 cfs Nov. 23, 1952 (gage height, 21.90 ft), from rating curve extended above 6,000 cfs by logarithmic plotting; minimum, that of Oct. 13, 1953, Sept. 29, 1954.
Flood in August 1940 reached a stage of 30.0 ft, from floodmarks.

Remarks.--Records good. Low and medium flow regulated by powerplant 0.8 mile above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 6, Aug. 3 to Sept. 30				Nov. 7 to Aug. 2			
1.1	10	2.4	103	1.3	18	12.0	2,180
1.4	28	3.0	200	1.5	29	14.0	3,080
2.0	66	4.0	400	2.0	62	16.0	4,360
				2.5	107	17.0	5,200
				3.0	200		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	23	111	28	544	782	582	358	565	150	36	23
2	18	26	22	138	494	3,360	746	28	250	152	481	22
3	20	26	20	132	516	3,660	558	352	154	37	225	22
4	20	23	257	141	454	1,830	420	346	311	37	78	22
5	147	125	28	151	424	1,590	524	346	36	36	27	22
6	114	348	25	120	386	1,020	406	335	34	136	34	22
7	18	194	362	126	318	724	469	347	265	36	23	22
8	20	24	*26	262	311	649	420	390	130	36	23	22
9	96	40	146	30	338	582	603	284	140	37	21	22
10	15	48	360	30	333	461	409	140	147	39	18	30
11	12	51	340	384	288	570	409	140	280	38	17	22
12	12	50	36	146	454	608	536	140	37	37	101	22
13	*20	147	220	172	175	409	420	264	130	37	200	24
14	38	24	1,240	177	68	780	409	465	248	37	22	20
15	110	23	2,440	422	393	2,800	383	802	250	38	21	21
16	141	143	1,230	1,710	310	1,630	524	1,080	963	138	124	*16
17	21	*112	527	4,760	*294	972	1,640	1,100	959	38	22	16
18	19	21	430	2,300	231	752	4,840	838	352	38	22	16
19	19	138	27	750	420	650	3,060	516	40	*148	22	15
20	20	146	44	552	186	530	1,160	901	40	39	22	15
21	21	20	395	861	486	524	687	4,830	*266	37	21	15
22	108	18	197	2,440	2,430	722	560	4,310	208	40	21	17
23	110	274	328	4,600	2,070	496	604	1,650	136	196	21	15
24	18	23	266	3,960	1,030	500	41	911	37	39	*21	15
25	21	144	30	1,520	702	402	566	524	264	39	22	15
26	22	18	28	1,480	550	468	374	460	39	38	23	14
27	22	310	198	2,800	420	409	513	531	37	37	23	13
28	23	22	236	2,580	420	409	*494	338	37	37	24	16
29	261	18	224	1,320	-	418	303	202	37	133	24	12
30	298	141	146	862	-	381	324	354	37	36	196	12
31	27	-	267	654	-	488	-	530	-	35	24	-
Total	1,832	2,720	10,206	35,608	15,045	29,576	22,984	23,812	6,429	1,951	1,959	560
Mean	59.1	90.7	329	1,149	537	954	766	768	214	62.9	63.2	18.7
Cfsm	0.079	0.121	0.439	1.53	0.717	1.27	1.02	1.03	0.286	0.084	0.084	0.025
In.	0.09	0.14	0.51	1.76	0.75	1.46	1.14	1.19	0.32	0.10	0.10	0.03

Calendar year 1953: Max 7,290 Min 12 Mean 528 Cfsm 0.705 In. 9.57
Water year 1953-54: Max 4,840 Min 12 Mean 418 Cfsm 0.558 In. 7.59

Peak discharge (base, 6,000 cfs).--No peak above base.
* Discharge measurement made on this day.

Fontaine Creek near Brink, Va.

Location.--Lat 36°36'55", long. 77°42'00", on left bank 10 ft downstream from bridge on State Highway 603, 0.3 mile downstream from Quarrel Creek, 2.7 miles west of Brink, Greensville County, and 10 miles southwest of Emporia.

Drainage area.--68.6 sq mi.

Records available.--October 1953 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 150 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,320 cfs Apr. 27 (gage height, 12.49 ft); no flow at times during year.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 26				Apr. 27 to Sept. 30			
2.3	0	2.9	5.0	2.3	0	3.5	27
2.4	.02	3.0	7.0	2.4	.05	4.0	52
2.5	.3	3.2	13	2.5	.6	4.5	77
2.6	.8	3.5	27	2.6	1.7	5.0	116
2.7	1.8			2.8	4.5	6.0	217
				3.0	8.5	9.0	590
Note.--Same as following table above 3.5 ft.				3.2	14	12.5	1,320

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.6	3.5	11	68	109	92	56	27	1.8	0.4	0.6
2	.3	1.0	3.3	10	64	168	71	42	19	1.7	.4	.6
3	.2	1.1	3.0	9.7	60	138	56	36	15	1.5	4.5	2.0
4	0	1.2	3.2	9.4	58	152	48	74	12	1.3	5.5	1.5
5	0	1.3	4.7	9.4	54	107	40	59	10	1.4	3.4	.8
6	0	1.8	6.2	9.4	49	77	39	42	9.0	1.5	2.7	.3
7	0	2.0	*11	9.4	44	66	38	32	8.1	1.2	1.8	.2
8	0	3.2	17	8.5	40	58	38	107	7.3	.9	1.4	0
9	0	3.8	15	8.5	40	54	43	74	6.9	.8	.9	0
10	0	4.2	12	8.5	37	50	37	52	21	.9	.6	0
11	0	4.3	24	*13	36	46	43	38	19	1.2	.4	0
12	*0	4.5	30	26	33	44	68	32	9.2	1.0	.3	0
13	0	4.2	94	22	29	42	50	26	8.1	.7	1.0	0
14	0	3.3	305	16	28	308	38	136	94	.5	6.9	0
15	0	2.8	269	74	*28	359	34	323	33	.6	8.1	0
16	.1	*2.6	130	510	28	184	32	222	61	1.3	3.6	0
17	.1	2.4	53	497	30	86	144	116	24	2.5	4.2	0
18	.1	2.2	33	228	29	71	162	67	19	2.0	4.2	0
19	.2	2.1	24	86	26	66	90	66	13	*1.4	2.5	0
20	.2	2.1	20	64	24	72	56	152	10	.9	1.5	0
21	.2	2.2	18	133	215	70	43	980	*7.7	.7	.8	0
22	.3	2.6	18	311	523	*56	36	484	6.3	11	.4	0
23	.4	3.6	17	666	217	48	32	173	5.5	17	*.2	0
24	.4	7.3	15	458	98	46	28	*77	4.7	9.8	.2	0
25	.4	8.8	12	228	74	46	29	58	4.2	4.9	.1	0
26	.4	7.3	12	281	64	44	74	44	3.6	3.0	0	0
27	.4	6.2	11	510	56	40	*1,210	36	3.2	2.1	.1	0
28	.4	5.2	11	458	48	44	*664	30	2.7	1.5	.2	0
29	.4	4.3	11	234	-	47	*157	30	2.4	1.2	2.6	0
30	.4	3.6	12	116	-	42	77	46	2.2	.8	1.5	0
31	.5	-	12	80	-	45	-	43	-	.6	.9	-
Total	5.9	101.8	1,209.9	5,104.8	2,100	2,785	3,569	3,753	468.1	77.7	61.3	6.0
Mean	0.19	3.39	39.0	165	75.0	89.8	119	121	15.6	2.51	1.98	0.20
Cfsm	0.0028	0.049	0.569	2.41	1.09	1.31	1.73	1.76	0.227	0.037	0.029	0.0029
In.	0.003	0.05	0.66	2.78	1.14	1.51	1.93	2.03	0.25	0.04	0.03	0.003

Calendar year 1953: Max - Min - Mean - Cfsm - In. -
Water year 1953-54: Max 1,210 Min 0 Mean 52.7 Cfsm 0.768 In. 10.43

Peak discharge (base, 1,000 cfs).--Apr. 27 (12:30 p.m.) 1,320 cfs (12.49 ft); May 21 (9 a.m.) 1,100 cfs (11.70 ft).

* Discharge measurement made or observation of no flow made on this day.

Ahoskie Creek at Ahoskie, N. C.

Location.--Lat 36°17', long. 77°00', on right bank 10 ft downstream from bridge on State Highway 350, half a mile upstream from Atlantic Coast Line Railroad bridge, and three-quarters of a mile southwest of Ahoskie, Hertford County.
Drainage area.--64.3 sq mi.
Records available.--January 1950 to September 1954.
Gage.--Water-stage recorder. Altitude of gage is 22 ft (by barometer). Prior to May 24, 1951, staff gage at same site and datum.
Extremes.--Maximum discharge during year, 1,100 cfs Jan. 24 (gage height, 7.89 ft); no flow for many days during several months.
1950-54: Maximum discharge, that of Jan. 24, 1954; no flow at times during each year.
Flood in August 1940 reached a stage of 11.1 ft, from floodmark witnessed by local resident (discharge not determined).
Remarks.--Records poor.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 23 to Dec. 16, July 1-13, Sept. 23-30)

3.6	0	4.8	20
3.7	.1	5.1	40
3.8	.7	5.5	90
3.9	1.7	5.9	190
4.0	2.9	6.3	315
4.2	5.7	7.0	620
4.5	11	8.0	1,170

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	0	*2.1	37	*178	92	*155	7.4	25	*0	0	1.0
2	1.8	0	1.9	36	145	*98	226	6.2	17	0	*.1	.5
3	1.4	*0	1.9	35	118	122	256	4.8	12	0	.8	.3
4	1.3	0	2.2	33	98	145	247	*3.8	8.7	0	.1	.1
5	1.2	.2	5.1	31	84	155	202	3.4	6.0	0	0	.1
6	1.1	4.9	4.6	*30	74	155	158	2.8	3.9	0	0	0
7	*.9	5.4	4.4	28	67	145	122	1.9	2.7	0	0	0
8	.9	2.2	3.9	26	61	125	96	14	1.7	0	0	0
9	.7	1.6	3.6	24	55	100	96	9.4	1.1	0	0	0
10	.6	1.6	5.7	22	49	82	84	7.6	*.8	0	0	0
11	.5	1.6	6.7	28	44	69	78	6.6	.7	0	0	.1
12	.4	1.6	8.0	41	39	59	76	6.0	.6	0	0	0
13	.3	1.6	16	38	34	52	75	7.6	.3	0	0	0
14	.2	1.6	82	44	32	59	74	28	.3	*0	0	0
15	.2	1.6	*92	101	30	63	69	44	.3	0	0	*0
16	.2	1.6	152	334	28	63	63	56	.3	0	0	0
17	.2	1.4	175	586	27	70	67	69	.3	0	*0	0
18	.2	*1.4	178	755	24	86	73	78	.3	0	0	0
19	.1	1.4	145	655	22	90	75	82	.2	0	0	.1
20	.1	1.6	110	450	20	87	69	108	.2	0	0	.1
21	.1	1.6	90	336	33	78	59	181	.2	0	.1	.2
22	.1	1.7	75	398	53	68	50	211	.2	.4	.1	.1
23	.1	4.5	64	779	52	59	40	336	.2	.1	0	0
24	.1	5.9	55	1,060	69	55	33	362	.2	0	0	0
25	0	3.9	47	*1,010	100	51	28	265	.1	0	0	0
26	0	3.7	47	*700	120	49	22	178	.1	0	.1	0
27	0	3.0	41	*530	110	47	17	112	.1	0	.2	.1
28	0	2.4	37	418	90	51	13	76	0	0	.1	.1
29	0	2.2	36	336	-	53	10	58	0	0	6.5	.1
30	0	2.1	39	271	-	70	8.8	48	0	0	4.6	*.1
31	0	-	38	223	-	94	-	36	-	0	*3.2	-
Total	15.0	62.3	1,569.1	9,395	1,856	2,592	2,641.8	2,409.5	83.5	0.5	15.9	3.0
Mean	0.48	2.08	50.6	303	66.3	83.6	88.1	77.7	2.78	0.02	0.51	0.10
Cfsm	0.0075	0.032	0.787	4.71	1.03	1.30	1.37	1.21	0.043	0.00031	0.0079	0.0016
In.	0.009	0.04	0.91	5.43	1.07	1.50	1.53	1.39	0.05	0.0003	0.009	0.002

Calendar year 1953: Max 356 Min 0 Mean 41.1 Cfsm 0.639 In. 8.67
Water year 1953-54: Max 1,060 Min 0 Mean 56.6 Cfsm 0.880 In. 11.94

* Discharge measurement or observation of no flow made on this day.

ROANOKE RIVER BASIN

Big Springs at Elliston, Va.

Location.--Lat 37°13', long. 80°14', a quarter of a mile upstream from South Fork Roanoke River, and 0.3 mile south of Elliston, Montgomery County.
Records available.--June 1928, August 1947, December 1949 to September 1954 (discharge measurements only).
Extremes.--Maximum discharge measured during year, 5.11 cfs Mar. 1; minimum measured, 3.23 cfs Sept. 28.
1928, 1947, 1949-54: Maximum discharge measured, 6.51 cfs May 3, 1950; minimum measured, 3.08 cfs Oct. 22, 1952.
Remarks.--Discharge measurements made at bridge where U. S. Highway 11 crosses spring.

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

Oct. 1	3.37	Feb. 3	4.22	June 29	3.69
30	3.65	Mar. 1	5.11	Aug. 4	3.47
Dec. 2	3.27	Apr. 1	4.08	Sept. 28	3.23
30	3.68	29	3.87		

384324 O - 56 - 6

Roanoke River at Lafayette, Va.

Location (revised).--Lat 37°14'10", long. 80°12'30", on right bank at Lafayette, Montgomery County, 0.4 mile downstream from confluence of North and South Forks and 1.1 miles upstream from Cove Hollow.
Drainage area.--257 sq mi.
Records available.--September 1943 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 1,174.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 30, 1949, staff gage at same site and datum.
Average discharge.--11 years, 257 cfs (revised).
Extremes.--Maximum discharge during year, 3,250 cfs Mar. 1 (gage height, 6.05 ft); minimum daily, 24 cfs Sept. 16-19.
1943-54: Maximum discharge, 13,200 cfs (revised) Aug. 4, 1948 (gage height, 11.0 ft, from graph based on gage readings); minimum daily, that of Sept. 16-19, 1954.
Flood in August 1940 reached a stage of 12.2 ft, from information by local residents (discharge, 19,000 cfs, from rating curve extended above 12,000 cfs by logarithmic plotting).
Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)‡
1032	1944	Feb. 18, 1944†	6,500	7.5
1032	1945	Sept.18, 1945	10,400	10.0
1052	1946	Feb. 10, 1946	7,200	8.0
1082	1947	Jan. 20, 1947	7,200	8.0
1112	1948	Aug. 4, 1948	13,200	11.0
1142	1949	Dec. 4, 1948	11,500	10.5

† Revised.
‡ From graph based on gage readings.

Remarks.--Records good except those for periods of doubtful gage-height record, which are fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1948 and 1949, superseding those published in WSP 1112 and 1142, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1948		1948-Con.		1949-Con.	
Feb. 13	2,500	Dec. 3	1,620	Apr. 13	3,040
14	5,600	4	5,760	14	2,340
15	2,340	5	1,580	15	1,480
Mar. 23	2,110	15	2,180	May 1	2,670
27	1,190	16	1,380	2	1,280
Apr. 7	3,370	17	1,010	June 29	1,690
8	2,340	30	3,040	30	1,660
9	1,340	31	1,220	July 14	1,660
Aug. 4	6,350			16	1,970
5	3,520	1949		17	1,900
Nov. 28	2,260	Jan. 6	1,900	Aug. 28	656
29	2,340	Mar. 23	2,340	29	1,790

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
February 1948	19,810	5,600	123	683	2.66	2.87
March	17,631	2,110	217	569	2.21	2.55
April	18,663	3,370	229	622	2.42	2.70
August	17,092	6,350	109	551	2.14	2.47
Water year 1947-48	132,992	6,350	64	363	1.41	19.26
November	9,978	2,340	75	333	1.30	1.45
December	28,305	5,760	246	913	3.55	4.09
Calendar year 1948	146,494	6,350	75	400	1.56	21.20
January 1949	17,620	1,900	259	568	2.21	2.55
March	11,947	2,340	171	385	1.50	1.73
April	18,242	3,040	246	608	2.37	2.64
May	15,394	2,670	120	497	1.93	2.22
June	8,947	1,690	89	298	1.16	1.29
July	18,297	1,970	200	590	2.30	2.65
August	9,008	1,790	140	291	1.13	1.30
Water year 1948-49	161,300	5,760	75	442	1.72	23.33
Calendar year 1949	139,356	3,040	80	382	1.49	20.16

Roanoke River at Lafayette, Va.--Continued

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 1				Mar. 2 to Sept. 30			
0.9	28	2.0	460	0.8	17	1.5	192
1.0	45	3.0	980	.9	26	2.0	430
1.2	94	4.0	1,620	1.0	40	3.0	980
1.4	167	5.0	2,340	1.2	88		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*33	42	42	54	155	*1,770	*177	106	a100	49	a36	34
2	33	42	*40	54	131	750	188	103	a90	47	a36	33
3	31	40	40	54	127	500	173	112	a85	47	a36	30
4	31	40	43	56	a120	375	165	169	a80	49	*a37	a28
5	31	40	52	54	a110	285	154	132	a80	49	37	a28
6	33	42	49	54	a110	226	147	118	a75	42	83	a27
7	33	42	60	52	a105	210	244	112	a75	40	60	a27
8	33	42	58	47	a100	a200	262	112	a75	49	44	a26
9	35	42	54	54	a100	a190	222	103	a100	55	39	a26
10	35	42	135	58	a95	a170	188	100	a120	47	36	a26
11	35	42	80	159	a95	a160	177	91	a95	42	33	26
12	35	42	86	124	a90	a160	165	83	a80	40	32	26
13	35	42	163	67	a90	a160	147	80	a70	37	32	26
14	35	42	265	83	a90	a160	140	122	a90	36	30	25
15	35	42	185	89	a90	a160	132	320	a100	34	30	a25
16	35	42	117	622	a95	a160	158	320	a110	34	29	a24
17	35	42	89	370	97	a160	201	248	a120	36	29	a24
18	35	42	65	212	94	a160	205	244	a130	33	30	a24
19	35	42	60	172	83	a170	173	480	a110	155	33	a24
20	35	43	70	135	83	350	147	370	a100	94	33	49
21	33	45	70	176	415	276	140	290	a90	195	33	60
22	33	49	70	1,190	410	222	136	226	a80	118	33	36
23	33	63	67	798	290	201	125	184	a75	a100	34	32
24	35	56	56	440	226	173	129	158	a70	a80	40	26
25	35	52	47	330	180	150	122	a150	a65	a65	115	a26
26	36	49	58	440	163	165	118	a140	a60	a55	58	26
27	36	47	58	450	147	a150	132	a130	a60	a50	49	25
28	56	43	56	355	139	a150	118	a120	a55	a45	85	*29
29	67	43	56	260	-	a150	*115	a120	*a55	a40	60	33
30	*52	42	*58	212	-	147	112	a120	51	a37	47	32
31	45	-	58	167	-	158	-	a110	-	a37	39	-
Total	1,139	1,324	2,407	7,388	4,030	8,418	4,812	5,273	2,546	1,837	1,348	883
Mean	36.7	44.1	77.6	238	144	272	160	170	84.9	59.3	43.5	29.4
Cfsm	0.143	0.172	0.302	0.926	0.560	1.06	0.623	0.661	0.330	0.231	0.169	0.114
In.	0.16	0.19	0.35	1.07	0.58	1.22	0.70	0.76	0.37	0.27	0.19	0.13

Calendar year 1953: Max 3,860 Min 31 Mean 197 Cfsm 0.767 In. 10.45
Water year 1953-54: Max 1,770 Min 24 Mean 113 Cfsm 0.440 In. 5.99

Peak discharge (base, 4,500 cfs).--No peak above base.
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of records for Roanoke River at Roanoke.

Roanoke River at Roanoke, Va.

Location.--Lat 37°15'30", long. 79°56'20", on left bank 50 ft downstream from Walnut Street Bridge in Roanoke, Roanoke County, 3.2 miles upstream from Tinker Creek, and at mile 360.6.

Drainage area.--388 sq mi.

Records available.--July 1896 to September 1954.

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

Average discharge.--56 years (1896-1905, 1907-54), 392 cfs.

Extremes.--Maximum discharge during year, 4,770 cfs Mar. 1 (gage height, 6.69 ft); minimum, 37 cfs Sept. 18, 19 (gage height, 0.38 ft); minimum daily discharge, 37 cfs Sept. 18.

1896-1954: Maximum discharge, 28,000 cfs Aug. 14, 1940 (gage height, 18.25 ft), from rating curve extended above 15,000 cfs by logarithmic plotting on basis of slope-area determination by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; practically no flow Dec. 23, 1909, when flow was retarded by freezing (gage height, 0.0 ft); minimum daily, 27 cfs Feb. 20, 1934.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Diurnal fluctuation at low flow caused by powerplant above station.

Revisions (water years).--WSP 972: 1928, 1930, 1933, 1935, 1936-39(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.3	32	2.0	585
.6	53	3.0	1,300
.8	92	4.0	2,150
1.0	147	6.0	4,070
1.5	323		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*60	63	*63	70	244	3,770	251	169	144	65	49	48
2	58	60	63	65	*217	1,660	262	159	130	62	58	48
3	56	56	63	67	200	*888	259	166	121	62	*53	46
4	56	55	72	67	188	664	246	200	115	63	52	45
5	55	53	77	65	175	537	237	197	110	62	62	44
6	53	53	88	65	162	449	230	169	102	60	81	43
7	53	55	97	65	153	394	262	166	92	58	100	42
8	53	53	95	63	141	346	346	162	85	58	67	41
9	53	56	105	60	130	294	337	156	120	63	56	40
10	53	56	162	76	130	274	310	150	172	65	50	40
11	60	56	169	169	124	270	289	141	127	60	48	40
12	60	56	162	207	118	277	274	132	105	55	47	40
13	58	56	227	124	108	266	248	127	90	52	44	41
14	58	56	337	113	102	289	227	181	147	50	44	41
15	55	56	302	141	105	310	217	460	156	53	44	40
16	55	58	197	678	105	270	230	525	113	60	45	39
17	53	58	156	585	105	255	251	398	178	52	43	39
18	53	58	118	355	118	255	281	360	204	53	42	37
19	55	58	85	255	113	298	251	645	194	169	43	38
20	55	60	108	213	113	514	227	567	166	204	44	58
21	53	62	100	213	758	a430	210	454	141	194	50	76
22	53	77	100	a1,500	724	a380	200	346	118	224	64	62
23	53	83	100	a1,200	514	a340	194	285	100	153	51	48
24	52	88	88	a800	364	a310	194	248	90	118	50	43
25	53	85	72	a500	302	a290	217	224	81	92	106	42
26	53	77	70	a600	289	a270	210	204	77	81	110	41
27	56	70	74	a700	230	a250	*230	184	72	68	77	42
28	68	67	72	a500	301	a240	217	172	67	65	81	*42
29	*112	65	*72	a400	-	a230	188	175	*63	60	100	41
30	92	65	70	a300	-	*230	178	184	67	53	70	40
31	68	-	70	289	-	244	-	162	-	52	56	-
Total	1,825	1,871	3,634	10,505	6,333	15,494	7,275	7,868	3,547	2,586	1,887	1,327
Mean	58.9	62.4	117	339	226	500	242	254	118	83.4	60.9	44.2
Cfsm	0.152	0.161	0.302	0.874	0.582	1.29	0.624	0.655	0.304	0.215	0.157	0.114
In.	0.18	0.18	0.35	1.01	0.61	1.49	0.70	0.76	0.34	0.25	0.18	0.13

Calendar year 1953: Max 5,290 Min 51 Mean 293 Cfsm 0.755 In. 10.24
Water year 1953-54: Max 3,770 Min 37 Mean 176 Cfsm 0.454 In. 6.18

Peak discharge (base, 4,000 cfs).--Mar. 1 (12 m.) 4,770 cfs (6.69 ft).
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of records for stations at Lafayette and Niagara.

Roanoke River at Niagara, Va.

Location.--Lat 37°15'18", long. 79°52'18", on right bank 200 ft downstream from powerplant of Appalachian Electric Power Co. at Niagara, Roanoke County, 2 miles downstream from Tinker Creek, 2.1 miles southeast of Vinton, and at mile 355.3.

Drainage area.--511 sq mi.

Records available.--July 1926 to September 1954.

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

Average discharge.--28 years, 526 cfs.

Extremes.--Maximum discharge during year, 6,830 cfs Mar. 1 (gage height, 10.27 ft); minimum, 7 cfs Aug. 4 (gage height, 0.37 ft); minimum daily, 12 cfs Sept. 11, 18.
1926-54: Maximum discharge, 35,000 cfs Aug. 14, 1940 (gage height, 17.5 ft, from floodmark), from rating curve extended above 12,000 cfs by logarithmic plotting on basis of velocity-area study by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, that of Aug. 4, 1954; minimum daily, that of Sept. 11, 18, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated at dam and powerplant 200 ft above station.

Revisions (water years).--WSP 892: 1928(M), 1930(M), 1933(M), 1935-36(M), 1938(M).
WSP 972: 1927-28, 1929(M), 1930, 1933-38, 1940.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.4	8	2.5	360
.6	21	3.0	530
.9	45	4.0	920
1.3	91	5.0	1,470
1.4	105	7.0	3,120
1.6	139	9.0	5,220
2.0	221		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	235	201	a150	141	335	5,200	362	217	222	124	62	102
2	231	199	147	141	305	2,070	376	203	192	126	181	102
3	226	193	145	143	285	*1,140	357	226	178	74	136	78
4	223	186	168	148	266	900	338	261	180	68	108	20
5	228	182	158	152	427	690	323	252	122	100	*115	80
6	228	180	186	152	231	623	305	223	148	133	200	77
7	226	178	184	154	214	530	380	217	211	122	70	142
8	217	176	170	154	203	434	548	214	144	115	113	90
9	214	176	203	145	193	459	459	203	192	139	194	80
10	221	176	248	172	195	382	395	197	255	57	93	104
11	228	178	253	351	188	346	370	193	218	56	59	12
12	228	172	315	354	182	346	351	180	110	144	92	30
13	217	168	338	a250	172	320	320	174	141	111	116	126
14	217	168	548	a170	166	366	293	138	218	76	45	75
15	214	168	459	a400	174	346	282	482	327	96	48	84
16	221	166	288	a1,000	172	330	308	604	179	136	136	80
17	a220	164	228	a800	182	296	323	494	299	62	56	89
18	a210	164	191	a600	186	294	351	486	292	42	106	12
19	a200	a160	152	a400	176	320	312	737	180	329	68	32
20	a200	a160	176	299	186	554	288	686	220	307	128	170
21	a210	a160	174	302	1,050	661	268	567	262	252	62	116
22	a210	a170	172	1,430	985	522	255	442	210	320	153	146
23	a200	a190	166	1,660	720	471	240	382	168	222	166	73
24	a200	a200	154	776	530	459	245	319	154	78	108	136
25	a200	a180	137	642	442	386	261	297	167	134	198	15
26	a210	a170	130	760	373	373	263	268	98	188	92	48
27	a230	a160	139	800	326	348	282	242	98	105	90	111
28	a280	a160	143	661	329	317	268	244	198	128	134	114
29	a320	a160	*145	530	-	308	240	221	*118	106	155	84
30	a250	a150	147	442	-	329	226	235	91	136	210	92
31	212	-	145	382	-	341	-	212	-	59	84	-
Total	6,926	5,215	6,359	14,511	9,193	20,461	9,589	9,816	5,592	4,145	3,596	2,520
Mean	223	174	205	468	328	660	320	317	186	134	116	84.0
Cfsm	0.436	0.341	0.401	0.916	0.642	1.29	0.626	0.620	0.364	0.262	0.227	0.164
In.	0.50	0.38	0.46	1.06	0.67	1.49	0.70	0.71	0.41	0.30	0.26	0.18

Calendar year 1953: Max 7,780 Min 92 Mean 456 Cfsm 0.892 In. 12.12
Water year 1953-54: Max 5,200 Min 12 Mean 268 Cfsm 0.524 In. 7.12

Peak discharge (base, 2,000 cfs).--Jan. 22 (10 p.m.) 3,220 cfs (7.08 ft); Feb. 21 (11 a.m.) 2,150 cfs (5.88 ft); Mar. 1 (7 a.m.) 6,830 cfs (10.27 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Roanoke and near Toshes.

Blackwater River near Union Hall, Va.

Location.--Lat 37°02'35", long. 79°41'07", on left bank 100 ft upstream from highway bridge at Kemps Ford, 3 miles upstream from Gills Creek, and 3 miles north of Union Hall, Franklin County.

Drainage area.--208 sq mi.

Records available.--March 1925 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 693.13 ft above mean sea level. Prior to Nov. 22, 1929, chain gage at same site and datum.

Average discharge.--29 years, 231 cfs.

Extremes.--Maximum discharge during year, 2,890 cfs Mar. 1 (gage height, 6.57 ft); minimum, 24 cfs Sept. 19 (gage height, 1.51 ft).
~ 1925-54: Maximum discharge, 19,700 cfs Aug. 14, 1940 (gage height, 19.52 ft), from rating curve extended above 6,500 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 13 cfs Sept. 20, 1932 (gage height, 1.42 ft).

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

Revisions (water years).--WSP 892: 1930(M), 1933(M), 1938-39(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 16 to Apr. 3)

Oct. 1 to Mar. 1				Mar. 2 to Sept. 30			
1.6	46	3.0	560	1.5	22	2.5	317
1.7	60	4.0	1,090	1.8	78	3.0	560
2.0	128	5.0	1,710	2.0	128	4.0	1,090
2.5	317						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	64	69	90	a150	1,460	165	123	117	68	a43	44
2	49	62	69	90	*a140	*640	155	123	117	68	a60	40
3	46	62	67	90	134	388	146	131	114	64	a80	33
4	49	62	71	90	128	308	137	200	112	62	a60	31
5	47	62	76	90	128	255	134	165	106	62	a54	31
6	49	62	98	90	123	222	137	140	104	60	a50	29
7	50	62	137	87	120	203	140	131	101	58	a48	27
8	50	62	106	87	114	185	152	134	99	66	a46	26
9	52	64	94	87	117	178	146	131	128	70	a44	29
10	52	64	149	94	114	168	131	128	185	62	a40	35
11	56	64	131	158	112	161	137	123	215	60	a39	36
12	56	64	140	172	109	158	137	120	125	56	a37	31
13	54	64	281	192	106	152	128	117	112	53	a36	29
14	54	64	471	760	106	178	125	165	123	*53	a35	26
15	56	64	272	580	106	178	128	393	99	49	a35	26
16	56	64	182	640	109	152	203	299	*94	44	a34	26
17	56	64	146	294	117	146	322	219	374	40	a35	26
18	56	64	130	182	114	143	226	189	238	40	a36	26
19	54	64	130	155	109	158	175	234	185	58	a39	26
20	56	64	140	146	112	345	155	268	137	92	a42	51
21	57	67	143	152	829	251	143	247	117	102	a47	109
22	56	69	120	1,270	610	200	140	192	106	a90	a52	64
23	57	78	109	590	317	185	137	168	99	a80	*a48	42
24	57	104	106	299	247	175	137	155	92	a70	40	36
25	59	80	109	247	219	168	131	146	87	a64	107	35
26	59	71	123	308	192	168	137	140	85	a60	168	35
27	60	67	120	a280	175	161	*134	134	83	a56	77	*36
28	*131	67	*110	a250	165	155	128	131	76	a52	84	36
29	114	65	96	a210	-	155	120	128	72	a50	96	38
30	74	*67	94	a190	-	*152	120	131	70	a47	85	35
31	67	-	92	a170	-	158	-	125	-	a45	60	-
Total	1,838	2,001	4,181	8,140	5,122	7,706	4,506	5,230	3,772	1,901	1,757	1,094
Mean	59.3	66.7	135	263	183	249	150	169	126	61.3	56.7	36.5
Cfsm	0.285	0.321	0.649	1.26	0.880	1.20	0.721	0.812	0.606	0.295	0.273	0.175
In.	0.33	0.36	0.75	1.45	0.92	1.38	0.80	0.94	0.68	0.34	0.31	0.20

Calendar year 1953 : Max 3,050 Min 36 Mean 189 Cfsm 0.909 In. 12.33
Water year 1953-54 : Max 1,460 Min 26 Mean 129 Cfsm 0.620 In. 8.46

Peak discharge (base, 2,000 cfs).--Feb. 21 (5:30 p.m.) 2,180 cfs (5.59 ft); Mar. 1 (1 p.m.) 2,890 cfs (6.57 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Pigg River near Toshes and Goose Creek near Huddleston.

Roanoke River near Toshes, Va.

Location.--Lat 37°02'03", long. 79°31'18", on right bank 1¾ miles downstream from Witchers Creek, 3 miles upstream from Pigg River, 5 miles northwest of Toshes, Pittsylvania County, and at mile 313.1.

Drainage area.--1,020 sq mi.

Records available.--September 1925 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 588.99 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 14, 1929, staff gage at same site and datum.

Average discharge.--29 years, 1,014 cfs.

Extremes.--Maximum discharge during year, 11,300 cfs Mar. 1 (gage height, 10.88 ft); minimum, 55 cfs Sept. 14 (gage height, 0.80 ft).
1925-54: Maximum discharge, 70,000 cfs Aug. 15, 1940 (gage height, 27.36 ft, from floodmark), from rating curve extended above 31,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, that of Sept. 14, 1954.

Remarks.--Records good. Diurnal fluctuation at low flow caused by powerplant at Niagara.

Revisions (water years).--WSP 1032: 1933(M), 1938-39(M), 1940, 1944(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 1

1.1	153	4.0	2,330
1.3	236	6.0	4,360
1.6	399	8.0	6,980
2.0	685		

Mar. 2 to Sept. 30

0.8	55	1.2	190
.9	78	1.6	399

Note.--Same as preceding table above 1.6 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	236	232	260	700	5,870	685	432	393	186	182	152
2	173	227	236	255	648	4,780	655	419	399	208	107	161
3	169	223	227	255	595	2,330	648	425	351	199	272	156
4	165	219	241	255	558	1,700	618	715	339	218	227	137
5	169	219	274	255	535	1,330	595	595	334	129	165	94
6	169	219	317	255	678	1,060	580	500	255	173	241	64
7	173	219	507	250	479	970	602	548	290	218	265	104
8	173	219	369	241	439	872	700	465	334	238	190	177
9	173	223	322	246	439	782	782	439	295	312	148	125
10	181	227	514	250	425	745	685	425	439	227	*231	118
11	185	227	486	493	419	685	640	399	625	208	152	156
12	*185	227	493	648	399	640	625	393	419	125	133	91
13	193	227	970	445	381	610	595	375	279	181	129	*62
14	185	227	1,740	369	369	715	550	465	284	*186	133	107
15	189	227	1,210	445	*363	738	550	1,060	393	148	140	110
16	189	*227	708	2,200	363	640	798	1,250	*452	148	88	114
17	193	227	500	1,880	393	587	1,100	985	798	199	135	114
18	193	227	357	1,140	387	550	858	820	768	182	169	114
19	193	227	334	572	375	802	*715	1,020	618	140	140	84
20	197	227	339	820	375	1,250	632	1,410	412	500	137	94
21	202	241	363	640	1,910	1,210	580	1,210	419	535	255	290
22	202	250	351	4,050	2,700	1,020	542	940	425	500	182	222
23	202	290	322	4,350	1,530	865	514	768	345	486	274	208
24	206	339	300	2,060	1,100	798	514	670	284	339	260	137
25	206	284	255	1,290	910	745	493	572	255	231	190	177
26	206	270	270	1,410	790	708	521	550	250	177	499	100
27	214	246	284	1,740	700	678	514	486	255	274	270	73
28	432	241	306	1,410	632	632	521	445	148	199	199	140
29	412	236	279	1,060	-	602	465	452	286	190	300	148
30	300	232	270	902	-	602	445	458	182	177	279	114
31	255	-	270	798	-	655	-	439	-	173	326	-
Total	6,461	7,130	13,646	31,244	19,592	35,971	18,722	20,040	11,326	7,406	6,418	3,943
Mean	208	238	440	1,008	700	1,160	624	646	378	239	207	131
Cfsm	0.204	0.233	0.431	0.988	0.686	1.14	0.612	0.633	0.371	0.234	0.203	0.128
In.	0.24	0.26	0.50	1.14	0.71	1.31	0.68	0.73	0.41	0.27	0.23	0.14

Calendar year 1953: Max 11,900 Min 157 Mean 812 Cfsm 0.796 In. 10.84
Water year 1953-54: Max 5,870 Min 62 Mean 498 Cfsm 0.488 In. 6.62

Peak discharge (base, 7,500 cfs).--Mar. 1 (4 p.m.) 11,300 cfs (10.88 ft).
* Discharge measurement made on this day.

Pigg River near Toshes, Va.

Location.--Lat 36°59'01", long. 79°30'52", on right bank 0.5 mile downstream from Frying-pan Creek and 1.7 miles northwest of Toshes, Pittsylvania County.

Drainage area.--394 sq mi.

Records available.--August 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 602.55 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--24 years, 400 cfs.

Extremes.--Maximum discharge during year, 7,100 cfs Jan. 22 (gage height, 15.24 ft); minimum, 47 cfs Sept. 16 (gage height, 2.73 ft).
1930-54: Maximum discharge, 34,300 cfs Aug. 15, 1940 (gage height, 32.5 ft, from floodmark), from rating curve extended above 11,000 cfs by logarithmic plotting on basis of slope-area determination at gage height 25.8 ft, and records for other stations in Roanoke River basin; minimum, 22 cfs Aug. 31, 1932 (gage height, 2.32 ft).

Remarks.--Records good. Diurnal fluctuation at low flow caused by mill above station.

Revisions (water years).--WSP 972: 1931-32(M), 1933, 1934-35(M), 1936, 1937(M), 1938-40.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.7	45	5.0	582
2.9	65	7.0	1,450
3.5	170	11.0	3,760

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	118	142	164	259	2,040	312	213	188	118	93	86
2	85	120	133	156	249	1,130	285	201	183	116	196	77
3	80	120	131	182	242	502	254	249	177	114	287	76
4	78	118	137	160	234	399	234	442	174	107	131	66
5	80	120	150	160	237	330	234	269	166	109	109	63
6	83	120	172	160	220	298	227	225	156	109	109	63
7	83	118	*413	160	210	274	225	210	156	106	99	57
8	85	120	274	160	204	259	225	217	156	216	94	57
9	85	122	197	156	204	246	210	206	156	454	93	70
10	88	125	242	164	201	239	204	*222	168	188	*86	70
11	93	127	264	*385	197	229	208	201	295	140	88	70
12	94	127	234	371	192	222	206	194	199	122	74	59
13	*93	129	427	229	188	217	199	190	156	116	70	*57
14	91	127	1,040	215	188	330	197	287	194	*109	72	53
15	91	127	566	295	188	330	229	1,550	170	102	68	51
16	93	127	317	1,650	183	*267	926	759	179	109	70	53
17	94	129	256	796	213	244	1,100	427	1,600	99	70	55
18	93	127	250	413	206	234	599	358	616	102	70	54
19	88	127	240	314	192	281	385	385	371	120	76	54
20	93	127	260	282	188	1,200	306	427	254	140	80	121
21	99	139	217	304	486	566	272	517	213	360	101	168
22	101	139	215	3,510	890	385	252	399	188	581	93	125
23	96	146	204	2,910	371	317	239	295	177	208	102	85
24	101	166	181	686	306	290	244	274	164	154	104	77
25	99	148	170	486	262	272	427	267	154	133	98	72
26	101	134	190	502	249	272	371	234	146	125	228	70
27	109	131	199	471	229	254	317	225	140	122	146	72
28	190	133	185	399	227	242	256	215	131	116	148	70
29	254	127	194	330	-	239	229	215	125	107	185	70
30	162	116	172	298	-	234	217	213	122	101	110	66
31	131	-	172	274	-	249	-	199	-	98	102	-
Total	3,206	3,855	7,944	16,722	7,235	12,591	9,589	10,285	7,274	4,901	3,452	2,187
Mean	103	128	256	539	258	406	320	332	242	158	111	72.9
Cfsm	0.261	0.325	0.650	1.37	0.655	1.03	0.812	0.843	0.614	0.401	0.282	0.185
In.	0.30	0.36	0.75	1.58	0.68	1.19	0.91	0.97	0.68	0.46	0.33	0.21

Calendar year 1953 : Max 3,760 Min 71 Mean 288 Cfsm 0.731 In. 9.94
Water year 1953-54 : Max 3,510 Min 51 Mean 244 Cfsm 0.619 In. 8.42

Peak discharge (base, 4,000 cfs).--Jan. 22 (7 p.m.) 7,100 cfs (15.24 ft).
* Discharge measurement made on this day.

Goose Creek near Huddleston, Va.

Location.--Lat 37°10', long. 79°32', on left bank a quarter of a mile upstream from Haden Bridge, three-eighths of a mile upstream from Rockcastle Creek, and 4 miles upstream from Huddleston, Bedford County.

Drainage area.--187 sq mi.

Records available.--March 1925 to September 1927 (gage heights only), September 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 592.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Mar. 15, 1925, to Sept. 30, 1927, chain gage at site a quarter of a mile downstream at different datum.

Average discharge.--24 years (1930-54), 183 cfs.

Extremes.--Maximum discharge during year, 2,350 cfs Jan. 22 (gage height, 7.62 ft); minimum, 13 cfs Sept. 8 (gage height, 1.00 ft).
1930-54: Maximum discharge, 20,300 cfs Oct. 19, 1937 (gage height, 25.75 ft, from floodmarks), from rating curve extended above 6,400 cfs on basis of slope-area determination at gage height 24.1 ft; minimum, 3 cfs Aug. 31, 1932, Jan. 30, 1934.

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

Revisions (water years).--WSP 892: 1933, 1935(M), 1939. WSP 972: 1931-32(M), 1934(M), 1935-38, 1940, 1941(M). WSP 1082: 1940(P). WSP 1142: 1938-40(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22		Jan. 23 to Sept. 30	
1.3	46	1.1	22
1.5	82	1.3	45
3.0	500	1.5	79
5.0	1,180	3.0	500
		5.0	1,180

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	60	62	66	123	*910	a120	77	73	37	32	a65
2	46	59	62	68	*123	356	a110	75	71	42	50	a55
3	46	57	64	68	116	224	a100	108	70	40	91	a47
4	46	57	68	66	110	182	91	168	70	50	42	a40
5	46	57	87	66	108	158	98	96	66	48	41	a35
6	49	57	106	66	101	147	96	81	60	37	70	a31
7	49	57	167	64	96	136	116	79	60	35	48	a27
8	46	59	100	70	91	128	116	81	64	46	36	a23
9	51	57	103	68	96	123	106	77	64	50	*33	*a26
10	52	59	188	68	91	118	98	75	81	37	35	27
11	54	59	122	159	89	116	98	73	93	36	31	26
12	52	57	168	125	84	108	98	70	66	35	29	26
13	49	57	218	72	79	103	91	70	73	33	28	28
14	49	59	530	112	79	136	91	98	98	32	27	26
15	51	59	230	125	81	126	93	218	125	*29	29	26
16	52	59	153	575	81	110	133	160	62	67	29	26
17	51	60	120	258	96	103	185	120	*77	41	32	26
18	51	59	91	178	86	103	a160	108	75	32	27	24
19	51	59	112	148	79	118	a140	150	66	127	129	25
20	51	59	115	138	86	221	a120	252	60	103	150	74
21	51	66	108	146	376	188	a110	199	56	210	140	68
22	51	72	96	1,090	310	155	a100	144	52	96	78	37
23	52	94	87	455	202	147	a100	123	51	71	78	31
24	52	87	76	246	166	133	96	110	48	52	50	30
25	51	68	70	210	152	128	96	101	45	45	49	29
26	51	66	100	266	136	128	91	91	45	41	52	29
27	56	60	100	246	123	120	*86	86	44	40	a80	31
28	*140	60	*78	196	120	116	81	81	40	40	a120	30
29	115	59	74	163	-	113	79	79	38	38	a160	28
30	87	*60	74	150	-	*113	77	79	38	36	a110	25
31	62	-	70	136	-	110	-	71	-	35	a80	-
Total	1,756	1,858	3,799	5,864	3,480	5,177	3,176	3,400	1,931	1,661	1,986	1,021
Mean	56.6	61.9	123	189	124	167	106	110	64.4	53.6	64.1	34.0
Cfsm	0.303	0.331	0.658	1.01	0.663	0.893	0.567	0.588	0.344	0.287	0.343	0.182
In.	0.35	0.37	0.76	1.16	0.69	1.03	0.63	0.68	0.38	0.33	0.40	0.20

Calendar year 1953: Max 1,750 Min 32 Mean 148 Cfsm 0.791 In. 10.72
Water year 1953-54: Max 1,090 Min 23 Mean 96.2 Cfsm 0.514 In. 6.98

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 records for Blackwater River near Union Hall and Otter River near Bedford.

Roanoke River at Altavista, Va.

Location.--Lat 37°06'21", long. 79°17'38", on right bank 12 ft upstream from highway bridge, a quarter of a mile south of Altavista, Campbell County, half a mile downstream from Sycamore Creek, 3½ miles upstream from Otter River, and at mile 286.5.

Drainage area.--1,802 sq mi.

Records available.--August 1930 to September 1954.

Gage.--Water-stage recorder and telemark. Datum of gage is 503.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Feb. 22, 1951, at site on left bank 50 ft downstream at same datum.

Average discharge.--24 years, 1,941 cfs.

Extremes.--Maximum discharge during year, 19,300 cfs Jan. 22 (gage height, 19.04 ft); minimum, 166 cfs Sept. 15 (gage height, 2.08 ft).
1930-54: Maximum discharge, 105,000 cfs Aug. 15, 1940 (gage height, 40.08 ft, from floodmark), from rating curve extended above 41,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 94 cfs Jan. 31, 1934 (gage height, 1.66 ft).

Remarks.--Records good except those for period of no gage-height record, which are fair. Diurnal fluctuation at low flow caused by powerplant at Niagara, 69 miles above station. Records of water temperatures and sediment loads for water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 892: 1938(M). WSP 972: 1931-33.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 2				Mar. 3 to Sept. 30			
2.6	310	9.0	5,200	2.1	170	4.0	1,090
3.0	445	13.0	9,600	2.5	300	9.0	5,400
5.0	1,740	16.0	13,800	3.0	530		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	358	498	457	580	1,600	7,580	1,440	940	910	420	405	475
2	347	465	477	560	1,460	11,100	1,400	940	820	425	395	312
3	331	449	465	555	1,390	4,950	1,400	940	820	450	910	308
4	322	449	477	555	1,320	3,600	1,300	1,640	748	455	680	296
5	316	445	530	545	1,250	2,970	1,230	1,400	720	445	490	268
6	322	438	640	550	1,320	2,430	1,230	1,090	650	348	480	224
7	325	434	*1,320	540	1,140	2,160	1,200	1,000	600	390	550	191
8	322	438	1,180	521	1,040	1,960	1,340	970	690	455	505	224
9	328	438	830	521	1,000	1,640	1,480	970	790	1,190	368	312
10	334	445	1,110	530	970	1,640	1,340	910	705	766	340	251
11	350	453	1,250	900	935	1,480	1,260	910	1,160	555	425	242
12	*354	453	1,110	1,600	900	1,340	1,230	850	1,160	445	304	276
13	364	453	2,020	1,080	830	1,340	1,200	820	820	340	*268	200
14	364	453	4,600	748	795	1,640	1,120	940	680	*420	254	*170
15	361	449	3,510	970	*795	1,880	1,090	3,240	*1,030	415	276	218
16	364	445	1,860	5,270	830	a1,500	2,130	3,420	940	360	257	218
17	364	445	1,320	4,600	900	a1,300	3,690	2,420	2,480	380	215	221
18	368	449	935	2,700	935	a1,200	2,700	1,840	2,430	410	308	221
19	361	445	694	1,670	865	a1,900	*1,920	1,920	1,560	435	292	224
20	358	445	760	1,500	830	a3,000	1,520	2,610	1,160	902	572	230
21	364	469	865	1,530	1,430	a2,500	1,370	2,970	910	1,370	560	480
22	378	503	830	9,180	6,010	a2,200	1,260	2,250	910	1,640	520	590
23	375	540	830	13,000	3,260	a2,000	1,200	1,720	790	1,160	485	415
24	375	664	712	5,000	2,380	a1,800	1,160	1,440	705	820	525	356
25	375	640	604	3,180	1,980	a1,600	1,260	1,300	635	670	470	276
26	372	550	521	3,180	1,670	a1,500	1,230	1,200	585	455	730	320
27	382	503	616	3,510	1,460	a1,400	1,340	1,090	600	480	736	236
28	704	485	658	3,020	1,320	a1,300	1,160	1,030	490	530	550	212
29	1,460	473	658	2,380	-	a1,200	1,060	970	420	430	970	284
30	900	465	634	2,060	-	1,260	1,000	970	545	420	625	284
31	586	-	604	1,780	-	1,340	-	940	-	380	570	-
Total	13,184	14,281	33,077	74,315	40,615	74,710	43,260	45,650	27,463	18,361	15,035	8,534
Mean	425	476	1,067	2,397	1,451	2,410	1,442	1,473	915	592	485	284
Cfsm	0.236	0.264	0.592	1.33	0.805	1.34	0.800	0.817	0.508	0.329	0.269	0.158
In.	0.27	0.29	0.68	1.53	0.84	1.54	0.89	0.94	0.57	0.38	0.31	0.18

Calendar year 1953: Max 15,600 Min 301 Mean 1,590 Cfsm 0.882 In. 11.97
Water year 1953-54: Max 13,000 Min 170 Mean 1,119 Cfsm 0.621 In. 8.42

Peak discharge (base, 18,000 cfs).--Jan. 22 (12 p.m.) 19,300 cfs (19.04 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Brookneal and near Toshes.

Otter River near Bedford, Va.

Location.--Lat 37°22', long. 79°25', on left bank 10 ft upstream from bridge on U. S. Highway 460, 1 mile downstream from Roaring Run, 5 miles upstream from Elk Creek, 6½ miles northeast of Bedford, Bedford County, and 8 miles upstream from Little Otter River.

Drainage area.--116 sq mi.

Records available.--October 1943 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 647.16 ft above mean sea level, datum of 1929.

Average discharge.--11 years, 138 cfs.

Extremes.--Maximum discharge during year, 4,240 cfs Mar. 1 (gage height, 7.62 ft); minimum, 6.4 cfs Sept. 19 (gage height, 0.98 ft).
1943-54: Maximum discharge, 12,100 cfs Mar. 23, 1949 (gage height, 17.3 ft), from rating curve extended above 4,000 cfs on basis of slope-area determinations at gage heights 12.1 and 17.3 ft; minimum, 5.6 cfs Sept. 8, 1944 (gage height, 0.89 ft).
Flood in 1937 or 1939 reached a stage of 21.8 ft, from mud lines on bridge piers. Flood in August 1940 reached a stage of 12.1 ft, from floodmarks (discharge, 8,080 cfs), from rating curve extended above 4,000 cfs as explained above.

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

Revisions (water years).--WSP 1142: 1940(M), 1944(M), 1948(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-31		Nov. 1 to Sept. 30			
1.0	7.2	0.9	4.8	1.9	87
1.2	14	1.0	7.5	2.3	150
1.4	25	1.1	11	3.0	375
1.7	49	1.2	16	4.0	880
		1.5	39	5.0	1,590

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	a26	23	42	*104	1,480	104	66	57	19	16	20
2	15	a25	22	43	101	431	93	63	53	20	17	17
3	13	a24	22	44	97	304	88	74	48	74	60	15
4	9.4	a23	29	42	91	226	84	88	48	61	28	14
5	9.2	a22	39	42	88	184	86	65	42	29	26	13
6	9.4	a22	81	41	84	158	87	60	39	26	51	12
7	9.7	a22	128	39	79	142	95	58	39	22	26	12
8	9.2	a23	54	37	73	130	90	61	37	24	22	11
9	9.7	a24	60	38	72	122	80	56	66	26	*19	*11
10	11	a25	157	41	68	114	77	58	57	23	16	10
11	11	a26	72	132	65	109	80	54	56	20	14	10
12	11	a27	215	90	61	105	79	52	42	17	13	8.6
13	10	a28	193	72	58	102	73	50	35	16	12	8.9
14	10	a26	516	60	59	124	73	70	72	15	11	8.6
15	11	a25	190	73	60	104	73	130	174	*57	12	8.6
16	11	a25	121	375	60	95	95	98	57	38	11	7.8
17	10	a25	94	187	73	93	146	81	*76	20	10	7.2
18	10	a25	85	124	63	91	116	79	60	17	9.2	7.0
19	11	a25	80	108	58	107	105	139	51	191	76	7.2
20	11	a26	70	100	60	250	97	150	42	129	40	21
21	11	a27	64	104	404	160	93	124	37	203	30	22
22	12	a28	63	544	250	136	90	102	34	73	23	16
23	11	a32	58	290	170	128	87	93	31	53	29	19
24	12	a38	52	187	144	121	86	86	27	37	22	18
25	12	a35	50	160	130	118	83	79	26	30	18	18
26	12	a33	50	211	118	115	80	73	26	29	16	20
27	12	a30	50	199	108	107	*77	70	24	26	46	22
28	*40	a28	48	148	107	104	72	66	20	24	174	20
29	43	a26	49	128	-	101	68	65	20	22	97	18
30	29	*a25	48	120	-	*101	68	60	19	21	38	18
31	a27	-	45	111	-	100	-	56	-	20	26	-
Total	437.6	796	2,828	3,932	2,905	5,762	2,625	2,426	1,415	1,382	1,008.2	420.9
Mean	14.1	26.5	91.2	127	104	186	87.5	78.3	47.2	44.6	32.5	14.0
Cfsm	0.122	0.228	0.786	1.09	0.897	1.60	0.754	0.675	0.407	0.384	0.280	0.121
In.	0.14	0.25	0.91	1.26	0.93	1.84	0.84	0.78	0.45	0.44	0.32	0.14

Calendar year 1953: Max 1,360 Min 9.2 Mean 124 Cfsm 1.07 In. 14.46
Water year 1953-54: Max 1,480 Min 7.0 Mean 71.1 Cfsm 0.613 In. 8.30

Peak discharge (base, 1,500 cfs).--Mar. 1 (7 a.m.) 4,240 cfs (7.62 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Evington and Goose Creek near Huddleston.

Otter River near Evington, Va.

Location.--Lat 37°13', long. 79°18', on right bank 10 ft upstream from highway bridge, 2 miles upstream from Flat Creek, and 2 miles southwest of Evington, Campbell County.

Drainage area.--325 sq mi.

Records available.--November 1936 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 544.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--17 years (1937-54), 363 cfs.

Extremes.--Maximum discharge during year, 6,010 cfs Mar. 1 (gage height, 14.94 ft); minimum, 34 cfs Sept. 13, 17, 18; minimum gage height, 1.04 ft Sept. 13.
1936-54: Maximum discharge, 27,500 cfs Oct. 19, 1937, Aug. 19, 1939 (gage height, 23.1 ft), from rating curve extended above 7,000 cfs by logarithmic plotting on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, that of Sept. 13, 17, 18, 1954.

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

Revisions (water years).--WSP 852: 1937. WSP 892: 1938-39(M). WSP 972: 1937-39. WSP 1032: 1940.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 21 to Sept. 30)

0.9	33	3.0	345
1.2	52	5.0	918
1.7	108	7.0	1,640
2.0	154	11.0	3,420

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	118	a100	116	250	3,380	250	167	144	73	70	57
2	72	112	a110	120	250	1,140	218	159	138	69	89	51
3	71	110	a130	124	229	708	209	182	126	70	232	48
4	69	102	a150	124	217	534	197	377	124	209	112	45
5	67	97	a250	122	208	422	204	201	117	110	87	42
6	67	93	a400	124	196	357	204	175	110	100	120	40
7	66	92	*a510	116	184	322	222	164	108	81	94	39
8	66	88	220	112	175	300	226	167	107	83	75	38
9	69	89	206	112	185	269	201	156	116	88	69	38
10	71	93	563	120	175	259	185	156	211	82	65	37
11	72	97	279	*339	172	240	187	149	316	74	60	37
12	*78	a100	463	279	160	233	189	144	148	71	56	36
13	79	a110	791	143	151	224	180	140	118	68	*55	*34
14	79	a110	2,200	190	152	311	178	177	111	66	54	35
15	80	a100	738	250	157	269	180	534	630	*76	55	36
16	81	*97	395	1,970	159	*227	464	357	226	196	55	36
17	80	92	290	753	178	215	548	250	*269	86	50	34
18	79	93	199	422	170	211	357	218	218	71	49	34
19	79	93	190	322	157	239	*279	290	175	267	50	37
20	79	95	180	279	164	798	250	563	146	250	421	71
21	79	112	180	201	648	450	229	506	130	679	112	89
22	76	118	178	2,460	621	345	218	322	122	229	71	53
23	76	a120	167	1,400	395	322	209	259	111	168	66	49
24	72	a130	143	679	322	290	204	229	100	129	60	49
25	66	a140	112	534	311	279	194	208	94	102	52	47
26	68	a120	141	679	269	279	189	190	90	94	46	46
27	75	a110	140	650	240	250	182	177	86	90	61	50
28	258	a100	134	478	233	238	175	167	79	80	175	50
29	422	a100	134	369	-	229	167	165	74	75	386	47
30	204	a100	130	322	-	229	167	159	74	81	105	45
31	135	-	126	279	-	233	-	148	-	75	72	-
Total	3,008	3,131	9,949	14,188	6,728	13,802	6,862	7,256	4,618	3,992	3,124	1,350
Mean	97.0	104	321	458	240	445	229	234	154	129	101	45.0
Cfsm	0.298	0.320	0.988	1.41	0.738	1.37	0.705	0.720	0.474	0.397	0.311	0.138
In.	0.34	0.36	1.14	1.63	0.77	1.58	0.79	0.83	0.53	0.46	0.36	0.15

Calendar year 1953: Max 3,200 Min 60 Mean 329 Cfsm 1.01 In. 13.74
Water year 1953-54: Max 3,380 Min 34 Mean 214 Cfsm 0.658 In. 8.94

Peak discharge (base, 4,000 cfs).--Jan. 22 (5 p.m.) 4,470 cfs (12.92 ft); Mar. 1 (3 p.m.) 6,010 cfs (14.94 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for station near Bedford and Goose Creek near Huddleston.

Roanoke River at Brookneal, Va.

Location.--Lat 37°02'28", long. 78°57'02", on left bank 1,600 ft upstream from highway bridge at Brookneal, Campbell County, 3 miles upstream from Falling River, and at mile 255.9.

Drainage area.--2,420 sq mi, approximately.

Records available.--April 1923 to September 1954.

Gage.--Water-stage recorder and telemark. Datum of gage is 351.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 30, 1929, chain gage at site 1,800 ft downstream at same datum. Aug. 30, 1929, to Aug. 15, 1940, water-stage recorder at site on left bank 1,800 ft downstream at same datum (destroyed by flood). Aug. 16 to Oct. 1, 1940, staff gage at site 1,800 ft downstream at same datum. Oct. 2, 1940, to Sept. 30, 1941, chain gage at site 1,600 ft downstream at same datum.

Average discharge.--31 years, 2,483 cfs.

Extremes.--Maximum discharge during year, 20,100 cfs Jan. 23 (gage height, 21.14 ft); minimum, 244 cfs Sept. 16 (gage height, 5.37 ft).

1923-54: Maximum discharge, 130,000 cfs Aug. 15, 1940 (gage height, 46.5 ft, at present site from gage-height relation curve), from rating curve extended above 44,000 cfs by logarithmic plotting on basis of slope-area determination by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 191 cfs Sept. 2, 1932.

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

Revisions (water years).--WSP 622: Drainage area. WSP 892: 1928(M). WSP 972: 1928-34.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 23		Jan. 24 to Sept. 30	
5.8	385	5.3	230
6.0	500	5.6	320
7.0	1,330	6.0	530
12.0	6,750	7.0	1,330
20.0	18,100	12.0	6,750
		18.0	14,800

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	476	752	633	840	1,920	5,720	1,820	1,280	1,140	a640	a580	664
2	446	664	633	800	1,720	14,600	1,870	1,240	1,080	a600	a800	530
3	424	626	648	800	1,620	6,400	1,770	1,240	1,020	a560	1,110	410
4	407	612	656	800	1,570	4,150	1,670	1,670	988	a640	1,200	400
5	396	598	704	792	1,470	3,280	1,620	2,020	934	706	776	375
6	390	591	808	784	1,420	2,760	1,570	1,520	889	590	706	352
7	396	591	1,620	784	1,520	2,390	1,570	1,330	784	a580	671	304
8	402	584	1,820	768	1,280	2,180	1,670	1,280	800	a560	657	271
9	402	591	1,240	752	1,240	2,020	1,720	1,240	1,110	a700	a620	296
10	407	591	1,570	784	1,240	1,870	1,770	*1,240	934	1,240	a600	365
11	424	605	1,870	988	1,200	1,770	1,620	1,200	1,380	736	a580	312
12	440	605	1,470	1,770	1,200	1,670	1,570	1,150	1,570	*638	*560	304
13	440	605	2,550	*1,620	1,120	1,620	1,520	1,120	1,200	a560	390	332
14	452	605	7,590	1,110	1,080	1,970	1,470	1,200	988	620	365	274
15	*452	612	5,940	1,240	1,080	2,240	1,420	2,390	1,040	720	352	248
16	452	619	2,860	5,940	1,080	1,970	2,340	4,260	1,570	824	375	268
17	458	619	1,870	6,750	1,200	1,720	4,480	3,080	1,520	784	352	*284
18	458	605	1,420	3,820	1,240	*1,570	4,040	2,440	3,080	744	312	292
19	464	*619	1,070	2,500	1,150	1,570	2,660	2,180	2,020	864	385	288
20	458	612	1,020	1,770	1,120	3,080	2,080	2,660	1,570	1,020	527	365
21	464	640	1,200	2,080	1,870	4,040	1,820	3,710	1,200	1,920	875	422
22	476	680	1,150	8,050	5,480	2,970	1,670	2,970	1,080	1,970	752	664
23	482	784	1,130	17,400	4,370	2,440	1,570	2,290	1,040	1,720	590	620
24	476	792	1,040	7,470	2,970	2,180	1,520	1,870	907	1,240	608	494
25	476	880	925	4,260	2,440	2,020	1,470	1,670	808	898	614	452
26	476	776	744	3,930	2,130	1,970	1,620	1,520	720	760	548	375
27	488	704	848	4,370	1,870	1,870	1,570	1,420	685	a700	922	410
28	626	664	916	3,820	1,720	1,770	1,520	1,330	706	a620	934	344
29	2,860	640	934	2,970	-	1,670	1,380	1,240	a660	a620	979	328
30	1,820	640	907	2,440	-	1,620	1,280	1,200	a600	a620	1,120	380
31	1,010	-	864	2,130	-	1,670	-	1,200	-	a600	713	-
Total	18,298	19,506	48,650	94,332	49,320	88,770	55,670	56,160	34,023	25,994	20,573	11,423
Mean	590	650	1,569	3,043	1,761	2,864	1,856	1,812	1,134	839	664	381
Cfsm	0.244	0.269	0.648	1.26	0.728	1.18	0.767	0.749	0.469	0.347	0.274	0.157
In.	0.28	0.30	0.75	1.45	0.76	1.36	0.86	0.86	0.52	0.40	0.32	0.18

Calendar year 1953: Max 19,500 Min 390 Mean 2,097 Cfsm 0.867 In. 11.76
Water year 1953-54: Max 17,400 Min 248 Mean 1,432 Cfsm 0.592 In. 8.04

Peak discharge (base, 21,000 cfs).--No peak above base.

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for stations at Randolph and Altavista.

Falling River near Naruna, Va.

Location.--Lat 37°07', long. 78°58', on left bank at upstream side of highway bridge, 2 miles upstream from Little Falling River and 2½ miles northeast of Naruna, Campbell County.
Drainage area.--172 sq mi.
Records available.--July 1929 to January 1935, September 1941 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 412.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1929, to Jan. 15, 1935, chain gage at same site and datum.
Average discharge.--18 years (1929-34, 1941-54), 149 cfs.
Extremes.--Maximum discharge during year, 4,970 cfs Jan. 22 (gage height, 14.36 ft); minimum, 10 cfs Sept. 13 (gage height, 2.37 ft).
1929-35, 1941-54: Maximum discharge, 15,800 cfs Sept. 18 or 19, 1944 (gage height, 23.9 ft, from floodmarks), from rating curve extended above 6,100 cfs on basis of slope-area determinations at gage heights 23.9 and 26.5 ft; minimum, 3 cfs Oct. 9, 1932 (gage height, 2.18 ft).
Flood in August 1940 reached a stage of 26.5 ft, from floodmarks (discharge, 22,000 cfs, by slope-area determination).
Revisions.--The figures of maximum discharge for water years 1930-34 have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)†
697	1930	Oct. 2, 1929	3,710	13.0
712	1931	May 23, 1931	1,510	7.5
727	1932	May. 6, 1932	5,900	16.0
742	1933	Oct. 17, 1932	5,000	15.0
757	1934	Mar. 28, 1934	3,500	12.5

† From graph based on gage readings.

Remarks.--Records good except those for periods of no gage-height record, which are fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1930 and 1935, superseding those published in WSP 697 and 782, are given herewith:

Oct. 2, 1929..... 2,140
Oct. 6, 1934..... 2,380

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
October 1929	2,140	59	175	1.02	1.18
Water year 1929-30	2,140	15	110	.640	8.69
October 1934	2,380	40	158	.919	1.06
Calendar year 1934	3,630	32	154	.895	12.16

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	61	48	74	140	730	a120	90	74	35	24	20
2	34	56	48	74	135	308	a110	89	72	35	26	20
3	33	51	48	76	129	244	a100	89	69	36	51	19
4	32	49	50	74	120	206	a100	131	83	31	33	19
5	31	48	61	74	114	165	a100	92	69	36	30	17
6	33	45	60	74	110	149	a100	87	64	44	51	15
7	35	50	*199	72	104	138	a105	87	64	34	34	17
8	33	48	89	69	100	129	a105	89	64	43	29	18
9	32	49	75	69	104	120	a105	85	96	42	26	14
10	36	46	471	72	98	116	a100	87	72	34	25	15
11	35	45	138	*a150	96	110	a100	81	89	34	20	15
12	*36	45	178	a120	90	108	a100	83	69	*31	*19	17
13	36	46	278	a100	87	106	a100	81	69	30	22	10
14	36	46	1,630	96	87	246	a110	124	*100	31	22	15
15	33	44	362	140	89	170	a120	308	136	50	28	*14
16	35	*45	193	1,350	89	*133	a140	203	61	51	19	16
17	35	46	144	356	127	120	a350	138	77	34	18	13
18	35	46	124	190	100	114	a250	118	64	32	26	17
19	36	44	131	158	90	118	a180	138	57	40	28	15
20	37	46	122	144	94	388	a140	182	50	59	24	43
21	40	54	100	190	417	198	*a130	317	48	66	43	49
22	38	61	104	2,260	247	158	127	170	45	45	31	26
23	40	102	98	792	163	a140	120	131	42	38	32	27
24	35	67	87	359	144	a130	112	114	42	35	31	21
25	40	60	85	332	144	a120	110	106	42	32	29	25
26	38	57	89	571	127	a110	104	96	37	31	29	24
27	43	51	89	538	112	a110	108	90	36	30	34	23
28	128	50	81	288	112	a105	98	89	36	24	45	24
29	907	48	81	208	-	a105	90	87	36	23	34	22
30	157	48	79	180	-	a105	90	81	36	21	29	23
31	77	-	78	158	-	a110	-	78	-	24	27	-
Total	2,220	1,554	5,420	9,408	3,569	5,307	3,724	3,741	1,899	1,131	919	613
Mean	71.6	51.8	175	303	127	171	124	121	63.3	36.5	29.6	20.4
Cfsm	0.416	0.301	1.02	1.76	0.738	0.994	0.721	0.703	0.368	0.212	0.172	0.119
In.	0.48	0.34	1.18	2.03	0.77	1.15	0.80	0.81	0.41	0.24	0.20	0.13

Calendar year 1953: Max 1,630 Min 25 Mean 130 Cfsm 0.756 In. 10.29
Water year 1953-54: Max 2,260 Min 10 Mean 108 Cfsm 0.628 In. 8.54

Peak discharge (base, 1,600 cfs).--Dec. 14 (4 p.m.) 2,830 cfs (10.28 ft); Jan. 16 (9 a.m.) 2,390 cfs (9.33 ft); Jan. 22 (5:30 p.m.) 4,970 cfs (14.36 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Cub Creek at Phenix and Roanoke River at Randolph.

Cub Creek at Phenix, Va.

Location.--Lat 37°05', long. 78°46', on right bank 10 ft upstream from bridge on State Highway 40, 0.9 mile west of Phenix, Charlotte County, 2 miles downstream from Rough Creek, and 6 miles upstream from Louse Creek.
Drainage area.--102 sq mi.
Records available.--August 1946 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 370.19 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 14, 1950, staff gage at same site and datum.
Average discharge.--8 years, 103 cfs (revised).
Extremes.--Maximum discharge during year, 1,870 cfs Jan. 23 (gage height, 10.37 ft); minimum, 6.5 cfs Sept. 7 (gage height, 0.86 ft).
1946-54: Maximum discharge (revised), 2,720 cfs Dec. 4, 1948 (gage height, 13.0 ft, from graph based on gage readings); minimum, that of Sept. 7, 1954.
Flood in August 1940 reached a stage of 17.5 ft, from floodmark.
Revisions.--Figures of maximum discharge for the water years 1947 and 1949 have been revised to 1,250 cfs Mar. 14, 1947 (gage height, 8.3 ft, from graph based on gage readings) and 2,720 cfs Dec. 4, 1948 (gage height, 13.0 ft, from graph based on gage readings), superseding those published in WSP 1082 and 1142, respectively.
Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for a high-water period in the water year 1948, superseding those published in WSP 1112, are given herewith:

Apr. 1, 1948.....	829
Apr. 2, 1948.....	1,060

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
April 1948.....	6,688	1,060	92	223	2.19	2.44
Water year 1947-48.....	44,927	1,060	16	123	1.21	16.39
Calendar year 1948.....	49,165	2,200	29	134	1.31	17.94

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 2				Mar. 3 to Sept. 30			
1.3	21	5.0	479	0.8	5.0	2.0	96
1.5	34	8.0	1,170	.9	7.5	3.0	222
2.0	74	9.0	1,450	1.0	12	6.0	696
				1.3	31	7.0	914

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	44	a36	46	80	328	94	58	48	31	18	12
2	24	39	a36	46	77	842	83	56	45	30	38	11
3	24	37	a37	47	74	295	77	55	44	28	60	10
4	24	36	a38	47	70	201	73	84	44	30	34	9.3
5	24	35	a45	46	67	139	79	63	42	30	28	8.8
6	24	34	a50	46	64	118	77	55	38	52	38	8.0
7	25	36	*a55	45	61	108	76	52	37	33	33	a7.2
8	25	38	a68	44	59	100	75	55	39	33	26	a7.2
9	25	36	a56	44	61	94	71	54	64	42	24	a7.6
10	26	35	a75	46	59	91	66	*57	48	34	24	a8.4
11	26	34	a95	*76	58	87	67	52	43	31	22	a9.5
12	*26	34	a80	70	56	83	67	52	40	*29	19	a8.5
13	26	33	a130	59	53	82	64	51	36	27	19	a8.0
14	26	33	a300	58	54	166	63	72	*56	25	18	a7.5
15	26	33	a550	63	*55	167	65	194	420	28	18	*a9.0
16	27	*33	a200	272	55	*109	173	167	803	44	*17	a9.5
17	26	33	a150	496	69	96	542	105	125	31	14	a10
18	26	33	a110	142	64	91	548	93	89	28	14	a12
19	26	33	a80	83	58	90	208	105	77	31	17	a17
20	27	33	a60	72	56	174	121	105	64	37	20	a30
21	28	39	a62	105	161	148	102	272	58	39	23	a45
22	27	44	a66	307	286	106	*91	264	52	35	31	a30
23	28	a46	a62	1,310	132	96	84	104	49	35	25	17
24	28	a48	a58	418	92	91	78	82	45	30	23	16
25	28	a50	a56	184	86	88	76	73	43	27	20	16
26	28	a48	a54	216	77	91	72	64	40	25	18	16
27	29	a45	a50	293	69	84	70	62	38	24	18	17
28	37	a40	a56	307	68	81	65	58	34	22	17	17
29	114	a37	a58	141	-	79	61	56	32	21	19	14
30	190	a36	a56	107	-	78	59	53	31	20	18	13
31	61	-	a50	92	-	80	-	49	-	19	14	-
Total	1,105	1,135	2,879	5,328	2,221	4,483	3,447	2,722	2,624	951	727	411.5
Mean	35.6	37.8	92.9	172	79.3	145	115	87.8	87.5	30.7	23.5	13.7
Cfsm	0.349	0.371	0.911	1.69	0.777	1.42	1.13	0.861	0.858	0.301	0.230	0.134
In.	0.40	0.41	1.05	1.95	0.81	1.64	1.26	0.99	0.96	0.35	0.27	0.15

Calendar year 1953: Max 550 Min 20 Mean 83.3 Cfsm 0.817 In. 11.08
Water year 1953-54: Max 1,310 Min 7.2 Mean 76.8 Cfsm 0.753 In. 10.24

Peak discharge (base, 1,000 cfs).--Jan. 23 (9 a.m.) 1,870 cfs (10.37 ft); Mar. 2 (7 a.m.) 1,230 cfs (8.17 ft); June 16 (12:30 a.m.) 1,420 cfs (8.93 ft).
* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of records for Falling River near Naruna and Roanoke Creek at Saxe.

Roanoke River at Randolph, Va.

Location.--Lat 36°54'54", long. 78°44'28", on right bank 14 ft downstream from bridge on State Highway 26, 2.8 miles northwest of Randolph, Charlotte County, 3.6 miles upstream from Roanoke Creek, and at mile 227.3.

Drainage area.--3,000 sq mi, approximately.

Records available.--August 1900 to August 1906, October 1927 to March 1930, and October 1950 to September 1954 in reports of Geological Survey. Prior to January 1905, published as Staunton River at Randolph. Records prior to August 1906, republished in Virginia Geological Survey Bulletin 31 with some revisions and corrections.

Gage.--Water-stage recorder. Datum of gage is 307.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Aug. 27, 1900, to Oct. 13, 1902, wire-weight gage at site 3.2 miles downstream at different datum. Oct. 14, 1902, to Aug. 11, 1906, and Oct. 1, 1927, to Mar. 31, 1930, wire-weight or chain gage at site of original gage at datum 3.87 ft lower than present datum.

Average discharge.--9 years (1902-5, 1927-29, 1950-54), 3,252 cfs.

Extremes.--Maximum discharge during year, 25,000 cfs Jan. 23 (gage height, 23.79 ft); minimum observed, 256 cfs Sept. 16 (gage height, 3.88 ft).
1900-1906, 1927-30, 1950-54: Maximum discharge, about 80,000 cfs Dec. 30, 1901 (gage height, 34.0 ft, site and datum then in use); minimum, that of Sept. 16, 1954.
Flood of Aug. 16, 1940, reached a stage of 41.6 ft (discharge, 150,000 cfs), from information by Corps of Engineers.

Remarks.--Records good. Records of chemical analyses, water temperatures, and sediment loads for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 1203: 1927-30. See also Records available.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.8	240	14.0	8,000
4.0	280	18.0	12,200
5.0	750	22.0	20,200
7.0	2,180	24.0	25,600
10.0	5,000		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	630	1,160	810	1,020	2,800	k4,920	2,100	1,500	1,400	675	640	810
2	590	960	810	1,020	2,530	17,000	2,180	1,470	1,330	700	625	750
3	565	870	810	990	2,350	k9,720	2,100	1,440	1,300	675	1,150	615
4	540	810	840	990	2,260	k5,960	2,020	1,660	1,260	650	1,360	470
5	525	780	900	990	2,180	4,730	1,900	2,350	1,260	675	1,260	445
6	515	780	960	960	2,100	3,900	1,900	1,980	1,160	750	930	425
7	510	750	1,400	960	2,000	3,300	1,860	1,620	1,120	750	900	380
8	510	750	2,530	960	1,940	2,900	2,020	1,500	1,050	700	840	314
9	515	750	*1,470	930	1,800	2,710	2,260	1,440	1,120	700	780	283
10	515	750	1,620	930	1,740	2,440	2,100	1,400	1,400	1,120	700	283
11	530	750	2,620	1,080	1,780	2,350	1,940	1,360	1,360	1,190	595	390
12	540	750	2,020	1,620	1,740	2,180	1,860	1,330	1,780	*810	585	314
13	550	780	2,440	2,100	1,700	2,100	1,820	1,300	1,620	725	590	289
14	*550	780	k7,430	1,540	1,600	2,530	1,740	1,360	*1,400	610	555	342
15	560	780	k8,100	1,500	1,500	3,400	1,700	2,530	1,400	530	520	286
16	560	780	k5,040	k6,420	1,500	2,800	2,710	5,160	2,400	700	495	*256
17	565	780	3,000	k8,980	*1,500	2,260	6,990	4,370	2,180	810	*470	282
18	570	*780	2,020	k5,810	1,600	2,100	6,570	3,300	2,990	725	405	274
19	575	780	1,500	k3,850	1,700	1,980	4,550	2,900	2,900	780	355	276
20	580	780	1,330	2,710	1,440	2,860	3,100	3,000	2,020	930	485	298
21	575	810	1,440	3,000	2,440	5,480	*2,440	5,160	1,620	1,860	875	545
22	580	870	1,540	k7,160	5,400	4,280	2,180	4,730	1,330	2,440	930	605
23	590	930	1,540	k23,200	6,430	3,300	2,020	3,300	1,300	2,100	900	780
24	600	1,050	1,470	k15,400	4,280	2,800	1,900	2,530	1,260	1,620	700	675
25	600	1,050	1,400	k6,360	3,400	2,530	1,860	2,180	1,120	1,300	750	565
26	600	1,050	1,190	5,720	2,900	2,530	1,900	1,940	1,020	1,020	725	500
27	600	930	990	6,290	2,530	2,350	1,860	1,780	930	900	675	465
28	640	870	1,080	5,800	2,260	2,180	1,900	1,660	840	725	1,440	475
29	2,260	840	1,160	4,640	-	2,020	1,700	1,540	810	725	1,050	410
30	4,460	810	1,190	3,700	-	1,980	1,580	1,470	700	725	1,360	370
31	1,740	-	1,120	3,200	-	1,980	-	1,440	-	675	1,050	-
Total	24,240	25,310	61,770	129,830	67,400	113,570	72,760	70,700	43,380	29,295	24,695	13,152
Mean	782	844	1,993	4,188	2,407	3,664	2,425	2,281	1,446	945	797	438
Cfsm	0.261	0.281	0.644	1.40	0.802	1.22	0.808	0.760	0.482	0.315	0.266	0.146
In.	0.30	0.31	0.77	1.61	0.84	1.41	0.90	0.88	0.54	0.36	0.31	0.16

Calendar year 1953: Max 19,400 Min 510 Mean 2,553 Cfsm 0.851 In. 11.55
Water year 1953-54: Max 23,200 Min 256 Mean 1,852 Cfsm 0.617 In. 8.39

Peak discharge (base, 20,000 cfs).--Jan. 23 (11 p.m.) 25,000 cfs (23.79 ft).
* Discharge measurement made on this day.
k Computed by using rate of change in stage as a factor.

Roanoke Creek at Saxe, Va.

Location.--Lat 36°55'49", long. 78°39'56", on right bank at downstream side of highway bridge, 500 ft northwest of Saxe, Charlotte County, and 4 miles upstream from mouth.
Drainage area.--162 sq mi.
Records available.--August 1946 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 322.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 21, 1950, staff gage at same site and datum.
Average discharge.--8 years, 122 cfs.
Extremes.--Maximum discharge during year, 1,410 cfs Mar. 2 (gage height, 9.54 ft); no flow for part of Sept. 18, from information by local observer.
1946-54: Maximum discharge, 3,190 cfs Nov. 1, 1949 (gage height, 12.0 ft, from graph based on gage reading); no flow for part of Sept. 18, 1954, from information by local observer.
Flood of Aug. 16, 1940, reached a stage of 25.7 ft (backwater from Roanoke River), from floodmark.
Revisions.--The maximum discharge for the water year 1949 has been revised to 2,400 cfs Dec. 5, 1948; maximum gage height, 12.0 ft Dec. 6, 1948, from graph based on gage readings (backwater from Roanoke River), superseding figure published in WSP 1142.
Remarks.--Records good except those for period of no gage-height record, which are fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for a high-water period in the water year 1949, superseding those published in WSP 1142, are given herewith:

Dec. 6, 1948..... 1,500

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
December 1948.....	11,348	2,230	92	366	2.26	2.61
Calendar year 1948.....	64,161	2,630	19	175	1.08	14.76
Water year 1948-49.....	52,040	2,230	31	143	.883	11.94

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 1 to Dec. 13, Mar. 17 to Apr. 15)

Oct. 1 to Mar. 1		Mar. 2 to Sept. 30			
1.7	20	0.8	0.4	3.0	81
2.0	29	.9	1.4	6.0	281
2.5	52	1.0	2.8	7.0	400
Note.--Same as		1.3	9.5	8.0	680
following table		1.5	15	9.0	1,110
above 2.5 ft.		2.0	32	10.0	1,740
		2.5	52		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	81	31	46	108	594	81	45	36	12	a7.2	8.5
2	22	46	31	44	96	1,290	84	44	34	12	a6.3	7.0
3	21	35	30	42	90	730	74	43	32	12	a10	5.7
4	20	30	33	42	87	363	65	47	30	11	17	5.0
5	20	28	44	42	81	280	63	52	29	12	16	4.8
6	20	28	56	42	75	176	71	46	28	14	14	4.4
7	20	30	74	42	70	129	73	42	26	17	15	4.2
8	20	34	108	40	65	114	78	41	25	17	13	4.0
9	20	38	*84	38	64	102	117	42	28	20	a9.8	a3.5
10	20	36	64	40	64	93	81	42	29	19	a10	a3.0
11	21	34	55	66	62	87	66	42	27	17	15	a2.6
12	22	32	57	90	59	81	60	*40	26	*16	14	a2.3
13	22	31	81	*96	56	78	56	38	24	13	a9.5	a2.0
14	*21	29	253	71	54	169	51	47	*26	12	a8.8	a1.7
15	21	29	362	108	54	246	50	96	42	24	a8.2	*a1.5
16	21	29	348	548	56	232	288	158	49	22	a7.8	a1.2
17	22	29	169	910	*61	129	766	204	87	19	*a7.5	a1.0
18	22	*29	99	555	72	*99	790	183	67	16	6.6	a.8
19	22	29	78	246	68	90	475	144	45	16	5.9	a1.0
20	22	29	64	141	61	126	239	162	36	17	5.9	a3.0
21	22	35	61	306	170	152	*132	211	30	24	8.0	5.9
22	22	44	68	525	348	120	99	246	26	27	14	9.2
23	22	53	72	1,010	348	96	84	225	23	22	16	8.2
24	23	51	65	910	197	84	74	114	21	19	14	6.8
25	23	48	56	400	123	78	68	75	20	16	12	5.7
26	23	44	49	325	105	78	63	58	19	14	10	5.5
27	24	39	50	475	90	78	58	50	17	a12	9.0	5.5
28	26	35	49	450	81	71	56	46	16	a11	12	5.5
29	41	32	49	297	-	65	50	48	14	a10	12	5.0
30	90	31	50	176	-	63	47	45	13	a9.0	12	4.6
31	132	-	49	129	-	67	-	38	-	a7.8	10	-
Total	870	1,098	2,739	8,252	2,865	6,140	4,359	2,714	925	489.8	336.5	129.1
Mean	28.1	36.6	88.4	266	102	198	145	87.5	30.8	15.8	10.9	4.30
Cfsm	0.173	0.226	0.546	1.64	0.630	1.22	0.895	0.540	0.190	0.098	0.067	0.027
In.	0.20	0.25	0.63	1.89	0.66	1.41	1.00	0.62	0.21	0.11	0.08	0.03

Calendar year 1953: Max 830 Min 13 Mean 94.2 Cfsm 0.581 In. 7.89
Water year 1953-54: Max 1,290 Min 0.8 Mean 84.7 Cfsm 0.523 In. 7.09

Peak discharge (base, 1,000 cfs).--Jan. 24 (12:30 a.m.) 1,170 cfs (9.08 ft); Mar. 2 (11:30 a.m.) 1,410 cfs (9.54 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Roanoke River at Randolph and Cub Creek at Phenix.

Dan River near Francisco, N. C.

Location.--Lat 36°30'54", long. 80°18'12", on left bank 200 ft upstream from bridge on State Highway 704 (bridge relocated), an eighth of a mile downstream from Georges Mill, 3 miles east of Francisco, Stokes County, and 7.9 miles downstream from Little Dan River.

Drainage area.--124 sq mi.

Records available.--August 1924 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 830 ft (from topographic map). Prior to Nov. 15, 1929, chain gage at same site and datum.

Average discharge.--30 years, 186 cfs.

Extremes.--Maximum discharge during year, 3,150 cfs Feb. 21 (gage height, 5.70 ft); minimum, 30 cfs Sept. 14, 29 (gage height, 0.88 ft); minimum daily, 48 cfs Oct. 19.
1924-54: Maximum discharge, 12,400 cfs Oct. 19, 1937 (gage height, 12.45 ft), from rating curve extended above 8,500 cfs; minimum, 7.1 cfs Sept. 8, 1932 (gage height, 0.43 ft); minimum daily, 30 cfs Sept. 18, 20, 1932.
Flood of 1916 reached a stage about 3 ft higher than that of Oct. 19, 1937.

Remarks.--Records fair except those for periods of ice effect, which are poor. Considerable diurnal fluctuation and some regulation by Pinnacles powerplant and two reservoirs 28 miles above station, with a combined capacity of 416,000,000 cu ft.

Revisions.--WSP 892: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	65	57	71	90	267	247	128	115	109	93	81
2	65	53	55	61	103	211	213	143	124	113	78	68
3	64	61	55	64	98	177	175	154	114	93	109	70
4	64	63	65	56	106	189	150	167	*122	104	100	69
5	54	64	73	75	101	169	153	123	103	67	93	70
6	60	69	127	72	95	151	139	120	95	67	101	59
7	62	70	177	70	89	156	129	116	78	86	75	64
8	60	69	79	67	74	144	120	127	107	117	70	72
9	*63	54	82	69	97	185	123	109	149	164	52	67
10	61	65	153	63	91	165	133	107	202	104	72	64
11	62	61	90	120	86	*122	125	112	177	93	68	64
12	53	62	180	103	93	119	102	122	131	77	67	61
13	57	59	171	*b90	82	159	109	102	110	93	70	50
14	57	56	310	b90	85	227	115	198	126	114	61	53
15	60	62	153	b100	78	160	116	212	157	118	55	65
16	56	51	102	518	80	205	177	167	169	*91	54	66
17	53	56	89	173	*97	205	216	117	231	76	115	65
18	59	54	*b85	114	86	181	161	141	159	68	93	66
19	48	55	b85	131	86	276	112	163	123	65	103	62
20	57	55	b85	116	92	395	107	222	99	183	81	58
21	65	58	84	141	1,150	227	116	237	88	420	84	80
22	69	69	80	1,020	367	213	115	177	*119	132	76	69
23	69	*101	75	414	236	212	114	127	127	115	57	65
24	65	66	69	218	181	195	117	112	118	90	62	64
25	71	60	b60	165	155	183	117	124	116	80	69	66
26	53	58	b60	158	132	169	*139	137	115	70	76	59
27	68	54	b60	142	118	136	132	125	102	93	*78	51
28	156	61	63	127	120	163	125	120	73	85	220	62
29	71	58	77	*119	-	125	119	137	100	91	108	62
30	65	49	73	120	-	137	110	113	102	126	73	60
31	63	-	71	106	-	186	-	103	-	110	78	-
Total	1,994	1,838	3,045	4,953	4,268	5,809	4,126	4,362	3,751	3,414	2,591	1,938
Mean	64.3	61.3	98.2	160	152	187	138	141	125	110	83.6	64.6
Cfsm	0.519	0.494	0.792	1.29	1.23	1.51	1.11	1.14	1.01	0.887	0.674	0.521
In.	0.60	0.55	0.91	1.49	1.28	1.74	1.24	1.31	1.12	1.02	0.78	0.58

Calendar year 1953: Max 2,140 Min 48 Mean 162 Cfsm 1.31 In. 17.77
Water year 1953-54: Max 1,150 Min 48 Mean 115 Cfsm 0.927 In. 12.62

Peak discharge (base, 2,000 cfs).--Jan. 22 (5 p.m.) 2,400 cfs (5.10 ft); Feb. 21 (8 a.m.) 3,150 cfs (5.70 ft).

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

North Mayo River near Spencer, Va.

Location.--Lat 36°34'05", long. 79°59'15", on left bank 800 ft downstream from highway bridge at Moores Mill, 2 miles downstream from Horse Pasture Creek, and 4 miles southeast of Spencer, Henry County.

Drainage area.--108 sq mi.

Records available.--October 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 730.94 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 23, 1936, chain gage at site 800 ft upstream at datum 1.50 ft higher. July 25 to Sept. 27, 1936, staff gage at present site and datum.

Average discharge.--24 years (1929-35, 1936-54), 121 cfs.

Extremes.--Maximum discharge during year, 2,200 cfs Jan. 22 (gage height, 5.88 ft); minimum, 19 cfs Sept. 11 (gage height, 1.12 ft).
1928-54: Maximum discharge, 17,200 cfs Oct. 9, 1947 (gage height, 15.80 ft), from rating curve extended above 7,200 cfs by logarithmic plotting on basis of velocity-area study; minimum, 19 cfs Sept. 2-5, 1930, Sept. 11, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-28		Oct. 29 to Sept. 30			
1.3	28	1.2	21	2.5	297
1.5	48	1.3	28	3.0	478
1.6	61	1.4	38	4.0	975
		1.7	84	5.0	1,570
		2.0	156		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	38	*39	45	77	*291	120	68	68	41	49	32
2	30	38	39	45	75	161	93	66	66	39	52	29
3	29	38	39	45	75	123	84	79	66	37	53	28
4	29	38	44	45	71	102	79	99	68	51	42	27
5	30	38	51	45	70	91	77	71	62	45	41	26
6	30	37	71	45	66	82	77	66	59	38	41	25
7	30	38	161	45	65	79	77	66	59	35	38	24
8	30	38	66	42	62	75	75	70	58	38	36	23
9	31	38	58	45	63	73	73	65	59	120	35	22
10	32	38	88	46	62	70	70	65	91	60	34	23
11	32	38	66	203	60	66	71	62	114	46	32	21
12	32	39	86	111	59	66	71	62	73	41	31	22
13	32	39	151	73	58	66	68	62	65	39	30	21
14	31	41	280	123	58	161	66	133	70	36	30	21
15	32	41	138	86	58	111	68	294	70	35	30	21
16	32	41	86	605	58	82	197	164	110	35	28	24
17	32	41	71	211	66	75	211	113	315	34	28	21
18	32	41	86	123	60	73	140	102	191	32	48	21
19	32	41	106	102	58	129	111	125	108	35	45	21
20	32	41	91	93	63	532	95	164	82	50	44	39
21	32	44	65	125	334	175	88	256	71	306	38	49
22	32	45	62	1,130	197	125	84	143	63	153	42	31
23	33	48	58	803	120	108	80	113	59	91	42	27
24	34	46	52	222	102	97	79	99	56	66	42	26
25	34	44	58	164	93	91	75	93	53	59	38	26
26	34	42	73	148	82	93	75	84	51	56	*36	25
27	37	41	73	125	75	82	75	80	48	62	34	24
28	58	39	*49	106	71	80	71	77	*45	51	58	*24
29	*49	39	49	95	-	77	68	77	42	48	74	24
30	41	39	49	91	-	75	68	75	41	48	41	23
31	38	-	48	84	-	*88	-	70	-	45	35	-
Total	1,043	1,209	2,453	5,271	2,358	3,599	2,686	3,163	2,383	1,872	1,247	770
Mean	33.6	40.3	79.1	170	84.2	116	89.5	102	79.4	60.4	40.2	25.7
Cfsm	0.311	0.373	0.732	1.57	0.780	1.07	0.829	0.944	0.735	0.559	0.372	0.238
In.	0.36	0.42	0.84	1.81	0.81	1.23	0.92	1.09	0.82	0.64	0.43	0.27

Calendar year 1953: Max 1,580 Min 26 Mean 100 Cfsm 0.926 In. 12.57
Water year 1953-54: Max 1,130 Min 21 Mean 76.9 Cfsm 0.712 In. 9.64

Peak discharge (base, 1,400 cfs).--Jan. 22 (11 p.m.) 2,200 cfs (5.88 ft).
* Discharge measurement made on this day.

Mayo River near Price, N. C.

Location.--Lat 36°32'00", long. 79°59'30", on right bank 300 ft downstream from Anglins Bridge, half a mile downstream from confluence of North and South Mayo Rivers, three-quarters of a mile downstream from Virginia-North Carolina State line, and 4 miles west of Price, Rockingham County.

Drainage area.--260 sq mi.

Records available.--July 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 689.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 29, 1929, staff gage at same site and datum.

Average discharge.--25 years, 322 cfs.

Extremes.--Maximum discharge during year, 5,680 cfs Jan. 22 (gage height, 6.52 ft); minimum, 40 cfs Sept. 16, 18, 19 (gage height, 0.62 ft).
1929-54: Maximum discharge, 30,000 cfs Oct. 19, 1937 (gage height, 14.00 ft), from rating curve extended above 8,000 cfs by logarithmic plotting; minimum, that of Sept. 16, 18, 19, 1954.

Remarks.--Records good except those for periods of ice effect, which are poor. Slight infrequent diurnal fluctuation at low flow caused by small mills above station.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 19				Mar. 20 to Sept. 30			
0.7	60	2.0	468	0.6	37	1.6	260
.9	91	3.0	1,060	.8	68	2.0	445
1.3	170	4.0	1,900	1.0	103	3.0	1,060
1.6	272	5.0	3,110	1.3	165	4.0	1,900

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	103	108	127	219	620	322	195	178	116	112	83
2	85	103	108	127	205	399	253	187	176	112	112	80
3	80	101	108	127	205	316	228	190	168	108	147	75
4	78	101	121	125	198	281	214	280	176	123	117	81
5	81	100	143	125	198	245	211	198	163	125	103	68
6	83	100	210	125	192	223	211	184	154	114	92	65
7	*81	101	463	121	176	216	*214	184	151	105	99	62
8	80	103	187	123	168	212	211	189	147	107	90	55
9	80	103	161	125	176	202	198	181	149	249	87	52
10	85	103	263	128	168	195	193	173	231	168	85	52
11	86	105	192	442	165	187	198	170	235	132	78	52
12	83	105	237	260	163	184	195	*168	178	114	73	52
13	81	105	432	*b150	158	187	187	165	160	101	73	46
14	80	105	764	b190	161	410	187	296	168	103	71	*48
15	85	105	397	223	161	303	187	660	158	94	73	46
16	88	105	245	1,440	163	233	419	420	256	94	70	49
17	86	103	195	553	*178	212	485	300	701	89	77	43
18	85	106	167	330	163	202	332	272	425	83	142	*43
19	86	105	b180	268	156	293	272	322	264	94	*158	42
20	88	106	b200	241	165	1,290	235	378	214	178	127	75
21	88	114	181	374	929	495	224	618	178	911	108	127
22	88	121	173	3,140	624	345	218	375	*176	537	165	85
23	91	151	156	*1,790	359	292	214	300	165	268	121	66
24	91	137	145	610	294	264	198	272	156	170	112	65
25	89	119	143	446	268	249	198	235	149	144	108	63
26	91	114	b140	384	237	253	268	224	142	136	108	62
27	104	110	b140	345	216	231	221	214	136	147	103	57
28	176	110	139	290	212	224	211	208	125	123	134	58
29	133	106	139	268	-	211	187	198	110	116	160	55
30	106	108	137	245	-	208	192	195	117	117	108	52
31	103	-	133	230	-	238	-	184	-	112	94	-
Total	2,827	3,258	6,507	13,472	6,675	9,420	7,083	8,135	5,906	5,190	3,307	1,859
Mean	91.2	109	210	435	238	304	236	262	197	167	107	62.0
Cfsm	0.351	0.419	0.808	1.67	0.915	1.17	0.908	1.01	0.758	0.642	0.412	0.238
In.	0.40	0.47	0.93	1.93	0.95	1.35	1.01	1.16	0.84	0.74	0.47	0.27

Calendar year 1953: Max 4,760 Min 70 Mean 269 Cfsm 1.03 In. 14.03
Water year 1953-54: Max 3,140 Min 42 Mean 202 Cfsm 0.777 In. 10.52

Peak discharge (base, 3,500 cfs).--Jan. 22 (7:30 p.m.) 5,680 cfs (6.52 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Dan River near Wentworth, N. C.

Location.--Lat 36°25', long. 79°50', on right bank 600 ft downstream from Settles Bridge, 3½ miles northwest of Wentworth, Rockingham County, and 7½ miles downstream from Mayo River.

Drainage area.--1,050 sq mi, approximately.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 518 ft (by barometer). Prior to Aug. 3, 1949, at site 150 ft upstream at same datum.

Average discharge.--15 years, 1,165 cfs.

Extremes.--Maximum discharge during year, 19,700 cfs Jan. 23 (gage height, 20.75 ft); minimum, 72 cfs Sept. 30 (gage height, 0.99 ft); minimum daily, 116 cfs Sept. 30.

1939-54: Maximum discharge, 56,800 cfs Sept. 18, 1945 (gage height, 27.78 ft), from rating curve extended above 16,500 cfs on basis of slope-area determination of peak flow at gage height 26.9 ft and runoff comparisons; minimum, that of Sept. 30, 1954; minimum daily, that of Sept. 30, 1954.

Flood in 1908 reached a stage about 7 ft higher than that of Sept. 18, 1945, and flood of 1937 reached a stage of 29.8 ft, from information by local residents.

Remarks.--Records fair. Slight diurnal fluctuation and regulation at low flow caused by powerplants above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 14)

1.2	103	6.0	2,350
1.5	160	9.0	4,650
2.0	278	12.0	7,500
2.5	456	16.0	11,800
3.0	663	20.0	17,800
4.0	1,120		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	258	290	425	818	1,930	2,280	600	521	316	336	240
2	231	275	290	398	750	750	1,510	600	529	309	508	226
3	221	267	294	413	750	1,220	1,170	642	488	309	456	181
4	210	256	316	417	728	1,070	1,020	1,100	496	312	*436	175
5	224	261	383	394	728	975	908	930	488	372	326	148
6	221	258	476	409	663	840	862	642	433	306	294	190
7	212	258	1,520	406	621	795	862	579	417	256	258	231
8	*219	272	863	383	600	795	*840	579	406	275	248	177
9	219	287	533	383	579	750	885	600	409	303	275	154
10	221	275	642	413	579	772	772	566	840	516	256	166
11	226	281	772	822	571	750	750	516	772	336	303	154
12	240	284	621	1,040	537	663	772	516	663	267	233	140
13	231	284	1,390	566	508	642	706	*529	504	256	208	164
14	217	272	3,120	*406	508	3,890	684	706	562	236	199	156
15	217	294	1,960	684	550	2,400	663	1,750	571	248	170	*134
16	224	290	1,020	5,470	529	1,270	908	1,420	862	357	217	154
17	236	300	750	3,000	566	1,070	1,750	975	2,440	275	199	*127
18	219	*287	496	1,390	*600	952	1,450	795	2,070	214	1,010	146
19	238	278	421	975	537	952	1,020	840	975	272	*537	123
20	228	303	545	862	500	6,200	862	1,220	728	620	406	136
21	217	287	642	3,390	3,240	2,490	772	2,910	621	2,700	347	210
22	226	340	642	7,120	3,630	1,510	750	1,450	504	1,930	343	219
23	228	390	575	*17,800	1,570	1,220	706	1,040	*496	1,340	516	194
24	231	456	500	3,720	1,170	1,120	706	862	468	621	365	166
25	231	383	433	2,000	998	998	1,240	750	429	472	294	144
26	238	309	379	1,750	885	1,020	840	728	413	406	270	140
27	238	312	456	1,570	772	998	795	663	398	350	278	166
28	278	303	545	1,300	750	885	728	642	375	354	439	156
29	396	294	460	1,070	-	885	642	621	316	329	908	134
30	312	309	460	952	-	818	621	600	281	316	444	116
31	272	-	436	885	-	1,040	-	579	-	309	284	-
Total	7,361	8,923	22,230	60,813	25,237	41,670	28,474	26,950	19,475	15,482	11,363	4,967
Mean	237	297	717	1,962	901	1,344	949	869	649	499	367	166
Cfsm	0.226	0.283	0.683	1.87	0.858	1.28	0.904	0.828	0.618	0.475	0.350	0.158
In.	0.26	0.32	0.79	2.15	0.89	1.48	1.01	0.95	0.69	0.55	0.40	0.18

Calendar year 1953: Max 13,600 Min 200 Mean 986 Cfsm 0.939 In. 12.74
Water year 1953-54: Max 17,800 Min 116 Mean 748 Cfsm 0.712 In. 9.67

Peak discharge (base, 12,000 cfs).--Jan. 23 (11 a.m.) 19,700 cfs (20.75 ft).
* Discharge measurement made on this day.

Smith River near Philpott, Va.

Location (revised).--Lat 36°47', long. 80°02', on left bank 900 ft downstream from Philpott Dam, 3.1 miles west of Philpott, Henry County, and 10.9 miles upstream from Reed Creek. Prior to Oct. 8, 1952, at site 1.9 miles downstream.

Drainage area.--212 sq mi.

Records available.--August 1946 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 804.27 ft above mean sea level (Corps of Engineers benchmark). Prior to Oct. 8, 1952, at site 1.9 miles downstream at different datum.

Average discharge.--8 years, 307 cfs (adjusted for storage).

Extremes.--1952-53: Maximum discharge during water year, 4,030 cfs Dec. 13 (gage height, 8.90 ft); minimum, 4 cfs Aug. 12 (gage height, 1.50 ft).
1953-54: Maximum discharge during water year, 1,300 cfs Nov. 10 (gage height, 5.00 ft); minimum, 29 cfs Oct. 23 (gage height, 1.98 ft).
1946-54: Maximum discharge, 17,000 cfs June 29, 1949 (gage height, 20.3 ft, datum then in use), from rating curve extended above 9,700 cfs on basis of slope-area determinations at gage heights 18.2 and 20.3 ft; minimum, that of Aug. 12, 1953.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Philpott Reservoir (usable capacity, 145,200 acre-ft).

Rating table, Oct. 1, 1952, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

2.0	31	2.9	215
2.3	63	5.0	1,300
2.6	125	6.0	2,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a160	165	*122	130	65	65	77	63	*82	271	115	102
2	a160	165	125	132	*65	50	80	82	80	243	115	130
3	a160	123	125	132	63	40	80	84	88	177	130	191
4	a160	57	125	130	63	40	80	84	82	174	153	207
5	a160	58	122	128	63	40	80	86	88	174	125	463
6	a160	58	122	80	62	41	80	86	78	174	118	64
7	a160	58	122	59	62	41	69	74	78	187	138	263
8	168	59	122	59	62	41	68	86	88	177	122	254
9	168	59	122	58	62	52	68	86	84	180	118	251
10	165	59	122	58	62	68	80	84	122	190	118	244
11	165	61	122	58	62	68	80	84	150	190	118	252
12	165	61	122	58	62	49	80	84	118	190	101	67
13	165	61	1,320	57	62	41	80	84	112	190	115	99
14	165	61	543	57	63	56	80	84	80	190	115	348
15	162	61	130	58	50	70	80	84	120	187	115	615
16	162	61	130	59	46	62	80	84	156	184	115	560
17	162	61	130	59	63	72	80	84	138	184	115	378
18	162	61	130	59	63	72	80	84	168	187	115	262
19	162	*61	130	59	63	73	80	84	159	187	118	375
20	162	61	130	59	63	73	80	84	190	180	120	74
21	162	62	130	47	49	73	82	84	194	180	118	301
22	162	62	130	46	39	73	82	90	259	187	125	282
23	162	62	130	61	39	75	82	86	259	171	125	289
24	162	62	130	62	39	53	80	82	259	132	125	300
25	162	62	130	62	46	44	80	82	259	130	125	260
26	162	62	130	62	63	56	80	86	263	128	115	126
27	162	62	130	62	63	77	82	100	263	128	108	99
28	162	62	130	63	65	77	82	110	267	145	105	238
29	165	62	130	63	-	77	82	84	267	120	102	188
30	165	86	130	63	-	77	68	164	267	110	102	268
31	165	-	132	63	-	*80	-	84	-	110	105	-
Total	5,044	2,115	5,548	2,203	1,629	1,876	2,362	2,707	4,818	5,357	3,654	7,550
Mean	163	70.5	179	71.1	58.2	60.5	78.7	87.3	161	173	118	252
(†)	-29	+142	+39	+288	+442	+687	+262	+156	+46	-47	-27	-171
Adjusted for change in contents in Philpott Reservoir												
Mean	134	212	218	359	500	748	341	243	207	126	91	81
Cfsm	0.632	1.00	1.03	1.69	2.36	3.53	1.61	1.15	0.976	0.594	0.429	0.382
In.	0.73	1.12	1.19	1.95	2.46	4.07	1.80	1.33	1.09	0.68	0.49	0.43

	Observed			Adjusted			
Calendar year 1952:	Max 2,000	Min 57	Mean 245	Mean 305	Cfsm 1.44	In. 19.42
Water year 1952-53:	Max 1,320	Min 39	Mean 123	Mean 270	Cfsm 1.27	In. 17.34

Peak discharge (base, 3,000 cfs).--Dec. 13 (6:30 a.m.) 4,030 cfs (8.90 ft).
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of records for station at Bassett.

Smith River near Philpott, Va.--Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	288	80	a270	a270	a250	268	266	65	254	263	68	284
2	285	272	280	a65	235	268	261	65	270	254	274	264
3	75	*268	272	a65	254	276	61	282	266	61	268	269
4	77	*274	274	a250	298	261	61	260	280	61	276	62
5	264	277	70	a250	262	274	250	260	67	278	268	62
6	263	283	70	a250	61	68	260	262	62	258	276	262
7	272	82	270	a250	62	68	269	266	255	278	66	254
8	258	82	274	a250	281	269	270	65	246	282	66	256
9	283	290	275	a65	274	282	262	65	251	270	298	278
10	75	286	278	a65	270	272	61	270	266	63	276	268
11	75	282	262	a300	276	264	62	273	250	63	280	60
12	264	274	70	a280	281	280	272	256	61	264	264	62
13	257	295	70	a260	63	65	270	266	61	263	258	280
14	261	82	264	a250	63	65	251	268	268	270	68	286
15	272	82	269	a260	342	276	266	63	256	264	68	268
16	274	284	280	a65	344	275	264	59	303	279	262	284
17	86	278	274	a65	335	280	a65	258	256	62	286	288
18	80	281	270	a280	330	268	a65	280	264	62	292	62
19	268	284	72	a280	320	280	a250	278	61	288	331	62
20	276	282	72	a280	65	65	a250	261	61	262	280	279
21	270	84	334	a280	65	65	a250	258	266	268	68	280
22	256	84	350	a280	328	275	a250	57	280	259	68	262
23	276	282	282	a65	310	282	a250	58	252	274	*278	262
24	80	268	278	a65	278	268	a65	344	242	63	266	308
25	84	263	274	a320	266	265	a65	312	262	63	264	62
26	284	275	72	a300	267	268	a250	320	61	274	287	62
27	288	264	72	a300	63	65	a250	330	61	278	276	259
28	*270	a70	280	a300	63	65	a240	320	*282	264	63	*272
29	280	a70	*224	a300	-	254	274	63	259	282	62	300
30	312	a280	286	a65	-	206	322	63	281	276	269	283
31	80	-	282	a65	-	208	-	262	-	68	256	-
Total	6,733	6,558	6,970	6,440	6,306	6,645	6,252	6,509	6,304	6,514	6,682	6,540
Mean	217	219	225	208	225	214	208	210	210	210	216	218
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168

Adjusted for change in contents in Philpott Reservoir

Mean	84	90	183	247	271	271	205	267	193	110	77	50
Cfsm	0.396	0.425	0.863	1.17	1.28	1.28	0.967	1.26	0.910	0.519	0.363	0.236
In.	0.46	0.47	0.99	1.35	1.33	1.48	1.08	1.45	1.02	0.60	0.42	0.26

	Observed			Adjusted		
Calendar year 1953:	Max 615	Min 39	Mean 144	Mean 254	Cfsm 1.20	In. 16.22
Water year 1953-54:	Max 350	Min 57	Mean 215	Mean 170	Cfsm 0.802	In. 10.91

Peak discharge (base, 3,000 cfs).--No peak above base.
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of records for station at Bassett.

Smith River at Bassett, Va.

Location.--Lat 36°46'15", long. 80°00'00", on left bank 5 ft upstream from highway bridge at north edge of North Bassett, 1 mile northwest of Bassett, Henry County, 3 miles downstream from Town Creek, and 5.6 miles upstream from Reed Creek.

Drainage area.--253 sq mi.

Records available.--April 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 753.09 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--15 years, 354 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,410 cfs Jan. 22 (gage height, 4.43 ft); minimum, 45 cfs Sept. 11 (gage height, 1.28 ft).
1939-54: Maximum discharge, 26,600 cfs Aug. 14, 1940 (gage height, 18.28 ft); minimum, 23 cfs Sept. 18, 26, 1953 (gage height, 1.06 ft).
Maximum stage known, about 22.9 ft Oct. 19, 1937, from information by local residents (discharge, 38,200 cfs, from rating curve extended above 24,000 cfs on basis of backwater studies and records for station at Martinsville).

Remarks.--Records good. Flow regulated by Philpott Reservoir (usable capacity, 145,200 acre-ft).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 17		June 18 to Sept. 30	
1.3	62	1.3	48
1.5	111	1.5	95
2.0	310	1.8	206
2.5	580	2.5	580
3.0	920		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	289	88	268	276	276	604	300	86	278	298	85	290
2	283	280	270	81	*249	329	296	86	274	296	282	287
3	86	*261	260	76	282	301	94	293	274	77	283	297
4	86	*290	269	272	308	291	91	290	275	79	278	63
5	276	283	76	280	282	296	292	282	84	302	274	61
6	276	290	94	270	81	98	294	287	84	295	287	274
7	280	96	299	277	76	91	284	280	278	293	69	296
8	283	94	276	276	278	287	282	86	276	308	72	274
9	288	298	282	81	273	278	287	86	286	322	297	293
10	86	293	291	81	276	278	86	274	306	85	295	277
11	86	302	276	322	284	270	86	282	290	82	283	56
12	289	300	122	291	282	270	275	283	84	296	294	61
13	284	300	100	284	84	91	284	290	81	293	288	283
14	284	101	395	274	81	104	288	322	287	296	72	276
15	289	98	302	294	341	287	282	182	297	294	69	288
16	290	299	289	255	355	280	331	111	400	294	298	272
17	102	312	266	111	358	284	133	300	486	79	294	295
18	91	288	276	290	338	280	106	298	336	77	292	61
19	285	294	84	292	344	323	286	322	101	340	336	61
20	278	296	81	287	96	228	286	354	95	314	322	284
21	276	101	326	288	309	114	278	354	306	352	82	298
22	288	101	338	798	386	290	287	101	313	315	74	286
23	284	294	274	175	346	290	286	91	305	304	292	296
24	76	286	268	117	286	293	102	367	287	85	*276	327
25	86	278	276	360	287	286	121	335	296	82	276	63
26	286	276	81	336	274	281	287	332	82	291	290	63
27	284	283	79	338	88	91	286	326	82	306	281	291
28	330	81	276	337	96	86	253	337	268	296	74	*280
29	*302	79	278	320	-	281	280	91	292	288	74	270
30	328	*279	284	84	-	220	326	86	289	286	292	283
31	91	-	274	81	-	225	-	286	-	82	284	-
Total	7,144	6,921	7,330	7,904	7,016	7,707	7,170	7,500	7,402	7,407	7,065	6,806
Mean	230	231	236	255	251	249	239	242	247	239	228	227
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168

Adjusted for change in contents in Philpott Reservoir

Mean	97	102	194	294	297	306	236	299	230	139	89	59
Cfsm	0.383	0.403	0.767	1.16	1.17	1.21	0.933	1.18	0.909	0.549	0.352	0.233
In.	0.44	0.45	0.88	1.34	1.22	1.40	1.04	1.36	1.01	0.63	0.41	0.26

	Observed			Adjusted		
Calendar year 1953:	Max 764	Min 64	Mean 168	Mean 278	Cfsm 1.10	In. 14.86
Water year 1953-54:	Max 798	Min 56	Mean 239	Mean 194	Cfsm 0.767	In. 10.44

Peak discharge (base, 4,500 cfs).--No peak above base.
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.

Smith River at Martinsville, Va.

Location.--Lat 36°39'45", long. 79°52'55", on right bank 800 ft downstream from bridge on U. S. Highways 58 and 220, 2 miles south of Martinsville, Henry County, and 5 miles downstream from Beaver Creek.

Drainage area.--374 sq mi.

Records available.--August 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 657.22 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--25 years, 461 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 5,960 cfs Jan. 22 (gage height, 7.14 ft); minimum, 4 cfs Mar. 13 (gage height, 1.04 ft); minimum daily, 29 cfs Oct. 4.
1929-54: Maximum discharge, 39,000 cfs Oct. 19, 1937 (gage height, 21.50 ft), from rating curve extended above 14,000 cfs on basis of computations of flow over dam at gage heights 16.76 and 21.50 ft; minimum, that of Mar. 13, 1954; minimum daily, 19 cfs Oct. 6, 1935.

Remarks.--Records good. Flow regulated by Philpott Reservoir (usable capacity, 145,200 acre-ft). Some additional regulation by powerplant 1,000 ft above station.

Revisions (water years).--WSP 1032: 1933-35(M), 1936-39, 1940-41(P).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 17				June 18 to Sept. 30	
1.5	25	2.5	438	1.6	35
1.7	67	3.0	860	1.8	86
1.8	94	4.0	1,760	2.0	152
2.0	163	5.0	2,860	2.5	380
				3.0	730

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	406	62	312	332	*342	1,400	435	183	338	300	47	291
2	310	244	314	190	335	706	444	88	387	299	304	300
3	153	349	330	66	416	543	188	444	338	162	292	290
4	29	327	348	290	400	452	197	480	352	58	292	164
5	312	318	184	314	416	444	394	358	202	277	303	45
6	315	310	191	351	206	299	407	354	72	300	308	271
7	296	173	476	329	94	134	414	350	344	272	154	297
8	302	64	342	320	345	357	404	199	370	332	42	284
9	312	310	374	192	362	401	400	72	359	474	276	303
10	140	404	392	94	410	406	182	356	486	186	267	303
11	59	335	359	591	381	398	134	346	572	35	299	136
12	294	306	289	431	397	400	398	344	208	292	287	38
13	310	342	236	366	216	252	368	344	105	303	312	276
14	312	174	720	362	96	290	386	518	515	292	154	293
15	299	62	456	392	430	399	392	677	436	298	49	294
16	317	320	406	1,080	471	434	778	244	598	314	268	287
17	146	310	354	318	497	418	424	428	1,090	180	328	288
18	82	330	344	350	490	419	268	416	502	40	307	66
19	306	312	182	418	465	442	372	520	229	347	352	76
20	277	322	76	386	237	1,060	392	666	120	362	323	347
21	306	204	350	404	746	306	398	648	326	696	184	314
22	288	80	396	2,350	624	394	364	308	320	392	42	309
23	316	328	376	977	562	458	367	184	318	354	310	270
24	86	323	347	327	454	430	189	465	320	156	272	343
25	88	320	324	492	449	436	388	452	303	42	304	132
26	303	306	186	552	426	430	392	450	168	301	*305	47
27	302	306	95	536	254	262	364	424	64	295	312	266
28	422	174	318	452	135	154	368	439	*272	294	150	*304
29	*360	59	343	465	-	377	348	176	290	288	78	292
30	356	286	348	283	-	348	390	119	289	300	311	298
31	168	-	335	128	-	*353	-	385	-	181	302	-
Total	7,972	7,762	10,105	14,138	10,656	13,602	10,945	11,417	10,293	8,382	7,534	7,224
Mean	257	259	326	456	381	439	365	368	343	270	243	241
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168
Adjusted for change in contents in Philpott Reservoir												
Mean	124	130	284	495	427	496	362	425	326	170	104	73
Cfsm	0.332	0.348	0.759	1.32	1.14	1.33	0.968	1.14	0.872	0.455	0.278	0.195
In.	0.38	0.39	0.88	1.52	1.19	1.53	1.08	1.31	0.97	0.52	0.32	0.22

	Observed			Adjusted			
Calendar year 1953:	Max 1,920	Min 29	Mean 257	Mean 367	Cfsm 0.981	In. 13.32	
Water year 1953-54:	Max 2,350	Min 29	Mean 329	Mean 284	Cfsm 0.759	In. 10.31	

Peak discharge (base, 6,500 cfs).--No peak above base.
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.

Smith River at Spray, N. C.

Location.--Lat 36°31'45", long. 79°46'10", on right bank 0.9 mile south of Virginia-North Carolina State line, 1 mile downstream from Stuart Creek, and 1 mile north of Spray, Rockingham County.

Drainage area.--538 sq mi.

Records available.--October 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 539.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--15 years, 626 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 8,800 cfs Jan. 22 (gage height, 9.16 ft); minimum, 60 cfs Oct. 12 (gage height, 1.35 ft); minimum daily, 84 cfs Sept. 13.
1939-54: Maximum discharge, 45,600 cfs Aug. 15, 1940 (gage height, 19.28 ft), from rating curve extended above 12,000 cfs on basis of computation of peak flow over dam 1½ miles downstream; minimum, that of Oct. 12, 1953; minimum daily, 66 cfs Sept. 10, 1944.

Remarks.--Records good. Flow regulated since August 1950 by Philpott Reservoir (usable capacity, 145,200 acre-ft). Some additional regulation by powerplant at Martinsville, Va.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.5	86	3.0	840
1.8	155	4.0	1,690
2.2	308	5.0	2,680
2.6	540	6.0	3,840

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	352	148	352	369	292	d2,500	507	489	442	356	173	313
2	327	143	351	367	472	d1,600	534	201	434	356	181	318
3	316	338	331	158	457	d900	450	314	463	343	376	314
4	141	351	376	185	441	d700	227	717	442	172	345	315
5	101	366	399	348	508	d600	286	492	447	120	*356	138
6	323	354	168	357	464	d600	450	446	188	377	343	86
7	*312	354	539	360	204	d250	414	446	214	328	336	308
8	321	146	444	365	258	351	464	457	436	343	142	310
9	322	163	399	382	454	505	462	198	431	649	111	315
10	326	356	491	152	444	495	404	270	518	412	352	325
11	128	350	428	763	466	473	238	439	1,060	202	328	309
12	127	349	458	650	431	470	257	422	448	160	309	121
13	309	358	403	425	424	464	410	446	200	334	305	84
14	308	375	1,020	434	191	725	437	599	594	318	322	*302
15	311	151	747	490	253	621	446	1,120	483	362	132	328
16	319	156	491	2,360	533	654	904	561	530	380	118	311
17	320	359	421	886	*490	574	1,240	397	1,860	349	328	312
18	151	*347	382	420	d550	527	588	572	1,010	180	459	280
19	140	349	391	523	d550	549	410	578	555	264	*371	126
20	322	369	167	486	d450	1,820	527	950	240	444	406	180
21	308	387	218	726	d1,300	620	480	905	284	1,420	400	374
22	329	156	454	3,990	d1,700	400	506	653	*415	1,450	199	346
23	318	181	460	3,310	d1,000	549	467	300	427	556	164	335
24	363	365	383	716	d800	506	473	376	382	385	335	308
25	116	354	355	518	d600	491	682	564	384	233	338	374
26	140	361	362	711	d500	502	367	560	380	180	348	128
27	344	337	165	668	d480	470	506	543	175	362	341	85
28	401	345	154	590	d250	247	493	516	172	343	356	294
29	451	136	436	560	-	260	470	457	343	342	152	312
30	366	133	378	543	-	441	472	266	340	348	200	314
31	405	-	355	268	-	436	-	297	-	357	330	-
Total	8,817	8,637	12,478	23,080	14,962	20,300	14,573	15,551	14,297	12,425	8,956	7,965
Mean	284	288	403	745	534	655	486	502	477	401	289	266
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168

Adjusted for change in contents in Philpott Reservoir

Mean	151	159	361	784	580	712	483	559	460	301	150	98
Cfsm	0.281	0.296	0.671	1.46	1.08	1.32	0.898	1.04	0.855	0.599	0.279	0.182
In.	0.32	0.33	0.77	1.68	1.12	1.52	1.00	1.20	0.95	0.64	0.32	0.20

	Observed			Adjusted		
Calendar year 1953:	Max 3,990	Min 101	Mean 375	Mean 485	Cfsm 0.901	In. 12.21
Water year 1953-54:	Max 3,990	Min 84	Mean 444	Mean 399	Cfsm 0.742	In. 10.05

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.
d Doubtful gage-height record; discharge estimated on basis of records for station at Martinsville, Va.

Sandy River near Danville, Va.

Location.--Lat 36°37'10", long. 79°30'10", on right bank 200 ft downstream from Hickory Forest Creek, 400 ft upstream from bridge on road between Callahans Store and Mount Cross, 5.5 miles northwest of western corporate limits of Danville, Pittsylvania County, and 5.8 miles upstream from mouth.

Drainage area.--113 sq mi.

Records available.--November 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 460.38 ft above mean sea level, unadjusted. Prior to June 26, 1942, water-stage recorder at site 1,200 ft downstream at datum 5.57 ft lower.

Average discharge.--24 years (1930-54), 102 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs Jan. 22 (gage height, 5.60 ft); minimum, 10 cfs Sept. 18 (gage height, 1.05 ft); minimum daily, 13 cfs Sept. 18, 19.
1929-54: Maximum discharge, 23,000 cfs Aug. 14, 1940 (gage height, 14.8 ft, from floodmarks), from rating curve extended above 3,600 cfs by logarithmic plotting; minimum, 3 cfs Sept. 29, 1930 (gage height, 0.40 ft, site and datum then in use); minimum daily, 8 cfs Aug. 29, 31, Sept. 1, 2, 1932.

Remarks.--Records good. Diurnal fluctuation at low flow caused by small mill above station.

Revisions (water years).--WSP 972: 1930-41.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 15 to Jan. 15)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
1.3	18	1.8	88	1.1	13	2.5	350
1.4	26	2.0	150	1.2	18	3.0	595
1.6	50	2.5	345	1.5	80	4.0	1,190
1.7	66	3.0	595	2.0	203	5.0	2,050

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	32	34	36	94	352	111	54	50	26	26	24
2	20	29	34	36	92	187	87	52	48	26	28	24
3	18	29	32	37	90	140	80	62	46	24	34	24
4	20	29	40	36	85	118	73	130	46	22	28	24
5	21	29	44	36	82	99	73	67	46	22	26	18
6	20	29	50	36	78	87	69	58	40	22	26	20
7	20	30	91	35	76	80	71	54	34	18	24	22
8	20	32	*46	35	71	78	71	54	38	18	18	22
9	21	30	42	36	71	71	69	54	34	121	18	22
10	20	30	77	40	67	69	62	54	42	50	32	20
11	21	32	50	171	67	69	65	52	38	32	*22	20
12	23	30	56	*86	62	67	65	50	42	24	18	16
13	*20	30	86	75	60	65	60	52	38	*22	18	20
14	20	30	494	80	60	306	58	94	114	18	17	*16
15	21	33	147	96	62	164	58	219	*50	22	18	14
16	21	32	75	910	*60	116	162	135	392	32	17	14
17	21	*32	61	206	71	*99	268	97	676	18	60	14
18	22	32	55	81	65	90	147	92	174	18	109	13
19	23	32	60	60	58	97	106	128	109	73	38	13
20	22	32	63	52	60	258	*90	384	76	78	36	36
21	23	35	52	216	164	142	80	213	58	368	62	34
22	23	37	47	1,450	135	109	73	128	56	269	32	18
23	24	45	44	1,140	99	99	69	102	50	104	28	16
24	24	37	41	245	90	90	65	87	44	65	30	16
25	24	35	53	190	87	85	80	78	42	48	36	16
26	26	34	61	193	78	87	67	71	38	42	69	15
27	25	34	63	170	73	78	62	67	38	40	56	16
28	30	34	40	138	73	76	60	62	36	34	36	15
29	41	34	38	121	-	73	56	65	30	34	30	15
30	40	35	37	109	-	69	56	58	28	30	32	14
31	32	-	37	104	-	90	-	50	-	28	26	-
Total	726	974	2,150	6,256	2,230	3,610	2,513	2,923	2,553	1,748	1,050	571
Mean	23.4	32.5	69.4	202	79.6	116	83.8	94.3	85.1	56.4	33.9	19.0
Cfsm	0.207	0.288	0.614	1.79	0.704	1.03	0.742	0.835	0.753	0.499	0.300	0.168
In.	0.24	0.32	0.71	2.06	0.73	1.19	0.83	0.96	0.84	0.58	0.35	0.19

Calendar year 1953: Max 880 Min 14 Mean 74.1 Cfsm 0.656 In. 8.93
Water year 1953-54: Max 1,450 Min 13 Mean 74.8 Cfsm 0.662 In. 9.00

Peak discharge (base, 1,500 cfs).--Jan. 22 (2:30 p.m.) 2,840 cfs (5.60 ft); June 16 (8 p.m.) 2,510 cfs (5.41 ft).
* Discharge measurement made on this day.

Dan River at Danville, Va.

Location.--Lat 36°35'15", long. 79°22'55", on left bank 50 ft downstream from Southern Railway bridge in Danville, Pittsylvania County, 1,000 ft upstream from Fall Creek, and at mile 62.7.

Drainage area.--2,050 sq mi, approximately.

Records available.--August 1934 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 379.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years, 2,353 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 25,500 cfs Jan. 23 (gage height, 11.53 ft); minimum, 124 cfs Oct. 3 (gage height, 1.67 ft); minimum daily, 245 cfs Sept. 14. 1934-54: Maximum discharge, 75,000 cfs Aug. 15, 1940 (gage height, 20.96 ft); minimum, 40 cfs Dec. 8, 1946 (gage height, 1.19 ft); minimum daily, that of Sept. 14, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Diurnal fluctuation caused by cotton mills above station. Flow regulated by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft).

Revisions (water years).--WSP 972: 1936.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 23				Jan. 24 to Sept. 30			
2.1	370	4.0	3,300	1.9	235	3.0	1,150
2.5	710	6.0	8,800	2.0	300	4.0	3,200
3.0	1,300	12.0	27,200	2.5	650	9.0	17,400
3.5	2,160						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	660	750	610	915	a1,700	4,630	a2,200	1,040	970	645	630	620
2	715	598	785	960	a1,500	6,000	a3,400	980	900	690	575	610
3	650	528	825	875	a1,600	3,350	a2,500	890	955	640	835	560
4	570	760	782	775	a1,500	a3,000	a2,000	1,590	905	670	805	495
5	525	750	938	830	a1,500	a2,500	a1,700	1,920	870	555	740	475
6	435	720	970	910	a1,400	a2,000	a1,500	1,300	790	570	695	405
7	655	790	1,480	960	a1,400	a1,800	a1,600	1,090	705	670	630	300
8	720	695	2,500	880	a1,300	a1,600	a1,500	1,120	715	660	625	520
9	590	642	1,330	910	a1,100	a1,400	a1,600	970	805	745	530	520
10	660	562	1,250	920	a1,200	a1,500	a1,500	905	965	990	560	465
11	620	780	1,470	1,230	a1,200	a1,400	a1,300	*990	1,940	840	*630	425
12	465	765	1,390	*2,480	a1,200	a1,400	1,160	965	1,220	540	630	475
13	*545	755	1,590	1,650	a1,100	a1,300	1,220	980	835	*490	590	330
14	660	800	5,030	1,170	a1,100	5,440	a1,300	1,270	870	630	495	*245
15	665	735	5,580	1,350	a1,000	7,400	a1,200	2,420	*1,200	690	580	500
16	690	655	2,400	7,960	*a1,100	3,200	a1,500	3,460	1,880	840	360	430
17	675	*590	1,600	9,080	a1,200	a2,600	a2,500	2,150	7,680	755	410	470
18	690	870	1,240	3,190	a1,300	a2,100	a3,200	1,550	5,200	630	970	375
19	420	735	940	2,100	a1,200	a1,900	a2,000	1,510	2,460	495	1,360	450
20	510	758	905	1,760	a1,200	a2,500	*a1,700	2,690	1,260	760	865	400
21	670	832	855	4,140	a2,000	a7,000	1,560	4,440	975	4,830	835	310
22	688	765	1,160	12,200	8,240	a3,500	1,380	4,070	955	5,940	680	620
23	668	718	1,200	24,800	3,960	a2,500	1,290	1,830	905	3,240	565	600
24	680	812	1,140	16,300	a3,000	a2,200	1,220	1,540	900	1,580	710	585
25	740	1,050	1,000	4,820	a2,100	a2,000	2,720	1,440	880	825	700	445
26	415	842	890	4,160	a1,800	a1,900	2,320	1,300	815	695	680	500
27	515	815	850	3,850	a1,600	a1,800	1,480	1,300	730	715	685	390
28	740	805	830	3,150	a1,500	a1,700	1,340	1,200	635	730	695	255
29	945	802	955	a2,800	-	a1,600	1,300	1,120	615	720	895	470
30	1,020	645	935	a2,300	-	a1,500	1,260	930	685	715	870	500
31	830	-	980	a2,000	-	a1,700	-	890	-	655	695	-
Total	20,031	22,324	44,410	121,425	50,000	84,420	52,450	49,850	41,220	34,150	21,525	13,745
Mean	646	744	1,433	3,917	1,786	2,723	1,748	1,608	1,374	1,102	694	458
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168

Adjusted for change in contents in Philpott Reservoir

Mean	513	615	1,391	3,956	1,832	2,780	1,745	1,665	1,357	1,002	555	290
Cfsm	0.250	0.300	0.679	1.93	0.894	1.36	0.851	0.812	0.662	0.489	0.271	0.141
In.	0.29	0.33	0.78	2.22	0.93	1.57	0.95	0.94	0.74	0.56	0.31	0.16

	Observed			Adjusted		
Calendar year 1953:	Max 20,600	Min 340	Mean 1,700	Mean 1,810	Cfsm 0.883	In. 11.98
Water year 1953-54:	Max 24,800	Min 245	Mean 1,522	Mean 1,477	Cfsm 0.720	In. 9.78

Peak discharge (base, 22,000 cfs).--Jan. 23 (8 a.m) 25,500 cfs (11.53 ft).

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.

a No gage-height record; discharge estimated on basis of record for station at Paces.

Dan River at Paces, Va.

Location.--Lat 36°38'32", long. 79°05'23", on right bank 12 ft downstream from highway bridge, 0.5 mile southeast of Paces, Halifax County, 0.5 mile upstream from Big Toby Creek, 2.7 miles upstream from Birch Creek, and at mile 36.0.

Drainage area.--2,550 sq mi, approximately.

Records available.--November 1950 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 317.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 24,800 cfs Jan. 24 (gage height, 22.13 ft); minimum, 241 cfs Sept. 22 (gage height, 1.87 ft).
1950-54: Maximum discharge, 25,700 cfs Mar. 26, 1952 (gage height, 22.12 ft); minimum, that of Sept. 22, 1954.
Flood of Aug. 16, 1940, reached a stage of 32.3 ft, from levels to floodmark.

Remarks.--Records good. Diurnal fluctuation caused by cotton mills at Danville. Flow regulated by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft). Records for water temperatures and sediment loads for the water year 1954 are given in WSP 1350.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.9	250	12.0	7,400
2.5	500	17.0	14,300
5.0	1,970	22.0	24,500

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	640	860	640	1,100	2,040	3,160	2,950	1,580	1,070	750	750	800
2	605	675	725	1,070	1,830	6,340	4,260	1,220	1,280	775	700	640
3	700	530	830	1,070	1,900	4,340	3,230	1,220	1,130	800	650	625
4	565	635	860	950	1,830	3,370	2,530	1,400	1,100	750	1,130	540
5	555	775	980	750	1,830	2,810	2,110	2,250	1,070	675	980	450
6	470	750	1,040	1,070	1,700	2,390	1,900	2,040	1,070	595	830	440
7	485	750	1,280	1,010	1,700	2,180	2,040	1,490	920	700	725	352
8	625	800	2,250	1,070	1,400	1,970	1,970	1,490	700	750	700	340
9	700	700	1,970	1,010	1,340	1,700	2,040	1,160	980	775	650	525
10	559	565	1,370	1,010	1,520	1,830	1,900	1,250	980	1,040	800	500
11	620	725	1,430	1,430	1,520	1,760	1,830	*1,040	1,760	1,190	*650	388
12	555	775	1,640	*2,110	1,490	1,760	1,520	1,250	2,250	800	675	450
13	*440	800	1,700	2,390	1,400	1,640	1,580	1,280	1,490	*520	650	396
14	520	800	3,650	1,580	1,400	4,340	1,640	1,400	1,100	590	540	300
15	640	830	5,700	1,520	1,190	8,390	1,580	2,460	1,340	675	550	265
16	635	725	3,650	5,550	1,160	5,140	1,640	3,790	1,970	2,670	550	*470
17	635	*610	2,250	10,800	1,580	*3,090	3,300	3,090	7,260	1,130	336	405
18	645	700	1,640	5,300	1,580	2,670	4,100	2,110	4,740	920	802	396
19	605	890	1,340	2,810	1,520	2,390	3,090	1,970	3,650	725	1,460	372
20	405	750	1,100	2,390	1,430	3,240	2,390	2,390	2,110	550	1,370	405
21	520	830	1,100	3,790	1,970	7,950	2,040	4,260	1,580	2,620	1,070	392
22	615	890	1,160	k9,160	5,380	4,260	1,830	4,660	1,160	5,700	980	415
23	650	830	1,520	*k19,300	5,140	2,800	1,760	2,880	1,340	4,100	700	600
24	645	800	1,400	k24,100	3,090	2,670	1,640	2,250	1,160	2,670	625	590
25	675	980	1,250	*k11,300	2,600	2,460	1,900	1,760	1,160	1,580	950	485
26	605	1,070	1,130	5,140	2,250	2,390	3,090	1,830	1,040	1,040	725	465
27	410	860	1,040	4,820	2,040	2,320	1,830	1,640	980	750	800	435
28	590	830	950	4,100	1,830	2,180	1,760	1,580	860	950	775	360
29	750	860	1,130	3,300	-	1,900	1,640	1,580	700	860	920	296
30	1,040	750	980	2,670	-	1,830	1,520	1,490	750	860	1,250	455
31	1,010	-	1,160	2,460	-	1,970	-	1,160	-	725	890	-
Total	19,105	23,345	48,865	136,130	55,660	97,320	66,610	60,970	48,700	39,235	25,183	13,552
Mean	616	778	1,576	4,391	1,988	3,139	2,220	1,967	1,623	1,266	812	452
(†)	-133	-129	-42	+39	+46	+57	-3	+57	-17	-100	-139	-168
Adjusted for change in contents in Philpott Reservoir												
Mean	483	649	1,534	4,430	2,034	3,196	2,217	2,024	1,606	1,166	673	284
Cfsm	0.189	0.255	0.602	1.74	0.798	1.25	0.869	0.794	0.630	0.457	0.264	0.111
In.	0.22	0.28	0.69	2.01	0.83	1.44	0.97	0.92	0.70	0.53	0.30	0.12

	Observed			Adjusted		
Calendar year 1953:	Max 16,800	Min 405	Mean 1,991	Mean 2,101	Cfsm 0.824	In. 11.19
Water year 1953-54:	Max 24,100	Min 265	Mean 1,739	Mean 1,694	Cfsm 0.664	In. 9.01

Peak discharge (base, 22,000 cfs).--Jan. 24 (6 p.m.) 24,800 cfs (22.13 ft).
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott Reservoir, furnished by Corps of Engineers.
k Computed by using rate of change in stage as a factor.

Georges Creek near Gretna, Va.

Location.--Lat 36°56'10", long. 79°18'50", on left bank 15 ft downstream from bridge on State Highway 40, 2.8 miles southeast of Gretna, Pittsylvania County, and 5.8 miles upstream from Whitethorn Creek.

Drainage area.--9.2 sq mi, approximately.

Records available.--September 1949 to September 1954.

Gage.--Water-stage recorder and wooden control. Datum of gage is 629.54 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--5 years, 8.73 cfs.

Extremes.--1952-53: Maximum discharge during water year, 191 cfs June 22 (gage height, 3.56 ft), from rating curve extended above 120 cfs on basis of slope-area determinations at gage heights 4.93 and 6.22 ft; minimum, 2.8 cfs Sept. 1, 2 (gage height, 2.01 ft).
1953-54: Maximum discharge during water year, 460 cfs Jan. 22 (gage height, 4.93 ft), from rating curve extended above 120 cfs on basis of slope-area determinations at gage heights 4.93 and 6.22 ft; minimum, 1.3 cfs Sept. 18 (gage height, 1.97 ft).
1949-54: Maximum discharge, 670 cfs Sept. 13, 1950 (gage height, 6.48 ft), from rating curve extended above 120 cfs on basis of slope-area determinations at gage heights 4.93 and 6.22 ft; minimum, that of Sept. 18, 1954; minimum gage height, 1.49 ft Oct. 1, 2, 1949.

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

Rating table, Oct. 1, 1952, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

1.9	1.0	2.6	38
2.0	2.5	2.9	74
2.2	9.1	3.5	180

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	6.5	7.4	13	9.1	9.1	10	11	5.5	6.8	6.1	3.2
2	8.1	6.5	7.4	10	9.1	11	9.8	8.8	5.5	6.5	10	3.2
3	8.1	6.5	7.4	12	8.8	11	9.1	8.4	5.5	6.5	6.1	3.2
4	7.1	7.1	7.4	9.8	8.8	21	9.1	8.1	*5.5	6.1	5.8	3.5
5	7.1	6.8	8.1	9.1	8.4	20	9.1	8.1	5.5	6.1	5.5	4.8
6	7.1	6.8	8.4	8.8	8.4	15	10	9.1	5.5	6.8	5.1	6.5
7	7.1	6.5	7.4	8.8	13	13	13	8.8	7.4	*13	5.1	5.1
8	7.1	6.5	7.4	9.1	11	12	10	8.1	6.5	6.8	5.5	3.8
9	7.1	6.5	7.4	20	9.8	11	9.8	8.1	6.1	6.5	5.5	*3.8
10	8.1	7.4	*10	26	9.1	10	9.1	7.8	6.8	5.8	5.1	3.8
11	7.4	7.8	23	17	9.1	10	8.8	7.4	6.5	5.5	4.8	3.8
12	7.1	7.8	13	*12	10	16	10	7.4	5.8	5.1	*4.5	3.8
13	6.8	7.1	10	10	9.8	18	16	7.1	5.8	5.1	4.5	3.5
14	6.8	6.8	9.8	9.8	9.1	14	11	7.4	5.8	4.8	4.2	3.5
15	6.8	14	9.1	9.8	22	20	10	7.1	5.8	4.8	4.2	3.5
16	6.8	8.4	8.8	9.1	*15	*13	13	7.4	5.8	4.8	4.2	3.2
17	6.8	8.1	8.4	8.8	13	12	11	7.1	13	4.5	4.2	3.2
18	6.8	7.8	8.4	8.8	10	13	9.8	8.4	7.1	4.5	4.5	3.2
19	6.5	7.8	8.1	8.8	10	12	9.8	12	6.8	4.5	4.5	3.5
20	6.5	*20	8.1	8.8	10	10	9.1	8.1	6.5	4.5	4.5	3.5
21	6.5	22	10	14	38	9.8	*9.1	7.1	6.1	4.5	4.2	3.2
22	6.5	14	8.4	11	21	9.1	8.8	6.8	21	5.1	4.2	3.2
23	*6.5	9.8	8.4	9.8	15	12	8.4	6.5	8.8	6.5	3.8	3.2
24	6.8	8.8	8.4	31	13	42	8.1	6.5	6.8	4.8	3.8	3.2
25	6.8	8.4	8.1	17	12	20	8.1	6.1	6.5	4.8	3.5	3.2
26	6.8	8.1	8.1	14	11	16	8.4	6.1	6.1	4.8	3.5	3.2
27	6.8	8.1	8.1	12	10	14	8.1	5.8	17	4.5	3.2	4.5
28	6.8	7.8	8.1	12	9.8	13	8.1	5.8	10	4.5	3.2	3.8
29	6.5	7.4	7.8	11	-	12	8.1	5.8	7.8	4.2	3.2	3.5
30	6.5	7.4	7.8	9.8	-	11	10	5.5	7.1	4.2	3.2	3.2
31	6.5	-	19	9.8	-	10	-	5.5	-	4.5	3.2	-
Total	215.3	264.5	287.2	380.9	343.3	440.0	292.7	233.2	225.9	171.4	142.9	109.8
Mean	6.95	8.82	9.26	12.3	12.3	14.2	9.76	7.52	7.53	5.53	4.61	3.66
Cfsm	0.755	0.959	1.01	1.34	1.34	1.54	1.06	0.817	0.818	0.601	0.501	0.398
In.	0.87	1.07	1.16	1.54	1.40	1.78	1.18	0.94	0.91	0.69	0.58	0.44

Calendar year 1952: Max 110 Min 5.5 Mean 10.9 Cfsm 1.18 In. 16.13
Water year 1952-53: Max 42 Min 3.2 Mean 8.51 Cfsm 0.925 In. 12.56

Peak discharge (base, 150 cfs).--June 22 (9 p.m.) 191 cfs (3.56 ft).
* Discharge measurement made on this day.

Georges Creek near Gretna, Va.--Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	4.2	5.1	5.5	8.1	21	8.1	5.5	5.8	3.2	3.6	a2.5
2	2.8	4.2	5.1	5.1	8.1	11	7.1	5.1	5.5	2.8	9.2	a2.3
3	2.8	4.2	5.1	5.1	7.8	9.8	6.8	6.5	5.1	2.5	7.8	a2.2
4	2.8	4.2	5.8	5.1	7.4	8.8	6.8	7.4	5.8	2.5	3.8	a2.1
5	2.8	4.2	6.1	5.1	7.4	8.1	6.8	5.8	5.1	2.5	3.5	a2.0
6	3.2	4.5	10	5.1	7.4	8.1	6.8	5.5	5.1	2.5	3.5	a1.9
7	3.2	4.8	*8.4	5.1	7.4	7.8	6.5	5.5	5.1	2.5	2.8	a1.8
8	3.2	4.8	6.1	5.1	7.1	7.4	6.5	5.8	4.8	14	2.5	a1.7
9	3.5	4.8	6.1	5.1	7.1	7.4	6.1	5.8	5.8	8.0	2.5	a1.6
10	3.8	4.5	12	5.5	7.1	7.1	5.8	*5.8	5.1	4.5	3.2	a1.5
11	3.8	4.5	6.5	*9.8	6.8	7.1	5.8	5.8	5.1	4.2	2.5	a1.5
12	*3.5	4.5	8.1	7.4	6.8	6.8	6.1	5.8	4.8	3.5	2.5	a1.4
13	3.5	4.5	8.1	9.2	6.5	6.8	5.8	5.8	4.5	3.5	2.5	*a1.4
14	3.8	4.5	35	6.8	6.5	12	5.8	11	5.1	*3.2	2.5	1.6
15	3.8	4.5	9.1	9.8	*6.5	8.4	8.1	16	7.4	2.8	2.4	1.6
16	3.8	*5.1	7.8	36	6.1	*7.4	26	10	*5.1	3.2	*2.2	1.6
17	3.8	5.1	6.8	17	7.8	7.1	21	8.4	22	2.5	a3.5	1.4
18	4.2	5.1	6.8	11	6.8	6.8	12	8.4	7.1	2.8	a6.0	1.4
19	4.2	5.1	6.1	9.8	6.8	7.8	*8.8	8.8	6.1	6.0	a4.5	1.6
20	4.2	5.1	5.8	9.1	6.8	12	7.8	8.8	5.8	4.8	a3.5	7.6
21	4.5	5.5	5.8	14	12	8.4	7.4	8.4	5.1	6.5	a4.0	2.8
22	4.5	5.5	6.1	*171	8.4	7.8	7.1	7.4	4.8	5.1	a3.5	2.2
23	4.5	5.8	5.8	a100	7.8	7.4	6.8	7.1	4.2	4.5	a3.0	2.0
24	4.8	5.1	5.8	a60	7.4	7.4	6.8	6.8	4.2	3.8	a3.0	2.0
25	4.8	5.1	5.8	a30	7.4	7.4	6.5	6.5	4.2	3.5	a3.5	2.0
26	4.8	5.1	5.8	17	7.1	7.4	6.1	6.1	3.8	3.5	a4.5	2.0
27	5.5	5.1	5.8	14	6.8	7.1	5.8	5.8	3.5	3.2	a4.0	2.0
28	6.5	5.1	5.8	11	7.1	7.1	5.8	5.8	3.2	2.8	a3.5	2.0
29	7.8	5.1	5.8	9.1	-	6.8	5.8	6.1	3.2	2.5	a3.2	2.0
30	5.1	5.1	5.8	9.1	-	7.1	5.8	6.1	3.2	2.5	a3.0	2.0
31	4.5	-	5.5	8.4	-	7.4	-	5.8	-	2.5	a2.7	-
Total	127.2	144.9	233.7	621.3	206.3	260.0	238.4	221.4	165.6	121.9	112.4	61.7
Mean	4.10	4.83	7.54	20.0	7.37	8.39	7.95	7.14	5.52	3.93	3.63	2.06
Cfsm	0.446	0.525	0.820	2.17	0.801	0.912	0.864	0.776	0.600	0.427	0.395	0.224
In.	0.51	0.59	0.95	2.50	0.83	1.05	0.96	0.89	0.67	0.49	0.46	0.25

Calendar year 1953: Max 42 Min 2.8 Mean 7.80 Cfsm 0.848 In. 11.51
Water year 1953-54: Max 171 Min 1.4 Mean 6.89 Cfsm 0.749 In. 10.15

Peak discharge (base, 150 cfs).--Jan. 22 (2 p.m.) 460 cfs (4.93 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Sandy River near Danville.

Banister River at Halifax, Va.

Location.--Lat 36°46'35", long. 78°54'58", on left bank 10 ft downstream from bridge on U. S. Highway 360, 1,700 ft downstream from Terrible Creek, 1 mile northeast of Halifax, Halifax County, and 10 miles upstream from mouth.

Drainage area.--552 sq mi.

Records available.--September 1904 to December 1905 (gage heights only), December 1928 to September 1954. Published as "near Houston" 1904-5.

Gage.--Water-stage recorder. Datum of gage is 318.54 ft above mean sea level (levels by Corps of Engineers). Sept. 28, 1904, to Dec. 31, 1905, chain gage at site 400 ft upstream at different datum. Dec. 9, 1928, to Sept. 20, 1950, water-stage recorder at site 400 ft upstream at same datum.

Average discharge.--25 years (1929-54), 533 cfs.

Extremes.--Maximum discharge during year, 5,260 cfs Jan. 24 (gage height, 17.12 ft); minimum daily, 26 cfs for many days in October.
1928-54: Maximum discharge, 50,000 cfs Sept. 20, 1944 (gage height, 40.8 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow and velocity-area study; minimum, 6 cfs for many days in August and September 1932; minimum daily, 6 cfs Aug. 30, 1932.

Remarks.--Records good except those for period of no gage-height record, which are fair. Low and medium flow regulated by powerplant half a mile above station.

Revisions (water years).--WSP 892: 1929-30, 1932-35. WSP 972: 1938(M), 1940. WSP 1112: 1943(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 15				Jan. 16 to Sept. 30			
-0.3	26	1.0	110	-0.4	24	2.0	280
0.0	30	2.0	262	0.0	43	4.0	670
.1	36	4.0	635	.5	73	9.0	2,080
.5	60	6.0	1,100	1.0	126	15.0	4,300

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	112	148	172	450	847	394	264	234	104	86	50
2	84	138	100	146	394	1,820	412	178	151	104	110	30
3	26	82	120	136	434	1,180	334	246	178	136	174	29
4	144	130	136	144	350	918	288	371	158	66	234	48
5	26	70	152	168	372	646	344	378	107	98	86	30
6	86	152	176	132	360	500	262	179	154	73	98	29
7	27	74	201	154	210	346	275	210	140	96	99	29
8	88	102	274	150	363	459	316	216	130	106	78	28
9	88	110	*235	146	212	246	326	189	330	388	152	28
10	68	106	156	262	290	328	348	203	110	324	36	28
11	88	98	343	501	276	332	272	204	262	143	84	28
12	94	128	250	122	246	365	271	187	128	132	100	28
13	69	102	354	214	246	282	252	236	214	132	29	28
14	*72	112	866	219	262	770	246	522	*243	30	122	27
15	71	121	904	364	236	1,180	254	606	151	406	29	27
16	85	122	808	1,430	*250	946	888	1,220	184	472	29	38
17	82	106	159	2,350	290	517	2,830	948	522	29	79	*a27
18	26	109	182	1,180	275	402	2,180	646	1,790	29	68	a27
19	127	118	159	670	281	428	972	519	1,550	29	*66	a27
20	80	106	142	416	260	642	668	576	438	29	96	a27
21	86	142	264	1,090	563	936	*472	1,010	184	199	159	a27
22	65	122	216	1,380	1,240	548	294	742	190	631	40	a27
23	114	138	210	3,980	912	438	335	488	210	1,700	98	a27
24	26	170	177	4,540	364	408	334	282	188	1,210	61	a27
25	95	136	126	1,980	402	352	256	284	156	156	125	a27
26	73	108	139	1,290	360	386	321	276	122	172	34	a27
27	79	142	186	1,430	341	350	246	271	126	98	36	a27
28	100	117	174	1,100	233	344	255	236	130	184	188	a27
29	359	107	219	876	-	312	234	240	89	90	77	a27
30	93	110	113	500	-	312	232	188	96	138	32	a27
31	26	-	166	440	-	417	-	173	-	60	60	-
Total	2,629	3,490	7,855	27,682	10,472	17,957	15,111	12,288	8,665	7,564	2,765	883
Mean	84.8	116	253	893	374	579	504	396	289	244	89.2	29.4
Cfsm	0.154	0.210	0.458	1.62	0.678	1.05	0.913	0.717	0.524	0.442	0.162	0.053
In.	0.18	0.23	0.53	1.87	0.71	1.21	1.02	0.83	0.58	0.51	0.19	0.06

Calendar year 1953: Max 2,140 Min 26 Mean 352 Cfsm 0.638 In. 8.63
Water year 1953-54: Max 4,540 Min 26 Mean 322 Cfsm 0.583 In. 7.92

Peak discharge (base, 5,000 cfs).--Jan. 24 (1:30 a.m.) 5,260 cfs (17.12 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement and records for Georges Creek near Gretna.

Hyco River near Denniston, Va.

Location.--Lat 36°35'16", long. 78°53'56", on left bank 10 ft upstream from bridge on U. S. Highway 501, 0.8 mile upstream from Mayo Creek, 2 miles east of Denniston, Halifax County, and 8 miles south of South Boston.

Drainage area.--219 sq mi.

Records available.--July 1929 to March 1934, October 1950 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 315.24 ft above mean sea level. July 10, 1929, to Mar. 14, 1934, chain gage at same site and datum

Average discharge.--8 years (1929-33, 1950-54), 219 cfs.

Extremes.--Maximum discharge during year, 2,650 cfs June 17 (gage height, 18.25 ft); minimum daily, about 0.3 cfs Sept. 30.
1929-34, 1950-54: Maximum discharge observed, 3,420 cfs Mar. 2, 1934 (gage height, 19.18 ft), from rating curve extended above 1,900 cfs; minimum discharge, 0.004 cfs Sept. 14, 1932 (gage height, 3.58 ft), from discharge measurement.
Floods in August 1928 and September 1945 reached stages of 26.4 and 25.6 ft, respectively, from levels to floodmarks.

Remarks.--Records good except those for period of indefinite stage-discharge relation, which are poor.

Rating tables, water year 1953-54, except period of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22 to June 17)

Oct. 1-30, Mar. 18 to Sept. 30				Oct. 31 to Mar. 17			
4.2	2.7	6.0	88	4.4	5.2	6.0	79
4.3	3.7	7.0	190	4.5	7.0	7.0	185
4.4	5.9	9.0	485	4.6	9.0	9.0	485
4.5	9.2	15.0	1,740	4.9	19	15.0	1,740
5.0	29	18.0	2,540	5.5	46	17.0	2,260
5.5	54						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.9	6.6	8.4	22	206	711	606	52	43	19	12	e2.5
2	7.2	6.1	9.3	21	178	740	1,010	50	40	18	12	e2.0
3	5.5	5.9	10	23	160	417	700	46	38	17	34	e1.6
4	4.1	5.6	9.9	16	145	417	325	114	34	15	27	e1.3
5	3.5	10	14	18	130	325	236	135	26	14	19	e1.2
6	3.3	7.4	22	22	116	234	203	72	25	16	15	e1.0
7	3.0	5.9	25	17	103	192	179	54	25	15	13	e.9
8	3.0	5.9	30	19	93	160	162	51	26	11	9.6	e.8
9	3.0	5.9	*25	18	91	140	157	51	26	9.6	8.5	e.7
10	3.1	5.7	22	17	90	127	135	48	25	10	14	e.7
11	3.1	5.9	24	45	83	115	121	*44	130	8.9	18	e.6
12	3.2	9.2	22	*85	78	103	130	40	157	7.6	10	e.5
13	3.3	8.2	42	64	71	97	119	39	52	*6.6	9.2	e.5
14	3.0	7.2	253	65	67	902	103	66	44	6.2	8.2	e.4
15	*3.0	7.0	355	97	67	1,550	97	432	*76	7.9	6.6	*e.4
16	3.0	7.0	176	1,150	67	1,620	172	451	150	540	5.7	e.4
17	3.0	8.2	65	1,350	72	*1,370	944	229	1,920	633	3.7	e.4
18	3.1	*7.6	38	1,200	*79	355	923	130	2,290	101	*3.1	e.4
19	3.0	6.5	36	393	71	269	624	107	1,130	52	3.3	e.4
20	3.0	6.8	34	213	64	311	289	210	152	51	12	e.5
21	2.9	8.2	29	853	215	370	196	820	88	49	9.2	e.5
22	2.7	15	32	1,410	624	269	157	680	65	100	10	e.5
23	2.8	12	34	1,920	370	216	130	276	55	58	8.9	e.5
24	2.9	15	31	2,030	227	190	109	162	48	44	6.9	e.4
25	2.9	13	25	2,000	178	174	94	115	42	36	5.9	e.4
26	3.1	12	23	1,500	148	162	84	88	34	23	5.5	e.4
27	3.2	9.0	22	1,260	119	157	78	72	30	20	5.5	e.4
28	3.5	8.6	25	986	103	146	69	62	25	23	33	e.4
29	4.6	8.6	24	485	-	152	61	57	26	18	10	e.4
30	5.7	8.6	25	318	-	146	54	52	22	14	4.8	e.3
31	6.8	-	23	255	-	146	-	48	-	13	3.6	-
Total	116.4	248.6	1,513.6	17,872	4,015	12,283	8,267	4,855	6,844	1,956.8	347.2	21.4
Mean	3.75	8.29	48.8	577	143	396	276	157	228	63.1	11.2	0.71
Cfsm	0.017	0.038	0.223	2.63	0.653	1.81	1.26	0.717	1.04	0.288	0.051	0.0032
In.	0.02	0.04	0.26	3.03	0.68	2.09	1.41	0.83	1.16	0.33	0.06	0.004

Calendar year 1953: Max 1,920 Min 2.0 Mean 205 Cfsm 0.936 In. 12.72
Water year 1953-54: Max 2,290 Min 0.3 Mean 160 Cfsm 0.731 In. 9.91

Peak discharge (base, 2,500 cfs).--June 17 (10 p.m.) 2,650 cfs (18.25 ft).
* Discharge measurement made on this day.
e Stage-discharge relation indefinite; discharge estimated on basis of 1 discharge measurement and records for Flat River at Bahama, N. C.

Roanoke River at Buggs Island, Va.

Location.--Lat 36°36'06", long. 78°17'56", on left bank 1,200 ft downstream from John H. Kerr Dam, 2.4 miles upstream from Allens Creek, 5.3 miles upstream from bridge on U. S. Highway 1, 6.7 miles southeast of Boydton, Mecklenburg County, and at mile 178.4.

Drainage area.--7,780 sq mi, approximately.

Records available.--November 1921 to August 1923 (gage heights only), April 1947 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 196.72 ft above mean sea level (Corps of Engineers benchmark). November 1921 to August 1923 water-stage recorder at site 0.3 mile upstream at different datum. Prior to Oct. 1, 1952, at site on same bank 2,800 ft downstream at different datum.

Average discharge.--7 years, 8,102 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 25,100 cfs Sept. 7 (gage height, 8.19 ft); minimum, 99 cfs Oct. 24 (gage height, 1.53 ft); minimum daily, 280 cfs Feb. 21.
1947-54: Maximum discharge, 76,000 cfs Dec. 7, 1948 (gage height, 14.97 ft, site and datum then in use); minimum, 99 cfs July 3, Oct. 24, 1953 (gage height, 1.53 ft); minimum daily, that of Feb. 21, 1954.
Flood in August 1940 reached a stage of 33.9 ft, from levels by Corps of Engineers.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft) and by John H. Kerr Reservoir (usable capacity, 2,324,300 acre-ft).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.9	280	3.5	2,870
2.0	370	4.0	4,350
2.5	970	5.0	8,250
3.0	1,820	7.0	18,400

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,260	520	3,720	a1,100	13,200	5,900	7,140	4,000	3,370	3,680	2,240	3,220
2	5,380	2,570	3,780	a2,000	12,900	9,540	7,160	3,850	3,790	4,520	4,010	3,320
3	1,480	2,040	3,710	a1,000	12,900	8,720	6,640	7,660	3,560	1,540	5,950	3,460
4	1,530	1,920	3,730	a4,500	13,400	8,930	5,760	8,990	2,670	2,300	5,010	1,360
5	5,560	2,680	1,140	a6,000	14,200	8,800	5,900	8,580	1,420	2,300	4,090	1,840
6	2,660	2,790	590	a5,400	9,620	3,540	6,160	8,490	2,220	2,900	4,120	1,920
7	2,580	985	4,310	a5,600	3,740	2,080	5,840	5,980	3,380	4,620	1,630	9,300
8	2,540	615	4,560	a5,400	14,000	2,920	6,020	2,260	4,420	3,170	2,280	6,830
9	2,640	2,770	4,450	a3,500	14,100	3,040	5,560	2,260	3,330	2,480	3,070	5,140
10	1,210	2,960	4,370	a1,100	13,800	2,900	5,700	6,450	2,760	1,660	3,150	5,960
11	1,800	2,160	4,320	a5,000	13,900	2,990	5,580	8,750	3,030	2,300	3,660	1,350
12	2,920	2,220	905	a6,200	14,600	3,040	5,960	8,590	1,520	4,140	2,680	1,840
13	2,660	2,360	660	a6,800	10,100	750	5,860	8,620	2,220	7,830	3,020	3,080
14	3,070	740	4,260	7,400	330	560	5,960	6,780	4,080	7,100	1,670	3,360
15	3,280	600	5,400	4,260	10,300	14,600	5,810	585	3,270	4,310	2,280	4,220
16	2,340	2,310	4,260	3,580	9,900	14,800	5,920	610	2,700	3,440	6,880	4,580
17	1,240	2,220	4,360	300	9,920	14,400	5,480	3,460	3,040	1,690	3,420	3,840
18	1,580	2,490	4,380	6,820	10,200	14,400	5,520	3,680	2,580	*2,280	3,150	2,320
19	3,580	2,220	a1,500	6,860	10,400	13,600	6,120	3,640	1,840	*6,410	4,980	2,220
20	3,210	2,400	a700	6,780	12,400	5,320	6,310	4,960	2,200	*6,540	4,300	5,840
21	2,840	1,400	a3,500	6,820	280	5,090	6,370	3,840	3,350	4,480	1,490	5,940
22	2,800	945	a5,000	9,020	3,280	4,900	7,830	2,160	3,460	3,600	2,200	2,680
23	2,540	5,200	a6,000	6,700	3,160	5,780	7,480	2,180	3,580	3,520	3,070	2,940
24	1,420	4,140	a3,000	4,540	3,210	5,850	5,230	10,400	3,560	1,740	3,820	2,520
25	1,420	4,420	a1,100	11,400	3,170	6,670	5,000	10,400	3,300	2,260	3,680	1,760
26	3,210	890	a2,400	12,500	3,160	7,200	8,360	9,660	1,520	6,420	5,140	1,880
27	2,760	4,510	a1,000	12,600	455	6,670	10,500	10,500	2,200	5,980	3,620	3,350
28	2,840	1,600	a4,000	13,200	470	5,300	9,760	10,600	3,470	5,940	1,500	3,820
29	5,620	1,000	a6,000	12,500	-	7,300	9,380	2,320	3,480	5,740	2,200	5,220
30	4,980	4,260	a5,600	6,440	-	6,880	7,930	2,240	3,980	4,590	4,250	5,640
31	1,110	-	a4,500	295	-	8,420	-	2,400	-	1,540	3,000	-
Total	88,060	67,935	107,205	185,615	241,095	210,890	198,240	174,895	89,300	121,020	105,560	110,750
Mean	2,841	2,264	3,458	5,988	8,611	6,803	6,608	5,642	2,977	3,904	3,405	3,692
(†)	-1,554	-618	+407	+6,328	-3,150	+3,074	-289	-34	+680	-1,445	-1,944	-3,208

Adjusted for change in contents in Philpott and John H. Kerr Reservoirs

Mean	1,287	1,646	3,865	12,320	5,461	9,877	6,319	5,608	3,657	2,459	1,461	484
Cfsm	0.165	0.212	0.497	1.58	0.702	1.27	0.812	0.721	0.470	0.316	0.188	0.062
In.	0.19	0.24	0.57	1.82	0.73	1.46	0.91	0.83	0.52	0.36	0.22	0.07

	Observed			Adjusted		
Calendar year 1953:	Max 27,800	Min 481	Mean 5,544	Mean 6,038	Cfsm 0.776	In. 10.52
Water year 1953-54:	Max 14,800	Min 280	Mean 4,659	Mean 4,545	Cfsm 0.584	In. 7.92

Peak discharge (base, 50,000 cfs).--No peak above base.
* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott and John H. Kerr Reservoirs, furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of records for station at Roanoke Rapids, N. C.

Roanoke River at Roanoke Rapids, N. C.

Location.--Lat 36°28', long. 77°38', on right bank 1¼ miles downstream from bridge on State Highway 48 at Roanoke Rapids, Halifax County, 2½ miles upstream from Chocyott Creek, and at mile 133.6.

Drainage area.--8,410 sq mi, approximately.

Records available.--December 1911 to December 1932 (published as "at Old Gaston"), February 1930 to September 1954. Gage-height records collected at site of auxiliary gage since November 1890 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder at present site and datum since February 1930. Datum of gage is 43.83 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Dec. 7, 1911, to Nov. 21, 1921, and Apr. 7 to Dec. 31, 1932, chain gage and Nov. 21, 1921 to Apr. 7, 1932, water-stage recorder, both at site 9 miles upstream at different datum. Since Aug. 6, 1941, auxiliary water-stage recorder 3.6 miles downstream from base gage.

Average discharge.--43 years, 8,368 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 23,000 cfs Mar. 16 (gage height, 9.20 ft); minimum, 633 cfs Nov. 3, Jan. 3 (gage height, 1.51 ft).

1911-54: Maximum discharge, 261,000 cfs Aug. 18, 1940 (gage height, 39.0 ft, from floodmarks), minimum, 458 cfs Sept. 21, 1932 (gage height, 1.25 ft); minimum daily, 472 cfs Sept. 21, 1932.

Flood in November 1877 at Old Gaston reached a stage about 2 ft lower than flood in August 1940, which was 21.5 ft.

Remarks.--Records good. Flow regulated since August 1950 by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft) and by John H. Kerr Reservoir (usable capacity, 2,324,300 acre-ft). Some additional diurnal fluctuation caused by powerplant at Roanoke Rapids.

Revisions (water years).--WSP 712: 1930. WSP 822: 1936. WSP 1032: 1912, 1923(M), 1928(M), 1930(M), 1933(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	1,050	5.0	6,500
2.5	1,630	6.0	9,500
3.0	2,320	7.0	13,000
4.0	4,100	8.0	17,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,560	1,360	3,960	7,260	1,990	1,130	9,510	7,110	2,540	3,910	1,430	3,110
2	5,460	1,070	4,110	1,430	13,400	10,100	7,880	4,100	3,660	3,710	2,110	3,320
3	5,530	2,050	3,940	2,400	13,200	10,600	7,700	4,060	3,830	4,590	4,400	3,270
4	1,760	2,250	4,030	1,330	13,400	10,200	7,290	9,450	3,920	1,220	5,810	3,510
5	1,560	2,070	4,250	6,290	13,800	9,910	6,380	9,380	2,700	2,040	5,060	1,410
6	4,300	2,860	1,480	7,160	13,300	9,210	6,380	8,900	1,350	2,180	4,070	1,630
7	2,880	2,970	1,220	6,300	9,970	4,340	6,500	8,900	2,040	2,860	4,240	1,800
8	2,510	1,300	4,310	6,370	5,450	2,500	6,500	5,820	3,460	4,760	1,510	8,730
9	2,480	1,060	4,870	6,320	14,700	3,410	6,500	2,480	4,470	3,090	2,040	7,000
10	2,650	2,310	4,790	4,410	14,300	3,430	6,120	2,320	3,300	2,710	2,940	5,510
11	1,290	3,050	4,830	1,500	14,000	3,330	6,250	7,780	2,770	1,250	3,090	6,010
12	1,700	2,510	4,980	6,980	14,200	3,240	6,120	8,980	3,080	2,110	3,690	1,500
13	2,700	2,430	1,990	7,780	13,200	3,400	6,380	9,220	1,410	4,130	2,490	1,700
14	2,680	2,430	2,780	7,710	10,400	2,440	6,380	9,500	2,280	7,720	2,880	3,100
15	2,900	1,140	7,720	8,080	1,970	6,640	6,380	7,070	4,120	7,430	1,480	3,280
16	3,400	921	6,720	7,540	10,100	16,000	6,250	*2,000	3,800	5,140	2,040	4,320
17	2,560	1,920	5,030	7,700	10,400	15,200	7,100	*1,240	3,000	3,640	6,450	4,520
18	1,240	2,420	4,790	2,550	10,400	15,300	6,950	3,530	3,170	1,300	3,400	4,100
19	1,480	2,420	4,770	7,230	10,500	15,300	6,250	4,060	2,940	2,110	3,200	2,240
20	3,420	2,450	1,440	7,580	9,880	13,200	6,820	4,630	1,600	6,270	5,090	2,130
21	3,280	2,570	1,180	8,020	3,540	6,220	6,650	8,590	2,180	6,360	4,870	6,030
22	2,960	1,550	4,270	10,000	2,930	5,500	7,100	7,590	3,560	4,840	1,610	5,760
23	2,700	1,450	7,060	14,500	4,650	5,190	7,650	3,450	3,560	3,630	2,110	2,680
24	2,710	5,060	7,280	10,400	3,930	6,290	7,450	2,920	3,570	3,520	3,230	3,040
25	1,420	4,560	3,340	7,070	3,840	6,530	5,750	10,800	3,580	1,280	3,890	2,600
26	1,430	4,640	1,410	13,400	3,760	7,420	5,380	10,600	3,400	2,040	3,840	1,490
27	2,970	1,440	2,600	15,800	3,660	7,630	10,600	10,200	1,220	6,040	5,310	1,700
28	2,870	4,220	1,340	15,200	1,460	7,280	11,200	10,800	1,900	5,860	3,900	3,400
29	3,090	1,780	6,450	14,300	-	5,980	9,850	10,600	2,440	5,900	1,570	3,770
30	5,730	1,290	7,380	12,700	-	7,760	9,850	3,400	3,400	5,360	2,040	5,340
31	5,210	-	7,080	7,260	-	7,530	-	2,720	-	4,640	4,410	-
Total	93,430	69,551	131,400	242,570	246,330	232,210	217,120	202,200	88,250	121,640	104,200	108,000
Mean	3,014	2,318	4,239	7,825	8,798	7,491	7,237	6,523	2,942	3,924	3,361	3,600
(†)	-1,554	-618	+407	+6,328	-3,150	+3,074	-289	-34	+680	-1,445	-1,944	-3,208
Adjusted for change in contents in Philpott and Kerr Reservoirs												
Mean	1,460	1,700	4,646	14,150	5,648	10,560	6,948	6,489	3,622	2,479	1,417	392
Cfsm	0.174	0.202	0.552	1.68	0.672	1.26	0.826	0.772	0.431	0.295	0.168	0.047
In.	0.20	0.23	0.64	1.94	0.70	1.45	0.92	0.89	0.48	0.34	0.19	0.05

	Observed					Adjusted			
Calendar year 1953:	Max	28,600	Min	921	Mean	5,861	Mean	6,355	Cfsm 0.756 In. 10.25
Water year 1953-54:	Max	16,000	Min	921	Mean	5,087	Mean	4,973	Cfsm 0.591 In. 8.03

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Philpott and Kerr Reservoirs, furnished by Corps of Engineers.

Roanoke River near Scotland Neck, N. C.

Location.--Lat 36°12', long. 77°23', on right bank 10 ft upstream from bridge on U. S. Highway 258, 1 mile downstream from tributary on right, 3 miles downstream from Bridgers Creek, 5¾ miles north of Scotland Neck, Halifax County, and at mile 102.5.

Drainage area.--8,700 sq mi, approximately.

Records available.--July 1896 to May 1903 (published as "at Neal"), August 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 5.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to May 1903 chain gage at different datum at site of auxiliary gage. Aug. 15 to Oct. 18, 1940, wire-weight gage at present site and datum. Auxiliary water-stage recorder 8.9 miles downstream. Aug. 15, 1940, to Jan. 13, 1941, auxiliary staff gage at same site as present auxiliary gage.

Average discharge.--20 years (1896-1902, 1940-54), 8,880 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 18,900 cfs Jan. 28; maximum gage height, 23.52 ft Jan. 28; minimum discharge, 800 cfs Nov. 17; minimum daily, 900 cfs Nov. 17.
1896-1903, 1940-54: Maximum discharge, 260,000 cfs Aug. 19, 1940; maximum gage height, 41.98 ft Aug. 19, 1940; minimum discharge, 750 cfs Nov. 10, 1952.
Maximum stage observed during period June 1930 to July 1940, 35.1 ft Jan. 24, 1936 (from unpublished U. S. Weather Bureau records adjusted to present datum). The following data on major floods (adjusted to present datum) were furnished by State Highway and Public Works Commission: 1877, about 37.8 ft; March 1912, 36.8 ft; 1919, 34.9 ft; 1924, 32.9 ft.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated since August 1950 by Philpott Reservoir on Smith River (usable capacity, 145,200 acre-ft) and by John H. Kerr Reservoir (usable capacity, 2,324,300 acre-ft). Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1350.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,000	3,810	2,120	7,630	6,340	2,120	9,820	9,720	2,870	3,650	3,440	3,690
2	5,910	1,700	4,110	4,890	8,800	4,740	9,250	6,020	3,150	3,680	1,800	3,190
3	5,550	1,040	3,990	2,230	13,600	12,500	8,760	3,980	3,740	4,280	2,980	3,190
4	4,050	2,060	4,030	2,620	13,700	11,300	7,830	6,510	4,020	3,290	5,270	3,250
5	1,960	2,250	4,360	3,200	14,300	10,900	7,330	9,870	3,370	1,650	5,530	3,050
6	2,810	2,280	3,320	7,060	14,800	10,500	6,650	9,500	2,470	2,010	4,400	1,550
7	4,180	2,950	1,860	6,980	11,700	6,640	6,840	9,410	1,640	2,190	4,250	1,580
8	2,950	2,880	2,140	6,570	6,750	4,460	6,750	9,000	2,530	3,650	3,360	5,600
9	2,480	1,520	4,650	6,550	12,200	3,350	7,250	4,610	3,910	3,760	1,800	7,990
10	2,500	1,140	4,910	4,910	14,300	3,740	6,950	3,060	3,850	2,930	2,100	6,290
11	2,460	2,590	4,890	3,980	14,800	3,720	6,680	4,500	3,130	2,400	2,820	6,020
12	1,390	3,020	4,970	4,740	14,800	3,610	6,660	9,190	2,930	1,450	3,300	4,290
13	1,660	2,600	4,000	7,950	15,200	3,640	6,640	9,370	2,780	2,750	3,090	1,900
14	2,550	2,500	3,070	8,110	12,300	3,860	6,730	9,800	1,740	5,840	2,560	1,940
15	2,710	2,410	6,580	8,770	6,100	4,560	6,640	9,800	2,900	7,640	2,570	3,120
16	2,920	1,190	7,800	9,020	7,710	14,000	6,580	5,670	3,800	6,220	1,620	3,790
17	3,110	900	6,270	10,400	11,400	16,100	6,870	*2,940	3,320	4,380	4,100	4,130
18	2,490	1,910	5,310	a7,000	11,100	16,200	7,500	2,280	3,050	2,950	4,650	4,270
19	1,310	2,400	5,020	a7,500	11,200	16,200	6,950	4,190	3,050	1,660	3,400	3,380
20	1,530	2,460	3,730	a7,000	11,100	15,800	*6,510	4,850	2,530	3,980	3,990	2,400
21	3,270	2,440	2,000	a7,000	6,370	9,800	7,320	10,100	1,890	6,360	4,900	3,920
22	3,170	2,470	2,180	a9,000	6,500	7,030	7,070	12,100	2,590	5,660	3,790	5,800
23	2,840	1,730	6,080	a17,000	6,240	5,880	8,030	8,340	3,420	4,430	1,920	4,320
24	2,740	2,500	7,470	a18,000	5,960	6,260	8,150	5,000	3,490	3,570	2,300	3,000
25	2,560	4,950	5,050	10,900	5,120	6,540	6,630	9,070	3,520	2,870	3,350	2,830
26	1,560	4,530	3,510	14,700	4,620	7,350	5,770	11,600	3,410	1,620	3,790	2,380
27	1,500	3,580	1,900	16,700	4,260	8,070	7,870	11,200	2,710	3,900	4,580	1,620
28	2,850	2,470	2,740	17,200	3,590	7,550	11,800	11,100	1,480	5,810	4,430	1,840
29	2,890	3,200	3,420	16,600	-	6,950	11,000	11,600	2,360	6,040	3,240	3,270
30	4,480	2,010	7,250	15,600	-	7,630	10,400	6,630	3,260	6,070	1,780	4,480
31	5,360	-	7,630	10,500	-	8,340	-	3,980	-	5,190	2,690	-
Total	94,740	73,490	136,360	280,310	274,860	249,340	229,230	234,990	88,910	122,080	103,800	108,080
Mean	3,056	2,450	4,399	9,042	9,816	8,043	7,641	7,580	2,964	3,938	3,348	3,603
(†)	-1,554	-618	+407	+6,328	-3,159	+3,074	-289	-34	+680	-1,445	-1,944	-3,208

Adjusted for change in contents in Philpott and Kerr Reservoirs

Mean	1,502	1,832	4,806	15,370	6,666	11,120	7,352	7,546	3,644	2,493	1,404	395
Cfsm	0.173	0.211	0.552	1.77	0.766	1.28	0.845	0.867	0.419	0.287	0.161	0.045
In.	0.20	0.24	0.64	2.04	0.80	1.48	0.94	1.00	0.47	0.33	0.19	0.05

	Observed			Adjusted			
Calendar year 1953 :	Max 25,800	Min 900	Mean 6,182	Mean 6,676	Cfsm 0.767	In. 10.41
Water year 1953-54 :	Max 18,000	Min 900	Mean 5,469	Mean 5,355	Cfsm 0.616	In. 8.38

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Philpott and Kerr Reservoirs, furnished by Corps of Engineers.
a No gage-height record; discharge estimated from records at Roanoke Rapids.

Tar River near Tar River, N. C.

Location.--Lat 36°12', long. 78°34', on right bank 50 ft downstream from bridge on State Highway 96, 1¼ miles upstream from Fishing Creek, 2½ miles east of town of Tar River, Granville County, and 8 miles south of Oxford.

Drainage area.--161 sq mi.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder and Parshall flume. Datum of gage is 287.04 ft above mean sea level, datum of 1929.

Average discharge.--15 years, 154 cfs.

Extremes.--Maximum discharge during year, 5,370 cfs June 17 (gage height, 11.70 ft); minimum, 0.4 cfs Oct. 21-27.
1939-54: Maximum discharge, 10,600 cfs Sept. 18, 1945 (gage height, 16.51 ft); minimum, 0.2 cfs Nov. 9-22, 1941, Oct. 18, 1943, Sept. 24, 25, 1953.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Town of Oxford diverts above 0.5 cfs for municipal water supply.

Revisions (water years).--WSP 972: 1940-41. WSP 1112: 1941 (calendar year figures). WSP 1273: 1941(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 9, 10, Apr. 2, 22-25, May 27 to June 13, June 22-25)

Oct. 1 to Aug. 12				Aug. 13 to Sept. 30	
0.7	0.2	2.5	90	1.3	1.0
.8	1.1	3.0	223	1.4	2.7
.9	2.8	4.0	524	1.5	5.3
1.0	5.4	5.0	867	1.7	13
1.2	12	7.0	1,830	2.0	27
1.5	26	9.0	3,070	2.4	47
2.0	55				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.7	0.8	2.1	12	90	1,420	1,500	28	31	11	7.4	1.7
2	4.6	1.0	2.1	11	81	1,140	*568	27	28	10	8.0	1.7
3	3.6	.9	2.1	10	74	398	250	31	26	9.7	47	1.6
4	2.6	.9	3.1	10	69	521	164	173	22	8.7	*35	1.3
5	2.1	.9	4.6	9.7	63	230	122	90	20	8.4	18	1.3
6	1.8	.9	6.4	9.7	58	160	107	53	18	8.4	10	1.1
7	1.6	.9	8.0	9.0	53	122	99	38	16	8.0	7.0	1.0
8	*1.4	.8	8.0	*9.0	48	103	91	45	15	7.7	4.9	1.0
9	1.4	.8	6.7	8.7	47	91	83	36	16	6.7	4.4	1.1
10	1.3	*.8	7.7	8.7	45	83	71	29	18	6.4	3.8	1.3
11	.9	1.0	12	14	43	73	67	26	28	5.7	3.3	.8
12	.9	1.0	21	25	40	65	77	24	20	5.1	2.8	.6
13	1.0	1.0	66	25	36	62	72	*22	17	4.9	2.7	1.0
14	.7	.9	946	22	33	1,610	61	122	160	4.6	2.7	1.3
15	.7	1.0	258	236	33	1,870	57	628	67	*55	2.4	a1.2
16	.7	1.0	74	1,950	33	281	61	298	1,160	553	2.2	a1.0
17	.6	1.1	41	947	36	180	618	137	3,340	66	2.4	*.9
18	.5	1.3	27	193	*34	140	333	114	952	29	27	.8
19	.6	1.3	19	110	32	117	154	164	137	20	*11	.8
20	.5	1.3	15	87	31	203	102	761	86	17	5.0	.8
21	.4	2.1	14	1,010	571	203	75	1,420	60	15	48	.9
22	.4	2.5	15	1,540	846	124	*60	424	45	33	27	.9
23	.4	3.1	14	2,700	216	99	53	177	36	74	12	.9
24	.4	3.6	12	573	140	88	48	108	*30	33	7.1	.7
25	.4	*3.6	12	510	107	80	108	78	26	20	5.0	.7
26	.4	2.8	11	916	88	75	83	62	22	14	*4.4	.6
27	*.4	2.5	11	1,040	71	70	51	50	19	11	4.1	.6
28	.5	2.3	10	405	62	84	41	44	16	8.4	3.6	.5
29	.7	2.1	10	200	-	95	34	41	14	7.4	2.9	.5
30	.8	2.1	12	140	-	119	30	39	12	5.7	2.4	.5
31	.8	-	13	110	-	1,300	-	36	-	5.1	1.7	-
Total	38.8	46.3	1,663.8	12,850.8	3,080	11,206	5,240	5,325	6,457	1,071.9	325.2	29.1
Mean	1.25	1.54	53.7	415	110	361	175	172	215	34.6	10.5	0.97
Cfsm	0.0078	0.0096	0.334	2.58	0.683	2.24	1.09	1.07	1.34	0.215	0.065	0.0060
In.	0.009	0.01	0.38	2.97	0.71	2.59	1.21	1.23	1.49	0.25	0.08	0.007

Calendar year 1953: Max 4,000 Min 0.2 Mean 164 Cfsm 1.02 In. 13.85
Water year 1953-54: Max 3,340 Min 0.4 Mean 130 Cfsm 0.807 In. 10.94

Peak discharge (base, 2,000 cfs).--Jan. 16 (6 p.m.) 2,400 cfs (7.98 ft); Jan. 23 (6 a.m.) 3,680 cfs (9.78 ft); Mar. 1 (12 p.m.) 2,340 cfs (7.86 ft); Mar. 14 (12 p.m.) 3,760 cfs (9.93 ft); Apr. 1 (11 a.m.) 2,000 cfs (7.32 ft); June 17 (5 p.m.) 5,370 cfs (11.70 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of streamflow continuity.

Tar River near Nashville, N. C.

Location.--Lat 35°51'00", long. 77°55'50", on left bank 15 ft downstream from Cockrell Bridge on State Highway 58, 5 miles upstream from Sapony Creek, 10 miles south of Nashville, Nash County, and at mile 93.8.

Drainage area.--701 sq mi.

Records available.--October 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 110.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct. 18, 1928, to Oct. 10, 1929, and Mar. 26, 1930, to Oct. 12, 1934, chain gage at bridge at same datum. Oct. 11, 1929, to Mar. 25, 1930, staff gage at site 45 ft upstream at same datum. Oct. 13, 1934, to Feb. 27, 1935, staff gage at present site and datum.

Average discharge.--26 years, 750 cfs.

Extremes.--Maximum discharge during year, 8,600 cfs Jan. 26 (gage height, 14.96 ft); minimum, 7.0 cfs Sept. 7 (gage height, 1.51 ft); minimum daily, 16 cfs Sept. 6, 13.
1928-54: Maximum discharge, 16,900 cfs Dec. 3, 1934 (gage height, 20.8 ft); minimum, that of Sept, 7, 1954; minimum daily, 11 cfs Sept. 20, 1932.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Considerable diurnal fluctuation and some regulation at low flow caused by small mills above station.

Revisions (water years).--WSP 822: Drainage area. WSP 1273: 1930.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.6	11	5.0	1,200
1.8	28	7.0	2,200
2.0	53	9.0	3,400
2.5	164	11.0	4,800
3.0	325	13.0	6,500
4.0	745	15.0	8,600

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	111	126	300	885	1,430	2,750	377	377	133	65	78
2	133	102	126	280	795	2,640	3,330	341	345	138	47	56
3	122	92	120	250	725	3,680	3,750	321	329	128	428	50
4	108	108	130	230	680	4,380	1,950	393	303	113	745	49
5	92	102	266	*225	635	2,640	998	590	274	108	425	46
6	89	122	357	232	590	1,380	835	533	248	106	222	16
7	127	114	325	232	545	975	770	425	228	106	156	20
8	120	161	274	222	513	835	956	708	248	108	a130	43
9	106	156	244	213	497	745	1,140	998	244	120	a120	36
10	108	141	216	207	489	705	860	745	216	113	a110	23
11	104	167	213	238	465	655	725	489	244	80	a100	26
12	92	164	274	385	445	590	705	389	241	18	a95	37
13	92	146	680	437	417	561	655	357	248	*74	a90	16
14	84	130	1,880	357	393	937	615	501	213	82	a85	46
15	88	118	2,990	596	405	2,250	565	905	460	86	a80	55
16	73	113	3,680	3,120	397	3,120	549	1,520	457	108	*a55	50
17	72	108	1,680	4,680	413	3,680	758	1,620	385	780	a85	42
18	82	118	635	5,040	409	1,510	1,670	815	1,720	449	70	*31
19	69	108	480	5,040	385	835	1,720	680	2,930	210	76	32
20	92	106	400	2,040	365	835	998	1,050	3,540	178	a100	17
21	89	106	360	1,090	1,230	885	725	2,910	947	161	a110	20
22	97	118	320	3,520	4,450	885	615	4,030	377	138	a100	46
23	82	130	300	6,320	3,470	725	557	4,100	303	128	a100	27
24	68	249	290	7,100	1,820	635	517	1,860	264	143	a110	30
25	69	281	280	8,200	975	615	477	835	244	181	106	22
26	60	222	270	8,500	795	590	461	655	222	138	97	30
27	86	175	260	*7,300	680	590	509	553	192	128	102	17
28	78	159	250	3,950	397	655	445	493	178	116	90	36
29	81	133	250	3,120	-	725	401	469	167	102	62	46
30	93	123	300	1,570	-	925	373	445	156	74	21	58
31	106	-	320	1,070	-	1,330	-	409	-	56	70	-
Total	2,924	4,183	18,296	76,044	24,265	42,943	31,379	30,516	16,300	4,603	4,252	1,101
Mean	94.3	139	590	2,453	867	1,385	1,046	984	543	148	137	36.7
Cfsm	0.135	0.198	0.842	3.50	1.24	1.98	1.49	1.40	0.775	0.211	0.195	0.052
In.	0.16	0.22	0.97	4.03	1.29	2.28	1.66	1.62	0.86	0.24	0.23	0.06

Calendar year 1953: Max 5,600 Min 17 Mean 749 Cfsm 1.07 In. 14.52
Water year 1953-54: Max 8,500 Min 16 Mean 704 Cfsm 1.00 In. 13.62

Peak discharge (base, 4,000 cfs).--Jan. 19 (5 a.m.) 5,120 cfs (11.40 ft); Jan. 26 (7 a.m.) 8,600 cfs (14.96 ft); Feb. 22 (11 a.m.) 4,660 cfs (10.82 ft); Mar. 4 (4 p.m.) 4,380 cfs (10.42 ft). May 23 (3 a.m.) 4,240 cfs (10.21 ft).

* Discharge measurement made on this day.

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

Sapony Creek near Nashville, N. C.

Location.--Lat 35°53'05", long. 77°54'45", near center of span on downstream side of highway bridge, 1 mile upstream from mouth and 6½ miles southeast of Nashville, Nash County.

Drainage area.--64.8 sq mi.

Records available.--April 1950 to September 1954.

Gage.--Wire-weight gage read twice daily. Altitude of gage is 107 ft (from topographic map). Prior to July 14, 1953, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 2,200 cfs Jan. 24 (gage height, 14.34 ft, from floodmark); minimum, 0.02 cfs on several days in September.
1950-54: Maximum discharge, that of Jan. 24, 1954; minimum, that of September 1954.

Remarks.--Records fair except those for period of backwater from Tar River and those below 2 cfs, which are poor.

Rating tables, water year 1953-54, except period of backwater from Tar River (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 13-19)

Oct. 1 to Dec. 1		Dec. 2 to Aug. 23				Aug. 24 to Sept. 30	
0.9	0.45	0.8	0.08	1.7	19	0.9	0.02
1.0	1.4	.9	.09	2.0	36	1.0	.4
1.1	3.0	1.0	.1	3.0	102		
1.3	8.8	1.1	.5	5.0	273		
		1.2	1.6	7.0	517		
		1.3	3.3	9.0	850		
		1.4	5.7	13.0	1,820		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	0.68	3.5	46	134	*142	409	13	13	0.6	0.08	0.04
2	2.8	.75	*3.0	43	118	158	*447	12	11	.34	.08	.04
3	2.3	.85	3.0	33	*102	273	373	*11	9.1	.20	7.4	.02
4	1.6	.85	4.3	28	102	316	216	16	6.6	.28	5.0	.04
5	*1.2	1.2	18	*26	91	182	118	20	5.2	.34	1.9	.02
6	1.0	2.7	22	25	84	142	88	22	4.3	.20	.7	.02
7	1.2	4.6	15	22	78	102	70	17	3.5	*.13	.13	.02
8	3.0	5.4	11	20	70	84	134	58	*3.0	.11	.10	.02
9	2.7	5.4	*11	19	64	70	150	54	3.3	.10	.09	.04
10	2.2	5.4	8.7	18	64	64	142	44	6.1	.34	.08	.04
11	1.7	4.9	7.4	25	61	61	150	22	11	.5	.08	.04
12	1.4	4.9	9.6	54	58	58	118	16	9.1	.13	.08	.04
13	1.2	4.4	25	61	51	51	88	13	11	.11	.08	.04
14	.95	3.8	88	51	48	102	74	43	7.4	.10	.07	.04
15	.85	3.3	*91	95	45	142	61	102	4.0	.09	.08	*.04
16	.85	2.8	110	361	45	234	48	134	13	5.5	*.08	.04
17	.75	*2.8	95	580	51	216	48	118	23	3.5	.08	.04
18	.60	2.7	74	870	51	118	54	*58	23	2.3	.08	.04
19	.60	2.7	31	517	51	70	58	30	29	2.6	.08	.04
20	.50	2.5	25	263	46	78	46	48	16	3.3	.08	.06
21	.60	2.5	23	182	94	84	32	102	8.7	3.0	.08	.06
22	.45	2.7	24	421	320	91	26	263	4.7	1.9	.08	.04
23	.45	3.0	25	1,400	930	70	23	338	3.3	1.5	.08	.04
24	.45	5.2	23	*1,800	539	54	22	190	2.3	.7	*.06	.04
25	.35	6.0	22	970	243	48	20	61	1.5	.28	.06	.02
26	.35	6.3	25	*c640	142	46	18	29	.9	.10	.06	.04
27	.35	5.4	25	*c600	102	44	15	22	1.9	.09	.06	.04
28	.45	4.6	23	*548	84	74	15	19	1.6	.09	.06	.02
29	.50	4.1	26	421	-	91	14	18	1.1	.08	.06	.1
30	.60	3.8	39	273	-	166	13	17	.7	.08	.2	.1
31	.85	-	46	182	-	234	-	15	-	.08	*.04	-
Total	36.90	106.23	956.5	10,594	3,868	3,665	3,090	1,925	238.3	28.67	17.19	1.22
Mean	1.19	3.54	30.9	342	138	118	103	62.1	7.94	0.925	0.555	0.041
Cfsm	0.018	0.055	0.477	5.28	2.13	1.82	1.59	0.958	0.123	0.014	0.0086	0.00063
In.	0.02	0.06	0.55	6.08	2.22	2.10	1.77	1.10	0.14	0.02	0.01	0.0007

Calendar year 1953: Max 811 Min 0.04 Mean 57.5 Cfsm 0.887 In. 12.05
Water year 1953-54: Max 1,800 Min 0.02 Mean 67.2 Cfsm 1.04 In. 14.07

* Discharge measurement made on this day.
c Backwater from Tar River.

Fishing Creek near Enfield, N. C.

Location.--Lat 36°09', long. 77°42', on right bank 15 ft downstream from bridge on U. S. Highway 301, 2,000 ft downstream from Atlantic Coast Line Railroad bridge, 2 miles southwest of Enfield, Halifax County, 4¾ miles downstream from Rocky Creek, and at mile 27.7.

Drainage area.--521 sq mi.

Records available.--October 1923 to September 1954 in reports of Geological Survey. Figures of discharge below 250 cfs Oct. 1, 1923, to July 3, 1924, below 350 cfs May 30, 1925, to May 31, 1926, below 150 cfs June 1 to Nov. 16, 1926, and below 100 cfs Nov. 17, 1926, to Sept. 30, 1928, published in WSP 622, 642, and 662, have been found subject to considerable error and should not be used. Gage-height records collected at site 2,000 ft upstream at different datum July 1, 1910, to Apr. 30, 1914, and at present site and datum since May 1, 1914, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 76.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 28, 1932, staff gage at highway bridge at same datum.

Average discharge.--31 years (1923-54), 501 cfs.

Extremes.--Maximum discharge during year, 6,340 cfs Jan. 24 (gage height, 15.22 ft); minimum, 10 cfs Sept. 21 (gage height, 0.10 ft).

1923-54: Maximum discharge, 12,600 cfs Dec. 2, 1934, Aug. 18, 1940; maximum gage height, 17.72 ft Aug. 18, 1940; minimum discharge, 10 cfs Oct. 19, 1933, Sept. 21, 1954.

The flood of Apr. 19, 1910, reached a stage of 20.1 ft, present datum (from floodmarks of Atlantic Coast Line Railroad Co.) at site 2,000 ft upstream. Flood of July 24, 1919, reached a stage of 19.6 ft (discharge, 20,300 cfs).

Revisions.--The maximum discharge observed for the water year 1928 has been revised to 9,850 cfs Sept. 20, 1928 (gage height, 16.7 ft), superseding figure published in WSP 662.

Remarks.--Records good. Slight diurnal fluctuation and some regulation at low flow caused by mills above station.

Revisions (water years).--WSP 872: 1935(M). WSP 1172: Drainage area. Figures of discharge for periods listed above in "Records available" as unreliable, and published in WSP 622, 642, and 662, are subject to considerable error because of indefinite stage-discharge relation and doubtful gage-height record. Revised figures of discharge, in cubic feet per second, for the water years 1932-33, 1935, superseding those published in WSP 727, 742 and 782, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1931		1932-Con.		1932-Con.	
Dec. 26	250	July 18	40	Sept.14	18
27	180	19	40	15	15
28	150	20	38	16	13
29	200	21	38	17	13
30	170	22	36	18	13
31	200	23	36		
		24	35	1933	
1932		25	35	July 22	71
Jan. 1	250	26	35		
July 14	50	27	35	1934	
15	46	28	35	Dec. 1	6,990
16	44	Sept.12	28	2	11,900
17	42	13	22	3	8,580

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
December 1931	385	78	164	0.315	0.36
Calendar year 1931	5,900	42	337	.647	8.78
January 1932	2,220	152	557	1.07	1.23
July	420	35	78.4	.150	.17
September	80	12	28.9	.055	.06
Water year 1931-32	4,160	12	262	.503	6.85
July 1933	383	51	120	.230	.26
Water year 1932-33	2,660	14	347	.666	9.04
Calendar year 1933	2,660	11	284	.545	7.39
December 1934	11,900	271	1,391	2.67	3.08
Calendar year 1934	11,900	44	442	.848	11.55
Water year 1934-35	11,900	63	632	1.21	16.47

Fishing Creek near Enfield, N. C.--Continued

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Nov. 24, Dec. 5, 13, 14, 18, Jan. 15, 16, 19-22, 30, 31, Feb. 21, 24, 25, Mar. 1, 2, 14, 15, 17, 18, 31, Apr. 3, 4, 17, 18, May 8-10, 14, 15, 17, 20, 21, 24, 25, June 16-18, Aug. 3)

0.1	10	10.0	1,720
.5	49	12.0	2,400
1.0	95	13.0	3,000
2.0	197	14.0	4,200
4.0	465	15.0	5,950
7.0	1,020		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	55	103	254	760	766	1,780	219	360	86	41	39
2	90	78	99	224	*644	1,550	*1,880	214	272	81	40	34
3	68	70	98	202	591	1,750	1,450	*208	236	80	216	31
4	62	65	102	195	540	1,630	904	242	214	76	254	29
5	*58	64	236	192	510	1,260	626	332	192	77	165	26
6	56	74	375	188	480	860	540	317	173	72	103	24
7	54	82	284	186	435	662	510	248	161	*62	78	23
8	54	104	284	179	420	574	480	871	153	62	64	22
9	54	118	236	173	405	510	525	1,270	145	62	55	21
10	55	118	195	170	390	480	557	704	142	62	48	19
11	54	112	188	192	375	465	480	390	161	60	44	19
12	55	115	230	284	368	435	435	290	146	58	41	13
13	54	118	826	375	346	405	420	254	144	58	39	17
14	54	104	1,280	310	324	1,070	390	478	156	57	37	17
15	56	94	1,200	586	324	2,400	360	1,220	197	54	36	*29
16	56	87	1,140	2,390	332	2,590	353	1,330	628	54	*34	37
17	55	85	1,120	3,620	339	1,640	408	855	1,770	55	*34	23
18	52	86	841	3,890	346	880	1,000	540	1,160	54	39	19
19	53	85	412	3,010	324	626	1,030	450	645	56	37	18
20	52	87	303	1,390	303	591	626	906	547	55	39	12
21	52	85	272	1,260	1,410	662	450	2,590	346	54	39	10
22	51	86	272	2,760	3,750	591	375	3,190	197	55	39	12
23	50	98	272	5,060	3,390	495	346	3,000	165	56	45	12
24	44	192	260	6,340	1,560	450	324	1,680	147	62	51	12
25	42	296	236	6,140	870	435	296	752	135	71	52	19
26	45	219	224	5,230	644	435	310	465	130	73	46	21
27	52	167	219	3,620	540	420	324	375	121	65	46	21
28	55	136	214	2,920	480	465	266	324	113	61	52	19
29	57	118	208	2,650	-	574	242	303	106	51	41	19
30	56	109	236	1,760	-	666	224	439	94	46	42	*18
31	61	-	266	1,060	-	1,220	-	495	-	43	41	-
Total	1,786	3,307	12,231	56,810	21,200	27,557	17,911	24,951	9,156	1,918	1,938	635
Mean	57.6	110	395	1,833	757	889	597	805	305	61.9	62.5	21.2
Cfsm	0.111	0.211	0.758	3.52	1.45	1.71	1.15	1.55	0.585	0.119	0.120	0.041
In.	0.13	0.24	0.87	4.06	1.51	1.97	1.28	1.78	0.65	0.14	0.14	0.05

Calendar year 1953: Max 3,190 Min 25 Mean 462 Cfsm 0.887 In. 12.04
Water year 1953-54: Max 6,340 Min 10 Mean 492 Cfsm 0.944 In. 12.82

* Discharge measurement made on this day.

Tar River at Tarboro, N. C.

Location.--Lat 35°53'40", long. 77°32'00", near right bank on downstream end of pier of bridge on U. S. Highway 64 in Tarboro, Edgecombe County, 6½ miles downstream from Fishing Creek, and at mile 46.2.

Drainage area.--2,140 sq mi, approximately.

Records available.--July 1896 to December 1900, October 1931 to September 1954. Gage-height records collected at same site since 1905 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 10.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to December 1900 chain gage at Atlantic Coast Line Railroad bridge 600 ft downstream at different datum. Oct. 1 to Dec. 8, 1931, chain gage at site 100 ft upstream at present datum.

Average discharge.--27 years, 2,243 cfs.

Extremes.--Maximum discharge during year, 23,600 cfs Jan. 27; maximum gage height, 27.43 ft Jan. 28; minimum discharge, 53 cfs Sept. 28 (gage height, 0.71 ft).
1896-1900, 1931-54: Maximum discharge, 37,200 cfs Aug. 20, 1940 (gage height, 31.77 ft); minimum, 36 cfs Oct. 17, 22, 1933 (gage height, 0.45 ft).
Maximum stage known, 34.0 ft July 27, 1919 (present datum), from floodmarks 20 ft downstream (discharge, 52,800 cfs, from rating curve extended above 38,000 cfs).

Remarks.--Records good. Some diurnal fluctuation at low flow caused by mills above station. Town of Henderson diverted an average of 2.2 cfs during the water year out of basin above station. Town of Tarboro diverts about 1 cfs for municipal supply. Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 1172: Drainage area. WSP 1273: 1899, 1900, 1932-33.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Dec. 14, 15, 20, Jan. 16-18, 24-26, 30, 31, Feb. 1-4, 22-25, 27, 28, Mar. 1, 7, 8, 15, 16, 20, 21, 31, Apr. 1, 6, 7, 9, 19, 21, May 9, 21-23, 26-29, June 17, 19, 22)

Oct. 1 to Jan. 28

1.4	179	10.0	4,080
2.0	320	13.0	5,980
3.0	636	16.0	8,050
4.0	1,030	19.0	10,800
6.0	1,910	23.0	15,800
8.0	2,920	27.0	22,500

Jan. 29 to Sept. 30

0.7	52	1.5	188
.8	63	2.0	314
1.0	90	3.0	636

Note.--Same as preceding table above 3.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	870	230	376	1,290	11,600	3,910	5,360	910	1,680	371	206	227
2	548	236	*346	1,250	8,710	4,200	6,380	930	1,460	348	173	136
3	430	266	365	1,120	6,170	5,320	7,330	790	1,200	297	403	167
4	346	236	357	1,010	4,250	6,320	7,910	790	1,070	314	436	142
5	310	250	378	970	3,480	7,190	7,780	810	970	348	950	165
6	298	290	462	930	2,980	7,620	5,320	1,030	790	314	910	105
7	*281	315	750	910	2,640	6,120	3,680	1,200	750	224	600	89
8	288	250	870	870	2,430	4,410	3,140	1,070	636	*249	371	126
9	276	302	770	830	2,230	3,480	4,070	1,460	565	270	345	128
10	266	397	711	790	2,130	2,920	4,440	2,280	600	254	259	98
11	264	397	673	790	2,040	2,590	3,720	2,330	548	229	236	90
12	253	392	636	1,030	1,950	2,330	3,140	1,770	565	259	222	93
13	255	400	790	1,290	1,860	2,130	2,700	1,460	565	244	208	105
14	250	392	1,820	1,420	1,730	2,090	2,430	1,510	565	206	163	90
15	243	373	3,480	1,550	1,680	3,240	2,180	1,910	512	178	171	75
16	239	354	4,440	3,530	1,640	4,770	2,000	2,810	548	303	186	66
17	218	349	5,260	6,370	1,590	5,720	1,860	3,600	1,320	365	*188	*66
18	230	312	5,320	8,230	1,590	6,520	1,910	3,720	1,730	532	167	128
19	223	308	3,960	9,210	1,590	6,450	3,040	2,980	2,920	750	142	92
20	230	310	2,980	11,000	1,510	4,880	3,480	2,810	3,900	436	190	84
21	220	305	2,230	12,100	1,550	4,050	2,560	4,070	4,140	320	171	104
22	207	300	1,860	11,500	3,430	3,250	2,040	6,100	2,400	281	186	100
23	227	315	1,640	12,100	6,370	2,860	1,770	7,920	1,640	289	208	*73
24	209	315	1,460	16,200	8,620	2,480	1,640	9,030	1,460	256	184	63
25	253	338	1,330	19,400	10,800	2,230	1,510	9,950	1,120	286	182	90
26	186	548	1,250	22,500	10,600	2,090	1,330	8,230	810	272	186	83
27	227	618	1,200	*23,100	8,160	2,000	1,250	6,170	582	308	208	62
28	188	530	1,120	*23,300	5,680	2,040	1,200	3,810	495	272	201	59
29	230	449	1,030	22,300	-	2,280	1,160	2,280	462	215	459	82
30	211	418	1,120	18,600	-	2,640	990	1,820	388	272	348	*66
31	225	-	1,250	14,800	-	4,070	-	1,640	-	201	283	-
Total	8,701	10,495	50,234	250,290	119,210	122,200	97,300	97,190	36,391	9,463	9,142	3,054
Mean	281	350	1,620	8,074	4,258	3,942	3,243	3,135	1,213	305	295	102
Cfsm	0.131	0.164	0.757	3.77	1.99	1.84	1.52	1.46	0.567	0.143	0.138	0.048
In.	0.15	0.18	0.87	4.35	2.07	2.12	1.69	1.69	0.63	0.16	0.16	0.05

Calendar year 1953: Max 9,660 Min 115 Mean 2,010 Cfsm 0.939 In. 12.76
Water year 1953-54: Max 23,300 Min 59 Mean 2,229 Cfsm 1.04 In. 14.12

* Discharge measurement made on this day.

Herring Run near Washington, N. C.

Location (revised).--Lat 35°34'03", long. 77°01'09", on left bank 10 ft downstream from bridge on county road, 1 mile upstream from bridge on U. S. Highway 264, 1¼ miles upstream from mouth, and 2¾ miles northeast of Washington, Beaufort County.

Records available.--January 1950 to September 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2 ft (from topographic map). Prior to May 8, 1951, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 120 cfs Jan. 16 (gage height, 8.87 ft); minimum, 0.7 cfs Aug. 1, 26, 27.

1950-54: Maximum discharge, 271 cfs June 27, 1951 (gage height, 11.21 ft); minimum, 0.7 cfs Nov. 18, 19, 1950, Oct. 22-24, 1951, Nov. 3, 4, 1952, Aug. 1, 26, 27, 1954.

Flood in 1946 reached a stage of 17 ft, from information by local resident (discharge not determined).

Remarks.--Records fair. Natural runoff affected by ditches and canals above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

5.0	0.5	6.0	22
5.1	.9	7.0	42
5.3	2.1	8.0	77
5.5	5.0	8.1	81
5.7	12		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	1.2	2.4	18	20	20	39	4.1	3.0	0.9	1.3	1.0
2	4.1	1.1	2.3	16	19	18	31	3.6	2.8	.9	1.2	1.0
3	3.6	1.0	2.1	14	17	18	26	3.2	2.5	1.1	*.8	.9
4	3.0	1.0	2.3	12	15	19	22	3.1	2.1	1.0	.8	.9
5	2.6	1.2	2.4	11	14	15	21	2.9	2.0	1.4	.8	.8
6	2.3	1.5	2.6	10	13	12	18	2.6	1.8	2.6	.8	.8
7	*3.2	1.8	3.0	9.0	12	10	14	2.4	1.7	1.7	.8	.8
8	3.4	1.8	2.9	8.5	12	9.5	14	2.8	1.6	1.5	.8	.8
9	3.0	1.6	2.8	7.5	11	8.5	29	2.6	1.5	1.3	.8	*.8
10	2.8	1.7	3.7	7.0	10	7.5	25	2.5	1.4	1.2	.8	2.0
11	2.4	1.7	3.7	14	9.5	6.6	24	2.3	1.4	1.2	.8	1.4
12	2.2	1.9	3.9	24	9.0	6.2	27	2.2	1.3	1.1	.8	.9
13	2.0	1.9	6.6	18	8.5	6.0	23	2.3	1.2	1.0	.8	.8
14	1.9	1.9	27	*15	7.5	6.0	20	4.6	1.2	1.0	.8	.8
15	1.8	1.8	*15	21	7.0	5.6	16	8.5	1.2	1.8	.9	.8
16	1.8	1.7	10	77	6.6	5.4	13	7.0	2.0	9.5	.8	.8
17	1.6	1.7	7.5	42	6.6	5.0	22	6.4	*1.4	2.3	.8	.8
18	1.5	*1.5	6.6	30	6.4	5.0	19	5.2	1.2	1.7	.8	.8
19	1.5	1.4	6.0	26	6.2	5.0	14	4.8	1.2	1.5	.8	.8
20	1.5	1.4	5.6	*23	6.0	*5.8	9.5	19	1.2	1.3	.8	.9
21	1.4	1.4	5.6	22	6.2	5.8	7.5	18	1.2	1.2	.8	1.4
22	1.4	1.4	5.8	38	7.0	5.2	6.8	10	1.1	1.2	.8	1.5
23	1.3	8.0	5.8	80	6.8	5.0	6.2	7.0	1.0	1.1	.8	.8
24	1.2	6.0	5.6	41	7.0	5.0	5.8	6.0	1.0	1.0	.8	.8
25	1.2	5.2	15	35	9.0	5.0	5.4	5.2	1.0	1.1	.8	.8
26	1.2	4.6	28	31	8.5	4.8	5.2	4.6	.9	1.0	.8	.8
27	1.2	3.7	18	28	7.0	5.2	5.0	3.9	1.0	1.0	1.2	.8
28	1.2	3.1	16	25	6.6	22	4.5	3.6	1.0	1.0	.9	.8
29	1.2	2.9	18	23	-	21	4.3	3.7	1.0	.9	.8	.8
30	1.2	2.6	26	21	-	25	4.1	3.6	1.0	.9	4.4	.8
31	1.2	-	23	21	-	28	-	3.2	-	.9	*1.6	-
Total	64.7	69.7	285.2	768.0	274.4	326.1	481.3	160.9	43.9	47.3	30.7	27.9
Mean	2.09	2.32	9.20	24.8	9.80	10.5	16.0	5.19	1.46	1.53	0.99	0.93
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 58 Min 0.8 Mean 6.36 Cfsm - In. -
Water year 1953-54: Max 80 Min 0.8 Mean 7.07 Cfsm - In. -

Peak discharge (base, 120 cfs).--Jan. 16 (9 a.m.) 120 cfs (8.87 ft).
* Discharge measurement made on this day.

Eno River at Hillsboro, N. C.

Location.--Lat 36°04', long. 79°06', on right bank 1,000 ft downstream from bridge on State Highway 86, at Hillsboro, Orange County, and 2 miles downstream from Sevenmile Creek.

Drainage area.--66.5 sq mi.

Records available.--November 1927 to September 1954 (fragmentary prior to April 1930).

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 487.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 29, 1937, staff gage at same site and datum with natural control.

Average discharge.--24 years (1930-54), 64.3 cfs.

Extremes.--Maximum discharge during year, 1,640 cfs Jan. 22 (gage height, 10.94 ft); minimum, 0.2 cfs on several days in September.

1927-54: Maximum discharge, 11,000 cfs Sept. 18, 1945 (gage height, 20.01 ft), from rating curve extended above 6,000 cfs by logarithmic plotting; minimum, about 0.1 cfs Sept. 5, 1953 (result of emergency municipal water-supply diversion upstream).

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated. The maximum discharge for the water year 1929, published in WSP 682, was exceeded by the flood of Feb. 28, 1929, which occurred during the period of no gage-height record, and is not determined.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
662	1928	Sept. 19, 1928	3,880	g16.0
727	1932	Mar. 6, 1932	3,610	g15.7
742	1933	Nov. 26, 1932	1,690	g11.1
757	1934	Apr. 9, 1934	2,240	13.00
852	1938	July 24, 1938	‡3,610	15.80

g From graph based on gage readings.
‡ Not previously determined. May have been higher during period of no gage-height record July 26, 1938.

Remarks.--Records good except those below 5 cfs, which are poor. Diversion of about 0.25 cfs for Hillsboro water supply is partly returned above station as sewage.

Revisions (water years).--WSP 1032: 1939(M), 1944(M). WSP 1203: 1930(M). Revised figures of discharge, in cubic feet per second, for periods in the water years 1928-29, 1932, superseding those published in WSP 662, 682, 727, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1927		1928-Con.		1932-Con.	
Dec. 3	572	Sept.19	2,510	Sept.10	2.8
4	641	20	691	11	2.6
16	559			12	1.8
		1929		13	1.3
1928		July 13	516	14	1.3
Apr. 11	574			15	1.6
27	664	1932		16	d2.2
28	1,520	Sept. 3	3.8	17	d2.1
Aug. 11	404	4	3.8	18	d2.0
16	764	5	3.2	19	d1.8
Sept. 3	474	6	3.8	20	d1.7
5	574	7	5.2	21	d1.6
6	1,930	8	4.5	22	d1.5
18	502	9	4.0	23	d1.4

d Doubtful gage-height record; discharge estimated on basis of discharge measurement and records for nearby streams.

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
December 1927.....	641	18	161	2.42	2.79
April 1928.....	1,520	29	174	2.62	2.92
August.....	764	4.7	79.7	1.20	1.38
September.....	2,510	30	292	4.39	4.90
Water year 1927-28.....	2,510	4.7	†94.2	1.42	19.27
Calendar year 1928.....	2,510	4.7	82.6	1.24	16.89
September 1932.....	5.2	1.2	2.39	.036	.04
Water year 1931-32.....	1,820	1.2	45.9	.690	9.41
Calendar year 1932.....	1,820	1.2	69.4	1.04	14.22

† Partly estimated.

Eno River at Hillsboro, N. C.--Continued

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 15				May 16 to Sept. 9				Sept. 10-30	
1.0	1.3	2.0	38	0.5	0.2	1.1	3.8	0.90	0
1.1	3.1	2.5	81	.7	.3	1.2	6.2	.95	.5
1.2	5.3	3.0	145	.9	.5	1.4	12	1.00	1.3
1.4	11	4.0	312	1.0	1.9	1.6	19		
1.6	19	6.0	655	Note.--Same as preceding table above 1.6 ft.					

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	3.8	2.1	6.1	36	96	306	19	15	5.5	2.3	0.5
2	2.3	3.8	2.1	5.9	32	67	*105	18	14	5.0	3.4	.4
3	2.3	3.3	2.3	5.6	31	53	74	31	13	5.2	*7.3	*.3
4	2.6	3.1	4.2	5.6	29	74	56	79	13	6.8	6.8	.3
5	2.6	3.5	5.1	5.3	27	46	47	31	12	6.5	3.8	.3
6	2.4	4.2	6.1	5.3	25	38	44	26	11	5.2	2.5	.2
7	2.7	4.2	6.4	5.3	24	32	42	19	11	4.8	2.5	*.2
8	2.6	4.2	5.3	5.1	22	29	42	19	11	4.3	2.3	.2
9	*2.4	4.4	4.9	5.1	22	27	85	20	15	4.3	2.3	.2
10	2.6	4.2	6.8	5.3	21	26	50	18	82	4.3	1.7	*.6
11	2.6	4.4	5.6	8.1	21	24	42	16	68	3.8	1.4	.3
12	2.7	4.2	18	14	19	23	42	16	22	3.8	1.1	.2
13	2.6	4.2	32	12	18	23	35	16	16	3.8	1.0	.2
14	2.4	4.2	127	10	18	763	32	74	14	3.6	.8	.2
15	2.7	3.8	33	35	18	170	31	162	32	8.9	.5	.2
16	2.4	3.5	16	695	19	83	35	64	17	28	.5	.2
17	2.4	3.1	11	130	21	60	236	39	15	11	1.1	.2
18	2.6	3.3	7.8	54	*19	49	89	29	15	5.7	3.2	.2
19	2.6	3.5	6.4	35	18	48	54	29	13	5.2	4.5	.2
20	2.4	3.3	6.1	27	18	136	42	142	12	5.2	2.5	.8
21	2.6	5.9	6.4	602	72	75	35	177	11	6.8	1.9	.8
22	2.6	4.0	7.0	754	81	51	31	65	9.9	6.5	1.7	*.2
23	2.7	4.2	7.0	479	44	44	29	41	9.0	5.7	1.7	.2
24	2.9	4.0	6.4	151	35	40	26	31	*8.4	5.0	1.3	.2
25	2.6	4.2	6.1	152	30	37	26	26	7.6	5.0	1.1	.2
26	2.9	*3.3	5.6	227	27	35	25	23	7.0	4.5	*.8	.2
27	3.1	3.3	5.6	183	24	34	22	20	6.8	3.8	1.4	.2
28	3.3	3.1	5.3	93	23	42	21	19	6.5	3.4	.8	.2
29	4.6	2.9	5.9	62	-	44	19	18	6.0	2.8	.5	.2
30	3.8	2.6	6.4	49	-	46	19	18	5.7	2.5	.4	*.2
31	3.5	-	6.7	42	-	232	-	16	-	2.3	.5	-
Total	84.9	113.7	376.6	3,868.7	794	2,547	1,742	1,321	498.9	179.2	63.6	8.5
Mean	2.74	3.79	12.1	125	28.4	82.2	58.1	42.6	16.6	5.78	2.05	0.28
Cfsm	0.041	0.057	0.182	1.88	0.427	1.24	0.874	0.641	0.250	0.087	0.031	0.0042
In.	0.05	0.06	0.21	2.16	0.44	1.42	0.97	0.74	0.28	0.10	0.04	0.005

Calendar year 1953: Max 1,540 Min 0.2 Mean 55.0 Cfsm 0.827 In. 11.22
Water year 1953-54: Max 763 Min 0.2 Mean 31.8 Cfsm 0.478 In. 6.48

Peak discharge (base, 1,500 cfs).--Jan. 22 (9 p.m.) 1,640 cfs (10.94 ft).
* Discharge measurement made on this day.

Flat River at Bahama, N. C.

Location.--Lat 36°11'00", long. 78°52'45", on right bank half a mile upstream from Lake Michie, 1¼ miles upstream from highway bridge, 1¼ miles north of Bahama, Durham County, and 1½ miles upstream from Dial Creek.
Drainage area.--150 sq mi.
Records available.--July 1925 to September 1954.
Gage (revised).--Water-stage recorder and concrete control. Altitude of gage is 356 ft (from topographic map). Prior to Oct. 22, 1925, staff gage at same site at datum 0.58 ft lower.
Average discharge.--29 years, 143 cfs.
Extremes.--Maximum discharge during year, 4,910 cfs Mar. 14 (gage height, 7.12 ft); minimum, 0.5 cfs Sept. 13 (gage height, 0.76 ft).
1925-54: Maximum discharge (revised), about 20,000 cfs July 26, 1938 (gage height not determined), computed from records of nearby stations; minimum, 0.37 cfs Sept. 26, 27, 1932 (gage height, 0.23 ft).
Revisions.--Figures of maximum discharge for the water years 1928 and 1938 have been revised to 8,670 cfs Apr. 28, 1928 (gage height, 9.26 ft), and about 20,000 cfs July 26, 1938, superseding figures published in WSP 662 and 852, respectively.
Remarks.--Records good except those for periods of no gage-height record, which are poor. Some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 miles above station.
Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1926, 1938, and 1946, superseding those published in WSP 622, 852, and 1052, are given herewith:

June 24, 1926	100
May 25, 1938	80
July 27, 1938	700
Apr. 27, 1946	88

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
June 1926	-	100	6.4	16.2	0.108	0.12
Water year 1925-26	-	1,840	1.6	81.2	.541	7.34
Calendar year 1926	-	2,250	1.9	93.4	.623	8.45
May 1938	1,111	80	19	35.8	.239	.28
July	22,424	9,000	56	723	4.82	5.56
Water year 1937-38	67,345	9,000	16	185	1.23	16.70
Calendar year 1938	70,623	9,000	16	193	1.29	17.50
April 1946	2,267	131	52	75.6	.504	.56
Water year 1945-46	47,601.3	2,780	5.1	130	.867	11.80
Calendar year 1946	36,281.8	2,780	5.1	99.4	.663	8.99

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	1.9	3.9	9.2	a70	1,190	*1,150	36	28	11	7.9	2.3
2	6.7	1.7	4.2	8.7	a60	*328	332	35	24	10	9.2	2.3
3	5.5	1.5	4.2	8.3	a60	*223	205	35	22	8.7	46	2.1
4	4.5	1.2	5.9	7.9	a50	266	153	53	23	7.9	31	2.1
5	3.9	1.5	4.9	7.5	a50	145	125	50	20	7.5	21	1.9
6	3.3	1.5	4.2	6.7	a50	112	112	35	18	6.7	16	1.5
7	2.8	1.5	5.5	5.9	47	90	103	32	20	6.3	13	1.5
8	*2.8	1.5	5.2	5.5	a45	80	96	31	16	5.9	12	1.2
9	2.8	1.4	*6.7	5.2	a45	71	88	30	16	5.9	11	1.2
10	2.5	*1.4	7.9	5.2	a40	67	78	29	18	5.5	8.3	*1.0
11	2.5	1.5	7.9	7.5	a40	61	73	27	19	5.2	6.3	.8
12	2.5	1.5	10	14	a40	55	90	*26	19	5.2	5.2	.6
13	2.3	1.7	a25	31	a35	52	78	25	19	4.9	4.5	.6
14	2.3	1.7	a300	24	30	2,970	69	69	37	4.5	4.2	.6
15	2.3	1.7	a100	53	31	545	67	274	26	*151	3.6	.6
16	2.3	1.7	a50	1,350	33	226	84	120	84	600	3.3	.6
17	2.3	1.9	a40	266	34	159	573	65	1,070	45	3.6	.7
18	2.3	1.9	a30	109	35	128	242	45	103	25	8.7	.8
19	2.1	1.7	a20	69	32	112	125	50	52	23	*9.2	.8
20	2.1	1.7	16	55	31	238	90	238	37	16	11	1.0
21	1.9	3.3	a15	*936	297	171	73	434	32	14	10	1.1
22	1.5	3.0	a14	1,430	262	109	65	150	29	15	8.3	.8
23	1.1	2.8	a13	1,070	112	93	59	78	*23	24	6.7	.7
24	1.4	2.8	a12	332	76	83	53	57	20	19	5.5	.7
25	1.4	*2.8	a12	328	63	76	49	46	18	16	4.2	.7
26	1.2	2.8	a12	618	*55	73	47	40	16	16	*3.9	.6
27	*1.2	3.0	12	555	49	69	43	37	14	13	4.2	.6
28	1.2	3.0	a10	249	47	73	40	34	16	11	3.9	.6
29	1.5	3.0	a9.6	145	-	88	38	33	13	10	3.3	.8
30	1.9	3.3	9.6	103	-	86	36	33	12	9.2	3.0	*.9
31	1.9	-	9.2	73	-	1,120	-	31	-	8.3	2.8	-
Total	82.3	61.9	779.9	7,887.6	1,819	9,159	4,436	2,278	1,864	1,110.7	290.8	31.7
Mean	2.65	2.06	25.2	254	65.0	295	148	73.5	62.1	35.8	9.38	1.06
Cfsm	0.018	0.014	0.168	1.69	0.433	1.97	0.987	0.490	0.414	0.239	0.063	0.0071
In.	0.02	0.02	0.19	1.96	0.45	2.27	1.10	0.56	0.46	0.28	0.07	0.008

Calendar year 1953: Max 3,970 Min 1.1 Mean 137 Cfsm 0.913 In. 12.42
Water year 1953-54: Max 2,970 Min 0.6 Mean 81.6 Cfsm 0.544 In. 7.39

Peak discharge (base, 4,500 cfs).--Mar. 14 (3:30 p.m.) 4,910 cfs (7.12 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for nearby stations.

Dial Creek near Bahama, N. C.

Location.--Lat 36°10'35", long. 78°51'20", on right bank three-eighths of a mile upstream from mouth and Lake Michie and 1½ miles northeast of Bahama, Durham County.
Drainage area.--4.9 sq mi, approximately.
Records available.--October 1925 to September 1954. Prior to October 1929, published as "at Bahama."
Gage.--Water-stage recorder and V-notch sharp-crested weir. Altitude of gage is 356 ft (from topographic map).
Average discharge.--29 years, 4.34 cfs.
Extremes.--Maximum discharge during year, 284 cfs Mar. 14 (gage height, 3.88 ft), from rating curve extended above 270 cfs on basis of slope-area determination of peak flow and computation of peak flow over dam at gage height 4.83 ft; no flow for several days in August and September.
1925-54: Maximum gage height, 7.60 ft May 24, 1940 (discharge not determined); no flow at times in many years.
Remarks.--Records fair.
Revisions (water years).--WSP 1233: 1926-40, 1941-42(M), 1944-45, 1946-47(M), 1948-50(P). Revised figures of discharge, in cubic feet per second, for water year 1931, superseding those published in WSP 712, 1233, are given herewith:

1931
June 6..... 0.71
July 24..... 9.5
25..... 4.8

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
June 1931.....	14.9	0.14	1.39	0.284	0.32
July.....	9.5	.03	.609	.124	.14
Water year 1930-31.....	68	0	2.14	.437	5.93
Calendar year 1931.....	68	0	1.99	.406	5.51

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	1.3	4.75
.1	.01	1.6	8.0
.2	.07	2.0	14
.3	.17	2.3	26
.4	.30	2.6	50
.6	.73	3.0	95
.8	1.38	3.2	125
1.0	2.42		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.21	0.25	0.35	0.73	3.15	62	*22	1.60	1.26	0.27	0.06	0
2	.21	.24	.35	.70	3.01	12	9.2	1.46	1.18	.25	.20	0
3	.20	.24	.35	.70	2.94	13	6.8	2.50	1.05	.21	3.26	0
4	.20	.24	.70	.68	2.66	8.4	5.3	4.83	.96	.21	.29	0
5	.21	.24	1.28	.68	2.48	6.0	4.75	1.95	.87	.20	.17	0
6	.21	.30	.73	.68	2.30	4.93	4.39	1.70	.81	.15	.13	0
7	.18	.37	1.05	.66	2.12	4.30	4.21	1.55	.81	.14	.07	0
8	.16	.35	.63	.66	2.06	3.79	3.95	1.80	.78	.12	.04	0
9	.17	.32	.53	.66	2.12	3.47	3.79	1.60	.87	.20	.02	0
10	.20	.30	.94	.73	1.95	3.31	3.39	1.46	.87	.24	.01	0
11	.22	.30	.72	1.42	1.95	3.08	3.55	1.34	1.18	.15	.01	0
12	.21	.30	3.51	1.30	1.75	2.80	3.39	*1.26	.81	.08	0	0
13	.18	.30	2.72	.93	1.65	2.87	2.94	1.56	.68	.06	0	0
14	.16	.30	19	.96	1.75	110	2.94	8.1	.73	.04	0	0
15	.15	.30	2.81	8.8	1.75	14	2.87	10	.66	4.92	0	0
16	.17	.30	1.50	49	1.80	7.9	7.0	4.11	3.75	3.76	0	0
17	.17	.32	1.11	8.3	2.18	5.9	12	2.60	7.8	.44	.95	0
18	.17	.30	.93	3.81	1.75	5.1	5.4	3.25	1.60	.34	1.31	0
19	.17	.30	.84	2.94	1.70	5.1	3.95	8.5	1.15	.80	.20	0
20	.18	.30	.81	2.54	1.75	9.0	3.31	20	.93	.48	.14	.08
21	.15	.91	.93	33	20	5.3	2.94	17	.78	.48	.14	.02
22	.14	.66	1.02	69	6.6	4.39	2.73	6.1	.70	.44	.11	.01
23	.14	.50	.90	26	4.84	4.21	2.54	3.87	.66	.48	.07	.01
24	.15	.44	.78	11	3.87	3.87	2.30	2.94	.58	.30	.06	0
25	.16	*.41	.73	14	3.39	3.63	2.24	2.48	.48	.26	.04	0
26	.15	.37	.75	18	2.94	3.39	2.06	2.06	.44	.22	.01	0
27	.16	.35	.70	17	2.54	3.08	1.85	1.85	.39	.18	.12	0
28	.21	.35	.70	8.2	7.8	4.39	1.70	1.75	.30	.14	.11	0
29	.30	.34	.81	5.4	-	3.55	1.65	1.65	.29	.10	.03	0
30	.34	.34	.99	4.39	-	7.0	1.70	1.96	.27	.05	.01	0
31	.27	-	.84	3.63	-	25	-	1.46	-	.03	0	-
Total	5.90	10.54	50.01	296.50	94.80	354.76	136.84	124.29	33.64	15.74	7.56	0.12
Mean	0.190	0.351	1.61	9.56	3.39	11.4	4.56	4.01	1.12	0.508	0.244	0.004
Cfsm	0.039	0.072	0.329	1.95	0.692	2.33	0.931	0.818	0.229	0.104	0.050	0.00082
In.	0.04	0.08	0.38	2.25	0.72	2.69	1.04	0.94	0.26	0.12	0.06	0.0009

Calendar year 1953: Max 131 Min 0 Mean 4.73 Cfsm 0.965 In. 13.07
Water year 1953-54: Max 110 Min 0 Mean 3.10 Cfsm 0.633 In. 8.58

Peak discharge (base, 160 cfs).--Jan. 22 (8:30 p.m.) 176 cfs (3.48 ft); Mar. 14 (8:30 a.m.) 284 cfs (3.88 ft).
* Discharge measurement made on this day.

Flat River at dam, near Bahama, N. C.

Location.--Lat 36°08'55", long. 78°49'43", on right bank 900 ft downstream from Durham municipal dam, 3 miles southeast of Bahama, Durham County, and 5 miles upstream from confluence with Eno River.

Drainage area.--171 sq mi.

Records available.--August 1927 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 255.05 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 19, 1927, at datum 1.30 ft higher.

Average discharge.--27 years, 156 cfs.

Extremes.--Maximum discharge during year, 5,000 cfs Mar. 14 (gage height, 11.24 ft); minimum, 2.1 cfs Dec. 2 (gage height, 0.47 ft); minimum daily, 2.3 cfs on several days in October, November, and December.

1927-54: Maximum discharge, 19,700 cfs (revised) July 26, 1938 (gage height, 19.50 ft), from rating curve extended above 4,000 cfs on basis of computation of peak flow over Durham municipal dam at gage heights 13.60, 14.60, 16.70, and 19.50 ft; no flow Sept. 3-14, 1938 (result of construction work upstream).

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
662	1928	Apr. 28, 1928	8,560	14.6
682	1929	Feb. 28, 1929	7,230	13.74
697	1930	Oct. 2, 1929	12,400	16.72
727	1932	Mar. 7, 1932	5,720	12.54
757	1934	Sept. 8, 1934	12,000	16.46
802	1935	Dec. 1, 1934	6,060	12.82
802	1936	Jan. 19, 1936	7,650	13.98
822	1937	Apr. 26, 1937	7,800	14.10
852	1938	July 26, 1938	19,700	19.50
872	1939	Aug. 18, 1939	8,100	14.27

Remarks.--Records fair. Considerable regulation since 1926 by Lake Michie (usable capacity, 12,610 acre-ft) above station. An average of 13.9 cfs was diverted above station for Durham municipal water supply. About 6.2 cfs was returned as sewage to Neuse River 3 miles upstream from Northside gage.

Revisions (water years).--WSP 802: 1935. Revised figures of discharge, in cubic feet per second, for the water years 1928-30, 1934, 1944, superseding those published in WSP 662, 682, 697, 757, and 1002, are given herewith:

Date	Discharge	Date	Discharge
1927		1929-Con.	
Nov. 19	1.7	Oct. 3	1,720
1928		1934	
Apr. 27	1,580	Apr. 9	2,430
28	5,600	10	4,070
		Sept. 8	6,120
1929			
Feb. 28	4,610	1944	
Oct. 2	10,500	Jan. 9	29

Month	Cfs-days	Maximum	Minimum	Mean
November 1927	-	122	0.8	23.0
April 1928	-	5,600	91	432
Water year 1927-28	-	5,600	.7	187
Calendar year 1928	-	5,600	.4	159
February 1929	-	4,610	28	257
Water year 1928-29	-	4,610	.4	155
October 1929	-	10,500	35	530
Calendar year 1929	-	10,500	.5	219
Water year 1929-30	-	10,500	.7	158
April 1934	-	4,070	98	506
September	-	6,120	50	483
Water year 1933-34	-	6,120	.20	147
Calendar year 1934	71,916.55	6,120	.65	197
January 1944	3,051	267	.5	98.4
Water year 1943-44	54,547.5	6,090	-	149
Calendar year 1944	71,470.0	6,090	.5	195

Flat River at dam, near Bahama, N. C.--Continued

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 6)

Oct. 1 to Dec. 6		Dec. 7 to Sept. 30			
0.4	0.9	0.6	1.9	1.7	102
.5	2.8	.7	4.0	2.0	160
.6	6	.8	7.5	3.0	398
.7	10	.9	12	4.0	720
		1.0	19	6.0	1,560
		1.2	36	8.0	2,550
		1.4	58		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	2.5	2.3	3.3	121	907	*1,410	46	48	46	34	7.5
2	2.3	2.5	2.3	3.3	84	550	458	46	48	30	51	8.0
3	2.3	2.3	2.3	3.3	83	343	310	22	48	12	19	8.4
4	2.3	2.5	2.5	3.3	58	356	162	10	48	12	8.0	8.4
5	2.3	2.5	2.5	3.5	46	206	162	11	48	12	8.0	8.0
6	2.3	2.5	2.8	3.5	11	164	160	11	48	12	8.4	8.0
7	3	2.5	*3.3	3.3	9.8	160	124	11	21	12	8.4	8.0
8	*4	2.5	3.3	3.5	9.8	162	47	11	9.8	12	8.4	8.0
9	5	2.5	*3.1	3.3	9.8	162	81	11	9.8	12	8.4	10
10	5	2.5	3.1	3.5	12	76	104	11	13	12	8.4	11
11	5	2.8	3.1	3.5	9.8	46	103	11	19	12	8.4	11
12	5	2.8	3.3	3.3	9.4	46	47	*11	19	12	8.4	11
13	4	2.8	3.3	3.3	9.8	46	67	11	17	12	8.4	12
14	2.8	2.5	3.5	3.3	9.4	2,400	57	37	9.8	12	8.4	*12
15	2.8	2.5	3.3	4.0	9.4	1,120	47	47	9.8	*13	8.4	11
16	2.8	2.5	3.3	4.9	9.4	384	150	160	9.8	31	8.4	11
17	2.8	2.5	3.3	15	9.4	296	335	115	168	48	8.4	11
18	2.8	2.5	3.3	147	9.4	266	398	48	277	48	8.4	11
19	8	2.5	3.1	156	9.4	196	344	82	146	48	*7.5	11
20	2.5	2.8	3.1	105	9.4	198	160	298	51	32	7.5	21
21	2.5	2.8	2.9	*800	34	192	76	384	51	12	7.5	11
22	2.5	2.5	2.9	1,500	322	190	45	369	51	12	15	11
23	2.5	2.5	2.9	1,920	218	192	47	207	*54	12	7.5	10
24	2.5	2.5	3.3	443	160	194	47	123	52	12	7.5	11
25	2.5	*2.5	3.5	369	174	98	84	50	51	12	7.5	11
26	2.5	2.3	3.3	656	*143	46	102	50	47	12	*7.5	11
27	2.5	2.3	3.3	654	46	47	64	50	45	41	8.0	11
28	2.5	2.3	3.3	413	54	47	47	50	46	9.2	7.5	11
29	2.8	2.3	3.3	413	-	53	46	50	46	7.5	7.5	11
30	2.5	2.3	3.3	204	-	55	46	48	46	8.4	7.5	*11
31	2.5	-	3.3	198	-	347	-	48	-	8.4	7.5	-
Total	97.1	75.3	95.4	8,049.1	1,690.2	9,545	5,330	2,439	1,557.0	586.5	334.7	316.3
Mean	3.13	2.51	3.08	260	60.4	308	178	78.7	51.9	18.9	10.8	10.5
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 3,980 Min 0.5 Mean 145 Cfsm - In. -
Water year 1953-54: Max 2,400 Min 2.3 Mean 82.5 Cfsm - In. -

* Discharge measurement made on this day.

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Neuse River near Northside, N. C.

Location.--Lat 36°02'07", long. 78°44'59", on right bank 10 ft downstream from Fish Dam Bridge, 1½ miles downstream from Rocky Creek, 2½ miles downstream from Seaboard Air Line Railroad bridge, and 2½ miles south of Northside, Granville County.

Drainage area.--526 sq mi.

Records available.--July 1927 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 226.32 ft above mean sea level (levels by Corps of Engineers). Prior to June 2, 1928, chain gage at bridge 10 ft upstream at same datum. Since Sept. 29, 1950, auxiliary water-stage recorder at bridge on U. S. Highway 15, 4 miles upstream. Mar. 25, 1949, to Sept. 28, 1950, auxiliary wire-weight gage at same site.

Average discharge.--27 years, 536 cfs.

Extremes.--Maximum discharge during year, 7,620 cfs Jan. 23; maximum gage height, 20.83 ft Jan. 23; minimum discharge, 11 cfs Sept. 27 (gage height, 1.06 ft).

1927-54: Maximum discharge, 36,600 cfs Sept. 18, 1945; maximum gage height, 31.02 ft Sept. 18, 1945, from floodmark; minimum discharge, 3.1 cfs Sept. 20, 1932 (gage height, 0.87 ft).

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
662	1928	Apr. 28, 1928	15,800	24.4
682	1929	Mar. 1, 1929	13,800	23.50
757	1934	Apr. 10, 1934	14,000	23.60

Remarks.--Records fair. Moderate diurnal fluctuation caused by powerplant above station. Flow slightly regulated by Durham municipal dam. For diversion see page 120 for records for Flat River at dam near Bahama.

Revisions (water years).--WSP 822: Drainage area. WSP 1032: 1933(M), 1935-36, 1937(M), 1938-39, 1944(M). Revised figures of discharge, in cubic feet per second, for the water years 1928-31, 1933, superseding those published in WSP 662, 682, 697, 712, 742, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1927		1928-Con.		1929-Con.		1931-Con.	
Dec. 5	3,630	Sept. 23	1,480	July 14	4,060	Apr. 8	3,480
6	3,480	24	850	15	1,940	9	1,780
7	2,410			16	823	10	800
8	1,880	1929		Oct. 3	22,400	Aug. 3	940
18	2,260	Mar. 1	11,700	4	13,200	5	2,400
19	905	2	5,630	5	6,700	6	1,990
		3	2,790	6	2,980	11	670
1928		4	1,680	7	1,300	12	2,880
Mar. 19	3,140	5	4,440	8	750	13	2,340
20	1,260	6	11,000			14	1,440
Apr. 28	9,790	7	5,270	1930		15	3,450
29	9,520	8	2,610	Feb. 6	3,440	16	3,380
30	3,920	Apr. 17	4,280	7	1,630	17	1,120
Sept. 7	5,180	18	3,040	8	838		
8	3,480	19	1,090			1933	
9	1,420	June 28	2,940	1931		Apr. 18	3,330
20	13,500	29	3,630	Apr. 5	1,060		
21	7,910	30	2,540	6	3,340		
22	3,540	July 1	843	7	4,890		

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
December 1927	3,630	49	1,070	2.03	2.34
March 1928	3,140	172	609	1.16	1.34
April	9,790	212	1,300	2.47	2.77
September	13,500	90	1,810	3.45	3.85
Water year 1927-28	13,500	28	610	1.16	15.80
Calendar year 1928	13,500	28	522	.992	13.52
March 1929	11,700	519	2,130	4.05	4.66
April	4,280	196	745	1.42	1.58
June	3,630	137	673	1.28	1.43
July	4,060	132	639	1.21	1.40
Water year 1928-29	11,700	57	553	1.05	14.25
October 1929	22,400	142	2,290	4.35	5.01
Calendar year 1929	22,400	57	818	1.56	21.09
February 1930	3,440	420	836	1.59	1.65
Water year 1929-30	22,400	13	552	1.05	14.23
Calendar year 1930	3,440	11	279	.530	7.20

Neuse River near Northside, N. C.--Continued

Revised figures of discharge, in cubic feet per second, 1928-31, 1933--Continued

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
April 1931.....	4,890	388	991	1.88	2.10
August.....	3,450	174	1,050	2.00	2.29
Water year 1930-31....	4,890	11	373	.709	9.64
Calendar year 1931....	4,890	14	363	.690	9.35
April 1933.....	3,330	196	715	1.36	1.52
Water year 1932-33....	4,290	5.5	449	.854	11.59
Calendar year 1933....	3,330	5.9	271	.515	6.98

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Fall used as a factor Dec. 15, Jan. 17-19, 24-29, Feb. 23, Mar. 2, 3, 16, 17, Apr. 2, 3, 18, May 15)

Oct. 1-31		Nov. 1 to Sept. 30			
1.1	14	1.1	14	5.0	624
1.2	21	1.3	33	7.0	1,070
1.3	30	1.4	50	10.0	1,890
1.4	42	1.6	84	13.0	2,860
		2.0	138	17.0	4,600
		3.0	282	20.0	6,900

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	18	20	52	455	1,640	2,920	134	125	78	36	22
2	30	16	21	47	344	2,770	*2,670	130	118	76	82	21
3	26	16	21	42	321	1,350	1,120	129	113	50	*109	20
4	20	20	21	38	306	1,250	624	347	111	36	87	20
5	20	21	61	42	260	812	490	294	106	31	54	20
6	23	20	68	38	222	546	438	160	100	29	48	18
7	26	18	54	36	156	455	422	120	99	32	40	18
8	26	18	57	*36	151	406	313	155	73	40	33	19
9	*26	17	50	35	148	383	391	125	68	36	31	20
10	24	18	55	36	143	344	422	107	87	33	31	19
11	22	18	74	68	139	244	375	96	227	28	28	21
12	20	19	116	138	128	222	352	93	267	27	28	20
13	18	20	443	109	118	207	298	*90	138	*27	26	17
14	19	18	1,600	92	109	1,370	282	265	144	28	25	*18
15	20	17	1,420	448	107	3,940	244	1,040	98	38	23	18
16	20	15	395	2,920	111	3,180	246	712	99	261	52	19
17	19	15	164	3,910	117	1,190	1,360	527	303	192	36	18
18	18	17	102	1,640	*121	644	1,520	344	438	132	102	19
19	16	20	79	674	113	527	812	685	298	100	61	18
20	21	19	68	455	111	685	527	919	150	98	52	18
21	19	19	61	1,420	518	790	368	1,890	103	70	40	32
22	14	20	68	3,840	1,830	546	267	1,420	102	52	31	20
23	14	26	66	6,580	970	472	230	664	99	48	33	14
24	15	63	59	5,660	527	438	207	391	*96	48	25	13
25	15	42	52	3,290	438	406	200	252	94	47	22	13
26	14	*31	48	2,930	391	274	230	192	93	38	22	13
27	15	22	47	3,050	282	244	214	171	82	48	21	12
28	16	20	43	2,140	214	274	160	155	81	66	23	12
29	17	19	47	1,160	-	336	147	146	81	33	25	12
30	18	19	59	727	-	422	138	138	79	31	22	12
31	19	-	59	527	-	995	-	137	-	31	23	-
Total	631	641	5,498	42,180	8,850	27,362	17,987	12,028	4,072	1,884	1,271	536
Mean	20.4	21.4	177	1,361	316	883	600	388	136	60.8	41.0	17.9
Cfsm	0.039	0.041	0.336	2.59	0.601	1.68	1.14	0.738	0.259	0.116	0.078	0.034
In.	0.04	0.05	0.39	2.98	0.63	1.93	1.27	0.85	0.29	0.13	0.09	0.04

Calendar year 1953: Max 8,480 Min 14 Mean 494 Cfsm 0.939 In. 12.76
Water year 1953-54: Max 6,580 Min 12 Mean 337 Cfsm 0.641 In. 8.69

Peak discharge (base, 4,500 cfs).--Jan. 23 (9 p.m.) 7,620 cfs (20.83 ft at 12 p.m.).
* Discharge measurement made on this day.

Neuse River near Clayton, N. C.

Location.--Lat 35°39', long. 78°25', on left bank 5 ft downstream from bridge on State Highway 42, 1.8 miles upstream from Mill Creek, and 3 miles east of Clayton, Johnston County.

Drainage area.--1,140 sq mi, approximately.

Records available.--July 1927 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 128.12 ft above mean sea level (levels by Corps of Engineers). Prior to Mar. 18, 1942, at site 1,100 ft upstream at same datum.

Average discharge.--27 years, 1,218 cfs.

Extremes.--Maximum discharge during year, 13,400 cfs Jan. 24 (gage height, 16.10 ft); minimum, 56 cfs Sept. 13, 14 (gage height, 0.92 ft).
1927-54: Maximum discharge, 22,900 cfs Sept. 19, 1945 (gage height, 22.12 ft); minimum, 44 cfs Sept. 15, 1932 (gage height, 0.28 ft, site then in use).
Flood of July 23, 1919, reached a stage of 21.15 ft, from floodmark at former site (discharge, 21,200 cfs).

Remarks.--Records good.

Revisions (water years).--WSP 822: Drainage area. WSP 1032: 1930, 1935(M). Revised figures of discharge, in cubic feet per second, for high-water period in the water year 1935, superseding those published in WSP 782, are given herewith:

Dec. 1, 1934..... 16,300

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
December 1934.....	101,955	16,300	771	3,289	2.89	3.33
Calendar year 1934.....	481,447	16,300	80	1,319	1.16	15.71
Water year 1934-35.....	492,799	16,300	109	1,350	1.18	16.07

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	51	4.0	1,750
1.1	106	6.0	3,160
1.5	226	8.0	4,850
2.0	468	10.0	6,700
2.5	770	13.0	9,650
3.0	1,080	16.0	13,300

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*275	117	*171	362	*1,460	*3,090	*4,080	438	438	*177	120	*131
2	219	*109	168	324	1,250	5,310	*4,250	415	*415	183	*199	117
3	186	120	156	301	1,050	4,510	4,250	*433	388	174	1,470	120
4	156	123	183	*284	960	4,250	3,010	594	352	168	843	117
5	*137	114	480	279	890	2,640	1,460	636	343	180	367	106
6	137	151	373	266	782	1,880	1,150	740	310	195	266	92
7	148	183	334	254	703	1,350	1,020	534	284	186	209	92
8	162	165	306	250	624	1,120	990	788	297	162	174	98
9	134	148	258	238	588	1,020	1,080	758	301	159	156	86
10	128	159	262	226	564	925	1,050	552	586	154	165	67
11	128	180	301	292	546	860	1,020	450	462	148	165	84
12	120	154	343	450	522	733	990	404	456	126	156	86
13	126	*142	1,500	522	486	672	860	378	528	128	156	62
14	126	134	3,760	498	462	1,560	770	654	421	126	137	70
15	120	134	5,590	955	450	3,650	721	1,620	540	120	126	*70
16	112	126	3,370	5,410	450	4,000	685	2,150	486	1,020	732	67
17	123	137	1,460	8,850	474	4,510	2,350	1,680	462	724	486	67
18	120	128	770	8,450	468	3,740	4,080	1,150	540	504	352	70
19	112	134	546	6,230	438	1,490	2,810	830	830	367	297	81
20	126	126	444	3,550	427	1,350	1,750	1,820	630	352	297	95
21	128	140	399	1,750	2,090	1,460	1,220	3,240	415	288	223	172
22	109	177	393	5,820	5,820	1,460	925	3,400	319	254	180	131
23	106	213	367	10,700	3,400	1,150	746	3,000	275	226	168	106
24	120	*432	343	13,100	2,360	1,020	654	1,620	258	189	162	95
25	114	254	319	11,100	1,420	925	606	990	234	168	151	89
26	103	223	334	9,650	1,120	890	552	752	223	159	145	86
27	106	189	306	9,250	960	764	546	624	209	159	140	81
28	114	189	284	8,450	806	860	546	588	192	154	142	86
29	126	168	310	6,790	-	960	498	612	192	140	134	92
30	137	154	433	4,270	-	1,270	456	516	186	137	123	95
31	123	-	399	1,950	-	1,980	-	462	-	131	142	-
Total	4,181	4,923	24,662	120,821	31,570	61,399	45,125	32,828	11,572	7,358	8,583	2,811
Mean	135	164	796	3,897	1,128	1,981	1,504	1,059	386	237	277	93.7
Cfsm	0.118	0.144	0.698	3.42	0.989	1.74	1.32	0.929	0.339	0.208	0.243	0.082
In.	0.14	0.16	0.80	3.94	1.03	2.00	1.47	1.07	0.38	0.24	0.28	0.09

Calendar year 1953: Max 7,010 Min 59 Mean 1,138 Cfsm 0.998 In. 13.54
Water year 1953-54: Max 13,100 Min 62 Mean 975 Cfsm 0.855 In. 11.60

Peak discharge (base, 7,100 cfs).--Jan. 17 (10 p.m.) 9,450 cfs (12.83 ft); Jan. 24 (1 p.m.) 13,400 cfs (16.10 ft); Feb. 22 (6 a.m.) 7,270 cfs (10.55 ft).
* Discharge measurement made on this day.

Middle Creek near Clayton, N. C.

Location.--Lat 35°34'10", long. 78°35'30", on right bank 300 ft downstream from bridge on State Highway 50, a quarter of a mile upstream from Buffalo Branch, 3½ miles downstream from county line, and 9¼ miles southwest of Clayton, Johnston County.

Drainage area.--80.7 sq mi.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 177 ft (by barometer).

Average discharge.--15 years, 87.9 cfs.

Extremes.--Maximum discharge during year, 3,070 cfs Jan. 23 (gage height, 11.34 ft); minimum, 0.1 cfs Sept. 15-18, 26-30.
1939-54: Maximum discharge, 4,100 cfs Sept. 1, 1952 (gage height, 12.31 ft); minimum, that of Sept. 15-18, 26-30, 1954.

Remarks.--Records fair.

Revisions (water years).--WSP 952: 1940(M), 1941. WSP 1233: 1943(M), 1945, 1949.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-14, Jan. 2-11, Sept. 7-23)

Oct. 1 to Dec. 11		Dec. 12 to Sept. 30			
0.5	1.7	0.2	0.2	2.2	69
.6	2.8	.3	.4	2.5	90
.8	6.0	.4	1.0	3.0	130
1.0	11	.5	1.7	4.0	220
1.4	25	.6	2.8	6.0	438
1.8	42	.8	6.0	7.0	630
		1.0	11	8.0	925
		1.4	25	9.0	1,310
		1.8	43	11.0	2,790

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.4	3.8	*7.8	80	*142	*375	*374	40	28	*4.3	4.8	*2.0
2	5.3	*4.5	7.5	63	134	410	386	38	*25	4.0	*4.8	1.2
3	4.6	4.3	7.5	57	126	346	222	*38	23	4.0	24	.9
4	4.0	3.8	11	*51	122	*230	147	80	21	5.7	46	.8
5	3.8	4.2	34	48	114	174	122	78	19	5.3	18	1.4
6	3.8	7.1	40	47	106	138	114	52	16	6.7	10	1.2
7	4.2	7.8	29	44	102	122	106	40	15	5.2	7.8	.8
8	4.5	7.1	25	40	95	114	100	86	13	3.7	5.7	.6
9	4.5	8.0	18	40	93	106	114	110	12	3.4	4.5	.4
10	4.5	9.9	15	40	89	102	100	58	123	3.8	4.3	.3
11	4.5	9.4	14	52	86	96	100	42	58	3.7	4.0	.4
12	4.5	7.5	29	99	82	89	122	36	31	3.1	3.6	.4
13	4.3	*7.1	132	85	77	88	100	35	21	2.7	3.1	.3
14	4.3	6.4	*308	66	75	199	83	97	16	2.5	2.6	.2
15	4.2	6.0	362	160	76	250	78	260	14	4.0	2.5	*.1
16	4.2	5.7	299	486	75	170	83	218	15	104	3.0	.1
17	3.8	5.7	95	1,270	82	110	283	106	18	45	3.9	.1
18	3.7	5.7	67	739	82	96	398	72	17	17	7.1	.1
19	3.6	5.7	54	275	72	92	267	68	15	12	7.5	.2
20	3.4	5.7	48	*160	68	150	114	184	14	13	6.7	.4
21	3.1	6.7	49	214	171	142	89	235	12	32	5.2	.8
22	3.0	8.9	*54	579	1,440	102	77	130	10	53	5.2	.8
23	3.0	14	51	*2,520	820	89	69	81	9.4	44	4.3	*.4
24	2.8	*13	44	1,450	284	90	64	60	8.2	22	3.7	.3
25	2.8	17	42	548	160	85	73	48	7.3	13	3.0	.2
26	2.7	11	56	424	134	84	70	42	6.9	10	2.6	.1
27	*2.8	9.2	53	410	114	82	57	37	6.0	8.7	*2.0	.1
28	3.4	8.3	44	386	106	202	50	42	5.5	7.5	1.6	.1
29	3.8	8.3	52	250	-	206	45	44	5.2	6.4	1.7	.1
30	3.8	8.0	110	183	-	271	42	38	4.6	5.5	3.0	.1
31	3.7	-	106	160	-	315	-	32	-	5.2	2.2	-
Total	121.0	229.8	2,263.8	11,026	5,127	5,125	4,049	2,527	589.1	460.4	208.4	14.9
Mean	3.90	7.66	73.0	356	183	165	135	81.5	19.6	14.9	6.72	0.50
Cfsm	0.048	0.095	0.905	4.41	2.27	2.04	1.67	1.01	0.243	0.185	0.083	0.0062
In.	0.06	0.11	1.04	5.08	2.36	2.36	1.87	1.16	0.27	0.21	0.10	0.007

Calendar year 1953: Max 940 Min 0.4 Mean 83.4 Cfsm 1.03 In. 14.04
Water year 1953-54: Max 2,520 Min 0.1 Mean 87.0 Cfsm 1.08 In. 14.63

Peak discharge (base, 600 cfs).--Jan. 17 (2 p.m.) 1,460 cfs (9.29 ft); Jan. 23 (3 p.m.) 3,070 cfs (11.34 ft); Feb. 22 (2 p.m.) 2,180 cfs (10.33 ft).
* Discharge measurement made on this day.

Little River near Princeton, N. C.

Location.--Lat 35°30'20", long. 78°09'30", on left bank 400 ft downstream from highway bridge (bridge relocated), three-quarters of a mile upstream from Little Creek, and 3 miles north of Princeton, Johnston County.

Drainage area.--229 sq mi.

Records available.--February 1930 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 108 ft (by barometer). Prior to Nov. 17, 1934, staff gage at same site and datum.

Average discharge.--24 years, 240 cfs.

Extremes.--Maximum discharge during year, 4,770 cfs Jan. 24 (gage height, 12.79 ft); minimum, 2.2 cfs Sept. 22, 23.
1930-54: Maximum discharge, that of Jan. 24, 1954; minimum, 1.0 cfs several times in September and October 1932 (gage height, 0.30 ft).
Flood in September 1924 reached a stage of 14.90 ft; July 1919, 14.57 ft; October 1929, 13.47 ft, from information by local resident.

Remarks.--Records fair. Slight diurnal fluctuation and occasionally some regulation for short periods caused by mills above station.

Revisions (water years).--WSP 822: Drainage area. WSP 1233: 1935(M).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	15	29	180	474	664	1,000	71	124	22	18	20
2	42	11	24	150	398	1,000	1,050	66	104	18	18	20
3	29	8.2	24	131	*351	960	850	56	90	16	18	20
4	21	12	29	112	313	960	674	85	68	13	19	17
5	17	16	41	102	294	872	484	*143	58	11	*178	17
6	*17	13	42	90	266	636	370	153	60	32	210	17
7	19	13	95	86	237	465	284	117	38	77	141	*16
8	18	20	93	78	205	370	256	104	40	58	79	15
9	17	17	88	73	211	322	275	127	41	41	37	15
10	14	14	71	68	200	284	313	162	48	31	32	14
11	13	18	55	76	187	231	360	134	43	26	27	13
12	13	24	58	*124	173	211	560	120	52	20	24	10
13	13	27	110	182	146	196	522	97	53	*20	26	*7.3
14	13	24	*234	164	134	311	313	98	41	19	21	7.3
15	14	14	342	180	132	598	233	200	*38	20	21	6.1
16	18	14	456	584	141	579	200	284	40	38	21	5.6
17	15	*26	560	1,070	151	456	218	266	38	135	*20	4.8
18	14	29	579	1,370	150	380	294	246	37	162	*20	4.4
19	12	28	389	*1,550	150	284	294	209	35	96	32	4.1
20	12	27	226	1,460	141	322	332	213	34	71	57	3.5
21	11	20	144	984	180	360	313	294	34	66	49	3.2
22	10	13	126	1,120	541	284	222	446	46	56	37	2.6
23	*10	14	122	2,800	811	256	162	579	35	46	30	3.2
24	10	20	110	*4,470	1,170	237	134	636	29	39	*24	*5.3
25	10	31	110	*4,180	1,490	195	218	522	29	32	24	4.8
26	10	32	127	3,310	903	178	209	275	29	28	22	4.3
27	9.4	27	126	2,520	474	173	139	178	27	23	21	3.6
28	9.1	40	110	1,480	332	322	107	150	27	27	22	*4.6
29	8.8	38	119	938	-	522	90	153	25	20	22	5.6
30	9.7	26	173	*770	-	579	78	184	24	20	24	5.8
31	14	-	216	579	-	770	-	139	-	19	*22	-
Total	507.0	631.2	5,028	30,981	10,355	13,977	10,554	6,507	1,387	1,302	1,316	280.1
Mean	16.4	21.0	162	999	370	451	352	210	46.2	42.0	42.5	9.34
Cfsm	0.072	0.092	0.707	4.36	1.62	1.97	1.54	0.917	0.202	0.183	0.186	0.041
In.	0.08	0.10	0.82	5.03	1.68	2.27	1.71	1.06	0.23	0.21	0.21	0.05

Calendar year 1953: Max 2,650 Min 7 Mean 238 Cfsm 1.04 In. 14.11
Water year 1953-54: Max 4,470 Min 2.6 Mean 227 Cfsm 0.991 In. 13.45

Peak discharge (base, 1,200 cfs).--Jan. 19 (11 p.m.) 1,580 cfs (8.37 ft); Jan. 24 (5 p.m.) 4,770 cfs (12.79 ft); Feb. 25 (11 a.m.) 1,550 cfs (8.31 ft).
* Discharge measurement made on this day.

Neuse River near Goldsboro, N. C.

Location.--Lat 35°20', long. 78°00', on left bank 5 ft downstream from highway bridge, 0.2 mile upstream from Stony Creek, 1.5 miles downstream from Atlantic Coast Line Railroad bridge, 3 miles south of Goldsboro, Wayne County, 4.3 miles downstream from Little River, and at mile 135.

Drainage area.--2,390 sq mi, approximately.

Records available.--February 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 42.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 24, 1931, chain gage at railroad bridge 1.5 miles upstream at datum 2.00 ft (revised) higher. July 24, 1931, to Aug. 31, 1948, water-stage recorder at site 2.3 miles upstream at datum 1.71 ft higher than present datum.

Average discharge.--24 years, 2,422 cfs.

Extremes.--Maximum discharge during year, 21,400 cfs Jan. 28 (gage height, 23.77 ft); minimum, 93 cfs Sept. 20 (gage height, 1.50 ft).

1930-54: Maximum discharge, 30,700 cfs Sept. 23, 1945; maximum gage height, 26.72 ft Sept. 23, 1945, site and datum then in use; minimum unregulated discharge, 85 cfs Sept. 14, 1932 (gage height, 1.03 ft, site and datum then in use); minimum, 80 cfs Dec. 3, 1951 (result of temporary closure of river channel upstream).

Maximum discharge known, 38,600 cfs (corrected) Oct. 5, 1929 (gage height, 27.3 ft, corrected, at railroad bridge and present datum).

Revisions.--The maximum discharge for the water year 1935 has been revised to 21,400 cfs Dec. 6, 1934 (gage height, 23.8 ft), superseding figure published in WSP 782.

Remarks.--Records good.

Revisions.--WSP 822: Drainage area. Revised figures of discharge, in cubic feet per second, for the water year 1931, 1935, superseding those published in WSP 712, 782, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1930		1930-Con.		1930-Con.		1930-Con.		1930-Con.	
Nov. 2	334	Nov. 9	610	Nov. 16	442	Nov. 23	442	Nov. 30	358
3	274	10	540	17	442	24	442		
4	240	11	412	18	384	25	412	1934	
5	292	12	358	19	412	26	358	Dec. 4	13,700
6	384	13	442	20	442	27	384	5	20,400
7	810	14	442	21	442	28	384	6	20,300
8	770	15	442	22	442	29	358		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
November 1930	-	810	240	425	0.179	0.20
Water year 1930-31	-	11,200	-	2,080	.878	11.93
December 1934	206,010	20,400	1,830	6,645	2.80	3.23
Calendar year 1934	898,648	20,400	254	2,462	1.04	14.10
Water year 1934-35	934,733	20,400	254	2,561	1.08	14.66

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	910	159	339	1,800	15,900	4,550	5,190	1,150	1,190	300	286	184
2	670	159	310	1,750	14,300	4,220	5,880	1,070	1,020	295	255	187
3	498	154	288	1,650	*11,800	5,000	6,280	990	910	280	228	184
4	377	152	304	1,550	9,290	5 720	6,700	950	830	261	269	177
5	313	157	342	1,410	*5,970	6,420	7,020	*1,070	732	255	1,100	170
6	*273	214	397	1,280	3,640	7,100	7,180	1,330	662	244	*950	166
7	261	209	628	1,190	2,940	7,580	6,940	1,370	611	244	750	*159
8	240	206	715	1,150	2,550	7,580	5,390	1,240	577	280	577	154
9	237	234	680	1,030	2,330	6,040	4,930	1,030	526	386	441	150
10	240	264	662	930	2,170	3,830	4,740	1,240	509	458	348	148
11	243	249	594	890	2,000	2,880	4,280	1,280	509	312	280	146
12	214	255	543	*960	1,850	2,500	4,220	1,070	680	272	255	133
13	201	270	594	1,110	1,750	2,220	4,350	910	810	261	247	129
14	204	264	1,240	1,370	1,650	2,060	4,150	950	750	239	231	113
15	193	243	2,490	*1,460	1,550	2,220	3,460	1,030	*830	228	215	*113
16	190	234	3,340	2,010	1,500	3,600	2,880	1,660	715	577	202	107
17	182	234	3,960	3,800	1,500	4,220	2,610	2,610	870	910	184	105
18	172	234	4,350	4,800	1,500	*4,540	2,720	3,050	830	1,600	*456	105
19	167	220	4,540	5,520	1,500	4,800	3,640	2,660	750	1,500	594	101
20	164	223	3,090	6,420	1,500	5,190	4,150	2,170	830	1,150	458	103
21	167	217	1,790	8,040	1,500	5,280	4,540	2,500	990	990	434	125
22	164	220	1,370	9,660	2,320	4,150	4,670	3,400	830	1,020	434	121
23	162	246	1,190	10,900	3,960	3,400	3,240	4,150	662	1,110	370	119
24	159	295	1,110	12,100	4,740	2,880	2,060	4,540	543	1,150	295	156
25	142	373	1,110	13,000	5,450	2,500	1,950	4,870	475	1,110	252	148
26	138	570	1,150	14,900	6,210	2,220	2,080	4,390	434	930	225	127
27	152	530	1,240	18,000	6,860	2,110	1,850	2,500	390	732	225	117
28	157	403	1,280	20,800	6,370	2,500	1,600	1,850	351	577	242	109
29	147	392	1,280	*21,100	-	2,940	1,370	1,550	339	441	261	115
30	147	363	1,370	19,600	-	3,580	1,280	1,500	315	367	210	113
31	154	-	1,600	17,500	-	4,220	-	1,410	-	312	192	-
Total	7,638	7,943	43,896	207,680	124,600	128,030	121,310	61,490	20,470	18,791	11,468	4,084
Mean	246	265	1,416	6,699	4,450	4,130	4,044	1,984	682	606	370	136
Cfsm	0.103	0.111	0.592	2.80	1.86	1.73	1.69	0.830	0.285	0.254	0.155	0.057
In.	0.12	0.12	0.68	3.23	1.94	1.99	1.89	0.96	0.32	0.29	0.18	0.06

Calendar year 1953: Max 9,300 Min 105 Mean 2,199 Cfsm 0.920 In. 12.49
Water year 1953-54: Max 21,100 Min 101 Mean 2,075 Cfsm 0.868 In. 11.78

* Discharge measurement made on this day.

Neuse River at Kinston, N. C.

Location.--Lat 35°15'30", long. 77°35'10", on left bank at Kinston, Lenoir County, 600 ft downstream from bridge on State Highway 11 and at mile 90.
Drainage area.--2,690 sq mi, approximately.
Records available.--February 1930 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 10.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 25, 1934, chain gage at highway bridge 1 mile downstream at datum 0.80 ft lower.
Average discharge.--24 years, 2,781 cfs.
Extremes.--Maximum discharge during year, 19,800 cfs Feb. 1 (gage height, 20.28 ft); minimum, 175 cfs Sept. 19, 20 (gage height, 1.84 ft).
1930-54: Maximum discharge, 25,900 cfs Sept. 27, 1945; maximum gage height, 22.44 ft Sept. 27, 1945; minimum discharge, 124 cfs Sept. 26, 1932 (gage height, 1.29 ft, site and datum then in use).
Maximum stage known, 25.0 ft, July 1919, present site and datum (discharge, about 39,000 cfs), from information by North Carolina State Highway and Public Works Commission.
Remarks.--Records good.
Revisions.--WSP 822: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1931, 1932, superseding those published in WSP 712, 727, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1931		1931-Con.		1932		1932-Con.		1932-Con.	
June 17	1,100	Sept.14	1,200	July 4	1,760	July 15	368	July 26	200
18	1,500	15	1,000	5	1,180	16	368	27	200
19	2,000	16	900	6	780	17	353	28	200
20	2,200	17	800	7	628	18	294	29	213
21	2,100	18	750	8	560	19	266	30	226
22	1,800	19	700	9	560	20	266	31	226
23	1,500	20	700	10	494	21	252		
24	1,000	21	650	11	494	22	252		
25	800	22	650	12	462	23	239		
Sept.12	1,600	23	600	13	430	24	226		
13	1,400	24	600	14	383	25	213		

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
June 1931	3,640	606	1,280	0.476	0.53
September	4,270	546	1,320	.491	.55
Water year 1930-31	11,200	290	2,350	.874	11.86
November 1931	-	-	†390	.145	.16
Calendar year 1931	11,200	378	2,360	.877	11.91
July 1932	2,180	200	548	.204	.23
Water year 1931-32	11,600	126	1,681	.625	8.50
Calendar year 1932	11,600	126	2,176	.809	11.00

† Estimated.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	222	451	1,910	19,600	6,360	4,060	1,560	1,710	430	451	300
2	988	228	434	2,070	19,100	6,440	4,620	1,420	1,470	413	434	290
3	770	235	412	2,070	18,100	5,960	5,260	1,330	1,280	401	392	274
4	600	239	395	1,970	16,600	5,340	5,720	1,240	1,150	383	350	259
5	482	242	423	1,860	*14,600	5,340	6,120	1,190	1,060	362	*332	254
6	416	270	482	1,760	11,700	5,640	6,440	1,240	945	353	818	234
7	377	308	482	1,610	8,620	6,040	6,710	1,420	860	341	1,040	224
8	341	310	645	1,500	5,830	6,440	7,000	1,510	818	329	860	*222
9	332	302	790	1,400	3,500	6,900	7,100	1,470	757	353	716	213
10	310	325	812	1,300	3,210	7,200	6,620	1,280	716	486	556	207
11	310	362	770	1,200	2,820	6,710	6,040	1,330	676	636	486	209
12	310	359	728	1,280	2,520	4,930	5,490	1,420	676	468	386	209
13	308	347	728	1,300	2,280	3,620	5,120	1,330	778	386	341	201
14	290	347	900	*1,400	2,170	3,000	4,830	1,240	880	362	323	194
15	292	344	1,480	1,610	2,070	2,580	4,690	1,280	920	353	318	186
16	285	332	2,300	1,970	1,970	2,580	4,410	1,330	990	521	300	*186
17	272	318	2,880	2,770	1,910	3,060	3,860	1,740	990	839	300	182
18	262	315	3,360	3,590	1,860	3,670	3,300	2,520	1,060	990	*321	179
19	258	315	3,730	4,060	1,810	*4,130	3,060	2,940	1,010	1,420	404	177
20	253	315	4,060	4,620	1,810	4,480	3,360	3,000	920	1,560	656	182
21	242	310	4,060	5,260	1,810	4,760	3,800	2,760	920	1,380	576	186
22	237	312	2,830	6,260	1,910	5,040	4,130	2,820	1,080	1,190	676	205
23	237	335	1,850	7,350	2,460	5,120	4,410	3,240	1,010	1,150	596	205
24	239	377	1,550	8,620	3,310	4,620	4,340	3,600	860	1,190	504	201
25	233	395	1,450	9,780	3,930	3,610	3,150	3,990	716	1,240	426	205
26	219	451	1,610	11,100	4,480	3,120	2,460	4,340	636	1,190	365	216
27	215	540	1,660	12,100	5,120	2,700	2,340	4,550	556	1,100	323	203
28	215	600	1,610	13,400	5,720	2,640	2,170	3,950	521	920	300	190
29	226	520	1,660	15,600	-	2,880	1,910	2,820	486	757	318	186
30	233	482	1,760	17,800	-	3,180	1,710	2,170	451	616	350	188
31	222	-	1,810	*19,600	-	3,600	-	1,860	-	521	362	-
Total	11,034	10,357	48,112	168,120	170,820	141,690	134,230	67,890	26,902	22,640	14,580	6,367
Mean	356	345	1,552	5,423	6,101	4,571	4,474	2,190	897	730	470	212
Cfsm	0.132	0.128	0.577	2.02	2.27	1.70	1.66	0.814	0.333	0.271	0.175	0.079
In.	0.15	0.14	0.67	2.32	2.36	1.96	1.86	0.94	0.37	0.31	0.20	0.09

Calendar year 1953: Max 9,020 Min 194 Mean 2,332 Cfsm 0.867 In. 11.75
Water year 1953-54: Max 19,600 Min 177 Mean 2,254 Cfsm 0.838 In. 11.37

* Discharge measurement made on this day.

Contentnea Creek near Wilson, N. C.

Location.--Lat 35°41'15", long. 77°56'50", in left abutment midway between separated lanes of bridge on U. S. Highway 301, 250 ft downstream from municipal powerplant, 1 mile upstream from Atlantic Coast Line Railroad bridge, and 3 miles southwest of Wilson, Wilson County.
Drainage area.--236 sq mi.
Records available.--February 1930 to December 1954 (discontinued).
Gage.--Water-stage recorder. Altitude of gage is 78 ft (from topographic map). Prior to June 24, 1934, staff gage at tailrace of municipal powerplant 250 ft upstream at same datum.
Average discharge.--24 years, 235 cfs.
Extremes.--1953-54: Maximum discharge during water year, 4,940 cfs Jan. 24 (gage height, 13.68 ft); minimum, 0.1 cfs Sept. 23, 24, 27, 28.
1954: Maximum discharge during period October to December, 152 cfs Dec. 26 (gage height, 1.77 ft); no flow for several days in each month.
1930-54: Maximum discharge, that of Jan. 24, 1954; no flow for several days in October, November, and December 1954.
Maximum stage known, about 22.2 ft (revised) in September 1924, from information by State Highway and Public Works Commission.
Remarks.--Records fair except those below 20 cfs, which are poor. Extreme diurnal fluctuation and considerable regulation during low flow caused by reservoir and municipal powerplant above station. During the water year 1954, city of Wilson diverted an average of 3.7 cfs above station for municipal supply.
Revisions (water years).--WSP 782: 1934. WSP 822: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	0.8	8.1	128	465	300	1,070	38	56	2.9	4.4	2.0
2	8.6	.8	7.2	153	359	630	1,130	48	53	2.7	3.8	1.9
3	9.3	.8	7.2	86	*298	930	1,010	39	29	2.5	*3.6	1.8
4	9.8	.8	34	94	287	1,100	819	54	5.7	2.3	3.6	1.7
5	9.8	.9	20	85	261	930	555	66	13	1.9	76	1.6
6	9.8	1.1	78	68	233	630	351	103	15	1.9	111	1.5
7	8.2	1.0	80	71	213	420	263	70	14	8.6	20	1.2
8	*7.6	1.0	59	68	197	342	255	86	14	13	17	1.1
9	7.6	1.0	30	46	196	231	336	91	14	9.4	17	*.7
10	7.2	1.4	36	46	190	213	420	159	14	7.1	8.2	.5
11	6.9	1.9	33	96	195	195	405	78	22	5.8	3.4	.4
12	6.2	3.6	67	133	161	185	510	63	29	4.7	3.4	.3
13	4.5	7.7	78	190	140	173	525	48	66	*3.3	3.4	.3
14	1.2	9.2	297	178	142	254	359	78	15	2.7	3.6	.2
15	1.2	13	384	186	141	450	244	274	3.3	3.8	3.6	.2
16	1.2	29	403	433	220	525	198	319	8.2	58	3.6	.2
17	1.2	10	418	968	170	510	203	331	20	128	*3.6	.2
18	1.2	9.5	309	1,270	167	435	246	*196	22	172	3.8	.2
19	1.2	*9.1	99	1,620	151	298	250	145	*19	95	3.8	.3
20	1.2	8.8	67	1,520	138	*241	190	138	19	18	3.8	.2
21	1.2	8.8	75	950	196	355	133	251	19	19	3.8	.3
22	1.2	9.1	70	1,060	398	270	112	322	15	63	3.8	.2
23	1.2	27	76	2,800	600	222	104	360	12	29	3.8	.1
24	1.2	8.0	88	*4,230	1,100	187	95	467	10	20	3.6	.1
25	1.0	31	110	4,300	1,520	179	90	330	8.6	20	3.6	.2
26	1.0	6.8	71	2,740	960	176	63	124	7.1	15	3.4	.2
27	1.0	7.2	106	1,920	465	180	60	80	6.3	3.8	4.2	.1
28	1.0	9.2	99	1,360	292	256	40	54	5.5	3.6	2.5	.1
29	1.0	11	99	1,100	-	420	59	70	3.6	3.8	2.2	.2
30	.9	22	185	*873	-	510	41	52	3.1	4.0	2.4	.2
31	.8	-	233	657	-	738	-	54	-	4.0	2.0	-
Total	143.4	251.5	3,726.5	29,429	9,855	12,485	10,136	4,588	541.4	728.8	335.9	18.2
Mean	4.63	8.38	120	949	352	403	338	148	18.0	23.5	10.8	0.61
Cfsm	0.020	0.036	0.508	4.02	1.49	1.71	1.43	0.627	0.076	0.100	0.046	0.0026
In.	0.02	0.04	0.59	4.64	1.55	1.97	1.60	0.72	0.09	0.11	0.05	0.003

Calendar year 1953: Max 2,030 Min 0.5 Mean 223 Cfsm 0.945 In. 12.85
Water year 1953-54: Max 4,300 Min 0.1 Mean 198 Cfsm 0.839 In. 11.38

* Discharge measurement made on this day.

Discharge, in cubic feet per second, 1954

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	*0.1	0	0	9	0.1	0.1	59	17	0.1	0	61	25	0	0	24
2	.1	0	0	10	.1	0	39	18	.1	0	72	26	0	0	36
3	.1	.1	0	11	.1	0	25	19	.1	.2	56	27	0	0	29
4	.1	.1	0	12	.1	*0	30	20	.1	.1	69	28	0	0	33
5	.1	.2	.2	13	.1	0	37	21	0	0	35	29	.1	0	34
6	.1	.1	.7	14	.1	0	70	22	0	0	*52	30	0	0	31
7	.1	.1	3.8	15	.2	0	38	23	0	0	40	31	0	-	31
8	.1	.1	67	16	.2	0	82	24	0	0	29				
Total													2.3	1.1	1,083.7
Mean													0.07	0.04	35.0
Cubic feet per second per square mile													0.00030	0.00017	0.148
Runoff in inches													0.0004	0.0002	0.17

* Discharge measurement or observation of no flow made on this day.

Contentnea Creek at Hookerton, N. C.

Location.--Lat 35°25'40", long. 77°35'05", on right bank at Hookerton, Greene County, 0.3 mile upstream from bridge on State Highway 123 and 2½ miles upstream from Wheat Swamp Creek.

Drainage area.--789 sq mi.

Records available.--November 1928 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 16 ft (from topographic map). Prior to Nov. 26, 1934, staff gage at site 200 ft downstream at same datum.

Average discharge.--25 years (1929-54), 721 cfs.

Extremes.--Maximum and minimum discharge for the water years 1930-35, 1954 are contained in the following table:

Water year	Maximum			Minimum		
	Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)	Gage height (feet)
1930	Oct. 6, 1929	11,100	18.90	Sept. 3, 4, 1930	46	1.82
1931	Aug. 17-19, 1931	†2,400	-	Oct. 12, 13, 16-19, 21-28, 1930	††53	-
1932	Mar. 12, 1932	1,720	10.18	Sept.16, 17, 1932	13	1.17
1933	Apr. 23, 1933	2,620	12.18	Oct. 5, 1932	26	1.47
1934	Sept.22, 1934	2,470	11.86	Oct. 28, 1933	15	1.22
1935	Sept.13, 1935	2,980	12.80	Nov. 2, 3, 1934	105	2.52
1954	Jan. 28, 1954	6,680	15.65	Sept.19, 20, 1954	18	1.60

† Maximum daily discharge.
†† Minimum daily discharge.

1928-54: Maximum discharge, 11,100 cfs Oct. 6, 1929 (gage height, 18.90 ft); minimum, 13 cfs Sept. 16, 17, 1932 (gage height, 1.17 ft).
Maximum stage known, 23.3 ft in September 1928, from floodmark. High water of autumn 1924 was at practically the same stage.

Remarks.--Records fair.

Revisions.--WSP 822: Drainage area. Revised figures of discharge for the water years 1930-35, superseding those published in WSP 697, 712, 727, 742, 757, 782, are given herein.

Discharge, in cubic feet per second, water year October 1929 to September 1930

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	2,680	2,320	1,180	1,640	755	535	459	216	244	108	50
2	2,570	2,140	2,280	1,070	1,680	775	555	334	230	216	124	50
3	2,980	1,880	2,570	1,010	1,720	755	555	286	176	216	188	46
4	4,620	1,640	2,680	1,010	1,800	755	595	230	134	272	186	50
5	9,600	2,050	2,730	962	1,960	735	635	216	134	244	164	92
6	11,000	2,520	2,730	919	2,140	715	755	202	124	216	134	108
7	9,600	2,680	2,730	898	2,230	715	940	188	134	230	108	87
8	*7,700	2,850	2,620	856	2,280	877	1,120	188	318	202	102	87
9	*5,940	3,120	2,520	815	2,280	1,140	1,160	188	535	154	100	134
10	4,500	*3,260	2,420	795	2,230	1,330	1,180	202	1,400	134	92	230
11	*3,500	3,190	2,230	775	2,050	1,400	1,210	188	1,720	116	87	302
12	2,850	3,120	2,100	755	1,840	1,600	1,180	164	1,290	116	82	302
13	2,140	2,850	2,000	715	1,600	1,680	1,030	144	1,960	116	82	272
14	1,500	2,520	1,920	695	1,360	1,500	795	154	2,000	124	78	258
15	1,140	2,140	1,800	835	1,240	1,240	555	154	1,960	164	74	230
16	919	1,880	1,640	1,160	1,180	962	478	*176	1,880	202	74	188
17	775	1,800	1,530	1,430	1,160	775	440	202	1,760	176	74	134
18	675	1,640	1,500	1,720	1,330	655	404	216	1,640	258	78	97
19	635	1,530	1,240	1,960	1,360	635	440	230	1,050	350	87	97
20	555	1,500	1,300	2,320	1,330	695	555	176	940	*478	92	97
21	575	1,430	1,330	2,420	1,270	755	675	144	877	422	87	97
22	1,240	1,270	1,360	*2,620	1,160	775	735	144	1,010	272	82	92
23	2,140	1,210	1,430	2,730	1,030	815	715	124	1,140	230	78	92
24	2,520	1,270	1,500	2,790	919	775	655	116	1,180	188	74	87
25	3,420	1,460	1,560	2,620	919	655	555	116	1,180	154	69	82
26	5,260	1,640	1,560	2,520	898	635	459	124	755	144	69	*82
27	5,940	1,840	1,600	2,420	856	*595	535	124	655	134	65	78
28	5,660	2,140	1,640	2,280	795	575	497	116	404	124	65	78
29	5,000	2,230	1,600	2,100	-	555	478	116	350	116	61	82
30	4,080	2,280	1,500	1,920	-	516	478	124	286	108	57	82
31	3,420	-	1,330	1,720	-	497	-	188	-	102	53	-
Total	113,684	63,760	59,270	48,020	42,257	26,842	20,899	5,733	28,068	6,222	2,876	3,763
Mean	3,670	2,130	1,910	1,550	1,510	866	697	185	936	201	92.8	125
Cfsm	4.65	2.70	2.42	1.96	1.91	1.10	0.883	0.234	1.19	0.255	0.118	0.158
In.	5.36	3.01	2.79	2.26	1.99	1.27	0.99	0.27	1.32	0.29	0.14	0.18

Calendar year 1929: Max 11,000 Min 302 Mean 1,820 Cfsm 2.31 In. 31.37
Water year 1929-30: Max 11,000 Min 46 Mean 1,150 Cfsm 1.46 In. 19.87

* Discharge measurement made on this day.

Contentnea Creek at Hookerton, N. C.--Continued

Discharge, in cubic feet per second, water year October 1930 to September 1931

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	116	97	675	386	318	615	202	695	78	d500	497
2	82	108	108	555	368	334	635	176	440	78	d475	440
3	78	97	124	422	334	302	675	164	334	87	d450	386
4	74	102	134	368	318	272	755	230	244	92	478	334
5	65	116	124	350	302	334	795	334	202	d250	1,070	272
6	65	108	116	318	286	386	1,010	535	176	d500	d1,700	244
7	61	*108	124	302	272	459	1,300	635	176	d700	*d1,800	478
8	61	116	144	318	272	440	1,430	675	188	d800	d1,900	d1,500
9	61	108	176	302	272	404	1,530	835	188	d800	d2,000	d2,000
10	61	97	164	286	286	386	1,600	1,090	188	d750	d2,000	d2,000
11	57	87	164	302	286	334	1,680	1,300	154	d750	d1,800	d1,700
12	53	92	164	*318	302	334	1,800	1,360	144	d700	1,800	984
13	53	102	164	535	302	318	1,840	1,330	144	d650	1,880	555
14	57	116	164	755	334	286	*1,960	1,330	144	d600	1,880	230
15	57	116	176	877	386	272	2,050	1,360	124	d600	1,920	164
16	53	116	176	984	440	258	1,800	*1,070	154	d600	d2,200	154
17	53	108	188	1,030	459	244	1,560	795	230	d1,000	d2,400	144
18	53	108	272	1,010	478	244	1,360	595	286	d1,200	d2,400	124
19	53	108	350	1,010	516	230	1,210	368	368	d1,250	d2,400	144
20	57	102	404	919	516	244	1,050	272	334	d1,250	2,050	164
21	53	97	386	877	478	272	835	230	258	d1,300	1,880	164
22	53	97	368	815	478	334	516	334	144	d1,100	1,640	258
23	53	97	404	755	478	478	404	555	108	d1,000	1,680	334
24	53	97	422	715	478	595	350	695	97	d950	1,800	202
25	53	97	440	675	459	715	318	898	87	d900	1,880	154
26	53	97	440	555	404	775	286	1,140	82	d850	1,840	144
27	53	97	478	516	334	795	302	1,270	78	d800	1,760	272
28	53	92	535	478	302	795	272	1,330	74	d800	1,680	350
29	61	92	655	459	-	815	258	1,330	70	d750	1,560	497
30	92	92	695	422	-	775	216	1,360	70	d700	1,090	655
31	124	-	715	404	-	635	-	1,050	-	d600	635	-
Total	1,937	3,086	9,071	18,307	10,526	13,383	30,412	24,848	5,981	22,485	50,548	15,544
Mean	62.5	103	293	591	376	432	1,010	802	199	725	1,630	518
Cfsm	0.079	0.131	0.371	0.749	0.477	0.548	1.28	1.02	0.252	0.919	2.07	0.657
In.	0.09	0.15	0.43	0.86	0.50	0.63	1.43	1.17	0.28	1.06	2.38	0.73

Calendar year 1930: Max 2,790 Min 46 Mean 545 Cfsm 0.691 In. 9.38
Water year 1930-31: Max 2,400 Min 53 Mean 565 Cfsm 0.716 In. 9.71

* Discharge measurement made on this day.
d Doubtful gage-height record; discharge estimated on basis of weather records and records for station at Wilson and nearby streams.

Discharge, in cubic feet per second, water year October 1931 to September 1932

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*765	87	105	d700	910	826	d900	251	d600	142	35	
2	646	82	125	d800	994	765	d1,000	461	*d550	136	37	
3	392	74	147	d750	1,020	685	d1,000	479	d500	130	43	
4	296	69	171	d700	1,040	589	d1,000	461	d450	125	43	
5	281	61	d250	608	1,060	515	d900	392	d400	125	38	
6	237	82	d350	589	1,060	497	d700	359	d350	120	35	
7	196	92	d500	551	1,080	533	d600	343	d300	120	32	
8	183	96	d550	515	*1,100	627	d500	327	d250	115	38	
9	171	96	d600	479	1,140	785	d400	311	d250	115	53	
10	147	96	d600	479	1,190	973	*343	327	d250	110	65	
11	136	92	d600	d600	1,210	d1,500	d350	327	d250	110	87	
12	183	92	d600	d700	1,240	1,640	d400	343	d250	100	120	
13	171	87	d550	d800	1,270	1,460	d450	359	d300	96	136	
14	159	82	d500	d1,000	1,240	1,210	d500	359	d350	92	96	†27.1
15	147	105	d500	d1,100	1,210	1,100	d500	359	d400	78	87	
16	136	125	d500	d1,100	1,190	994	d500	343	d500	69	74	
17	120	153	d500	d1,100	1,140	889	d450	343	d600	61	65	
18	171	159	d500	d1,100	1,120	765	343	327	d650	50	61	
19	251	153	d500	d1,000	1,100	685	327	311	d700	43	46	
20	251	147	d500	d900	1,100	646	296	311	d700	39	327	
21	237	142	d500	d800	1,080	608	296	296	d700	36	589	
22	209	125	d500	d750	1,080	589	281	281	d600	*34	409	
23	183	110	d500	665	1,060	570	266	266	d500	32	281	
24	159	100	d500	570	1,060	533	251	266	426	29	159	
25	142	87	d500	589	1,040	533	251	251	359	28	*57	
26	130	78	d500	646	1,020	d550	237	251	237	26	53	
27	147	82	d500	685	1,020	d600	237	237	159	25	46	†21.8
28	142	74	515	705	973	d650	223	237	147	26	43	
29	130	78	551	725	889	d700	209	d300	147	28	36	
30	100	87	551	745	-	d750	209	d400	142	30	33	
31	*100	-	570	765	-	d800	-	d550	-	33	32	-
Total	6,718	2,993	14,335	23,216	31,636	24,567	13,919	10,428	12,017	2,303	3,256	-
Mean	217	99.8	462	749	1,090	792	464	336	401	74.3	105	e23.7
Cfsm	0.275	0.126	0.586	0.949	1.38	1.00	0.588	0.426	0.508	0.094	0.133	0.030
In.	0.32	0.14	0.68	1.09	1.49	1.16	0.66	0.49	0.57	0.11	0.15	0.03

Calendar year 1931: Max 2,400 Min 61 Mean 592 Cfsm 0.750 In. 10.18
Water year 1931-32: Max 1,640 Min - Mean 399 Cfsm 0.506 In. 6.89

* Discharge measurement made on this day. † Result of discharge measurement.
d Doubtful gage-height record; discharge estimated on basis of weather records and records for stations at Wilson and nearby streams. e Estimated by correlation with nearby stations.

Contentnea Creek at Hookerton, N. C.--Continued

Discharge, in cubic feet per second, water year October 1932 to September 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	142	359	1,430	2,180	1,140	343	705	392	479	889	147
2	32	125	359	1,400	2,230	1,060	343	497	296	515	868	136
3	28	110	343	1,430	2,100	973	375	426	281	497	826	120
4	28	120	296	1,360	1,880	868	392	426	237	426	805	110
5	26	125	266	1,210	1,720	785	426	375	209	392	551	105
6	29	147	266	1,020	1,530	725	443	973	159	296	327	105
7	36	171	251	847	1,360	705	479	1,210	147	237	281	120
8	78	183	237	745	1,330	847	570	1,140	130	183	266	d130
9	125	d250	237	685	1,300	889	627	1,020	110	147	237	d140
10	159	d400	209	745	1,240	910	570	765	92	142	209	d140
11	171	d500	209	785	1,360	952	533	551	82	159	196	d140
12	142	d500	266	805	1,640	973	589	533	92	153	209	d140
13	110	d450	*426	910	1,840	973	589	461	110	130	223	d150
14	78	d400	705	1,040	2,050	952	551	296	142	105	281	d200
15	57	d350	1,120	1,120	2,230	847	515	281	183	120	237	409
16	46	d300	1,330	1,160	2,320	805	497	237	209	147	251	*409
17	74	d250	1,500	1,240	2,320	847	745	237	153	159	266	266
18	87	d200	1,600	1,360	2,280	910	1,140	209	142	171	153	223
19	d150	d200	1,800	1,400	2,280	745	1,400	183	136	d250	125	209
20	d250	209	1,920	1,400	2,230	*805	1,680	*171	130	d350	115	209
21	d300	343	1,920	1,360	2,100	973	2,180	183	125	*d500	110	196
22	d350	479	1,880	1,300	1,960	1,140	2,520	237	120	608	115	183
23	d300	570	1,800	1,160	1,840	1,360	2,570	327	125	646	147	171
24	d250	608	1,600	1,060	1,720	1,640	2,470	409	130	665	171	171
25	d200	551	1,430	910	1,600	1,800	2,320	443	147	685	183	159
26	d150	443	1,360	1,020	1,530	1,800	2,050	409	136	665	209	125
27	d100	392	1,240	1,160	1,400	1,500	1,840	327	209	705	223	110
28	*d75	426	1,210	1,360	1,190	1,160	1,500	343	281	765	223	87
29	d100	409	1,270	1,560	-	889	1,240	296	409	847	196	82
30	130	359	1,330	1,800	-	589	1,100	327	443	868	183	74
31	153	-	1,400	1,960	-	375	-	409	-	089	159	-
Total	3,847	9,712	30,139	36,742	50,760	30,937	32,597	14,406	5,557	12,901	9,234	4,966
Mean	124	324	972	1,190	1,810	998	1,090	465	185	416	298	166
Cfsm	0.157	0.411	1.23	1.51	2.29	1.26	1.38	0.589	0.234	0.527	0.378	0.210
In.	0.18	0.46	1.42	1.73	2.39	1.46	1.54	0.68	0.26	0.61	0.44	0.23

Calendar year 1932: Max 1,920 Min - Mean 453 Cfsm 0.574 In. 7.81
Water year 1932-33: Max 2,570 Min 26 Mean 662 Cfsm 0.839 In. 11.40

* Discharge measurement made on this day. d Doubtful gage-height record; discharge estimated on basis of weather records and records at Wilson and nearby streams.

Discharge, in cubic feet per second, water year October 1933 to September 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	26	a44	53	136	296	1,020	a360	223	251	1,530	2,320
2	53	24	a44	50	153	251	994	a320	251	765	1,360	2,370
3	53	22	a50	61	266	223	952	a300	296	994	1,270	2,320
4	46	18	a55	78	327	209	889	a280	311	931	1,100	1,960
5	46	20	a55	82	251	209	826	a260	375	889	847	1,530
6	50	26	a60	87	209	251	785	a240	426	847	805	1,300
7	53	31	a65	92	183	223	725	a220	479	745	765	1,270
8	61	38	a70	92	171	209	646	a220	570	589	889	1,300
9	65	43	69	87	159	223	765	a200	627	497	1,020	1,140
10	65	46	65	78	142	251	973	a190	665	375	1,240	973
11	53	53	61	74	130	343	1,100	a180	725	533	1,430	805
12	43	57	61	69	136	497	1,300	a180	765	889	1,210	685
13	40	53	61	69	196	570	1,330	183	765	1,880	910	570
14	35	a50	65	74	281	570	1,430	183	627	2,180	826	461
15	30	a50	65	74	281	570	1,600	183	589	2,280	889	515
16	28	a50	69	78	281	570	1,680	311	497	2,280	973	a805
17	28	a50	69	78	251	*551	1,680	443	392	1,600	1,020	a1,240
18	33	a55	69	78	196	589	1,720	515	311	725	973	1,720
19	38	a55	74	74	183	589	1,600	608	311	409	646	a1,920
20	43	*a50	74	69	266	589	1,200	646	359	281	533	2,280
21	43	a48	74	69	375	627	1,020	705	409	281	479	2,420
22	35	a48	74	65	359	685	1,190	725	d600	327	443	2,420
23	27	a48	74	65	327	725	1,300	665	d1,500	359	343	2,230
24	23	a50	69	65	311	745	1,680	533	*a1,720	392	*a497	1,840
25	22	a50	69	65	311	745	1,800	443	*1,600	868	a745	1,360
26	19	a48	69	110	281	765	1,560	359	952	1,160	910	952
27	16	a48	69	159	251	685	1,160	251	426	1,640	1,040	665
28	15	a46	69	196	266	665	a900	209	311	2,180	1,120	515
29	18	a46	69	209	-	785	a600	209	296	2,370	1,330	461
30	22	a46	69	209	-	1,060	a440	196	237	2,480	1,720	461
31	26	-	57	159	-	1,120	-	209	-	1,920	2,140	-
Total	1,190	1,295	2,007	2,868	6,679	16,390	34,865	10,526	17,615	33,917	31,003	40,808
Mean	38.4	43.2	64.7	92.5	239	529	1,160	340	587	1,090	1,000	1,360
Cfsm	0.049	0.055	0.082	0.117	0.303	0.670	1.47	0.431	0.744	1.38	1.27	1.72
In.	0.06	0.06	0.09	0.14	0.31	0.77	1.64	0.50	0.83	1.60	1.46	1.92

Calendar year 1933: Max 2,570 Min 15 Mean 555 Cfsm 0.703 In. 9.55
Water year 1933-34: Max 2,480 Min 15 Mean 546 Cfsm 0.692 In. 9.38

* Discharge measurement made on this day. a No gage-height record; discharge estimated by comparison with other nearby streams. d Doubtful gage-height record; discharge estimated on basis of weather record and records for station at Wilson and nearby streams.

Contentnea Creek at Hookerton, N. C.--Continued

Discharge, in cubic feet per second, water year October 1934 to September 1935

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	570	120	931	847	1,240	533	1,680	847	533	296	1,240	608
2	745	110	1,140	931	1,060	608	1,680	765	461	327	1,160	608
3	725	115	1,330	1,100	931	a725	1,600	685	392	392	973	533
4	533	130	1,560	1,240	805	a785	1,500	646	375	443	765	497
5	461	196	1,840	1,360	725	a785	1,430	570	359	443	646	479
6	a426	311	2,050	1,560	685	a745	1,330	515	327	426	570	785
7	392	311	2,230	1,680	646	a685	1,300	479	359	461	533	1,400
8	392	296	2,280	1,680	608	a627	1,240	426	*570	461	497	1,800
9	359	266	2,140	1,640	570	570	1,240	426	765	533	533	2,230
10	296	237	1,800	1,530	551	a497	1,300	392	685	646	608	2,520
11	296	209	1,360	1,500	533	a461	1,330	359	570	931	608	*2,790
12	251	196	1,100	1,530	515	a461	1,430	359	497	1,060	d500	2,920
13	251	209	952	1,720	497	a479	1,560	343	426	910	d400	2,980
14	223	209	889	1,880	497	a589	1,720	343	409	725	d300	2,620
15	223	209	826	2,050	533	a805	1,500	343	392	889	d250	2,230
16	209	237	765	2,050	646	973	1,270	327	392	1,400	*d200	1,720
17	183	251	725	1,920	725	1,060	1,060	343	375	2,000	d200	973
18	171	*223	685	1,720	805	1,060	*931	343	375	2,370	d250	725
19	183	183	646	1,430	889	994	847	375	375	2,520	d300	*426
20	171	171	665	1,240	931	868	805	392	359	2,620	409	327
21	159	183	785	931	931	765	847	443	426	2,520	589	266
22	153	183	910	868	889	745	931	497	533	2,320	646	237
23	147	183	1,020	826	805	685	1,040	*646	497	2,000	570	266
24	147	281	1,100	889	685	608	1,100	889	426	1,760	515	296
25	136	359	1,140	1,020	608	a608	1,140	1,120	375	1,460	479	296
26	147	461	1,140	1,140	533	a646	1,190	1,240	359	1,060	443	266
27	142	497	1,080	1,270	479	a745	1,240	1,240	327	889	409	237
28	159	515	973	1,400	497	a931	1,240	1,100	327	1,020	392	237
29	142	570	931	1,460	-	al,140	1,100	931	327	1,190	375	237
30	125	685	889	1,460	-	1,360	952	725	311	1,270	392	343
31	136	-	868	1,360	-	1,560	-	608	-	1,270	515	-
Total	8,653	8,106	36,750	43,232	19,819	24,103	37,533	18,717	12,904	36,612	16,267	31,852
Mean	279	270	1,185	1,395	708	778	1,251	604	430	1,181	525	1,062
Cfsm	0.354	0.342	1.50	1.77	0.897	0.986	1.59	0.766	0.545	1.50	0.665	1.35
In.	0.41	0.38	1.73	2.04	0.93	1.14	1.77	0.88	0.61	1.73	0.77	1.50

Calendar year 1934: Max 2,480 Min 50 Mean 680 Cfsm 0.862 In. 11.69
Water year 1934-35: Max 2,980 Min 110 Mean 807 Cfsm 1.02 In. 13.89

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of river characteristics and recorded range in stage. d Doubtful gage-height record; discharge estimated on basis of discharge measurements and other records.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	39	71	565	3,710	1,580	1,530	291	197	55	43	55
2	70	38	65	565	*3,140	1,580	1,730	269	168	51	40	43
3	59	38	63	528	*2,480	1,440	2,000	228	158	49	37	37
4	55	39	65	456	*1,970	1,360	2,100	216	146	46	36	33
5	53	38	75	392	1,590	1,360	2,210	*203	136	44	*34	30
6	*53	49	98	336	1,280	1,440	2,270	203	121	41	33	28
7	54	58	114	306	1,040	1,550	2,150	197	101	40	32	*26
8	55	68	136	284	953	1,580	1,900	203	87	38	33	25
9	57	65	136	262	830	1,510	1,690	222	83	38	62	24
10	55	66	136	248	770	1,190	1,620	197	82	39	59	25
11	54	68	126	248	732	897	1,660	191	79	92	45	24
12	52	69	129	284	695	732	1,730	216	79	80	38	23
13	50	66	141	336	658	658	1,690	242	77	58	35	21
14	48	70	*273	392	621	658	1,620	262	76	*50	32	21
15	46	68	566	447	584	658	1,510	336	84	46	30	20
16	45	59	658	668	547	713	1,380	411	104	91	28	*20
17	44	*55	676	984	547	790	1,090	447	*136	397	*28	20
18	44	53	658	1,110	584	850	866	528	216	341	33	19
19	43	53	639	*1,270	602	910	770	510	180	216	30	19
20	41	57	579	1,440	547	931	658	510	152	180	28	19
21	41	59	397	1,660	547	890	621	658	122	191	30	21
22	39	56	298	1,850	717	810	565	658	103	203	38	24
23	38	60	255	2,520	850	770	474	547	88	180	31	21
24	38	73	228	2,980	975	732	420	510	88	146	28	22
25	36	86	228	3,600	1,060	676	392	492	94	125	26	23
26	36	95	306	*4,960	1,160	621	671	528	80	102	25	23
27	36	94	402	6,020	1,270	584	658	492	70	84	24	21
28	36	84	402	6,680	1,440	756	484	411	65	71	26	*20
29	36	87	367	6,340	-	870	402	420	61	62	42	20
30	37	81	429	5,390	-	975	344	305	57	56	72	20
31	38	-	528	*4,320	-	1,230	-	228	-	48	76	-
Total	1,477	1,891	9,244	57,441	31,899	31,301	37,205	11,131	3,290	3,260	1,154	747
Mean	47.6	63.0	298	1,853	1,139	1,010	1,240	359	110	105	37.2	24.9
Cfsm	0.060	0.080	0.378	2.35	1.44	1.28	1.57	0.455	0.139	0.133	0.047	0.032
In.	0.07	0.09	0.44	2.71	1.50	1.48	1.75	0.52	0.16	0.15	0.05	0.04

Calendar year 1953: Max 2,470 Min 30 Mean 533 Cfsm 0.676 In. 9.18
Water year 1953-54: Max 6,680 Min 19 Mean 521 Cfsm 0.660 In. 8.96

* Discharge measurement made on this day.

Swift Creek near Vanceboro, N. C.

Location.--Lat 35°20'42", long. 77°11'44", on left bank at bridge on county road 2½ miles upstream from bridge on State Highway 118, 2½ miles downstream from Clayroot Swamp, and 3½ miles northwest of Vanceboro, Craven County.

Drainage area.--182 sq mi.

Records available.--January 1950 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 5 ft (from topographic map). Prior to Jan. 17, 1951, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 1,260 cfs Jan. 25 (gage height, 7.52 ft); no flow Aug. 8-29.

1950-54: Maximum discharge observed, 2,330 cfs July 10, 1950 (gage height, 9.54 ft); no flow Aug. 8-29, 1954.

Flood in 1909 reached a stage of 16 ft, and flood in 1928 reached a stage of 11.7 ft, from information by local resident.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, Oct. 14 to Nov. 22)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30			
2.7	4.0	1.9	0	3.6	33
2.9	6.7	2.0	.1	4.0	62
3.2	13	2.1	.2	4.3	98
3.5	22	2.2	.4	4.6	157
4.0	49	2.3	.8	5.0	263
4.3	80	2.4	1.8	6.0	590
4.6	146	2.6	4.6	7.0	1,000
5.0	260	3.0	12	8.0	1,520
6.0	590	3.3	20		
7.0	1,000				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	254	5.0	44	425	249	161	505	39	21	5.7	0.2	11
2	157	5.0	41	359	218	378	660	35	16	3.7	.3	8.2
3	94	4.7	37	290	194	422	642	31	13	2.4	*.2	4.9
4	65	4.8	36	230	*180	375	488	28	12	1.8	.2	3.0
5	50	5.4	39	188	157	349	362	25	10	1.9	.1	2.1
6	41	18	40	160	142	284	281	23	9.4	1.5	.1	1.5
7	*36	17	43	133	128	227	238	*21	8.5	1.1	.1	1.2
8	29	16	43	109	117	184	210	22	8.0	.6	0	.8
9	24	14	*42	93	109	153	272	21	7.1	.6	0	*.5
10	21	17	44	82	104	134	488	20	6.9	1.1	0	.4
11	18	18	45	87	95	123	505	18	6.6	3.1	0	.5
12	16	16	45	202	90	108	471	16	6.9	3.1	0	.5
13	14	14	51	369	84	95	471	16	6.9	2.3	0	.4
14	12	12	139	*336	78	90	388	28	6.0	*1.2	0	.4
15	11	11	*370	286	77	89	305	42	5.2	.8	0	.4
16	10	10	366	400	75	86	246	47	4.8	1.1	0	.4
17	9.5	9.9	293	775	75	77	218	42	*9.0	25	*0	.3
18	8.7	*9.5	233	975	74	71	235	36	16	18	0	.2
19	8.1	9.5	174	890	70	66	202	30	11	8.7	0	.2
20	7.4	9.5	128	*660	66	*73	170	35	7.8	5.4	0	.2
21	7.2	9.5	107	508	69	83	136	81	6.2	3.6	0	.2
22	6.7	9.5	93	448	88	83	113	140	4.9	2.8	0	.2
23	*6.2	38	85	736	113	78	92	75	4.0	2.4	0	*3.0
24	6.0	67	76	1,120	104	73	79	57	3.7	1.9	0	6.6
25	5.5	67	90	*1,260	109	73	74	45	3.4	1.6	0	4.2
26	5.4	63	242	1,180	117	68	79	37	3.1	1.1	0	2.1
27	5.2	60	425	910	111	70	68	30	2.6	.8	0	1.0
28	5.4	55	408	608	97	144	56	25	3.1	.6	0	.6
29	5.6	50	352	455	-	342	48	24	15	.5	0	.3
30	5.4	46	376	355	-	388	42	24	9.7	.3	1.6	*.2
31	5.0	-	442	296	-	422	-	23	-	.3	*7.6	-
Total	949.3	691.3	4,949	14,925	3,190	5,369	8,144	1,136	247.8	105.0	10.4	55.5
Mean	30.6	23.0	160	481	114	173	271	36.6	8.26	3.39	0.34	1.85
Cfsm	0.168	0.126	0.879	2.64	0.626	0.951	1.49	0.201	0.045	0.019	0.0019	0.010
In.	0.19	0.14	1.01	3.05	0.65	1.10	1.66	0.23	0.05	0.02	0.002	0.01

Calendar year 1953: Max 1,020 Min 0.6 Mean 108 Cfsm 0.593 In. 8.03
Water year 1953-54: Max 1,260 Min 0 Mean 109 Cfsm 0.599 In. 8.11

* Discharge measurement or observation of no flow made on this day.

Trent River near Trenton, N. C.

Location.--Lat 35°03'54", long. 77°27'25", on left bank 50 ft downstream from Free Bridge, 800 ft downstream from Little Chinquapin Branch, 1½ miles southwest of Phillips Crossroads, and 6 miles west of Trenton, Jones County.

Drainage area.--168 sq mi.

Records available.--January 1951 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 18.5 ft above mean sea level (from Corps of Engineers benchmark). Prior to Mar. 21, 1951, wire-weight gage on bridge 50 ft upstream at same datum.

Extremes.--Maximum discharge during year, 1,500 cfs at 12:01 a.m. Oct. 1 (gage height, 12.42 ft), stage falling, peak occurred Sept. 30, 1953; minimum, 2.1 cfs Sept. 30 (gage height, 2.30 ft).

1951-54: Maximum discharge, 1,680 cfs Sept. 30, 1953 (gage height, 12.87 ft), from rating curve extended above 1,000 cfs by logarithmic plotting; minimum, that of Sept. 30, 1954.

Flood in 1928 reached a stage of 17.3 ft, from information furnished by State Highway and Public Works Commission.

Remarks.--Records fair.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.3	2.1	4.0	69
2.5	5.0	6.0	230
2.7	9.2	8.0	447
2.9	14	10.0	788
3.3	29	12.0	1,370

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,300	21	148	585	206	184	365	43	30	4.5	6.0	7.0
2	886	20	120	556	188	270	398	39	71	4.7	6.2	7.2
3	585	20	105	488	172	290	410	35	73	4.7	6.8	7.0
4	343	20	97	410	152	300	387	30	55	5.0	*14	6.6
5	184	20	105	332	132	280	332	27	37	4.7	13	6.6
6	132	29	124	260	124	250	260	*24	24	4.4	9.4	6.4
7	*109	35	144	210	116	215	206	22	18	4.2	7.2	5.8
8	96	40	148	184	109	176	206	21	14	4.0	5.8	*5.2
9	84	39	136	164	102	156	235	19	12	6.3	4.8	4.8
10	76	42	132	164	98	136	290	18	12	8.8	4.5	5.0
11	70	54	128	164	92	120	376	18	11	7.4	4.2	5.0
12	64	62	124	235	88	109	500	17	11	6.4	3.9	5.0
13	58	66	139	*321	84	102	528	17	13	6.0	3.6	5.6
14	52	61	376	354	79	93	460	29	13	5.8	3.4	5.4
15	49	58	*570	365	77	86	376	45	12	5.8	3.4	4.8
16	44	55	788	398	74	80	280	54	*11	9.9	4.0	4.4
17	43	*52	886	500	72	72	260	53	10	12	4.2	3.7
18	40	48	742	600	72	67	270	48	9.4	13	4.5	3.1
19	36	46	556	675	71	*62	245	43	9.0	11	3.9	2.9
20	34	43	422	*675	68	77	210	42	8.3	11	3.7	3.4
21	32	41	332	585	73	102	176	42	7.9	9.9	4.4	4.8
22	30	38	270	486	160	102	144	40	7.7	10	4.5	4.4
23	28	65	235	500	206	96	120	35	7.2	8.8	4.8	3.9
24	26	188	215	556	220	92	98	30	7.0	7.9	*8.5	3.4
25	25	280	215	635	215	94	85	26	6.4	7.4	6.6	3.3
26	24	321	376	654	210	96	75	22	6.0	9.0	4.8	2.9
27	23	310	486	617	192	105	66	19	5.8	11	4.8	2.6
28	22	270	556	528	168	176	59	18	5.6	12	4.2	2.4
29	22	215	600	398	-	280	52	17	4.8	9.2	3.6	2.2
30	22	176	600	310	-	321	47	18	4.7	7.4	5.4	*2.1
31	21	-	600	250	-	332	-	22	-	6.4	7.9	-
Total	4,560	2,735	10,475	13,157	3,620	4,921	7,516	933	516.8	238.6	176.0	136.9
Mean	147	91.2	338	424	129	159	251	30.1	17.2	7.70	5.68	4.56
Cfsm	0.875	0.543	2.01	2.52	0.768	0.946	1.49	0.179	0.102	0.046	0.034	0.027
In.	1.01	0.61	2.32	2.91	0.80	1.09	1.66	0.21	0.11	0.05	0.04	0.03

Calendar year 1953: Max 1,600 Min 4.6 Mean 139 Cfsm 0.827 In. 11.27
Water year 1953-54: Max 1,300 Min 2.1 Mean 134 Cfsm 0.798 In. 10.84

* Discharge measurement made on this day.

New River near Gum Branch, N. C.

Location.--Lat 34°51'05", long. 77°31'05", on right bank 5 ft downstream from highway bridge, half a mile downstream from Jenkins Swamp, 1¾ miles southwest of Gum Branch, Onslow County, and 3¾ miles southeast of Richlands.

Drainage area.--74.5 sq mi.

Records available.--August 1949 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 3 ft above mean sea level (Corps of Engineers benchmark). Prior to Mar. 23, 1950, staff gage at same site and datum.

Average discharge.--5 years, 73.8 cfs.

Extremes.--Maximum discharge during year, 590 cfs Dec. 15 (gage height, 8.29 ft); minimum, 2.2 cfs Sept. 28-30 (gage height, 0.55 ft).
1949-54: Maximum discharge, 3,120 cfs July 9, 1950 (gage height, 16.16 ft), from rating curve extended above 2,400 cfs; minimum, that of Sept. 28-30, 1954.
Flood in 1908 reached a stage 2 ft higher than that of July 9, 1950, from information by local resident.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 23

1.1	9.9	4.0	141
1.4	17	5.0	216
1.7	26	6.0	305
2.0	37	8.0	545
2.5	56	10.0	860
3.0	81		

Feb. 24 to Sept. 30

0.5	1.8	1.4	18
.6	2.7	1.7	27
.7	3.8	2.0	38
.9	6.8	2.5	57
1.1	11	3.0	81

Note.--Same as preceding table above 3.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	11	32	257	86	145	196	36	13	4.2	8.7	18
2	58	11	32	200	*81	238	275	32	11	4.1	12	9.3
3	42	11	30	162	76	257	266	28	10	3.9	15	6.6
4	34	11	29	138	71	202	184	25	10	5.4	*12	5.5
5	30	12	44	121	68	166	130	24	10	15	8.5	4.8
6	*27	24	58	109	62	134	106	*22	8.7	7.9	7.0	4.4
7	24	33	58	100	58	115	100	20	8.1	5.8	6.2	*3.9
8	22	28	57	89	54	100	118	19	7.4	4.8	5.7	3.9
9	21	28	49	81	54	89	127	18	6.8	4.9	5.4	3.7
10	20	28	46	78	52	84	192	16	13	11	5.1	3.7
11	19	45	45	81	51	76	240	16	17	37	4.8	3.9
12	18	40	43	124	49	68	266	15	12	19	4.5	3.7
13	16	30	78	*172	45	63	295	17	9.5	11	4.1	3.4
14	15	24	331	162	44	61	224	70	9.3	8.3	3.9	3.2
15	15	20	560	130	43	56	152	92	47	6.8	3.7	3.2
16	15	19	545	141	43	51	118	61	*29	9.3	3.6	4.1
17	14	18	352	220	44	47	166	45	39	36	3.5	4.1
18	13	*17	208	295	49	46	257	35	27	32	3.6	3.1
19	13	16	138	240	43	*46	188	28	19	17	3.6	2.7
20	13	15	115	*176	41	74	124	31	14	15	3.5	2.7
21	13	15	106	155	65	109	92	33	11	16	3.1	3.6
22	12	15	106	148	238	81	74	27	9.3	38	3.7	4.5
23	12	23	106	192	366	64	62	23	7.8	169	3.8	4.1
24	12	62	97	305	260	66	54	20	7.0	135	3.2	3.1
25	11	94	105	305	188	62	51	17	6.2	46	*3.0	2.7
26	11	89	237	216	180	58	51	15	5.7	26	2.9	2.6
27	11	59	366	169	155	64	45	14	5.1	19	2.9	2.4
28	11	45	335	144	121	122	38	16	4.6	16	7.7	2.3
29	12	38	240	121	-	200	41	19	4.5	13	6.5	*2.2
30	12	34	232	106	-	200	41	18	4.4	11	6.6	2.2
31	12	-	275	94	-	158	-	15	-	9.8	26	-
Total	668	915	5,055	5,031	2,687	3,302	4,273	867	386.4	757.2	193.8	127.6
Mean	21.5	30.5	163	162	96.0	107	142	28.0	12.9	24.4	6.25	4.25
Cfsm	0.289	0.409	2.19	2.17	1.29	1.44	1.91	0.376	0.173	0.328	0.084	0.057
In.	0.33	0.46	2.52	2.51	1.34	1.65	2.13	0.43	0.19	0.38	0.10	0.06

Calendar year 1953: Max 620 Min 3.3 Mean 69.9 Cfsm 0.938 In. 12.75
Water year 1953-54: Max 560 Min 2.2 Mean 66.5 Cfsm 0.893 In. 12.10

Peak discharge (base, 800 cfs).--No peak above base.
* Discharge measurement made on this day.

Haw River near Benaja, N. C.

Location.--Lat 36°15', long. 79°34', on left bank 200 ft upstream from site of old High Rock Mill, 500 ft upstream from highway bridge, half a mile upstream from county line, 6 miles downstream from Troublesome Creek, and 6 miles east of Benaja, Rockingham County.

Drainage area.--168 sq mi.

Records available.--October 1928 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 629 ft (by barometer).

Average discharge.--26 years, 163 cfs.

Extremes.--Maximum discharge during year, 1,470 cfs Jan. 23 (gage height, 7.17 ft); minimum, 1.3 cfs Sept. 30 (gage height, 0.47 ft).
1928-54: Maximum discharge, 12,300 cfs Sept. 25, 1947 (gage height, 19.22 ft, from high-water mark), from rating curve extended above 4,000 cfs on basis of slope-area determination of peak flow; minimum, that of Sept. 30, 1954.
Flood in July 1916 reached a stage of about 17.5 ft, from floodmark on tree 500 ft below gage.

Remarks.--Records good. City of Reidsville diverted for municipal water supply from Haw River and Amos Lake above station Sept. 27-30 as result of drought emergency.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.49	1.4	2.0	121
.5	1.5	2.5	214
.6	2.9	3.0	320
.8	7.9	4.0	555
1.0	16	5.0	810
1.3	35	7.0	1,410
1.6	66		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	23	25	53	149	184	253	67	45	13	14	12
2	19	23	26	51	131	249	299	64	41	12	27	9.3
3	18	22	26	50	120	299	266	62	38	11	25	7.9
4	18	22	28	49	112	240	216	134	35	13	24	7.1
5	18	21	42	48	108	178	154	154	32	13	*16	5.9
6	18	22	49	48	102	144	129	144	29	12	13	5.1
7	17	22	65	47	96	124	120	95	29	9.9	11	4.2
8	17	22	71	46	91	114	*112	84	26	9.9	10	3.8
9	16	22	65	46	88	106	115	76	26	19	9.3	2.9
10	16	22	55	47	84	100	121	71	127	17	9.3	2.8
11	17	22	55	77	82	96	112	62	331	14	10	2.9
12	17	22	61	100	80	92	109	60	147	11	9.3	2.6
13	16	22	96	85	75	92	103	56	65	9.3	6.8	2.2
14	14	22	214	*75	74	331	95	98	47	7.3	5.9	2.2
15	15	23	*288	86	71	399	91	168	39	6.5	5.7	*2.3
16	15	23	299	258	75	399	98	203	42	11	5.1	2.6
17	16	23	253	353	82	320	188	172	82	21	5.7	2.5
18	16	23	163	399	*84	201	268	115	105	15	7.6	*2.2
19	16	*23	100	364	82	156	288	102	95	15	33	2.3
20	16	25	88	265	78	178	201	139	65	23	*22	2.5
21	15	25	76	353	182	199	134	174	47	68	36	3.6
22	17	27	79	630	272	201	109	196	38	93	31	4.9
23	16	29	82	1,240	249	161	98	158	*32	116	25	4.2
24	16	30	74	*1,410	188	132	87	106	27	75	23	3.8
25	17	31	64	1,030	146	123	103	87	25	40	18	3.3
26	19	28	58	680	124	120	135	71	22	27	16	2.9
27	19	26	56	543	110	121	127	64	20	21	14	2.6
28	19	25	55	423	102	121	95	59	18	19	23	2.6
29	22	25	56	331	-	120	79	58	15	16	34	1.9
30	23	25	58	251	-	112	71	53	14	14	25	1.4
31	25	-	59	182	-	138	-	48	-	12	17	-
Total	545	720	2,786	9,620	3,237	5,550	4,398	3,200	1,704	763.9	531.7	116.5
Mean	17.6	24.0	89.9	310	116	179	147	103	56.8	24.6	17.2	3.88
Cfsm	0.105	0.143	0.535	1.85	0.690	1.07	0.875	0.613	0.338	0.146	0.102	0.023
In.	0.12	0.16	0.62	2.13	0.72	1.23	0.97	0.71	0.38	0.17	0.12	0.03

Calendar year 1953: Max 792 Min 6.7 Mean 120 Cfsm 0.714 In. 9.68
Water year 1953-54: Max 1,410 Min 1.4 Mean 90.9 Cfsm 0.541 In. 7.36

Peak discharge (base, 1,400 cfs).--Jan 23 (12 m.) 1,470 cfs (7.17 ft).
* Discharge measurement made on this day.

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Horsepen Creek at Battle Ground, N. C.

Location.--Lat 36°08'34", long. 79°51'24", on right bank 10 ft downstream from highway bridge, 0.5 mile downstream from bridge on U. S. Highway 220, three-quarters of a mile north of Battle Ground, Guilford County, and 2 miles upstream from mouth.

Drainage area.--15.9 sq mi.

Records available.--November 1925 to July 1931 (fragmentary November 1925 to October 1928), May 1934 to September 1954.

Gage.--Water-stage recorder and Parshall flume. Datum of gage is 737.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Nov. 9, 1925, to July 31, 1931, water-stage recorder at site 1,000 ft upstream at datum 1.45 ft higher.

Average discharge.--21 years (1929-30, 1934-54), 14.9 cfs.

Extremes.--Maximum discharge during year, 638 cfs Jan. 22 (gage height, 6.53 ft); minimum, 0.7 cfs Sept. 19, 20, 26, 28, 29 (gage height, 0.65 ft).
1925-31, 1934-54: Maximum discharge, 6,400 cfs Sept. 24, 1947 (gage height, 10.36 ft), from rating curve extended above 800 cfs on basis of contracted-opening determination of peak flow; minimum, 0.7 cfs July 24, 1926, Sept. 19, 20, 26, 28, 29, 1954.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	2.6	a2.8	a4.4	11	65	26	6.0	4.0	1.7	2.2	1.6
2	2.2	2.5	a2.8	a4	10	22	17	5.7	3.8	1.7	2.5	1.4
3	2.1	2.4	a2.8	a4	9.1	21	13	5.3	*4.0	1.7	2.8	1.2
4	2.1	2.5	a7	a4	8.8	15	11	8.7	3.8	1.9	*1.5	1.1
5	2.2	3.4	a5	a4	8.4	11	10	7.2	3.5	1.8	1.2	1.0
6	2.4	5.2	a 11	a4	7.8	10	10	6.0	3.4	1.6	1.7	1.0
7	*2.2	5.8	a7	a4	7.3	8.0	*9.1	5.3	3.5	*1.4	1.4	.9
8	2.1	4.5	a4.6	a4	7.2	7.5	10	5.9	3.2	2.2	1.2	*.9
9	2.2	4.2	a4	a4	7.0	7.2	11	5.7	4.7	1.9	a8	.9
10	2.4	4.1	a6	a4	6.8	6.8	9.1	5.3	8.0	1.8	a4	1.0
11	2.4	5.2	a4.4	a16	6.7	6.7	12	4.8	4.1	1.6	2.2	.9
12	2.2	3.7	a30	a9	6.2	6.4	9.3	*4.8	3.5	1.4	1.7	.9
13	2.1	3.3	a10	a6	6.6	8.6	7.6	5.5	3.2	1.2	1.5	.9
14	2.2	3.1	a100	a5	7.0	150	7.8	20	3.5	1.1	1.5	.9
15	2.4	2.9	*17	*12	6.7	33	7.6	14	3.2	1.4	1.5	1.1
16	2.2	2.8	8.9	201	6.6	23	28	8.9	5.5	6.1	1.4	*1.2
17	2.2	2.8	6.2	31	8.6	18	183	6.8	14	1.9	11	.9
18	2.1	*2.8	5.1	18	7.5	14	32	6.2	5.7	1.9	4.4	.9
19	2.2	a2.8	4.8	13	*6.8	19	20	6.4	4.0	3.5	2.8	.8
20	2.2	a2.8	4.8	10	7.6	28	15	15	3.4	2.2	*3.3	1.2
21	2.1	a2.8	5.1	209	48	17	12	12	2.9	7.9	21	1.5
22	3.5	a3	*5.5	301	18	13	10	7.2	*2.7	15	4.6	.9
23	3.1	a3.6	a5	*131	12	12	9.5	6.0	2.5	5.7	3.8	.8
24	2.5	a3.2	a4.6	41	9.8	12	8.9	5.5	2.2	3.1	3.2	.8
25	2.4	a3	a4.4	46	9.1	11	8.0	4.9	2.2	2.5	2.8	.8
26	2.4	a2.8	a4.4	62	7.8	14	7.4	4.9	2.1	2.2	2.4	.8
27	2.6	a2.8	a4.4	47	6.8	10	7.0	4.9	1.9	2.1	2.2	.8
28	3.2	a2.8	a4.4	27	9.2	14	6.6	4.9	1.7	1.9	2.1	.8
29	2.9	a2.8	a4.6	20	-	11	6.2	4.9	1.8	1.9	2.4	.8
30	2.9	a2.8	a5	16	-	11	6.2	4.3	1.7	1.8	2.0	.8
31	2.6	-	a4.6	12	-	30	-	4.3	-	1.7	1.7	-
Total	74.5	99.0	296.2	1,273.4	274.4	635.2	530.3	217.3	113.7	85.8	106.0	29.5
Mean	2.40	3.30	9.55	41.1	9.80	20.5	17.7	7.01	3.79	2.77	3.42	0.98
Cfsm	0.151	0.208	0.601	2.58	0.616	1.29	1.11	0.441	0.238	0.174	0.215	0.062
In.	0.17	0.23	0.69	2.98	0.64	1.49	1.24	0.51	0.27	0.20	0.25	0.07

Calendar year 1953: Max 284 Min 1.6 Mean 15.4 Cfsm 0.969 In. 13.14
Water year 1953-54: Max 301 Min 0.8 Mean 10.2 Cfsm 0.642 In. 8.74

Peak discharge (base, 300 cfs).--Jan. 16 (10:30 a.m.) 354 cfs (5.98 ft); Jan. 22 (8:30 p.m.) 638 cfs (6.53 ft); Mar. 14 (1 p.m.) 310 cfs (5.84 ft); Apr. 17 (10 a.m.) 338 cfs (5.93 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated from records at nearby stations.

Reedy Fork near Gibsonville, N. C.

Location.--Lat 36°11', long. 79°37', on right bank a quarter of a mile downstream from Huffines Mill, 1¼ miles upstream from Buffalo Creek, and 6 miles northwest of Gibsonville, Guilford County.

Drainage area.--133 sq mi.

Records available.--September 1928 to September 1954.

Gage.--Water-stage recorder and rock-masonry control. Datum of gage is 626.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936

Average discharge.--26 years, 112 cfs.

Extremes.--Maximum discharge during year, 1,750 cfs Jan. 24 (gage height, 7.32 ft); minimum daily, 0.7 cfs Aug. 15.
1928-54: Maximum discharge, 11,600 cfs Sept. 25, 1947 (gage height, 20.77 ft); minimum daily, 0.5 cfs Sept. 19, 1953.
Flood in July 1916 reached a stage of 17.90 ft, from information by local resident (discharge, 8,640 cfs).

Remarks.--Records good except those for periods of no gage-height record, which are poor. Considerable diurnal fluctuation caused by powerplants above station. Flow partly regulated since 1923 by Lake Brandt (capacity, 113,256,000 cu ft) 14 miles above station and since 1943 by Richland Lake 12 miles above station. City of Greensboro diverted from Lake Brandt an average of 16.4 cfs for municipal supply and Cone Mills diverted from Richland Lake an average of 4.8 cfs during the water year 1954.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	0.6	1.7	96
.6	1.2	2.0	157
.7	2.7	2.5	284
.8	5.6	3.0	415
.9	10	4.0	710
1.0	16	5.0	1,020
1.2	32	7.0	1,660
1.4	54		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7		5.0	a32	80	120	174	30	15	3.3	25	3.3
2	3.0		11	a28	41	190	162	29	37	7.9	17	2.0
3	3.0		5.9	a26	38	266	146	31	7.4	2.4	21	2.2
4	3.0		7.5	a26	41	214	101	67	19	4.4	6.7	2.6
5	5.5		16	a26	41	120	78	58	9.2	8.7	2.1	2.6
6	4.0		17	a26	40	94	68	59	5.0	3.6	2.7	2.4
7	2.1		28	a24	37	86	67	*47	16	7.1	3.3	2.4
8	*3.6		19	a24	36	52	*77	42	9.3	3.0	3.3	2.4
9	3.2		15	a24	34	38	86	35	19	9.0	3.6	2.7
10	3.0	a8	16	a24	32	34	71	32	118	2.4	4.2	3.5
11	4.4		14	a44	30	34	67	31	39	2.1	5.0	1.2
12	10		26	a55	28	34	64	28	25	4.0	5.6	1.6
13	3.6		37	a50	27	40	59	27	19	3.8	13	4.2
14	9.3		141	*50	26	430	54	52	11	2.1	2.2	2.0
15	5.0		*93	57	27	256	49	78	14	4.9	.7	3.0
16	5.1		92	304	29	349	50	96	8.2	2.2	1.1	2.7
17	2.2		176	291	32	253	138	84	5.0	4.9	2.0	2.4
18	3.0		88	457	43	84	285	63	19	2.7	*5.3	1.6
19	6.9	(*)	42	245	48	72	305	53	32	8.5	5.6	*1.6
20	4.0	7.0	36	124	48	110	148	73	49	4.6	9.3	2.2
21	4.4	3.3	36	338	129	122	90	64	35	3.7	10	2.1
22	6.4	7.8	36	776	171	137	70	60	28	10	16	2.4
23	4.0	11	39	1,370	157	112	59	54	22	23	9.6	2.4
24	2.7	12	38	*1,180	137	90	53	42	*17	12	15	5.8
25	5.3	8.2	36	402	100	77	59	35	11	4.2	3.8	1.0
26	7.6	8.7	34	279	82	77	79	29	7.6	11	3.0	1.2
27	2.9	12	32	184	73	75	80	27	5.0	4.2	8.0	1.5
28	6.0	4.6	32	133	64	80	42	25	8.6	10	6.8	1.6
29	7.9	6.9	29	124	-	75	35	22	3.6	6.5	2.6	2.0
30	8.5	11	32	124	-	78	32	20	5.4	1.5	12	2.0
31	3.1	-	32	100	-	147	-	18	-	1.4	4.6	-
Total	145.4	244.5	1,261.4	6,947	1,671	3,946	2,848	1,411	619.3	179.1	230.1	70.6
Mean	4.69	8.15	40.7	224	59.7	127	94.9	45.5	20.6	5.78	7.42	2.35
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 1,160 Min 0.5 Mean 87.9 Cfsm - In. -
Water year 1953-54: Max 1,370 Min 0.7 Mean 53.6 Cfsm - In. -

Peak discharge (base, 1,600 cfs).--Jan. 24 (4 a.m.) 1,750 cfs (7.32 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 Benaja.

South Buffalo Creek near Greensboro, N. C.

Location.--Lat 36°03'37", long. 79°43'33", on left bank 5 ft downstream from bridge on McConnel road crossing, 3.8 miles east of post office in Greensboro, Guilford County, and 6 miles upstream from confluence with North Buffalo Creek.

Drainage area.--32.8 sq mi.

Records available.--August 1928 to September 1954. Prior to October 1952, published as Buffalo Creek near Greensboro.

Gage.--Water-stage recorder. Datum of gage is 696.2 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--26 years, 37.6 cfs.

Extremes.--Maximum discharge during year, 992 cfs Jan. 23 (gage height, 7.59 ft); minimum, 2.5 cfs Sept. 26.

1928-54: Maximum discharge, 10,000 cfs July 15, 1949 (gage height, 11.54 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening determinations at gage heights 8.69, 10.64, and 11.54 ft; minimum, 0.2 cfs Oct. 2, 1930.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Sewage from Greensboro enters above station affecting low-water flow.

Revisions (water years).--WSP 972: 1928-33, 1934(M), 1935-37, 1939, 1940(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 23-30)

Oct. 1 to Dec. 6		Dec. 7 to Sept. 30			
2.7	3.0	2.5	2.7	4.5	69
2.8	4.2	2.7	4.4	5.0	103
2.9	5.7	2.9	7.4	5.5	152
3.2	13	3.2	15	6.0	235
3.4	20	3.5	26	6.5	393
		4.0	47	7.0	632

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	a5	7.4	12	22	97	209	13	10	6.9	6.0	8.0
2	5.7	a6	7.6	10	22	100	69	11	9.8	6.9	12	6.9
3	5.0	a7	7.9	9.1	22	50	40	23	9.3	6.4	*33	6.2
4	4.2	a7	15	11	22	50	30	99	9.1	5.0	11	5.7
5	4.2	a7	15	11	24	32	27	28	7.8	5.0	7.4	4.7
6	5.7	a7	20	9.1	22	23	*24	*17	6.4	5.4	8.0	4.8
7	5.9	a7	43	a8	17	19	24	14	6.9	6.0	5.9	5.6
8	5.7	a7	16	a7	18	19	28	14	8.0	7.1	4.2	6.2
9	*5.7	a5	12	a8	18	19	52	12	8.9	6.0	14	*6.2
10	5.6	a6	21	a10	17	17	28	12	22	6.2	16	6.0
11	*4.0	a7	16	a20	16	17	26	12	11	4.9	6.9	5.4
12	5.0	a7	44	a40	16	18	30	11	8.9	5.2	*5.9	4.2
13	5.7	a7	61	a25	14	38	24	12	6.9	6.7	5.6	5.0
14	5.7	a7	*213	a18	13	683	20	48	9.5	6.6	4.8	6.0
15	5.7	a6	167	*33	14	289	20	49	9.1	10	4.1	5.7
16	5.7	a5	30	360	15	62	30	24	17	43	4.8	*6.0
17	4.8	*7.4	19	294	20	38	107	17	25	9.1	8.4	6.2
18	4.0	7.4	15	56	*17	32	90	15	14	5.6	*9.7	5.3
19	5.1	7.4	12	35	16	35	33	29	10	6.2	6.7	4.0
20	6.6	7.6	11	27	15	92	22	83	7.8	7.4	7.0	3.5
21	*6.2	6.9	14	313	61	45	20	48	7.4	17	27	5.6
22	a6	6.7	16	556	84	29	19	20	8.2	*24	7.8	5.6
23	a6	9.6	14	*688	32	24	18	14	8.0	29	6.7	4.8
24	a6	9.3	12	171	24	22	15	12	*7.6	9.3	6.7	4.5
25	a6	8.1	10	101	23	22	13	12	7.1	5.7	6.6	4.0
26	a6	7.4	9.5	148	20	27	14	12	6.6	5.7	6.4	3.1
27	a5	7.4	9.3	110	16	23	62	11	5.2	6.4	6.6	3.3
28	a7	6.4	11	55	16	30	24	11	5.6	6.4	24	3.8
29	a10	5.2	14	37	-	28	16	11	6.7	6.2	151	3.9
30	a8	6.4	15	30	-	34	14	8.7	6.9	6.2	50	3.6
31	a6	-	14	26	-	94	-	9.5	-	6.2	11	-
Total	178.1	206.2	891.7	3,238.2	636	2,108	1,148	712.2	286.7	287.7	485.2	153.8
Mean	5.75	6.87	28.8	104	22.7	68.0	38.3	23.0	9.56	9.28	15.7	5.13
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 862 Min 3.5 Mean 42.4 Cfsm - In. -
Water year 1953-54: Max 688 Min 3.1 Mean 28.3 Cfsm - In. -

Peak discharge (base, 650 cfs).--Jan. 23 (4:30 a.m.) 992 cfs (7.59 ft); Mar. 14 (3 p.m.) 940 cfs (7.52 ft).

* Discharge measurement made on this day.

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

North Buffalo Creek near Greensboro, N C.

Location.--Lat 36°07'13", long. 79°42'30", on left bank 5 ft downstream from highway bridge, 4.2 miles upstream from confluence with South Buffalo Creek, and 5.8 miles northeast of post office in Greensboro, Guilford County.

Drainage area.--36.4 sq mi.

Records available.--August 1928 to September 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 679 ft (from topographic map).

Average discharge.--26 years, 45.7 cfs.

Extremes.--Maximum discharge during year, 1,330 cfs Jan. 22 (gage height, 9.05 ft); minimum, 7.0 cfs Nov. 29 (gage height, 1.81 ft).
1928-54: Maximum discharge, 6,000 cfs Sept. 25, 1947 (gage height, 15.96 ft), from rating curve extended above 2,000 cfs on basis of contracted-opening determinations at gage heights 14.15 and 15.96 ft; minimum, 1.6 cfs Aug. 28, 1932.

Remarks.--Records fair. Diurnal fluctuation at low flow caused by mills above station. Diversion into basin from Greensboro and Proximity Mills enters above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	6.6	3.0	133
2.0	15	4.0	331
2.2	29	5.0	551
2.5	58	7.0	955

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	12	17	17	31	190	102	24	22	19	19	21
2	19	14	19	13	34	62	49	19	23	20	38	20
3	17	18	18	12	32	78	37	59	22	16	56	18
4	12	18	43	16	31	50	30	76	20	14	23	14
5	15	18	23	19	31	38	31	32	17	12	*20	10
6	19	20	58	20	26	31	35	30	14	15	30	9.8
7	19	15	46	20	20	24	35	*26	16	20	15	16
8	*21	11	21	20	23	27	*60	24	21	29	14	17
9	21	14	20	16	27	29	54	17	23	20	61	19
10	18	17	32	13	28	31	31	20	42	17	46	21
11	13	18	19	85	32	29	40	23	21	12	22	15
12	17	19	100	35	39	28	34	23	19	14	19	11
13	17	17	30	26	25	78	33	29	15	19	19	14
14	19	15	*336	27	20	599	35	113	36	20	15	18
15	19	12	42	66	22	92	32	50	23	29	12	19
16	18	15	27	469	27	49	50	27	27	89	15	*19
17	16	18	23	70	38	40	182	26	63	18	54	18
18	12	19	22	38	*27	39	52	28	28	12	*46	15
19	15	*18	19	35	23	61	35	50	20	17	23	10
20	19	18	14	32	24	81	33	133	16	20	21	19
21	19	16	19	834	222	37	35	59	19	70	71	20
22	19	16	23	*965	57	33	33	31	20	123	17	18
23	19	15	21	*345	37	35	31	20	20	36	17	17
24	15	18	16	108	35	34	27	23	*19	19	19	16
25	11	19	13	133	35	34	39	26	20	13	20	14
26	14	15	12	142	31	47	74	25	19	12	20	12
27	18	13	12	108	26	31	74	26	14	13	20	14
28	19	12	16	58	27	46	38	26	15	13	122	19
29	27	9.8	21	44	-	35	31	23	19	14	105	18
30	18	14	23	35	-	42	28	17	20	13	21	17
31	15	-	20	27	-	160	-	19	-	12	22	-
Total	540	473.8	1,125	3,848	1,030	2,190	1,400	1,124	673	770	1,022	488.8
Mean	17.4	15.8	36.3	124	36.8	70.6	46.7	36.3	22.4	24.8	33.0	16.3
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 898 Min 9.8 Mean 46.6 Cfsm - In. -
Water year 1953-54: Max 965 Min 9.8 Mean 40.2 Cfsm - In. -

Peak discharge (base, 920 cfs).--Jan. 22 (9 p.m.) 1,330 cfs (9.05 ft); Mar. 14 (10 a.m.) 1,080 cfs (7.67 ft).
* Discharge measurement made on this day.

Stony Creek near Burlington, N. C.

Location.--Lat 36°11', long. 79°25', on right bank a quarter of a mile upstream from highway bridge, half a mile upstream from Buttermilk Creek, 4½ miles upstream from mouth, and 6 miles north of Burlington, Alamance County.

Drainage area.--44.2 sq mi.

Records available--July 1952 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 536.3 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 1,600 cfs Jan. 23 (gage height, 8.80 ft); no flow for several days in November, December, and September.
1952-54: Maximum discharge, 1,670 cfs Feb. 15, 1953 (gage height, 9.08 ft); no flow at times in each year.

Remarks.--Records fair except those below 1 cfs and those above 500 cfs, which are poor.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13 to Dec. 14, June 21-28)

0.2	0	1.6	14
.3	.01	1.8	24
.4	.02	2.0	35
.5	.05	2.5	82
.6	.10	3.0	146
.7	.18	3.5	226
.8	.40	4.0	328
.9	.85	5.0	670
1.0	1.5	6.0	970
1.2	3.6		
1.4	7.0		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.02	0.01	0.01	3.5	16	426	238	5.8	3.7	0.33	1.8	0.04
2	.02	.01	.01	3.2	14	108	72	5.4	3.7	.65	1.0	.03
3	.02	.01	0	3.2	14	64	42	5.8	3.5	.40	*.54	.02
4	.02	.01	.01	3.1	12	68	30	46	3.4	.31	.62	.02
5	.02	.01	.04	3.1	11	38	26	19	3.0	.29	.58	.01
6	.01	.01	.29	3.1	10	30	*24	10	2.8	.17	.49	.01
7	.01	.01	.72	3.0	9.1	26	22	7.9	2.2	.12	.25	.01
8	.01	.01	.85	3.0	8.8	22	21	7.0	2.4	.15	.11	.01
9	.01	.01	1.2	2.9	8.8	20	20	6.8	2.4	.27	.07	.01
10	.01	.01	1.0	4.6	8.5	19	16	6.0	14	.60	.07	.01
11	.01	.01	1.2	6.7	7.9	17	16	5.2	66	.29	.04	.01
12	.01	.01	2.0	15	7.0	16	18	4.9	10	.60	.03	0
13	.01	.01	7.2	8.1	6.8	23	15	4.6	5.8	.49	.02	0
14	.01	.01	*55	5.8	7.0	827	14	20	80	*.33	.01	0
15	.01	.01	17	8.8	7.3	146	13	62	16	.20	.01	0
16	.01	.01	7.0	411	*7.6	57	14	32	6.6	8.2	.01	**.01
17	.01	*0	4.7	84	8.5	40	75	19	5.0	3.7	.02	0
18	.01	.01	3.9	28	8.5	30	46	11	4.2	1.9	.03	0
19	.01	.01	3.4	18	7.6	28	25	*10	3.9	1.5	.03	.01
20	.01	.01	3.4	15	7.3	62	18	50	2.9	1.2	.07	.01
21	.01	.01	3.6	522	47	39	16	69	2.0	4.6	.36	.01
22	.01	.01	*4.0	565	44	28	13	28	1.6	5.6	.06	.01
23	.01	.01	4.3	586	22	24	12	16	1.3	6.0	.04	.01
24	.01	.01	3.9	94	17	22	10	12	*1.0	3.6	.03	0
25	.01	.01	3.6	90	15	21	9.7	9.4	.92	2.2	.03	0
26	.01	.01	3.4	152	13	22	8.5	7.3	.92	1.2	.02	0
27	.01	.01	3.6	131	12	22	7.9	6.0	.92	.85	6.3	0
28	.01	.01	4.0	50	15	24	7.0	5.6	.58	.62	10	0
29	.01	.01	3.6	29	-	25	6.2	5.4	.38	.38	1.0	0
30	.01	.01	3.6	23	-	23	5.8	5.6	.38	.20	.20	.01
31	.01	-	3.6	19	-	122	-	4.3	-	.14	.07	-
Total	0.36	0.29	150.13	2,894.1	372.7	2,439	861.1	507.0	251.50	47.09	23.91	0.25
Mean	0.012	0.010	4.84	93.4	13.3	78.7	28.7	16.4	8.38	1.52	0.771	0.008
Cfsm	0.00027	0.00023	0.110	2.11	0.301	1.78	0.649	0.371	0.190	0.034	0.017	0.00018
In.	0.0003	0.0002	0.13	2.44	0.31	2.05	0.72	0.43	0.21	0.04	0.02	0.0002

Calendar year 1953: Max 979 Min 0 Mean 30.1 Cfsm 0.681 In. 9.23
Water year 1953-54: Max 827 Min 0 Mean 20.7 Cfsm 0.468 In. 6.35

Peak discharge (base, 900 cfs).--Jan. 23 (1 a.m.) 1,600 cfs (8.80 ft); Mar. 14 (5 p.m.) 1,440 cfs (8.06 ft).
* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.

Haw River at Haw River, N. C.

Location.--Lat 36°05', long. 79°22', on left bank at town of Haw River, Alamance County, 650 ft downstream from Southern Railway bridge and 3 miles downstream from Stony Creek.

Drainage area.--599 sq mi.

Records available.--October 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 471.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--26 years, 581 cfs.

Extremes.--Maximum discharge during year, 8,670 cfs Jan. 23 (gage height, 17.33 ft); minimum, 12 cfs Sept. 28 (gage height, 1.07 ft); minimum daily, 14 cfs Sept. 27. 1928-54: Maximum discharge, 37,000 cfs Sept. 18, 1945 (gage height, 31.10 ft, from floodmark), from rating curve extended above 26,000 cfs on basis of contracted-opening determination of peak flow; minimum, 3 cfs Sept. 5, 1930 (gage height, 0.92 ft); minimum daily, 5 cfs Sept. 6, 1930.

Remarks.--Records good. Large diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station. City of Burlington diverted an average of 6.2 cfs for municipal supply from basin above station during the water year 1954.

Revisions (water years).--WSP 757: 1929(M). WSP 782: 1934. WSP 822: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Feb. 11-20)

1.1	13	4.0	705
1.3	25	6.0	1,460
1.5	46	8.0	2,340
1.7	77	10.0	3,400
2.0	140	12.0	4,600
2.5	258	14.0	6,000
3.0	384		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	41	60	167	490	1,800	1,820	207	171	50	71	108
2	91	35	75	164	384	1,140	1,100	219	87	85	188	83
3	54	93	79	118	316	1,020	862	153	91	74	*248	39
4	45	79	93	127	333	1,020	656	450	103	46	112	27
5	47	63	93	151	330	705	474	474	108	39	118	25
6	42	60	127	125	253	540	408	358	125	42	53	38
7	52	57	170	122	258	458	371	278	63	40	60	28
8	41	60	243	129	268	408	408	258	89	42	54	68
9	*42	41	174	133	240	346	639	223	74	45	56	35
10	42	64	155	125	278	328	427	178	288	45	45	29
11	85	68	144	149	195	270	412	174	656	57	127	26
12	56	59	201	311	199	260	384	171	412	45	91	18
13	45	45	360	303	176	281	333	169	260	88	57	17
14	49	36	996	233	169	5,630	323	298	298	47	38	23
15	47	62	838	273	243	2,710	300	656	204	45	38	39
16	74	60	722	2,900	*202	1,500	316	606	114	49	33	35
17	57	*60	556	1,780	202	1,020	1,240	458	120	102	39	33
18	53	57	474	1,460	207	678	1,020	346	233	108	*50	25
19	36	59	288	1,060	192	474	985	290	199	53	129	*22
20	52	65	192	678	187	792	678	722	207	70	87	23
21	69	54	187	3,240	587	740	427	1,100	153	75	87	31
22	63	35	180	4,710	985	606	346	590	129	160	125	*41
23	39	62	192	6,650	758	507	306	474	118	283	122	29
24	38	89	185	4,340	639	427	293	358	*118	228	140	30
25	38	87	164	2,600	524	384	300	250	95	129	91	22
26	28	93	142	2,190	384	384	306	209	70	101	35	16
27	39	72	133	1,790	346	408	442	192	52	81	35	14
28	61	62	151	1,220	330	442	346	171	53	59	146	18
29	59	60	144	880	-	427	240	142	93	56	260	34
30	62	56	147	722	-	384	216	147	56	105	239	25
31	50	-	167	606	-	937	-	158	-	78	224	-
Total	1,624	1,834	7,832	39,456	9,675	27,026	16,378	10,479	4,839	2,527	3,198	1,001
Mean	52.4	61.1	253	1,273	346	872	546	338	161	81.5	103	33.4
Cfsm	0.087	0.102	0.422	2.13	0.578	1.46	0.912	0.564	0.269	0.136	0.172	0.056
In.	0.10	0.11	0.49	2.45	0.60	1.68	1.02	0.65	0.30	0.16	0.20	0.06

Calendar year 1953: Max 5,890 Min 23 Mean 480 Cfsm 0.801 In. 10.89
Water year 1953-54: Max 6,650 Min 14 Mean 345 Cfsm 0.576 In. 7.82

Peak discharge (base, 6,000 cfs).--Jan. 23 (12:30 a.m.) 8,670 cfs (17.33 ft); Mar. 14 (1 p.m.) 8,220 cfs (16.75 ft).

* Discharge measurement made on this day.

Haw River near Pittsboro, N. C.

Location.--Lat 35°42', long. 79°05', on left bank 100 ft upstream from Robeson Creek, 2 miles downstream from bridge on U. S. Highway 64, and 5 miles east of Pittsboro, Chatham County.

Drainage area.--1,310 sq mi, approximately.

Records available.--November 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 180.06 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 15, 1929, staff gage at same site and datum.

Average discharge.--26 years, 1,241 cfs.

Extremes.--Maximum discharge during year, 24,000 cfs Jan. 23 (gage height, 16.39 ft); minimum, 3.1 cfs Sept. 13 (gage height, 1.19 ft); minimum daily, 5.6 cfs Oct. 11, 25.
1928-54: Maximum discharge, 79,000 cfs during night of Sept. 18-19, 1945 (gage height, 28.58 ft, from floodmark in gage shelter); minimum, that of Sept. 13, 1954; minimum daily, 5.3 cfs Sept. 20, 1953.
Flood in August 1908 reached a stage of 32.1 ft, from floodmarks 1,000 ft upstream (discharge, 98,000 cfs). Flood in 1865 reached a stage about 1 ft lower than flood in 1908, from information by local residents. Flood in September 1928 reached a stage of 20.3 ft, from floodmarks (discharge, 39,200 cfs).

Remarks.--Records good. Considerable diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station.

Revisions.--WSP 822: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.2	3.4	3.0	580
1.3	7.3	3.5	950
1.4	13	4.0	1,360
1.6	28	5.0	2,260
1.8	52	7.0	4,560
2.1	108	9.0	7,600
2.4	212	12.0	13,100
2.7	379	15.0	19,700

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	251	48	55	124	1,010	3,110	5,640	379	262	183	46	313
2	146	179	34	169	860	3,420	*2,860	237	292	161	116	271
3	124	103	32	152	800	1,840	1,790	238	260	58	491	174
4	58	58	38	214	573	2,020	1,360	898	186	14	601	54
5	134	41	78	198	650	1,480	1,150	875	93	52	302	13
6	53	34	145	201	702	1,070	950	817	127	82	260	7.3
7	*35	12	211	190	390	838	830	704	179	88	154	*25
8	28	69	481	110	525	845	800	501	167	90	162	44
9	28	172	153	178	619	688	1,190	235	198	97	161	22
10	11	87	142	132	476	601	1,230	363	181	104	62	20
11	5.6	50	148	190	489	594	860	690	581	60	*38	21
12	37	37	318	282	469	539	1,030	326	838	105	41	10
13	55	31	560	352	471	702	845	214	478	57	27	29
14	37	50	3,270	350	227	7,970	718	341	398	26	62	50
15	32	57	2,040	608	260	8,900	702	1,840	603	30	108	34
16	33	143	1,070	9,720	696	2,940	*575	1,400	566	394	124	29
17	46	91	838	5,900	*612	1,920	3,010	1,070	1,260	415	60	26
18	73	60	710	2,460	511	1,440	3,040	845	935	262	183	12
19	108	42	629	1,740	98	1,110	1,790	650	658	230	144	57
20	61	36	190	1,230	203	1,680	1,400	725	178	288	55	125
21	48	14	216	4,660	929	1,790	1,030	2,910	217	267	39	65
22	34	77	440	12,200	2,380	1,310	838	1,400	*466	206	14	28
23	27	174	229	18,600	1,440	1,070	740	868	200	179	38	28
24	11	*96	368	7,670	1,110	935	710	746	187	142	188	34
25	5.6	62	182	4,840	928	838	318	743	185	273	159	28
26	122	34	106	4,840	808	785	638	416	104	291	130	14
27	84	127	108	3,790	680	710	685	225	122	187	43	29
28	53	169	162	2,560	348	710	602	368	169	186	56	42
29	38	127	363	1,740	-	974	660	291	144	182	135	29
30	36	138	282	1,310	-	1,190	530	222	180	169	236	27
31	30	-	192	1,070	-	1,540	-	209	-	60	418	-
Total	1,844.2	2,418	13,790	87,780	19,264	55,559	38,521	21,746	10,414	4,938	4,653	1,660.3
Mean	59.5	80.6	445	2,832	688	1,792	1,284	701	347	159	150	55.3
Cfsm	0.045	0.062	0.340	2.16	0.525	1.37	0.980	0.535	0.265	0.121	0.115	0.042
In.	0.05	0.07	0.39	2.49	0.55	1.58	1.09	0.62	0.30	0.14	0.13	0.05

Calendar year 1953: Max 14,400 Min 5.3 Mean 1,052 Cfsm 0.803 In. 10.90
Water year 1953-54: Max 18,600 Min 5.6 Mean 719 Cfsm 0.549 In. 7.46

Peak discharge (base, 17,000 cfs).--Jan. 23 (3 a.m.) 24,000 cfs (16.39 ft).
* Discharge measurement made on this day.

New Hope River near Pittsboro, N. C.

Location.--Lat 35°44', long. 79°02', on right bank at downstream side of bridge on U. S. Highway 64, a quarter of a mile downstream from Whiteoak Creek and 8¾ miles east of Pittsboro, Chatham County.

Drainage area.--285 sq mi.

Records available.--January 1949 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 176.42 ft above mean sea level (Corps of Engineers benchmark). Prior to Mar. 18, 1950, staff gage at same site and datum.

Average discharge.--5 years, 235 cfs.

Extremes.--Maximum discharge during year, 7,600 cfs Jan. 24 (gage height, 19.55 ft); minimum, 2.3 cfs Sept. 11-13.
1949-54: Maximum discharge, 7,900 cfs Mar. 5, 1952; minimum, 2.0 cfs Sept. 4, 1953. Flood in September 1945 reached a stage of 27.65 ft; 1929 flood, 25.3 ft; 1908 flood, 23.85 ft; from information by State Highway and Public Works Commission.

Remarks.--Records fair. City of Durham discharged an average of 4.3 cfs sewage effluent into basin above station, diverted from Neuse River during the water year 1954. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 12		Dec. 13 to Aug. 23				Aug. 24 to Sept. 30	
2.3	3.2	1.9	4.9	5.0	216	2.3	2.6
2.4	7.2	2.0	6.0	7.0	459	2.4	6.7
2.5	12	2.1	7.2	9.0	800	2.5	13
2.6	18	2.3	13	11.0	1,250	2.6	20
2.8	33	2.5	27	14.0	2,100		
3.0	50	2.7	43	17.0	3,760		
3.5	91	3.0	60	19.0	6,160		
4.0	130	3.5	88	19.2	6,520		
4.4	160	4.0	130				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	9.6	8.2	93	270	444	1,330	45	25	8.2	6.6	7.2
2	13	8.6	8.2	72	216	880	*1,310	40	23	8.2	*6.7	5.7
3	11	8.2	8.2	58	186	940	1,250	40	*22	8.2	16	4.8
4	9.6	8.2	9.6	49	172	*980	912	54	22	7.9	46	4.4
5	9.1	7.7	16	45	164	690	388	99	20	16	37	4.4
6	8.2	7.7	33	42	148	412	211	100	18	13	18	4.0
7	*8.6	7.7	42	40	130	254	177	59	16	9.1	12	*3.6
8	9.1	8.2	24	*38	113	191	156	57	14	7.9	8.6	3.6
9	9.1	9.1	22	35	102	160	198	91	14	7.7	7.7	3.2
10	9.1	11	19	33	94	140	354	76	14	7.7	7.0	2.9
11	8.2	10	25	37	*88	130	366	47	20	7.7	*6.5	2.6
12	7.2	9.6	156	86	*80	114	264	37	48	7.4	6.0	2.6
13	6.4	9.1	414	177	74	100	237	32	75	7.0	5.8	2.9
14	6.4	9.1	*1,200	144	68	471	181	113	39	6.6	5.6	3.2
15	6.0	9.1	*1,350	334	65	1,000	148	416	37	6.1	5.6	3.6
16	5.6	9.1	1,270	1,700	64	1,020	*134	505	33	9.1	5.3	4.0
17	5.6	9.1	1,230	3,230	*64	1,050	316	366	41	56	5.7	3.6
18	6.0	9.1	538	3,840	67	584	806	206	42	82	7.9	3.6
19	6.8	9.1	147	*2,550	66	248	619	114	53	*39	53	4.0
20	7.2	9.1	87	1,480	60	324	403	166	29	21	40	4.8
21	7.2	10	72	678	154	430	213	259	19	22	15	4.8
22	7.2	11	*71	1,300	630	354	140	206	*16	23	9.9	4.0
23	6.8	15	70	4,160	668	242	118	134	15	16	8.2	4.0
24	6.4	*16	66	6,580	583	177	97	78	13	14	7.2	4.0
25	6.0	16	56	3,840	361	156	136	*60	12	12	6.7	4.4
26	6.8	18	49	2,380	201	156	83	48	12	9.6	4.8	4.4
27	*6.8	14	45	1,820	156	158	67	41	11	8.2	*4.8	3.6
28	6.8	11	42	1,560	126	207	62	36	9.9	7.1	6.2	3.2
29	7.2	9.6	42	1,390	-	276	56	33	9.1	6.6	19	3.6
30	7.7	9.1	68	1,040	-	375	*48	32	8.4	7.1	13	3.6
31	9.1	-	98	478	-	706	-	30	-	6.8	8.9	-
Total	251.2	308.1	7,286.2	39,309	5,170	13,367	10,760	3,618	730.4	468.2	410.7	118.3
Mean	8.10	10.3	235	1,268	185	431	359	117	24.3	15.1	13.2	3.94
Cfsm	0.028	0.036	0.825	4.45	0.649	1.51	1.26	0.411	0.085	0.053	0.046	0.014
In.	0.03	0.04	0.95	5.13	0.67	1.74	1.40	0.47	0.10	0.06	0.05	0.02

Calendar year 1953: Max 4,240 Min 2.2 Mean 319 Cfsm 1.12 In. 15.18
Water year 1953-54: Max 6,580 Min 2.6 Mean 224 Cfsm 0.786 In. 10.66

Peak discharge (base, 2,500 cfs).--Jan. 18 (3 a.m.) 4,290 cfs (17.56 ft); Jan. 24 (5 a.m.) 7,600 cfs (19.55 ft).
* Discharge measurement made on this day.

West Fork Deep River near High Point, N. C.

Location.--Lat 36°00'15", long. 79°58'42", on left bank 2,300 ft upstream from highway bridge and High Point Lake, 2.3 miles west of Jamestown, and 2.5 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--32.1 sq mi.

Records available.--June 1923 to September 1926, July 1928 to September 1954.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 758 ft (from topographic map). June 14, 1923, to Sept. 30, 1926, staff gage at site 2,300 ft downstream at different datum.

Average discharge.--29 years, 31.5 cfs.

Extremes.--Maximum discharge during year, 1,410 cfs Jan. 21 (gage height, 11.15 ft); minimum, 1.6 cfs Sept. 19, 29 (gage height, 2.39 ft).
1923-26, 1928-54: Maximum discharge, 8,450 cfs Sept. 24, 1947 (gage height, 19.92 ft, from floodmark), from rating curve extended above 2,000 cfs on basis of contracted-opening determination of peak flow; mimimum, 0.3 cfs Sept. 1, 1932.

Remarks.--Records good except those above 25 cfs, which are fair.

Revisions (water years).--WSP 852: Drainage area. WSP 922: 1928-29(M), 1933(M), 1936(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 6		Dec. 7 to Sept. 30			
2.5	2.9	2.4	1.7	4.0	61
2.6	4.8	2.5	3.1	4.5	116
2.8	9.9	2.6	4.9	5.0	193
3.0	16	2.8	9.9	6.0	318
		3.0	16	8.0	518
Note.--Same as following table above 3.0 ft.		3.3	27	10.0	950
		3.6	40	10.1	980

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	5.4	6.1	9.6	23	126	82	14	8.6	4.4	9.0	4.2
2	5.4	5.4	6.1	9.4	22	35	36	13	8.6	4.4	36	3.9
3	5.2	5.4	6.1	9.4	21	40	29	17	7.7	4.2	17	3.7
4	5.2	5.4	11	9.1	20	30	24	32	7.2	5.5	4.9	3.5
5	5.2	5.4	11	9.4	19	23	22	15	6.9	4.9	4.2	3.2
6	*5.0	6.1	19	9.1	18	21	22	13	6.4	4.1	4.7	3.1
7	5.0	5.9	24	8.8	17	19	21	12	6.6	3.7	3.7	2.8
8	4.8	5.9	10	8.6	17	18	68	15	6.4	5.7	3.5	2.6
9	5.0	5.9	8.8	8.6	17	18	*48	12	6.4	4.7	61	2.5
10	5.2	5.9	16	9.4	16	17	25	12	12	4.4	33	2.6
11	5.0	5.6	9.4	*34	15	16	28	11	7.7	3.9	6.3	2.5
12	4.8	5.9	82	22	14	16	22	11	6.6	3.5	4.6	2.2
13	4.4	5.9	30	12	14	79	19	12	6.4	3.4	4.4	*2.2
14	4.6	5.9	384	12	14	405	19	38	6.4	3.1	4.1	2.3
15	5.0	5.9	39	38	14	57	18	28	6.0	3.9	3.9	2.2
16	4.8	5.9	20	487	14	33	76	17	32	16	4.1	2.3
17	4.6	5.9	15	67	18	26	378	13	101	4.7	21	2.2
18	4.6	5.9	12	33	14	23	58	12	19	4.9	46	2.0
19	4.8	5.9	11	26	*14	43	33	12	12	6.4	28	1.8
20	4.6	5.9	11	23	15	96	26	27	9.9	4.2	9.3	2.6
21	4.4	6.3	13	653	103	36	23	24	*8.8	14	17	3.5
22	4.6	6.6	14	675	34	27	20	14	8.0	23	9.6	2.5
23	4.8	8.4	12	349	24	24	19	12	6.9	11	8.0	*2.2
24	4.8	6.6	11	101	22	23	18	11	6.6	5.7	6.2	2.2
25	4.6	6.6	10	108	23	22	17	11	6.4	4.9	5.7	2.2
26	4.8	6.1	10	193	19	30	15	9.6	5.7	4.4	5.1	2.1
27	5.0	6.1	9.9	184	17	26	14	9.6	5.5	4.2	4.4	2.2
28	5.4	6.1	9.9	60	27	30	15	9.6	4.9	3.9	125	2.0
29	9.5	5.9	11	38	-	24	14	9.9	4.7	3.5	19	1.8
30	6.3	6.1	12	31	-	26	14	9.6	4.7	3.4	6.6	1.8
31	5.6	-	10	26	-	184	-	8.6	-	5.4	4.9	-
Total	158.4	180.2	854.3	3,263.6	605	1,593	1,223	464.9	346.0	183.4	520.2	76.9
Mean	5.11	6.01	27.6	105	21.6	51.4	40.8	15.0	11.5	5.92	16.8	2.56
Cfsm	0.159	0.187	0.860	3.27	0.673	1.60	1.27	0.467	0.358	0.184	0.523	0.080
In.	0.18	0.21	0.99	3.78	0.70	1.85	1.42	0.54	0.40	0.21	0.60	0.09

Calendar year 1953: Max 768 Min 2.4 Mean 32.1 Cfsm 1.00 In. 13.58
Water year 1953-54: Max 675 Min 1.8 Mean 25.9 Cfsm 0.807 In. 10.97

Peak discharge (base, 700 cfs).--Jan. 16 (8 a.m.) 765 cfs (9.30 ft); Jan. 21 (6 a.m.) 1,410 cfs (11.15 ft); Mar. 14 (9:30 a.m.) 716 cfs (9.13 ft).
* Discharge measurement made on this day.

East Fork Deep River near High Point, N. C.

Location.--Lat 36°02'15", long. 79°56'46", on left bank 5 ft upstream from highway bridge, 3.3 miles upstream from High Point Dam, and 5.2 miles northeast of High Point College, High Point, Guilford County.

Drainage area.--14.2 sq mi.

Records available.--July 1928 to September 1954.

Gage.--Water-stage recorder. Intake pipe extended to downstream side of bridge since Mar. 1, 1934. Datum of gage is 764.02 ft above mean sea level, unadjusted.

Average discharge.--26 years, 14.7 cfs.

Extremes.--Maximum discharge during year, 1,530 cfs Jan. 21 (gage height, 3.90 ft); minimum, 1.4 cfs Sept. 11, 12, 28, 29 (gage height, 0.21 ft).
1928-54: Maximum discharge, 6,300 cfs Sept. 24, 1947 (gage height, 10.87 ft, from floodmark), by contracted-opening method based on floodmarks at gage height 14.11 ft on upstream side of bridge and 10.87 ft on downstream side of bridge; minimum, 0.7 cfs Sept. 22, 1941 (result of temporary regulation); minimum unregulated, 1.2 cfs Sept. 25, 1941.

Remarks.--Records fair. Occasional temporary regulation of unknown origin during low flow in some water years.

Revisions.--WSP 852: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.1	0.6	1.0	38
.2	1.6	1.3	82
.3	3.0	1.6	154
.4	5.0	2.0	280
.6	11	2.5	470
.8	21		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	3.6	3.8	4.2	a12	81	30	6.8	5.3	3.2	9.0	2.2
2	3.4	3.6	3.8	4.2	a 11	19	17	6.8	5.0	3.0	19	2.2
3	3.4	3.6	3.8	4.2	a10	22	13	7.9	4.8	3.0	7.1	2.2
4	3.4	3.6	5.8	4.2	a9.5	15	11	12	4.8	3.6	4.4	2.0
5	3.4	3.6	4.6	4.2	a9.0	12	10	6.8	4.6	3.2	4.0	2.0
6	3.6	3.8	9.7	4.0	a8.5	10	10	6.3	4.6	3.0	*4.2	1.7
7	3.4	3.6	6.7	4.0	a8.0	9.3	9.6	6.3	4.4	2.9	3.0	1.7
8	3.4	3.6	4.2	4.0	a8.0	9.0	18	7.3	4.4	4.2	2.9	1.6
9	3.4	3.6	4.2	4.0	a7.5	8.6	14	6.3	6.8	3.4	13	1.6
10	3.6	3.6	5.9	4.4	a7.0	8.3	9.6	6.3	7.0	3.4	5.2	1.6
11	3.6	3.6	4.2	*16	a7.0	7.6	10	6.0	5.0	3.0	3.2	1.6
12	3.6	3.8	31	8.3	a7.0	7.3	9.3	5.8	4.6	2.9	2.9	1.5
13	3.4	3.8	11	5.0	a6.5	15	8.6	6.6	4.4	2.7	2.7	*1.6
14	3.4	3.8	133	5.0	a6.5	152	8.6	18	4.6	2.7	2.6	1.7
15	3.6	3.8	12	22	a6.5	24	8.6	12	5.9	15	3.0	1.7
16	3.4	3.8	7.1	172	a7.0	16	46	8.6	16	6.5	2.9	*1.7
17	3.4	3.8	5.8	20	a8.5	12	185	7.1	10	3.2	6.0	1.7
18	3.6	3.8	5.0	12	a6.5	10	26	6.3	6.6	3.0	15	1.7
19	3.6	3.8	4.8	9.6	*6.3	22	17	7.6	5.5	3.4	5.5	1.6
20	3.4	3.8	4.6	8.6	a10	32	12	17	5.0	3.0	3.8	2.2
21	3.4	4.0	5.0	316	a50	15	11	11	4.4	9.0	11	2.2
22	3.4	4.2	5.3	*355	a14	11	9.6	7.6	4.0	14	4.4	1.9
23	3.4	4.8	5.0	70	11	10	9.3	6.6	3.8	4.8	3.8	*1.7
24	3.4	4.0	4.8	40	10	10	8.6	6.3	3.6	3.6	3.4	1.6
25	3.4	4.0	4.6	57	10	10	8.3	6.0	3.6	3.4	3.2	1.5
26	3.4	4.0	4.4	80	9.0	13	7.6	5.8	3.6	3.4	3.0	1.6
27	3.6	4.0	4.4	a50	7.9	10	7.6	5.8	3.4	3.0	2.9	1.5
28	3.8	3.8	4.4	a25	14	14	7.6	5.8	3.4	2.9	5.6	1.5
29	4.7	3.8	4.6	a18	-	11	6.8	5.5	3.4	2.7	3.6	1.5
30	3.6	3.8	4.8	a15	-	11	6.6	5.3	3.4	2.7	2.7	1.5
31	3.4	-	4.4	a13	-	61	-	5.3	-	15	2.3	-
Total	108.9	114.4	322.7	1,358.9	288.2	668.1	556.3	238.8	155.9	142.8	165.3	52.3
Mean	3.51	3.81	10.4	43.8	10.3	21.6	18.5	7.70	5.20	4.61	5.33	1.74
Cfsm	0.247	0.268	0.732	3.08	0.725	1.52	1.30	0.542	0.366	0.325	0.375	0.123
In.	0.29	0.30	0.85	3.56	0.75	1.75	1.46	0.63	0.41	0.37	0.43	0.14

Calendar year 1953: Max 397 Min 2.4 Mean 15.2 Cfsm 1.07 In. 14.53
Water year 1953-54: Max 355 Min 1.5 Mean 11.4 Cfsm 0.803 In. 10.94

Peak discharge (base, 800 cfs).--Jan. 21 (3:30 a.m.) 1,530 cfs (3.90 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range of stage, and records for nearby stations.

Deep River near Randleman, N. C.

Location.--Lat 35°54'10", long. 79°51'15", on left bank 500 ft downstream from highway bridge, a quarter of a mile downstream from Coltrane's mill, half a mile south of Guilford County line, 4¾ miles upstream from Muddy Creek, and 7 miles north of Randleman, Randolph County.

Drainage area.--124 sq mi.

Records available.--October 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 638.11 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--26 years, 118 cfs.

Extremes.--Maximum discharge during year, 4,400 cfs Jan. 22 (gage height, 17.99 ft); minimum, 1.1 cfs Feb. 28 (gage height, 1.47 ft); minimum daily, 3.8 cfs Sept. 29.
1928-54: Maximum discharge, 20,000 cfs Sept. 25, 1947 (gage height, 32.2 ft, from floodmark), from rating curve extended above 7,100 cfs on basis of contracted-opening determination of peak flow at bridge 1½ miles upstream; minimum, 0.5 cfs Nov. 28, 1931 (gage height, 1.41 ft); minimum daily, 1.2 cfs Nov. 12, 1933.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Large diurnal fluctuation at low flow caused by Coltrane's mill. Flow slightly regulated by High Point Lake (total capacity, 5,064 acre-ft). City of High Point diverts about 3 cfs for municipal supply above station and discharges sewage effluent into Rich Fork in Pee Dee River basin.

Revisions (water years).--WSP 782: 1929-30.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.6	3.7	4.0	337
1.8	10	6.0	785
2.0	23	8.0	1,280
2.5	72	10.0	1,800
3.0	141	12.0	2,360

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a12	14	17	48	103	478	459	53	22	16	35	8.5
2	a12	11	14	17	62	192	196	32	14	15	23	18
3	a14	13	15	15	96	174	137	90	21	7.1	38	7.6
4	a14	13	25	15	61	153	97	174	37	23	24	17
5	a14	14	55	15	80	83	116	75	22	22	20	14
6	*14	15	27	16	43	113	69	51	10	16	20	11
7	14	15	58	22	57	57	90	48	21	20	19	18
8	13	14	23	32	81	69	169	54	8.8	15	17	26
9	14	14	19	15	49	54	*367	32	19	8.4	62	15
10	14	13	26	14	42	54	161	43	36	8.5	117	9.9
11	13	16	21	29	47	50	106	24	23	9.2	21	14
12	13	13	94	76	62	57	144	49	52	10	24	17
13	12	14	66	38	34	122	82	25	17	19	11	6.3
14	14	14	487	49	28	2,300	98	118	10	8.1	20	15
15	14	16	112	55	61	363	82	123	37	20	13	7.0
16	15	13	86	1,580	34	177	212	50	70	53	17	15
17	14	31	45	355	57	135	818	78	112	27	7.4	5.2
18	13	19	33	153	46	105	292	46	104	18	21	16
19	14	14	60	107	*30	109	155	37	29	25	17	9.2
20	14	*14	22	88	58	312	130	43	24	25	*26	5.8
21	14	14	23	1,870	280	173	103	96	41	26	86	7.8
22	14	14	26	2,500	194	126	67	37	27	106	27	15
23	15	15	46	1,630	115	98	72	23	11	52	37	*5.2
24	15	a14	19	391	82	95	80	56	22	28	25	14
25	16	14	18	381	71	81	40	37	10	20	9.6	6.7
26	14	15	19	500	62	94	101	23	24	9.0	21	16
27	14	14	22	495	72	92	90	16	22	20	15	4.3
28	15	14	42	240	38	80	76	21	15	10	110	13
29	38	13	22	160	-	116	50	41	15	36	133	3.8
30	35	14	21	111	-	99	51	26	10	19	57	11
31	15	-	18	102	-	535	-	13	-	15	26	-
Total	476	441	1,581	11,119	2,045	6,746	4,710	1,634	885.8	706.3	1,099.0	352.3
Mean	15.4	14.7	51.0	359	73.0	218	157	52.7	29.5	22.8	35.5	11.7
Cfsm	0.124	0.119	0.411	2.90	0.589	1.76	1.27	0.425	0.238	0.184	0.286	0.094
In.	0.14	0.13	0.47	3.33	0.61	2.02	1.41	0.49	0.27	0.21	0.33	0.11

Calendar year 1953: Max 3,330 Min 2.8 Mean 115 Cfsm 0.927 In. 12.57
Water year 1953-54: Max 2,500 Min 3.8 Mean 87.1 Cfsm 0.702 In. 9.52

Peak discharge (base, 2,600 cfs).--Jan. 22 (10 p.m.) 4,400 cfs (17.99 ft); Mar. 14 (9 a.m.) 3,920 cfs (16.76 ft).

* Discharge measurement made on this day.

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

Deep River at Ramseur, N. C.

Location.--Lat 35°44', long. 79°39', on right bank 1,800 ft downstream from railroad station at Ramseur, Randolph County, and 1½ miles downstream from Sandy Creek.

Drainage area.--346 sq mi.

Records available.--November 1922 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 419.50 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--32 years, 344 cfs.

Extremes.--Maximum discharge during year, 11,600 cfs Jan. 22 (gage height, 17.53 ft); minimum, 3.7 cfs Nov. 30 (gage height, 0.35 ft); minimum daily, 6.0 cfs July 30, Sept. 5.

1922-54: Maximum discharge, 43,000 cfs Sept. 18, 1945 (gage height, 34.04 ft, from floodmark), from rating curve extended above 18,000 cfs on basis of slope-area determination of peak flow; minimum, 0.4 cfs May 27, Nov. 28, 29, 1941; minimum daily, 0.7 cfs Nov. 29, 1941.

Flood in August 1901 reached a stage of 28.75 ft, from floodmarks about a quarter of a mile upstream (discharge, 30,000 cfs).

Remarks.--Records good except those for period of no gage-height record, which are poor. Large diurnal fluctuation caused by powerplants above station. Flow regulated by High Point Lake and small powerplant reservoirs. Town of Asheboro diverted an average of 1.2 cfs from Pee Dee River basin into this basin above station.

Revisions (water years).--WSP 822: Drainage area. WSP 1032: 1923-26, 1927-28(M), 1929, 1930(M), 1932-33, 1934(M), 1935, 1936-37(M), 1944(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.4	6.8	2.5	645
.5	16	3.0	930
.6	26	4.0	1,540
.8	53	6.0	2,880
1.0	91	8.0	4,120
1.3	164	11.0	6,220
1.6	258	11.1	6,300
2.0	408		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	43	19	230	945	1,730	120	a50	26	13	56
2	8.6	52	40	20	233	618	615	111	36	25	58	27
3	18	18	25	36	175	385	404	176	26	25	127	26
4	15	10	26	124	195	450	286	719	28	24	146	11
5	82	9.6	25	72	147	321	270	334	28	11	56	6.0
6	*27	79	26	63	161	235	249	132	28	9.6	28	7.7
7	14	20	162	22	111	220	214	129	62	9.6	28	9.6
8	8.6	19	139	60	169	207	293	108	54	15	27	11
9	10	40	25	23	159	115	*685	118	27	18	17	13
10	12	24	78	23	113	198	384	176	72	21	77	14
11	12	24	25	84	109	142	296	99	198	17	156	17
12	13	24	130	86	86	101	279	104	55	16	65	25
13	15	24	373	123	98	142	279	42	40	18	31	26
14	17	24	1,480	89	106	4,970	200	168	129	102	30	30
15	17	24	442	122	157	1,430	222	500	107	21	17	46
16	20	24	222	4,500	113	505	175	282	21	8.6	7.7	10
17	22	24	171	1,490	113	393	1,650	194	257	16	9.6	10
18	22	24	112	477	157	317	961	167	213	17	11	11
19	90	40	25	300	73	289	440	160	158	100	13	13
20	14	33	34	218	*106	785	304	49	37	31	15	18
21	10	23	130	2,650	819	512	266	116	114	44	17	53
22	13	23	87	6,290	690	347	210	142	25	61	63	*15
23	15	45	89	*5,900	338	274	192	109	70	250	136	7.7
24	18	30	21	1,220	278	220	135	129	28	118	58	8.6
25	19	30	21	960	176	213	188	a120	28	34	18	8.6
26	89	28	32	1,410	180	196	189	a100	34	101	13	9.6
27	12	27	47	1,240	107	212	222	a50	31	30	62	9.6
28	7.7	25	64	689	128	220	222	a30	58	26	66	10
29	11	19	116	403	-	280	74	a70	28	16	426	11
30	20	11	117	314	-	248	125	a30	25	6.0	212	12
31	87	-	85	252	-	859	-	a100	-	12	124	-
Total	752.9	810.6	4,412	29,279	5,527	16,349	11,759	4,884	2,067	1,229.8	2,127.3	532.4
Mean	24.3	27.0	142	944	197	527	392	158	68.9	39.7	68.6	17.7
Cfsm	0.070	0.078	0.410	2.73	0.569	1.52	1.13	0.457	0.199	0.115	0.198	0.051
In.	0.08	0.09	0.47	3.15	0.59	1.76	1.26	0.52	0.22	0.13	0.23	0.06

Calendar year 1953: Max 6,730 Min 6.8 Mean 322 Cfsm 0.931 In. 12.62
Water year 1953-54: Max 6,290 Min 6.0 Mean 218 Cfsm 0.630 In. 8.56

Peak discharge (base, 6,000 cfs).--Jan. 16 (11 a.m.) 6,600 cfs (11.47 ft); Jan. 22 (10 p.m.) 11,600 cfs (17.53 ft); Mar. 14 (1 p.m.) 7,700 cfs (12.88 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage and normal regulation pattern.

Bear Creek at Robbins, N. C.

Location.--Lat 35°26', long. 79°36', on right bank 300 ft downstream from Cabin Creek and half a mile west of Robbins, Moore County.

Drainage area.--134 sq mi.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 323.23 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by North Carolina Highway and Public Works Commission).

Average discharge.--15 years, 141 cfs.

Extremes.--Maximum discharge during year, 6,590 cfs Jan. 22 (gage height, 15.46 ft); minimum not determined, occurred during period of indefinite stage-discharge relation. 1939-54: Maximum discharge, 27,000 cfs Sept. 18, 1945 (gage height, 32.02 ft, from floodmarks), from rating curve extended above 7,000 cfs on basis of slope-area determination of peak flow; no flow Oct. 2, 22-27, 1941.

Remarks.--Records fair except those for September, which are poor. Diversion of about 300,000 gal daily, from the gage pool, for municipal water supply of town of Robbins is included in these records.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	13	13	57	112	480	1,020	63	23	9.4	5.4	*5.1
2	*24	11	12	46	108	202	315	58	*21	9.4	5.6	4.4
3	23	11	*12	41	106	197	216	58	22	12	5.6	3.3
4	21	11	20	38	104	198	169	120	24	13	3.5	2.8
5	18	11	50	36	99	129	153	78	23	9.0	1.8	2.3
6	17	11	24	36	89	110	139	58	22	7.9	1.3	1.9
7	15	13	18	34	84	103	135	52	22	7.5	1.3	1.8
8	15	15	16	31	79	97	129	49	21	7.1	1.3	1.6
9	14	15	13	31	81	90	124	46	21	6.4	1.3	1.4
10	13	15	13	31	*76	89	108	43	*32	9.4	*3.0	*1.3
11	12	15	24	42	73	84	179	41	42	11	5.1	1.0
12	12	15	292	120	68	78	226	39	27	9.0	4.9	.8
13	12	14	283	73	64	78	122	41	19	8.3	5.4	e.5
14	12	14	1,090	49	64	695	110	166	17	*7.5	5.6	*e.4
15	10	14	164	337	66	180	108	250	27	5.1	5.1	e.4
16	9.4	14	79	3,800	64	110	176	93	221	227	4.7	e.4
17	9.4	13	57	522	72	93	684	60	702	70	4.7	e.4
18	7.9	13	48	194	67	87	255	47	76	27	24	e.6
19	5.1	13	43	*108	60	110	150	49	50	22	*122	e.7
20	5.6	12	40	93	67	498	118	172	35	18	25	e.7
21	*6.0	13	41	582	1,020	169	104	163	27	27	20	e.7
22	5.4	12	44	3,410	358	116	166	68	21	58	23	e.7
23	6.7	14	44	2,340	164	103	158	48	18	40	11	e.4
24	6.7	22	38	494	131	*118	101	41	15	21	7.9	*e.4
25	8.3	19	34	495	118	133	104	38	12	13	6.4	e.7
26	8.6	17	44	420	103	110	124	37	11	*10	*5.4	e.8
27	9.4	14	39	270	90	136	127	32	10	9.0	6.5	e.7
28	9.4	13	35	206	87	785	82	37	10	7.9	37	e.6
29	11	13	63	164	-	280	70	36	9.4	7.1	13	*e.8
30	19	12	*184	144	-	613	66	33	9.4	6.4	7.1	e.5
31	16	-	85	129	-	576	-	27	-	6.0	5.4	-
Total	388.9	412	2,962	14,373	3,674	6,847	5,738	2,143	1,589.8	701.4	379.3	38.1
Mean	12.5	13.7	95.5	464	131	221	191	69.1	53.0	22.6	12.2	1.27
Cfsm	0.093	0.102	0.713	3.46	0.978	1.65	1.43	0.516	0.396	0.169	0.091	0.0095
In.	0.11	0.11	0.82	3.99	1.02	1.90	1.59	0.59	0.44	0.19	0.11	0.01

Calendar year 1953: Max 2,990 Min 3.3 Mean 133 Cfsm 0.993 In. 13.46
Water year 1953-54: Max 3,800 Min 0.4 Mean 108 Cfsm 0.806 In. 10.88

Peak discharge (base, 3,500 cfs).--Jan. 16 (12 m.) 5,930 cfs (14.43 ft); Jan. 22 (10:30 p.m.) 6,590 cfs (15.46 ft).

* Discharge measurement made on this day.

e Stage-discharge relation indefinite; discharge estimated on basis of weather records and discharge measurements.

Deep River at Moncure, N. C.

Location.--Lat 35°36', long. 79°05', on right bank 1½ miles northwest of Moncure, Chatham County, 2¼ miles downstream from Rocky River, and 4½ miles upstream from confluence with Haw River.

Drainage area.--1,410 sq mi, approximately.

Records available.--May 1898 to December 1899 and July 1930 to September 1954 in reports of Geological Survey. Revised records for May 1898 to December 1899 in Bulletin 34 of North Carolina Department of Conservation and Development.

Gage.--Water-stage recorder. Datum of gage is 185.88 ft above mean sea level (levels by Corps of Engineers). May 1898 to December 1899 chain gage at railroad bridge 1 mile downstream at different datum.

Average discharge.--25 years, 1,450 cfs.

Extremes.--Maximum discharge during year, 27,500 cfs Jan. 23 (gage height, 9.87 ft); minimum, 35 cfs Sept. 29 (gage height, 0.76 ft); minimum daily, 40 cfs Sept. 29.
1898-99, 1930-54: Maximum discharge, 80,300 cfs Sept. 18, 1945 (gage height, 17.20 ft), from rating curve extended above 66,000 cfs; minimum, 9 cfs Nov. 11, 1941; minimum daily, 10 cfs Nov. 5-6, 8-12, 1941.

Remarks.--Records good except those below 250 cfs, which are fair. Diurnal fluctuation and considerable regulation at low flow caused by small powerplants above station.

Revisions (water years).--WSP 822: Drainage area. WSP 1082: 1930-46 (1943-46 not previously published). See also Records available.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	40	3.0	1,800
.9	57	4.0	3,740
1.2	139	5.0	6,240
1.5	276	6.0	9,340
1.7	398	7.0	13,200
2.0	621	9.0	22,200
2.5	1,110		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	412	52	82	664	1,060	3,270	9,700	482	276	109	66	347
2	215	48	79	474	930	4,540	*6,680	379	240	79	68	229
3	129	50	82	360	880	2,600	2,900	526	293	68	101	132
4	119	50	151	255	870	2,170	1,830	519	266	75	178	101
5	79	52	129	299	781	1,830	1,400	970	106	64	170	77
6	64	57	166	224	744	1,310	1,170	1,010	234	95	201	68
7	59	68	301	353	673	1,060	1,070	690	106	79	240	77
8	57	72	196	392	647	940	1,010	519	75	61	98	75
9	57	68	152	262	573	850	1,130	412	139	61	72	66
10	75	84	405	101	573	763	1,500	432	224	66	70	61
11	79	87	279	180	581	690	1,430	385	432	61	90	59
12	64	82	252	305	497	698	1,980	412	266	59	90	57
13	59	87	1,350	385	511	638	1,420	340	305	59	72	57
14	57	87	7,650	504	439	4,590	1,080	533	398	72	106	57
15	57	82	5,340	1,500	474	9,340	960	1,760	266	84	106	57
16	57	79	2,000	15,100	482	4,420	910	1,980	317	187	75	57
17	55	72	910	14,800	467	1,650	3,700	1,100	530	366	72	55
18	54	70	597	13,000	426	1,170	6,380	772	1,060	360	95	54
19	54	72	504	*3,520	432	1,010	3,060	638	655	250	106	70
20	98	84	439	1,400	460	2,330	1,580	2,320	482	116	95	70
21	75	90	271	2,180	3,950	3,100	1,160	2,900	392	132	75	54
22	61	87	322	13,400	9,000	1,770	950	1,530	334	147	90	78
23	55	95	299	21,800	4,070	1,230	1,000	880	147	497	192	174
24	55	101	293	19,600	1,830	1,020	970	638	132	260	90	116
25	55	84	293	17,300	1,240	940	781	489	155	353	64	82
26	55	87	353	8,660	1,020	910	840	453	87	366	68	57
27	55	122	209	5,160	760	870	820	412	119	151	98	48
28	55	103	207	3,520	763	2,540	690	347	82	77	183	42
29	57	95	299	2,200	-	3,520	735	347	61	72	215	40
30	57	90	405	1,530	-	3,520	647	334	68	174	190	42
31	54	-	673	1,220	-	4,420	-	155	-	84	474	-
Total	2,534	2,357	24,688	150,648	35,133	69,709	59,483	24,664	8,247	4,684	3,910	2,559
Mean	81.7	78.6	796	4,860	1,255	2,249	1,983	796	275	151	126	85.3
Cfsm	0.058	0.056	0.565	3.45	0.890	1.60	1.41	0.565	0.195	0.107	0.089	0.060
In.	0.07	0.06	0.65	3.97	0.93	1.84	1.57	0.65	0.22	0.12	0.10	0.07

Calendar year 1953: Max 16,200 Min 39 Mean 1,445 Cfsm 1.02 In. 13.92
Water year 1953-54: Max 21,800 Min 40 Mean 1,065 Cfsm 0.755 In. 10.25

Peak discharge (base, 15,000 cfs).--Jan. 16 (5 p.m.) 20,600 cfs (8.66 ft); Jan. 23 (4:30 a.m.) 27,500 cfs (9.87 ft).
* Discharge measurement made on this day.

Cape Fear River at Lillington, N. C.

Location.--Lat 35°24', long. 78°49', near right bank in downstream end of pier of bridge on U. S. Highway 15A, 1,800 ft downstream from Norfolk Southern Railway bridge, 0.5 mile north of Lillington, Harnett County, and 1 mile downstream from Neill Creek.
Drainage area.--3,440 sq mi, approximately.
Records available.--December 1923 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 105.71 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 8, 1927, chain gage at same site and datum.
Average discharge.--30 years (1924-54), 3,295 cfs.
Extremes.--Maximum discharge during year, 56,500 cfs Jan. 23 (gage height, 19.83 ft); minimum, 59 cfs Oct. 11 (gage height, 0.34 ft); minimum daily, 62 cfs Oct. 25, Sept. 13, 14.

1923-54: Maximum discharge uncertain, occurred Sept. 19, 1945 (gage height, 33.19 ft, from floodmark); minimum, 22 cfs (revised) Oct. 8, 1926 (gage height, 0.01 ft); minimum daily, 22 cfs (revised) Oct. 8, 1926.

Revisions.--The maximum discharge for the water year 1945, published in WSP 1032, has been found to be in error and should not be used. The minimum discharge for the water year 1927 has been revised to 22 cfs Oct. 8, 1926 (gage height, 0.01 ft), superseding figure published in WSP 642.
Remarks.--Records fair. Large diurnal fluctuation and considerable regulation at low flow caused by powerplants above station.
Revisions (water years).--WSP 822: Drainage area. WSP 1002: 1930(M), WSP 1032: 1942(m). Revised figures of discharge, in cubic feet per second, for the water years 1927 and 1945, superseding those published in WSP 642 and 1032, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1926		1926-Con.		1926-Con.		1926-Con.		1945	
Oct. 1	75	Oct. 6	35	Oct. 11	25	Oct. 26	51	Sept.18	130,000
2	57	7	27	12	61	31	71	19	140,000
3	48	8	22	23	51	Nov. 4	54	20	115,000
4	46	9	24	24	48	7	75	21	75,000
5	40	10	25	25	48	9	76	22	36,000

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
October 1926	-	211	22	84.7	0.025	0.03
November	-	1,110	54	272	.079	.09
Calendar year 1926	-	25,800	22	2,175	.632	8.57
Water year 1926-27	-	29,200	22	2,097	.610	8.28
September 1945	648,817	140,000	294	21,630	6.29	7.01
Water year 1944-45	1,748,889	140,000	128	4,791	1.39	18.91
Calendar year 1945	1,742,945	140,000	128	4,775	1.39	18.84

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	660	66	279	1,160	2,920	5,150	17,400	1,190	575	256	210	862
2	757	128	211	1,060	2,560	11,400	14,400	682	390	280	98	377
3	321	160	160	862	2,300	6,600	7,290	782	468	228	245	582
4	270	217	126	774	2,100	5,880	5,190	1,280	685	100	1,060	211
5	242	158	402	690	1,980	5,020	3,770	1,700	471	154	550	189
6	109	134	315	667	1,720	3,610	2,920	2,300	305	88	442	75
7	203	78	609	554	1,850	2,770	2,490	1,750	194	154	432	68
8	73	65	524	533	1,370	2,360	2,360	1,480	224	159	346	91
9	106	137	806	690	1,420	2,160	2,300	1,180	320	162	250	114
10	70	242	308	630	1,530	1,860	3,220	735	632	203	345	85
11	64	228	690	652	1,250	1,750	3,220	953	790	179	228	85
12	116	203	846	690	1,340	1,530	3,450	1,030	1,210	168	71	68
13	91	94	2,130	798	1,320	1,530	3,070	870	1,020	165	104	62
14	180	159	12,400	1,320	1,280	6,670	2,420	924	924	153	106	62
15	87	87	11,900	2,240	898	23,200	1,980	3,620	924	144	71	64
16	65	164	5,640	21,900	969	11,400	1,980	4,850	862	935	90	66
17	110	150	3,610	34,000	1,480	5,540	6,120	3,140	1,930	994	233	68
18	82	222	2,630	22,100	1,370	4,090	12,000	2,360	2,230	729	342	68
19	128	178	1,900	12,000	1,050	3,000	7,020	1,800	1,580	778	296	71
20	137	94	1,220	5,800	668	3,310	4,340	3,390	1,230	405	272	78
21	157	195	830	5,680	5,320	6,060	3,070	7,170	568	552	204	233
22	129	121	720	25,200	18,300	4,340	2,420	4,650	463	*672	175	174
23	118	222	879	52,600	9,040	3,070	2,100	2,630	818	525	259	87
24	71	317	767	42,200	4,810	2,560	1,920	1,920	371	873	380	87
25	62	298	751	32,800	3,370	2,360	1,750	1,480	272	262	85	108
26	110	232	933	22,200	2,630	2,040	1,700	1,280	380	704	121	71
27	98	95	720	13,800	2,230	2,100	1,860	854	115	644	183	68
28	185	228	370	9,460	1,860	3,140	1,620	915	216	202	157	116
29	82	316	760	6,600	-	5,700	1,260	879	314	237	292	114
30	128	262	1,110	5,020	-	5,900	1,640	652	214	304	382	93
31	75	-	1,380	3,770	-	7,560	-	637	-	168	634	-
Total	5,086	5,250	55,926	328,450	78,935	153,660	126,280	59,083	20,695	11,577	8,663	4,497
Mean	164	175	1,804	10,600	2,819	4,957	4,209	1,906	690	373	279	150
Cfsm	0.048	0.051	0.524	3.08	0.819	1.44	1.22	0.554	0.201	0.108	0.081	0.044
In.	0.05	0.06	0.60	3.55	0.85	1.66	1.37	0.64	0.22	0.13	0.09	0.05

Calendar year 1953: Max 40,900 Min 61 Mean 3,159 Cfsm 0.918 In. 12.45
Water year 1953-54: Max 52,600 Min 62 Mean 2,351 Cfsm 0.683 In. 9.27

Peak discharge (base, 30,000 cfs).--Jan. 17 (4 a.m.) 40,000 cfs (16.45 ft); Jan. 23 (4 p.m.) 56,500 cfs (19.83 ft).
* Discharge measurement made on this day.

Little River at Linden, N. C.

Location.--Lat 35°16', long. 78°47', on left bank 10 ft downstream from bridge on U. S. Highway 15A, 1.6 miles (revised) west of Linden, Cumberland County, 2 miles upstream from Stewart Creek, and 4½ miles upstream from mouth.

Drainage area.--460 sq mi.

Records available.--November 1928 to September 1954. Prior to October 1950, published as Lower Little River at Linden.

Gage.--Water-stage recorder. Datum of gage is 73.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Aug. 28, 1934, chain gage at same site and datum. Since June 18, 1948, auxiliary wire-weight gage 2¼ miles downstream read twice daily during periods of backwater.

Average discharge.--26 years, 544 cfs.

Extremes.--Maximum discharge during year, 5,770 cfs Jan. 23; maximum gage height, 18.00 ft Jan. 24 (backwater from Cape Fear River); minimum discharge, 38 cfs Sept. 10, 14, 15, 16 (gage height, 1.89 ft).

1928-54: Maximum discharge not determined, occurred Sept. 18, 1945, during period of backwater from Cape Fear River; maximum gage height, 41.47 ft Sept. 19 or 20, 1945 (from floodmark); minimum discharge, 26 cfs Oct. 14, 1940.

Flood of Sept. 21, 1928, reached a stage of 37.3 ft, from floodmark.

Remarks.--Records good except those for period of backwater from Cape Fear River, which are fair.

Revisions.--WSP 822: Drainage area.

Rating table, water year 1953-54, except period of backwater from Cape Fear River (gage height, in feet, and discharge, in cubic feet per second)

1.9	39	4.0	505
2.2	69	5.0	883
2.6	128	7.0	1,660
3.0	207	9.0	2,440
3.5	339		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	98	118	731	940	864	1,820	339	171	97	68	77
2	165	96	114	655	902	1,040	1,820	316	156	91	81	72
3	135	92	112	560	826	1,190	1,660	310	146	86	96	66
4	122	91	123	505	807	1,120	1,350	469	132	112	96	59
5	114	90	309	434	750	883	997	617	125	177	84	53
6	106	102	336	401	712	731	845	560	117	*132	74	50
7	*100	117	351	401	674	636	788	452	108	118	68	46
8	96	114	330	366	636	579	788	342	102	108	62	44
9	92	114	240	366	598	*542	826	296	94	98	58	43
10	92	117	200	342	579	524	769	294	282	96	62	41
11	94	117	175	345	542	487	731	257	363	103	*69	42
12	92	115	208	542	505	452	*1,150	217	655	132	65	43
13	90	114	520	636	469	434	997	200	524	120	58	42
14	86	112	1,080	617	452	452	883	270	385	102	55	*41
15	86	112	*1,080	579	452	542	731	487	636	90	53	40
16	85	109	1,080	1,490	452	655	655	636	731	175	55	41
17	86	108	1,040	2,130	469	579	940	560	1,040	217	53	45
18	88	104	769	*2,170	505	469	1,190	401	978	205	74	45
19	85	103	560	2,010	487	418	1,310	299	864	214	77	46
20	79	103	452	1,470	452	560	1,080	330	579	169	68	51
21	78	126	418	1,080	487	693	769	617	382	144	66	90
22	78	144	434	1,620	731	674	617	693	278	187	193	77
23	78	135	469	c4,600	1,230	560	542	542	222	207	135	62
24	77	135	434	*c4,060	1,740	505	505	360	185	207	*110	56
25	79	135	418	*c3,950	1,120	524	505	280	165	157	90	52
26	79	135	560	*c2,650	788	505	505	*234	148	128	78	50
27	78	133	598	c1,800	636	505	505	207	135	110	68	48
28	81	125	524	1,580	560	722	469	189	126	100	67	49
29	84	120	524	1,350	-	997	434	191	108	88	78	48
30	92	125	674	1,150	-	1,270	385	196	104	79	97	47
31	96	-	750	1,040	-	1,230	-	185	-	72	82	-
Total	3,045	3,441	15,000	41,630	19,501	21,342	26,566	11,346	10,041	4,121	2,440	1,566
Mean	98.2	115	484	1,343	696	688	886	366	335	133	78.7	52.2
Cfsm	0.213	0.250	1.05	2.92	1.51	1.50	1.93	0.796	0.728	0.289	0.171	0.113
In.	0.25	0.28	1.21	3.37	1.58	1.73	2.15	0.92	0.81	0.33	0.20	0.13

Calendar year 1953: Max 2,580 Min 48 Mean 462 Cfsm 1.00 In. 13.65
Water year 1953-54: Max 4,600 Min 40 Mean 438 Cfsm 0.952 In. 12.96

Peak discharge (base, 2,100 cfs).--Jan. 18 (10 p.m.) 2,250 cfs (8.53 ft); Jan. 23 (7 p.m.) 5,770 cfs (17.26 ft).

* Discharge measurement made on this day.

c Backwater from Cape Fear River.

Rockfish Creek near Hope Mills, N. C.

Location.--Lat 34°58', long. 78°55', on left bank 150 ft upstream from bridge on U. S. Highway 301 (bridge relocated), at mouth of Little Rockfish Creek, 1¾ miles east of town of Hope Mills, Cumberland County, and 5¾ miles upstream from mouth. Records include flow of Little Rockfish Creek.

Drainage area.--284 sq mi, includes that of Little Rockfish Creek.

Records available.--October 1902 to May 1903 (gage heights only), November 1928 to December 1931, February 1939 to December 1954 (discontinued). Published as "near Brunt" 1902-3 and as "near Fayetteville" 1928-31.

Gage.--Water-stage recorder. Datum of gage is 52.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. October 1902 to May 1903 and November 1928 to December 1931, chain gages at sites 4 miles downstream at different datums. Since June 18, 1948, auxiliary wire-weight gage 4 miles downstream.

Average discharge.--17 years (1929-31, 1939-54), 377 cfs.

Extremes.--1953-54: Maximum discharge during year, 1,290 cfs Jan. 23; maximum gage height, 14.27 ft Jan. 24; minimum discharge, 19 cfs Sept. 16 (gage height, 3.65 ft); minimum daily, 21 cfs Sept. 19, 26.

1954: Maximum discharge during period October to December, 2,330 cfs Oct. 17 (gage height, 17.34 ft); minimum, 20 cfs Oct. 1 (gage height, 3.67 ft); minimum daily, 21 cfs Oct. 2, 3, 10.

1927-31, 1939-54: Maximum discharge, 8,000 cfs Sept. 18, 1945 (gage height, 31.75 ft), from rating curve extended above 4,500 cfs on basis of computation of peak flow over dams, three-quarters of a mile upstream on Rockfish Creek and 1¾ miles upstream on Little Rockfish Creek; minimum, 2.6 cfs Oct. 24, Nov. 22, 23, 1941; minimum daily, 2.8 cfs Nov. 23, 1941.

Remarks.--Records fair except for periods of doubtful gage-height record, which are poor. Large diurnal fluctuation and considerable regulation caused by mills and reservoirs above station. Records of chemical analyses for the water year 1954 are given in WSP 1350.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	408	39	304	399	540	600	d800	135	258	52	24	232
2	430	176	217	185	563	531	d500	160	343	207	147	207
3	125	217	264	202	440	540	d590	317	258	40	147	113
4	219	127	315	421	503	582	419	397	262	41	287	27
5	207	219	132	336	544	490	613	432	54	44	218	27
6	224	273	451	371	312	297	547	516	54	170	26	169
7	*224	131	356	351	302	232	458	358	207	*197	28	195
8	228	50	418	351	488	516	545	122	243	216	27	155
9	233	249	376	132	516	*495	769	255	122	86	178	31
10	117	394	344	180	485		568	422	243	48	218	70
11	42	347	412	385	521	d450	495	408	547	48	*116	71
12	184	251	112	408	508		710	317	492	302	195	23
13	236	*330	256	430	161	d180	703	282	290	197	197	66
14	216	74	661	357	265	d300	809	427	422	184	39	204
15	106	33	*725	426	390		603	241	414	118	30	126
16	234	167	740	305	480	d470	582	170	340	265	185	74
17	153	245	770	694	411		469	501	302	67	144	125
18	40	225	471	597	427		343	317	374	24	*130	60
19	79	221	339	707	472		577	448	131	207	193	21
20	219	186	370	636	168	d180	561	485	51	282	53	133
21	221	128	474	569	371	d300	501	440	236	353	24	252
22	222	135	410	610	618		480	234	270	369	24	195
23	220	289	159	881	456		475	284	223	260	202	22
24	80	397	342	*730	464		161	427	277	30	*230	98
25	38	404	413	*799	432	d470	322	411	280	26	197	72
26	189	337	412	*817	453		475	*340	49	253	218	21
27	229	91	317	698	312	d180	485	364	45	320	71	157
28	112	156	363	679	297	d300	472	297	166	223	94	121
29	240	41	382	573	-		453	63	200	81	25	218
30	234	233	365	467	-	d500	405	62	181	225	211	90
31	130	-	482	604	-		-	239	-	27	265	-
Total	5,839	6,165	12,152	15,300	11,899	13,273	15,890	9,871	7,334	4,962	4,143	3,375
Mean	188	206	392	494	425	428	530	318	244	160	134	112
Cfsm	0.662	0.725	1.38	1.74	1.50	1.51	1.87	1.12	0.859	0.563	0.472	0.392
In.	0.76	0.81	1.59	2.00	1.56	1.74	2.08	1.29	0.96	0.65	0.54	0.44

Calendar year 1953: Max 1,270 Min 33 Mean 337 Cfsm 1.19 In. 16.08
Water year 1953-54: Max 881 Min 21 Mean 302 Cfsm 1.06 In. 14.42

* Discharge measurement made on this day.
d Doubtful gage-height record; discharge computed on basis of recorded range in stage and normal pattern of regulation.

Discharge, in cubic feet per second, 1954

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	62	159	227	9	65	379	472	17	1,650	*197	416	25	419	338	137
2	21	248	230	10	21	335	448	18	1,720	272	501	26	361	374	197
3	21	193	405	11	117	348	46	19	*609	274	248	27	157	42	390
4	151	299	128	12	211	141	267	20	615	46	488	28	148	44	287
5	163	277	45	13	63	69	453	21	466	211	542	29	312	272	272
6	141	76	317	14	112	207	542	22	361	230	379	30	207	211	348
7	65	207	437	15	520	250	526	23	147	364	151	31	121	-	369
8	89	295	508	16	1,150	297	490	24	274	282	461				

Total	10,539	6,937	10,727
Mean	340	231	346
Cubic feet per second per square mile	1.20	0.813	1.22
Runoff in inches	1.38	0.91	1.40

Calendar year 1954: Max 1,720 Min 21 Mean 313 Cfsm 1.10 In. 14.95

* Discharge measurement made on this day.

Cape Fear River at lock 3, near Tarheel, N. C.

Location.--Lat 34°50', long. 78°48', on right bank 100 ft upstream from lock 3, 1 mile downstream from county line, 7 miles north of Tarheel, Bladen County, 9 miles upstream from Philips Creek, and at mile 95.

Drainage area.--4,810 sq mi, approximately.

Records available.--October 1937 to September 1954.

Gage.--Water-stage recorder and concrete lock and dam control. Datum of gage is 28.935 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Jan. 7, 1939, staff gage on upper lock wall 100 ft downstream at same datum. Auxiliary water-stage recorder at site 1.8 miles downstream. Prior to Jan. 14, 1943, auxiliary staff gage 400 ft downstream on lower end of lock wall. Jan. 14, 1943, to Sept. 30, 1953, auxiliary water-stage recorder at site 600 ft downstream.

Average discharge.--17 years, 4,768 cfs.

Extremes.--Maximum discharge during year, 52,000 cfs Jan. 24; maximum gage height, 26.66 ft Jan. 25; minimum discharge, 170 cfs Sept. 20 (gage height, 0.40 ft); minimum daily, 208 cfs Sept. 13.

1937-54: Maximum gage height, 43.44 ft Sept. 22, 1945 (discharge not determined); minimum discharge, that of Sept. 20, 1954; minimum daily, that of Sept. 13, 1954.

Remarks.--Records good except those computed using submergence as a factor, which are fair. Slight diurnal fluctuation and some regulation for short periods at low flow caused by powerplants above station.

Rating table, water year 1953-54, except periods computed using submergence as a factor (gage height, in feet, and discharge, in cubic feet per second)

0.4	170	2.0	1,830
.6	320	3.0	3,460
1.0	670	4.0	5,690
1.5	1,200	6.0	11,500

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	392	780	3,080	5,940	4,500	k14,000	2,580	1,220	552	416	1,000
2	1,430	336	750	2,660	5,200	11,800	k20,500	1,830	1,170	561	440	1,160
3	1,280	416	690	2,200	4,720	k12,000	k16,700	1,530	991	561	480	800
4	790	480	790	2,120	4,280	9,550	k11,600	2,200	1,000	516	525	740
5	660	552	1,000	2,040	4,170	8,370	8,090	2,900	1,000	448	1,270	507
6	650	670	1,210	1,830	3,650	6,730	6,200	3,560	790	498	870	408
7	516	650	1,420	1,700	3,270	4,960	5,320	3,560	650	552	630	440
8	552	432	1,580	1,570	3,270	4,280	4,960	2,740	630	552	580	408
9	498	400	1,500	1,490	2,900	3,960	5,690	2,270	552	552	561	305
10	480	650	1,490	1,370	2,990	3,650	5,690	1,970	1,100	561	561	282
11	336	780	1,220	1,520	2,900	3,270	5,940	1,760	1,670	507	650	290
12	305	770	1,300	1,900	2,740	3,080	6,730	1,830	2,420	561	570	238
13	416	770	1,920	2,120	2,580	2,740	6,860	1,700	2,420	660	456	208
14	480	580	6,380	2,340	2,340	2,660	6,070	1,700	2,040	590	320	260
15	472	416	*k15,900	2,900	2,270	k14,400	4,960	2,420	2,200	570	252	352
16	472	392	*k12,900	9,070	2,120	*k19,700	3,960	5,820	2,200	660	282	290
17	480	552	7,980	k30,100	2,340	*k12,300	4,840	5,940	2,900	1,570	368	245
18	352	561	5,440	*k32,100	2,660	7,000	11,800	4,280	4,060	1,570	376	305
19	312	620	4,060	*k25,800	2,660	4,960	k14,100	3,460	4,060	1,310	590	230
20	384	630	2,900	*k17,700	2,040	4,280	9,550	3,270	2,990	1,390	498	230
21	472	770	2,420	k10,700	2,120	6,200	6,460	6,730	2,120	1,500	498	368
22	525	670	1,970	k14,700	k13,500	7,270	4,960	8,660	1,470	2,270	456	507
23	525	680	1,830	k34,600	k16,200	5,690	4,060	5,560	1,240	1,970	534	498
24	472	870	1,760	k48,900	k13,300	4,500	3,460	4,060	1,380	1,530	670	305
25	328	991	1,970	*k45,700	7,540	3,960	3,270	3,180	1,080	1,330	790	320
26	305	980	2,270	*k37,300	5,560	3,750	3,080	2,420	840	881	552	245
27	400	750	2,340	*k27,900	4,390	3,360	3,180	2,040	680	1,200	456	268
28	440	570	2,040	k21,300	3,460	3,960	3,360	1,800	472	1,100	670	352
29	472	480	1,830	k16,500	-	6,800	2,740	1,540	590	730	730	336
30	525	600	2,420	k10,300	-	8,730	2,580	1,390	670	561	620	416
31	480	-	3,080	7,810	-	10,200	-	1,200	-	640	860	-
Total	17,569	18,410	95,140	421,320	131,100	208,050	210,710	95,700	46,605	28,453	17,531	12,313
Mean	567	614	3,069	13,590	4,682	6,711	7,024	3,087	1,554	918	566	410
Cfsm	0.118	0.128	0.638	2.83	0.973	1.40	1.46	0.642	0.323	0.191	0.118	0.085
In.	0.14	0.14	0.74	3.26	1.01	1.61	1.63	0.74	0.36	0.22	0.14	0.10

Calendar year 1953: Max 38,000 Min 275 Mean 4,570 Cfsm 0.950 In. 12.91
Water year 1953-54: Max 48,900 Min 208 Mean 3,570 Cfsm 0.742 In. 10.09

* Discharge measurement made on this day.
k Computed using submergence of lock and dam as a factor.

Little Coharie Creek near Roseboro, N. C.

Location.--Lat 34°57', long. 78°29', on downstream end of center pier of bridge on State Highway 24, 1¼ miles east of Roseboro, Sampson County, and 1½ miles upstream from Bear-skin Swamp.

Drainage area.--96.4 sq mi.

Records available.--January 1950 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 81 ft (estimated from previously destroyed benchmark at site). Prior to Jan. 12, 1951, wire-weight gage at same site and datum.

Extremes.--Maximum discharge during year, 596 cfs Jan. 26 (gage height, 7.03 ft); minimum, 0.1 cfs Sept. 13, 14, 27.

1950-54: Maximum discharge, that of Jan. 26, 1954; minimum, that of Sept. 13, 14, 27, 1954.

Flood in 1924 reached a stage of 11.6 ft, from information furnished by State Highway and Public Works Commission.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 24				July 25 to Sept. 30			
1.2	0.7	3.0	32	0.94	0.1	1.4	2.6
1.3	1.3	4.0	65	1.0	.2	1.7	6.0
1.5	3.0	5.0	118	1.1	.45	2.0	10
1.7	5.2	6.0	215	1.2	1.0	3.0	32
2.0	10	6.5	348				
2.5	20	7.0	580				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	6.9	28	125	199	137	168	a44	20	3.4	4.0	4.1
2	31	6.9	27	118	179	142	192	a40	17	3.1	12	*4.1
3	21	6.9	26	115	163	142	185	a36	14	2.7	14	5.6
4	16	6.9	28	109	154	146	179	a34	12	2.5	6.6	2.5
5	13	7.1	54	94	142	158	173	a32	9.8	2.2	5.5	1.6
6	11	13	62	80	136	168	168	a30	8.2	2.0	4.0	1.2
7	10	20	69	73	125	168	168	a28	7.4	1.5	3.0	.35
8	8.9	24	71	67	118	158	179	a26	6.6	*1.1	2.5	.2
9	*8.4	24	69	62	112	142	215	a24	6.2	1.3	2.2	.15
10	8.0	26	60	58	103	128	255	a22	27	4.8	2.2	.2
11	7.7	29	50	62	97	115	233	a22	50	6.5	2.0	.15
12	7.4	30	44	78	92	100	255	a22	82	7.4	1.5	.15
13	7.1	28	46	80	83	92	*255	a26	125	6.3	*1.3	.1
14	8.6	25	87	80	78	100	a250	a50	142	4.4	1.1	.1
15	7.7	22	97	83	73	115	a220	a100	66	3.7	.7	.15
16	7.1	20	100	123	71	97	a200	a80	33	12	.5	*.2
17	9.6	18	103	168	73	80	a180	a60	26	19	.5	.2
18	7.2	17	109	192	71	71	a160	a50	28	17	.6	.25
19	6.3	16	106	*192	69	65	a140	a36	29	12	1.6	.15
20	6.3	16	94	215	67	80	a120	a50	24	10	1.2	.2
21	6.0	26	76	233	75	83	a110	a90	18	13	1.2	.6
22	12	48	65	233	106	80	a95	a100	14	12	4.4	.45
23	16	58	60	348	115	80	a80	a60	10	22	5.0	.25
24	10	65	56	387	122	83	a70	a46	11	32	3.1	.2
25	7.6	69	62	476	122	78	a85	a34	9.8	39	*1.7	.2
26	6.6	65	97	*526	125	76	a95	a32	7.2	32	1.1	.15
27	6.0	52	100	476	122	73	a80	a30	5.9	18	.7	.15
28	6.0	42	100	348	112	103	a70	*30	4.8	11	.7	.2
29	6.9	36	109	281	-	115	a60	30	4.2	7.9	1.3	.2
30	7.2	31	125	255	-	122	a50	28	3.8	5.9	1.3	.15
31	7.1	-	128	215	-	132	-	24	-	4.7	2.2	-
Total	339.7	854.7	2,308	5,952	3,104	3,429	4,690	1,316	821.9	320.4	91.7	24.20
Mean	11.0	28.5	74.5	192	111	111	156	42.5	27.4	10.3	2.96	0.807
Cfsm	0.114	0.296	0.773	1.99	1.15	1.15	1.62	0.441	0.284	0.107	0.031	0.0084
In.	0.13	0.33	0.89	2.30	1.20	1.32	1.81	0.51	0.32	0.12	0.04	0.009

Calendar year 1953: Max 379 Min 0.5 Mean 60.0 Cfsm 0.622 In. 8.46
Water year 1953-54: Max 526 Min 0.1 Mean 63.7 Cfsm 0.661 In. 8.98

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby stations.

Black River near Tomahawk, N. C.

Location.--Lat 34°45', long. 78°17', on downstream side (relocated) of highway bridge near center of span, a quarter of a mile downstream from Clear Run Swamp and 3¾ miles northeast of Tomahawk, Sampson County.

Drainage area.--680 sq mi.

Records available.--October 1951 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 0.39 ft below mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge observed during year, 1,860 cfs Apr. 12 (gage height, 35.35 ft); minimum, 8.9 cfs Sept. 13 (gage height, 25.60 ft).

1951-54: Maximum discharge, 2,090 cfs Mar. 8, 1952 (gage height, 36.14 ft); minimum, that of Sept. 13, 1954.

Flood in 1928 reached a stage of 47.0 ft (discharge not determined). Floods in 1945 and 1948 reached a stage of 42.6 ft, from information furnished by North Carolina Highway and Public Works Commission.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
26.0	36	25.6	8.9	28.0	289
26.5	80	25.8	19	31.0	806
27.0	138	26.0	34	33.0	1,210
28.0	289	26.5	80	35.0	1,730
29.0	459	27.0	138	35.3	1,830
31.0	799				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	40	151	787	1,480	697	1,020	340	165	29	33	20
2	165	40	144	714	1,310	1,000	*1,280	306	132	27	36	18
3	132	40	138	663	1,100	1,080	1,330	272	113	25	49	17
4	113	40	119	612	980	1,060	1,280	255	96	23	90	17
5	85	40	193	561	863	1,040	1,310	239	90	23	60	16
6	70	41	340	510	768	960	1,060	239	85	21	45	15
7	66	58	357	493	714	882	1,060	223	70	19	33	13
8	*62	85	340	442	663	825	1,190	208	60	*21	26	12
9	59	90	306	425	629	806	1,420	208	60	56	24	11
10	58	119	289	408	595	750	1,610	193	132	223	22	10
11	59	*151	272	391	561	*714	1,730	165	306	172	21	9.8
12	56	158	255	527	544	663	1,830	158	255	208	19	9.8
13	54	138	289	646	510	595	1,830	158	239	125	*18	8.9
14	52	125	544	595	493	561	1,760	208	223	80	17	9.4
15	50	119	782	561	476	510	1,560	340	208	60	16	*11
16	49	107	680	663	459	493	*1,350	374	223	70	15	12
17	48	96	*629	1,040	442	493	1,240	340	193	165	14	12
18	47	90	544	1,170	442	493	1,080	306	125	208	15	12
19	47	85	493	1,190	425	493	1,000	272	96	138	16	12
20	45	96	459	1,170	408	578	882	272	96	101	16	12
21	43	101	442	1,140	425	663	768	306	85	90	15	14
22	40	107	425	1,170	578	629	646	374	80	80	14	23
23	38	132	425	1,240	663	561	578	357	65	90	13	18
24	38	255	391	1,450	646	578	561	323	57	96	14	16
25	51	272	374	1,610	629	578	732	306	49	96	*14	14
26	48	255	595	1,700	595	561	940	289	47	96	17	13
27	42	239	765	*1,730	578	578	787	272	45	96	16	12
28	38	208	680	1,730	595	646	612	*272	40	80	22	12
29	38	193	663	1,730	-	806	476	391	34	60	18	11
30	40	193	731	1,700	-	825	391	306	32	49	29	12
31	40	-	816	1,640	-	825	-	223	-	40	24	-
Total	1,966	3,713	13,631	30,408	18,571	21,943	33,313	8,495	3,501	2,667	781	402.9
Mean	63.4	124	440	981	663	708	1,110	274	117	86.0	25.2	13.4
Cfsm	0.093	0.182	0.647	1.44	0.975	1.04	1.63	0.403	0.172	0.126	0.037	0.020
In.	0.11	0.20	0.75	1.66	1.02	1.20	1.82	0.46	0.19	0.15	0.04	0.02

Calendar year 1953: Max 1,490 Min 25 Mean 389 Cfsm 0.572 In. 7.76
Water year 1953-54: Max 1,830 Min 8.9 Mean 382 Cfsm 0.562 In. 7.62

* Discharge measurement made on this day.

South River near Parkersburg, N. C.

Location.--Lat 34°48', long. 78°27', on downstream side of highway bridge near center of span, at Bladen-Sampson County line, 1.9 miles southwest of Parkersburg, Sampson County.

Drainage area.--382 sq mi.

Records available.--October 1951 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 0.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 1,730 cfs Jan. 31 (gage height, 60.74 ft); minimum, 0.2 cfs Sept. 29, 30.
1951-54: Maximum discharge, that of Jan. 31, 1954; minimum, that of Sept. 29, 30, 1954.

Remarks.--Records fair.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 11, 12, 22-30, Dec. 1 to Jan. 4, Jan. 8-12, 15)

Oct. 1 to Jan. 16				Jan. 17 to Sept. 30			
52.3	4.3	54.0	69	51.9	0.2	55.0	136
52.4	6.2	55.0	136	52.0	.4	57.0	320
52.6	11	56.0	222	52.1	1.2	58.0	470
53.0	23	57.0	320	52.3	3.7	59.0	725
53.5	44	57.2	346	52.5	8.0	60.0	1,200
				53.0	23	60.7	1,730
				54.0	69		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	6.4	41	309	1,640	450	490	279	332	18	23	3.4
2	28	6.2	39	309	1,480	490	560	249	320	15	39	2.9
3	22	6.2	37	309	1,270	510	610	222	279	18	56	2.8
4	18	6.2	37	309	1,020	560	660	195	213	15	69	2.3
5	16	6.4	72	320	875	610	690	186	152	11	69	2.0
6	15	9.8	107	320	760	660	725	177	114	9.4	63	1.7
7	14	17	114	320	690	725	725	177	87	8.2	50	1.2
8	*13	16	107	309	635	760	795	168	69	*7.1	37	.9
9	12	16	100	299	560	760	875	152	58	47	28	.7
10	12	21	93	289	510	725	970	136	87	46	22	.6
11	11	*28	87	289	470	*660	1,070	128	93	56	18	.7
12	11	26	87	309	420	635	1,130	114	75	63	14	.4
13	9.8	23	93	320	390	585	1,070	100	100	41	*11	.4
14	9.1	22	152	320	375	535	1,070	128	152	26	9.2	.3
15	8.9	22	195	309	346	490	1,020	160	204	21	7.5	.3
16	8.2	20	195	346	332	470	*1,020	177	222	23	6.6	*.4
17	8.0	20	*195	435	320	435	920	186	177	53	5.7	.4
18	7.3	19	195	490	309	390	875	195	114	46	5.7	.3
19	7.1	19	186	535	299	346	795	186	87	33	5.3	.4
20	6.6	19	177	610	289	332	690	186	72	28	4.1	2.7
21	6.2	20	186	635	299	320	635	186	72	23	3.6	3.0
22	6.0	33	186	690	332	309	560	168	72	21	3.0	2.7
23	6.2	58	186	835	332	309	490	160	66	21	2.8	2.3
24	6.2	81	177	970	320	309	450	177	58	19	2.4	1.2
25	6.4	81	177	1,130	320	309	435	213	48	17	*2.2	.7
26	6.9	75	240	1,410	320	299	420	240	41	18	2.2	.4
27	7.1	60	259	*1,560	346	299	360	259	35	23	1.9	.4
28	7.1	53	259	1,640	360	320	332	*269	28	25	3.4	.3
29	7.1	46	269	1,640	-	346	309	279	23	23	4.7	.2
30	7.1	41	289	1,730	-	375	299	299	21	22	3.4	.2
31	6.4	-	309	1,730	-	405	-	320	-	19	3.4	-
Total	337.7	877.2	4,846	21,026	15,619	14,728	21,050	6,071	3,471	815.7	576.1	36.2
Mean	10.9	29.2	156	678	558	475	702	196	116	26.3	18.6	1.21
Cfsm	0.029	0.076	0.408	1.77	1.46	1.24	1.84	0.513	0.304	0.069	0.049	0.0032
In.	0.03	0.09	0.47	2.05	1.52	1.43	2.05	0.59	0.34	0.08	0.06	0.004

Calendar year 1953: Max 880 Min 1.8 Mean 214 Cfsm 0.560 In. 7.61
Water year 1953-54: Max 1,730 Min 0.2 Mean 245 Cfsm 0.641 In. 8.71

* Discharge measurement made on this day.

Colly Creek near Kelly, N. C.

Location.--Lat 34°28', long. 78°15', on right bank 10 ft downstream from bridge on State Highway 53, 4 miles east of Kelly, Bladen County, and 6¾ miles upstream from mouth.

Drainage area.--85.2 sq mi.

Records available.--January 1950 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 15.4 ft above mean sea level, unadjusted. Prior to Dec. 13, 1950, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 303 cfs Apr. 12 (gage height, 5.20 ft); no flow for several days during October, November and June to September.

1950-54: Maximum discharge observed, 647 cfs July 16, 1950 (gage height, 6.30 ft), from rating curve extended above 500 cfs; no flow at times during several years.

Flood in 1908 reached a stage of 11.1 ft, in September 1945, 10.2 ft, from information by local resident. Flood in 1928 reached a stage of 7.7 ft, from information by State Highway and Public Works Commission.

Remarks.--Records fair except those below 2 cfs, which are poor.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 25 to Aug. 8)

Oct. 1-7		Oct. 8 to Sept. 30					
0.6	0.7	0.68	0	1.1	3.0	2.5	29
.7	1.2	.7	.05	1.3	5.8	3.0	45
.8	1.7	.8	.3	1.5	8.9	4.0	113
.9	2.4	.9	.9	1.7	12	4.7	194
		1.0	1.8	2.0	18	5.2	303

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	0	3.3	135	154	124	209	80	6.3	0	0.7	
2	1.9	0	3.3	136	151	128	*225	80	5.0	0	.2	
3	1.6	0	3.3	136	146	133	238	79	4.0	0	.05	
4	1.3	0	4.9	134	141	135	231	75	5.5	0	.05	
5	1.0	0	15	131	135	132	217	66	4.0	0	.05	
6	.8	0	17	129	129	127	213	58	3.0	0	.04	
7	.7	0	17	125	123	126	225	50	1.9	0	.04	
8	*.3	0	16	120	118	126	238	43	1.2	*0	.02	
9	.2	0	16	117	112	127	273	38	1.1	0	0	
10	.2	0	17	112	106	130	286	33	2.7	1.2	0	
11	.05	0	17	118	102	*130	298	29	2.9	2.9	0	
12	0	*0	18	126	96	129	300	25	3.6	1.8	0	
13	0	.3	25	129	90	125	298	26	4.9	1.1	*0	
14	0	.7	85	132	85	123	286	36	4.6	.6	0	
15	0	.8	98	131	81	118	*268	37	4.3	.3	0	(*)
16	0	.8	85	133	78	111	259	36	4.8	.1	0	
17	0	.7	*79	134	75	106	245	33	6.9	.02	0	
18	0	.7	74	134	70	100	223	29	9.5	.02	0	
19	0	.6	68	136	66	97	206	28	11	.02	0	
20	0	*.5	65	142	63	117	190	27	10	0	0	
21	0	.5	65	145	66	124	176	23	8.2	0	0	
22	0	.4	66	148	86	122	164	20	5.6	.2	0	
23	0	1.2	66	155	89	120	151	18	3.6	.7	0	
24	0	2.2	66	157	94	120	139	15	2.1	2.6	0	
25	0	3.4	80	157	108	118	127	13	1.3	21	0	
26	0	3.8	103	*159	111	116	117	11	.8	16	0	
27	0	3.6	107	168	112	117	107	9.9	.4	*8.9	0	
28	0	3.5	111	175	112	131	97	*9.9	.2	5.0	0	
29	0	3.3	119	173	-	138	90	9.9	.02	2.9	0	
30	0	3.3	128	168	-	140	83	8.6	0	1.8	0	
31	0	-	133	163	-	154	-	7.2	-	1.2	0	-
Total	10.45	30.3	1,770.8	4,358	2,899	3,844	6,179	1,053.5	119.42	68.36	1.15	0
Mean	0.337	1.01	57.1	141	104	124	206	34.0	3.98	2.21	0.037	0
Cfsm	0.0040	0.012	0.670	1.65	1.22	1.46	2.42	0.399	0.047	0.026	0.00044	0
In.	0.005	0.01	0.77	1.90	1.27	1.68	2.70	0.46	0.05	0.03	0.0005	0

Calendar year 1953: Max 344 Min 0 Mean 66.1 Cfsm 0.776 In. 10.54
Water year 1953-54: Max 300 Min 0 Mean 55.7 Cfsm 0.654 In. 8.87

* Discharge measurement or observation of no flow made on this day.

Northeast Cape Fear River near Chinquapin, N. C.

Location.--Lat 34°49', long. 77°50', on right bank 540 ft downstream from bridge on State Highway 41, half a mile downstream from Muddy Creek, and 1¼ miles west of Chinquapin, Duplin County.

Drainage area.--600 sq mi.

Records available.--July 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 17.28 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--14 years, 605 cfs.

Extremes.--Maximum discharge during year, 2,210 cfs Apr. 12 (gage height, 10.05 ft); minimum, 6.6 cfs Sept. 18.

1940-54: Maximum discharge, 11,000 cfs Oct. 16, 1942 (gage height, 16.74 ft), from rating curve extended above 8,100 cfs; minimum, that of Sept. 18, 1954.

Flood of 1908 reached a stage of 22.6 ft at old bridge site 1,000 ft upstream from gage. Flood of 1928 reached a stage 0.8 ft lower than that of 1908, from information by State Highway and Public Works Commission.

Remarks.--Records fair.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 18 to May 10)

0.8	6.3	3.0	278
1.0	13	4.0	445
1.3	33	5.0	637
1.6	66	7.0	1,110
2.0	120	10.0	2,260
2.5	198		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,620	42	377	1,580	961	599	1,110	152	278	14	15	19
2	1,110	43	334	1,460	*796	913	1,290	140	222	13	15	23
3	622	42	302	1,290	681	1,060	1,420	126	160	12	14	25
4	343	40	286	1,110	595	1,110	1,380	110	122	14	*24	22
5	238	41	360	937	535	1,040	1,230	99	96	16	36	18
6	*185	55	436	796	499	937	1,040	*92	74	12	23	14
7	156	86	499	659	463	819	937	88	58	12	16	*12
8	147	113	517	555	428	704	985	82	46	11	13	10
9	138	130	499	499	411	595	1,170	75	38	11	12	8.5
10	126	141	463	463	386	517	1,700	66	53	13	11	8.0
11	117	172	436	463	368	463	2,110	64	74	11	9.8	7.4
12	107	187	411	727	352	420	2,160	59	74	13	9.1	7.1
13	95	195	481	*913	334	377	1,940	58	69	15	8.5	8.0
14	86	176	1,040	1,010	318	343	1,660	79	54	14	8.0	8.0
15	79	156	*1,780	1,010	310	318	1,350	130	96	13	8.0	7.1
16	76	140	1,900	1,060	302	294	1,110	196	*100	15	7.7	*8.0
17	72	129	1,900	1,350	294	278	1,010	214	87	22	7.4	6.9
18	66	*119	1,860	1,620	294	262	889	187	59	30	8.3	6.9
19	61	112	1,460	1,780	286	*254	750	158	55	52	8.3	7.4
20	58	106	1,140	1,780	270	310	595	161	45	52	7.7	8.3
21	55	99	961	1,700	318	394	499	163	34	44	12	11
22	52	95	842	1,580	711	428	411	180	28	53	12	8.8
23	48	212	727	1,700	842	436	343	176	24	66	10	8.3
24	46	535	659	1,860	842	428	286	164	21	81	11	9.1
25	44	727	644	2,020	819	420	254	161	21	56	*23	10
26	43	842	1,060	2,020	750	402	278	164	19	46	20	11
27	41	819	1,350	1,900	637	436	262	161	19	33	18	11
28	40	704	1,500	1,680	535	820	230	153	16	26	20	*9.8
29	41	555	1,500	1,460	-	842	187	177	16	20	13	8.5
30	43	445	1,540	1,290	-	937	169	222	14	17	13	8.5
31	44	-	1,580	1,110	-	937	-	262	-	16	14	-
Total	5,999	7,258	28,844	39,362	14,337	17,893	28,755	4,319	2,072	803	427.8	330.6
Mean	194	242	930	1,270	512	577	958	139	69.1	25.9	13.8	11.0
Cfsm	0.323	0.403	1.55	2.12	0.853	0.962	1.60	0.232	0.115	0.043	0.023	0.018
In.	0.37	0.45	1.79	2.44	0.89	1.11	1.78	0.27	0.13	0.05	0.03	0.02

Calendar year 1953: Max 1,980 Min 13 Mean 453 Cfsm 0.755 In. 10.25
Water year 1953-54: Max 2,160 Min 6.9 Mean 412 Cfsm 0.687 In. 9.33

* Discharge measurement made on this day.

Waccamaw River at Freeland, N. C.

Location.--Lat 34°05'43", long. 78°32'56", on left bank 150 ft downstream from New Britton Bridge on State Highway 130, 1 mile southwest of Freeland, Brunswick County, and 7 miles downstream from Juniper Creek.

Drainage area.--626 sq mi.

Records available.--July 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 15.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 15, 1943, staff gage at site 150 ft upstream at same datum. Since July 15, 1952, auxiliary water-stage recorder at site 3.3 miles downstream; Oct. 7, 1949, to July 14, 1952, auxiliary staff gage at same site.

Average discharge.--15 years, 616 cfs.

Extremes.--Maximum discharge during year, 1,780 cfs Apr. 10-13; maximum gage height, 13.02 ft Apr. 11; minimum discharge, 0.1 cfs Aug. 30, Sept. 9, 10, 28.
1939-54: Maximum discharge, 7,500 cfs (published in error 1949-53) Feb. 14, 1948 (gage height, 15.92 ft); minimum, that of Aug. 30, Sept. 9, 10, 28, 1954.

Remarks.--Records fair except those below 5 cfs and those for period of no gage-height record, which are poor.

Revisions.--WSP 1172: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	0.2	27	548	710	449	980	492	73	2.9	33	0.2
2	20	.2	26	562	710	662	*1,130	444	69	2.6	32	.2
3	18	.2	25	556	710	764	1,290	*398	63	2.6	31	.2
4	16	.2	32	556	694	840	*1,450	344	59	3.8	28	.2
5	14	.2	45	554	678	880	1,530	307	55	4.0	23	.2
6	13	.4	86	548	662	900	1,580	274	49	2.2	a18	.2
7	10	.4	92	561	630	920	1,630	243	44	1.8	a14	.2
8	*8.1	.3	94	547	588	920	1,680	221	41	*.8	a12	.2
9	6.8	.4	94	529	560	920	1,730	222	38	.5	a10	.1
10	5.6	1.0	99	522	518	*920	1,780	197	34	.6	a7	.1
11	4.4	2.1	99	574	480	920	1,780	173	31	.8	a5	.2
12	3.5	*4.4	96	602	444	880	1,780	149	29	.8	*4.0	.2
13	2.8	6.9	99	616	409	860	1,780	120	27	1.3	3.1	.2
14	2.1	7.6	116	630	376	820	1,730	176	25	1.2	2.4	.2
15	1.7	9.0	286	646	354	764	*1,680	194	23	1.1	1.7	*.3
16	1.3	9.3	*317	646	325	728	1,630	197	21	2.3	1.2	.4
17	1.0	8.1	353	630	307	678	1,580	191	20	7.8	1.4	.5
18	.9	7.1	344	*630	282	616	1,490	178	18	7.8	2.6	.4
19	.8	6.3	314	*630	266	574	1,370	169	16	9.6	1.7	.4
20	.6	*6.0	283	646	251	560	1,290	178	15	11	.9	.7
21	.6	6.3	231	646	243	560	1,190	169	15	15	.6	1.2
22	.5	6.3	224	662	243	546	1,130	149	13	17	.4	.6
23	.4	29	221	694	251	532	1,040	142	12	21	.4	.4
24	.4	38	224	728	251	518	960	126	11	22	.2	.3
25	.3	40	224	728	290	532	880	111	9.3	26	.3	.2
26	.3	37	267	746	325	560	800	96	7.9	25	*.3	.2
27	.3	34	351	746	354	588	728	*84	6.8	*33	.3	.2
28	.3	31	*413	*746	398	678	646	89	5.3	36	.3	.1
29	.3	29	*425	728	-	764	588	93	4.4	35	.2	.3
30	.2	28	*482	728	-	840	532	82	3.6	37	.1	.4
31	.2	-	512	710	-	900	-	77	-	36	.2	-
Total	160.4	348.9	6,501	19,595	12,309	22,593	39,384	6,085	838.3	368.5	235.3	9.2
Mean	5.17	11.6	210	632	440	729	1,313	196	27.9	11.9	7.59	0.31
Cfsm	0.0083	0.019	0.335	1.01	0.703	1.16	2.10	0.313	0.045	0.019	0.012	0.00050
In.	0.01	0.02	0.39	1.16	0.73	1.34	2.34	0.36	0.05	0.02	0.01	0.0005

Calendar year 1953: Max 2,450 Min 0.2 Mean 435 Cfsm 0.695 In. 9.45
Water year 1953-54: Max 1,780 Min 0.1 Mean 297 Cfsm 0.474 In. 6.43

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records at auxiliary gage and streamflow continuity.

Waccamaw River near Longs, S. C.

Location.--Lat 33°54'45", long. 78°42'55", near right bank on upstream side of bridge on State Highway 9, 500 ft downstream from Buck Creek and 2.1 miles southeast of Longs, Horry County.

Drainage area.--1,030 sq mi, approximately.

Records available.--March 1950 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 5.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Extremes.--Maximum discharge during year, 2,520 cfs Apr. 9-15; maximum gage height, 10.00 ft Apr. 11, from graph based on gage readings; minimum discharge, 2 cfs Sept. 7-13, 27, 28.

1950-54: Maximum discharge, 6,360 cfs Mar. 15, 1953 (gage height, 11.50 ft, from graph based on gage readings); minimum, that of Sept. 7-13, 27, 28, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 25)

0.1	1	5.0	495
.3	7	7.0	848
.6	19	8.0	1,070
1.0	39	9.0	1,500
1.5	74	9.5	1,890
2.0	117	10.0	2,520
3.0	222		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	8	*131	1,500	1,240	976	1,800	1,070	199	17	32	4
2	84	8	122	1,570	1,240	1,160	1,890	976	199	17	33	3
3	76	8	113	1,640	1,200	1,330	1,990	932	188	15	33	3
4	66	8	122	1,640	1,200	1,500	2,100	848	177	15	*30	3
5	53	10	260	1,570	1,130	1,570	2,100	789	166	16	28	3
6	44	9	336	1,500	1,100	1,640	2,220	714	156	15	26	3
7	41	8	460	1,440	1,070	1,640	2,220	643	146	14	24	2
8	38	8	475	1,380	1,050	1,640	2,360	575	136	13	21	2
9	35	11	505	1,330	1,020	1,640	2,520	495	126	13	18	2
10	31	14	553	1,240	1,000	1,640	2,520	435	117	12	17	2
11	27	14	537	1,200	976	*1,570	2,520	377	108	11	15	2
12	24	13	569	1,240	954	1,500	2,520	322	99	10	13	2
13	*23	12	603	1,160	888	1,500	2,520	309	90	10	12	2
14	22	12	655	1,160	848	1,440	2,520	363	82	9	11	3
15	20	12	747	1,130	808	1,380	2,520	377	74	9	9	*3
16	18	12	864	1,130	770	1,330	2,360	377	62	10	8	6
17	17	12	946	1,130	714	1,240	2,360	363	52	15	6	6
18	16	12	1,020	1,130	660	1,200	2,220	349	45	18	16	5
19	14	11	1,040	*1,130	626	1,130	2,220	349	39	19	16	4
20	13	11	1,070	1,130	575	1,130	2,220	335	36	21	13	4
21	12	14	1,070	1,160	559	1,100	2,100	349	32	21	10	6
22	12	24	1,070	1,200	543	1,050	1,990	363	29	21	9	5
23	12	54	1,040	1,200	527	1,020	1,890	363	*27	22	9	4
24	11	96	1,040	1,240	527	1,020	1,800	349	24	26	8	4
25	10	113	1,070	1,280	609	1,000	1,640	335	23	27	6	3
26	10	122	1,100	1,330	660	1,000	1,500	296	21	28	6	3
27	11	131	1,160	1,330	714	1,050	1,380	270	21	27	5	2
28	10	140	1,200	1,280	770	1,130	*1,280	234	20	27	5	2
29	9	150	1,330	1,280	-	1,280	1,200	222	19	29	5	4
30	9	140	1,380	1,280	-	1,440	1,130	210	17	30	4	14
31	8	-	1,440	1,240	-	1,640	-	210	-	30	3	-
Total	864	1,197	24,028	40,170	23,978	40,886	61,610	14,199	2,530	567	451	111
Mean	27.9	39.9	775	1,296	856	1,319	2,054	458	84.3	18.3	14.5	3.7
Cfsm	0.027	0.039	0.752	1.26	0.831	1.28	1.99	0.445	0.082	0.018	0.014	0.0036
In.	0.03	0.04	0.87	1.45	0.87	1.48	2.22	0.51	0.09	0.02	0.02	0.004

Calendar year 1953: Max 6,360 Min 8 Mean 863 Cfsm 0.838 In. 11.37
Water year 1953-54: Max 2,520 Min 2 Mean 577 Cfsm 0.560 In. 7.60

* Discharge measurement made on this day.

Yadkin River at Patterson, N. C.

Location.--Lat 35°59'30", long. 81°33'30", on left bank 200 ft upstream from bridge on State Highway 268, half a mile south of Patterson, Caldwell County, three-quarters of a mile upstream from Warrior Creek, and 2 miles downstream from Walnut Branch.

Drainage area.--28.8 sq mi.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,212.47 ft above mean sea level, unadjusted. Prior to Feb. 9, 1940, staff gage at same site and datum.

Average discharge.--15 years, 45.6 cfs.

Extremes.--Maximum discharge during year, 974 cfs Jan. 22 (gage height, 3.59 ft); minimum, 5.3 cfs Sept. 30 (gage height, 0.02 ft).
1939-54: Maximum discharge, 16,200 cfs Aug. 13, 1940 (gage height, 12.70 ft), from rating curve extended above 1,300 cfs on basis of computation of peak flow over dam at gage heights 4.58, 7.70, and 12.70 ft; minimum, that of Sept. 30, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.0	4.5	0.7	64
.1	8.3	1.0	110
.2	14	1.5	214
.3	20	2.0	344
.5	39	2.5	503

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	11	14	14	27	140	68	34	25	12	9.9	9.3
2	*12	10	12	14	27	107	56	32	25	12	14	8.3
3	12	10	12	15	26	84	50	45	25	12	12	*8.3
4	12	10	24	14	26	68	45	58	26	12	9.3	7.9
5	12	9.9	23	14	25	59	43	43	23	12	9.3	7.5
6	11	9.9	26	14	23	52	41	38	22	11	9.3	7.2
7	11	9.9	31	14	23	47	48	*36	22	11	7.9	7.2
8	11	9.9	20	14	22	45	54	35	21	12	7.5	7.2
9	11	9.9	38	14	22	41	44	32	19	14	*7.5	7.2
10	11	9.9	54	14	21	39	43	30	23	17	7.9	7.2
11	11	9.9	30	19	*21	37	43	28	20	15	6.8	7.5
12	11	*10	46	15	20	36	38	27	20	13	6.8	7.2
13	11	10	44	12	19	36	37	31	18	12	6.8	6.8
14	11	11	70	13	20	55	36	106	18	11	6.8	6.8
15	11	11	56	20	20	41	35	100	19	9.9	7.2	6.4
16	11	10	38	55	22	37	38	71	26	12	6.8	6.4
17	11	10	29	31	36	35	45	58	32	12	6.4	*6.4
18	11	10	27	24	24	34	37	50	*29	11	6.4	6.0
19	11	10	25	22	22	42	34	46	25	17	7.2	6.0
20	11	11	23	22	158	49	32	61	22	14	8.3	7.2
21	11	27	22	73	396	41	32	56	19	12	18	10
22	11	23	22	*494	119	37	31	44	18	12	46	7.5
23	11	28	20	189	80	37	33	39	17	13	19	6.4
24	11	17	18	92	64	39	36	37	16	11	14	6.4
25	11	17	17	67	54	38	40	33	15	9.9	13	6.0
26	11	15	17	54	47	50	39	32	15	*10	12	6.0
27	11	14	17	45	41	*43	39	31	14	12	11	5.6
28	15	14	17	38	50	44	41	29	13	9.3	19	5.6
29	19	14	17	35	-	43	36	31	12	8.3	21	5.6
30	14	14	17	32	-	40	35	32	12	9.3	14	5.3
31	12	-	15	30	-	56	-	27	-	8.3	11	-
Total	363	386.3	841	1,523	1,455	1,552	1,229	1,352	611	367.0	362.1	208.4
Mean	11.7	12.9	27.1	49.1	52.0	50.1	41.0	43.6	20.4	11.8	11.7	6.95
Cfsm	0.406	0.448	0.941	1.71	1.81	1.74	1.42	1.51	0.708	0.410	0.406	0.241
In.	0.47	0.50	1.09	1.97	1.88	2.00	1.59	1.75	0.79	0.47	0.47	0.27

Calendar year 1953: Max 655 Min 9.9 Mean 35.4 Cfsm 1.23 In. 16.68
Water year 1953-54: Max 494 Min 5.3 Mean 28.1 Cfsm 0.975 In. 13.25

Peak discharge (base, 1,000 cfs).--No peak above base.
* Discharge measurement made on this day.

Reddies River at North Wilkesboro, N. C.

Location.--Lat 36°10', long. 81°10', on left bank 400 ft upstream from highway bridge, 1¼ miles northwest of North Wilkesboro, Wilkes County, 1¼ miles upstream from North Wilkesboro municipal dam, and 2 miles upstream from mouth.

Drainage area.--93.9 sq mi.

Records available.--December 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 978.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--15 years, 138 cfs.

Extremes.--Maximum discharge during year, 2,440 cfs Feb. 21 (gage height, 7.15 ft); minimum, 22 cfs Aug. 17 (gage height, 0.63 ft).
1939-54: Maximum discharge, 27,000 cfs Aug. 14, 1940 (gage height, 22.02 ft), from rating curve extended above 2,100 cfs on basis of computation of peak flow over dam; minimum, that of Aug. 17, 1954.

Remarks.--Records good except those for periods of ice effect, which are fair. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 14				May 15 to Sept. 30			
0.7	35	2.0	236	0.6	20	1.5	138
.8	45	3.0	525	.8	38	2.0	236
1.0	67	4.0	900	1.0	60		
1.5	144	5.0	1,350				

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	50	48	51	77	607	154	96	*68	39	41	37
2	47	50	48	52	75	254	125	92	66	39	38	35
3	47	50	48	52	74	192	117	122	64	53	36	35
4	47	50	72	50	71	162	109	132	64	43	33	34
5	47	50	73	50	71	144	104	101	61	41	32	32
6	46	50	76	50	67	131	104	93	60	38	34	32
7	45	50	102	49	65	122	128	92	60	37	31	31
8	45	50	66	49	63	117	115	96	58	49	30	30
9	46	50	96	50	63	*112	109	88	58	52	*29	31
10	46	50	152	50	61	109	102	86	64	100	28	31
11	46	50	88	74	61	104	104	82	56	48	26	32
12	45	49	137	53	59	101	101	81	54	44	25	30
13	44	49	130	b50	56	102	96	82	53	41	25	30
14	44	49	253	b55	60	141	96	208	55	40	25	30
15	45	49	146	66	59	109	96	206	73	37	26	30
16	46	49	102	144	60	101	114	142	84	36	25	29
17	45	48	81	94	90	99	140	114	79	35	23	*29
18	45	48	b75	74	66	99	109	109	84	36	26	29
19	*46	48	b74	68	62	114	101	110	69	45	51	28
20	47	48	b72	66	201	147	98	118	61	40	42	32
21	47	85	b70	103	1,180	118	*94	104	56	57	38	42
22	47	68	*67	1,290	284	109	93	91	54	61	496	33
23	48	157	63	402	192	107	99	86	50	45	94	29
24	47	66	57	196	165	107	136	84	48	40	61	29
25	47	61	b56	147	147	107	109	80	47	38	55	29
26	48	54	b55	123	134	126	120	76	46	36	53	28
27	49	52	b55	110	125	109	110	74	44	40	97	28
28	76	50	55	*98	164	109	102	72	42	36	103	27
29	67	49	55	93	-	104	93	79	41	35	69	26
30	54	*49	54	87	-	102	98	88	*40	36	47	*26
31	51	-	53	81	-	127	-	70	-	34	40	-
Total	1,498	1,678	2,579	3,977	3,852	4,292	3,276	3,154	1,759	1,351	1,779	924
Mean	48.3	55.9	83.2	128	138	138	109	102	58.6	43.6	57.4	30.8
Cfsm	0.514	0.595	0.886	1.36	1.47	1.47	1.16	1.09	0.624	0.464	0.611	0.328
In.	0.59	0.66	1.02	1.58	1.53	1.70	1.30	1.25	0.70	0.54	0.70	0.37

Calendar year 1953: Max 1,290 Min 37 Mean 112 Cfsm 1.19 In. 16.14
Water year 1953-54: Max 1,290 Min 23 Mean 82.5 Cfsm 0.879 In. 11.94

Peak discharge (base, 2,000 cfs).--Jan. 22 (12 m.) 2,130 cfs (6.60 ft); Feb. 21 (6:30 a.m.) 2,440 cfs (7.15 ft); Aug. 22 (11:30 a.m.) 2,330 cfs (6.95 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Yadkin River at Wilkesboro, N. C.

Location.--Lat 36°09', long. 81°09', on right bank 150 ft upstream from bridge on U. S. Highway 421 between North Wilkesboro and Wilkesboro, 150 ft downstream from Reddies River, and half a mile northeast of Wilkesboro, Wilkes County.
Drainage area.--493 sq mi.
Records available.--April 1903 to June 1909, October 1920 to September 1954. Prior to October 1928, published as "at North Wilkesboro." Discharge records April 1903 to June 1909, published in water-supply papers, were considerably in error. Revised records April 1903 to May 1907 in Bulletin 34 of North Carolina Department of Conservation and Development.
Gage.--Water-stage recorder. Datum of gage is 942.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Apr. 10, 1903, to June 30, 1909, and Oct. 15, 1920, to Apr. 10, 1929, staff or chain gages at site 1¼ miles downstream at different datum. Apr. 11, 1929, to Jan. 9, 1930, chain gage at present site and datum. Datum used 1920-28 was about 1.2 ft lower than that used 1903-9.
Average discharge.--37 years (1903-6, 1920-54), 779 cfs.
Extremes.--Maximum discharge during year, 11,800 cfs Jan. 22 (gage height, 15.49 ft); minimum, 99 cfs Sept. 28, 29, 30 (gage height, 1.50 ft); minimum daily, 113 cfs Sept. 30.
1903-9, 1920-54: Maximum discharge, 160,000 cfs Aug. 14, 1940 (gage height, 37.6 ft, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area determination of peak flow; minimum, that of Sept. 28, 29, 30, 1954; minimum daily, that of Sept. 30, 1954.
Flood in July 1916 reached a stage of 34.5 ft (present site and datum), from floodmark (discharge, 116,000 cfs, from rating curve extended above 20,000 cfs as explained above).
Remarks.--Records good. Slight diurnal fluctuation at low flow caused by powerplant on Reddies River 1 mile above station.
Revisions (water years).--WSP 822: Drainage area. WSP 892: 1930(M). See also Records available.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22

1.8	220	5.0	2,170
2.0	306	7.0	3,570
2.5	560	9.0	5,130
3.0	870	12.0	7,830

Jan. 23 to Sept. 30

1.5	99	2.5	550
1.7	152	3.0	870
2.0	274		

Note.--Same as preceding table above 3.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	254	*241	241	293	489	*3,460	1,260	513	*409	237	227	180
2	254	237	237	297	477	1,780	902	477	403	242	344	170
3	249	228	237	297	472	1,200	753	593	386	318	228	162
4	245	228	319	293	472	935	662	857	397	260	187	156
5	245	228	418	288	448	792	618	612	370	251	184	159
6	237	228	364	280	425	714	581	538	359	233	180	143
7	232	224	584	280	403	650	662	501	349	220	173	138
8	228	228	384	275	386	618	612	520	344	*265	170	132
9	237	224	442	280	386	*581	562	460	339	284	152	129
10	241	224	1,000	280	381	556	532	448	397	375	159	135
11	237	228	554	364	*375	532	538	420	359	279	146	140
12	237	228	666	332	359	513	520	414	344	246	138	132
13	228	228	805	249	333	501	489	420	318	228	138	129
14	228	228	1,360	297	339	968	483	1,290	349	216	138	126
15	237	228	968	360	344	727	483	1,710	375	203	140	126
16	232	224	614	870	344	587	544	1,060	460	208	140	123
17	228	224	486	632	569	538	675	792	656	208	132	121
18	228	220	379	459	437	513	562	688	631	199	182	121
19	228	220	370	408	386	575	513	688	513	246	203	116
20	228	224	370	388	679	935	495	734	437	242	224	132
21	224	356	398	850	7,050	688	*466	701	386	246	298	187
22	224	364	384	7,040	2,100	612	460	581	354	289	1,450	152
23	232	632	364	4,680	1,200	581	466	538	333	260	530	135
24	228	341	337	1,550	870	581	538	513	313	203	294	129
25	224	302	328	1,030	746	575	513	489	303	195	246	126
26	228	275	337	818	662	708	575	477	289	199	242	123
27	228	254	328	701	593	644	680	448	274	233	284	118
28	306	249	319	612	718	637	935	443	256	203	346	118
29	328	237	315	589	-	600	600	454	256	180	386	116
30	275	*241	310	538	-	581	550	513	237	187	269	*113
31	245	-	*302	520	-	720	-	431	-	*176	*203	-
Total	7,475	7,793	14,520	26,130	22,443	24,602	18,229	19,323	11,196	7,331	8,133	4,087
Mean	241	260	468	843	802	794	608	623	373	236	262	136
Cfsm	0.489	0.527	0.949	1.71	1.63	1.61	1.23	1.26	0.757	0.479	0.531	0.276
In.	0.56	0.59	1.10	1.97	1.69	1.86	1.38	1.46	0.84	0.55	0.61	0.31

Calendar year 1953: Max 9,200 Min 180 Mean 581 Cfsm 1.18 In. 16.00
Water year 1953-54: Max 7,050 Min 113 Mean 469 Cfsm 0.951 In. 12.92

Peak discharge (base, 8,000 cfs).--Jan. 22 (7:30 p.m.) 11,800 cfs (15.49 ft); Feb. 21 (9:30 a.m.) 10,200 cfs (14.24 ft).
* Discharge measurement made on this day.

Fisher River near Copeland, N. C.

Location.--Lat 36°20', long. 80°40', on left bank 500 ft upstream from bridge on State Highway 268, 1 mile upstream from Cody Creek, and 2 miles northwest of Copeland, Surry County.

Drainage area.--121 sq mi.

Records available.--October 1931 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 913 ft (by barometer). Prior to Sept. 5, 1936, staff gage at same site and datum.

Average discharge.--23 years, 181 cfs.

Extremes.--Maximum discharge during year, 3,800 cfs Feb. 21 (gage height, 8.24 ft); minimum, 15 cfs about Sept. 19 (gage height, 1.68 ft).
1931-54: Maximum discharge, 27,300 cfs Aug. 14, 1940 (gage height, 18.4 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of slope-area determination of peak flow; minimum, that of Sept. 19, 1954.

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

Revisions.--WSP 822: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.7	17	3.5	562
2.0	53	4.0	806
2.3	104	5.0	1,350
2.6	178	6.0	2,020
3.0	328		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	56	61	74	115	1,910	285	108	100	59	49	41
2	52	54	60	72	113	432	181	106	94	57	48	39
3	51	54	60	72	108	298	158	121	88	81	46	37
4	49	54	74	72	104	232	145	173	86	84	40	36
5	48	54	94	70	106	197	138	115	81	63	39	34
6	48	53	96	70	100	178	136	106	79	59	45	33
7	47	54	168	69	96	164	138	102	77	53	40	29
8	*46	54	98	67	92	153	148	111	76	61	35	a28
9	47	54	108	69	92	145	131	98	72	131	35	a27
10	48	54	200	70	90	138	124	98	*86	77	34	a26
11	49	54	117	126	90	*133	138	94	96	66	31	a25
12	48	54	200	98	88	128	145	92	76	61	27	a20
13	47	54	200	83	84	131	122	92	72	56	25	a22
14	47	54	424	115	84	221	122	199	72	54	25	a22
15	48	56	204	100	84	156	119	258	91	*51	25	a22
16	49	54	140	339	86	138	140	170	138	48	25	a22
17	48	54	*117	184	115	131	172	136	761	47	23	a22
18	47	54	111	133	96	126	140	126	258	46	29	a17
19	47	54	105	117	88	160	126	164	167	48	80	a17
20	47	54	100	111	98	289	119	313	131	181	65	a25
21	47	64	100	140	1,460	178	117	207	113	250	104	49
22	47	90	96	1,640	368	153	115	148	100	92	121	37
23	48	*152	90	689	221	145	117	131	90	77	81	a29
24	51	88	84	319	178	138	136	122	84	61	66	a28
25	49	76	82	232	158	136	124	115	81	57	63	a27
26	49	67	80	197	145	148	*136	108	76	56	*54	a26
27	52	64	80	172	131	133	119	104	72	54	49	a25
28	97	64	79	*148	190	128	122	98	66	51	78	a24
29	67	61	79	136	-	126	108	112	61	47	84	a24
30	57	61	77	128	-	122	108	146	60	47	56	23
31	56	-	76	122	-	307	-	100	-	45	47	-
Total	1,586	1,870	3,660	6,034	4,780	7,174	4,129	4,173	3,504	2,220	1,569	836
Mean	51.2	62.3	118	195	171	231	138	135	117	71.6	50.6	27.9
Cfsm	0.423	0.515	0.975	1.61	1.41	1.91	1.14	1.12	0.967	0.592	0.418	0.231
In.	0.49	0.57	1.12	1.85	1.47	2.20	1.27	1.28	1.08	0.68	0.48	0.26

Calendar year 1953: Max 3,130 Min 37 Mean 159 Cfsm 1.31 In. 17.83
Water year 1953-54: Max 1,910 Min 17 Mean 114 Cfsm 0.942 In. 12.75

Peak discharge (base, 2,200 cfs).--Jan. 22 (4 p.m.) 3,260 cfs (7.57 ft); Feb. 21 (7:30 a.m.) 3,800 cfs (8.24 ft); Mar. 1 (8:30 a.m.) 3,180 cfs (7.53 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for Forbush Creek near Yadkinville.

Forbush Creek near Yadkinville, N. C.

Location.--Lat 36°08', long. 80°33', on left bank 900 ft upstream from highway bridge, three-quarters of a mile north of Forbush Church, 2⅝ miles upstream from Logan Creek, 3½ miles upstream from mouth, and 6 miles east of Yadkinville, Yadkin County.

Drainage area.--21.7 sq mi.

Records available.--April 1940 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 728 ft (by barometer).

Average discharge.--14 years, 21.6 cfs.

Extremes.--Maximum discharge during year, 1,660 cfs Jan. 22 (gage height, 9.78 ft); minimum, 1.3 cfs Sept. 19, 20 (gage height, 0.42 ft).
1940-54: Maximum discharge, 2,450 cfs Sept. 30, 1944 (gage height, 11.02 ft), from rating curve extended above 700 cfs on basis of velocity-area study; minimum, that of Sept. 19, 20, 1954.

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

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13		Dec. 14 to Sept. 30			
0.6	5.8	0.4	1.1	1.5	62
.8	14	.5	2.7	2.0	106
1.0	25	.6	5.6	4.0	336
1.4	54	.8	13	6.0	596
		1.0	24	8.0	925

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	7.2	8.0	10	17	96	46	14	12	6.6	11	3.4
2	7.6	7.6	8.0	10	17	37	34	13	12	6.3	7.3	3.1
3	7.6	7.6	8.0	10	16	32	32	30	12	8.1	7.7	2.9
4	7.2	7.6	12	10	15	25	27	27	*12	11	4.9	2.7
5	7.2	7.2	11	10	15	22	26	15	11	7.3	4.6	2.5
6	7.2	7.2	52	10	15	21	27	14	11	6.6	4.6	2.3
7	6.9	7.6	34	10	14	19	28	14	10	6.0	4.0	2.1
8	6.9	7.6	16	10	14	19	29	14	10	7.3	3.7	1.9
9	7.2	7.6	17	10	14	19	a26	13	27	7.0	4.0	1.9
10	7.2	8.0	31	10	13	*18	a22	13	33	6.6	4.9	1.9
11	7.2	8.0	18	18	13	15	a24	12	17	6.3	3.7	1.9
12	6.9	8.0	53	12	12	15	a28	12	12	5.2	3.4	1.5
13	6.9	8.0	39	12	12	16	a24	13	11	4.9	3.1	1.7
14	6.9	8.0	160	12	12	210	a20	31	10	4.6	2.9	1.7
15	7.6	8.3	43	14	12	42	a22	29	11	*4.6	3.1	1.7
16	7.2	8.3	26	132	12	30	a26	19	24	4.6	2.7	1.7
17	6.9	8.3	*20	40	15	25	a30	16	17	4.6	4.0	1.7
18	6.9	8.0	18	25	13	22	a22	15	13	4.3	15	1.4
19	6.9	8.0	17	20	12	129	a18	17	12	8.1	9.7	1.4
20	6.9	8.0	15	19	16	94	15	66	11	6.3	5.6	2.1
21	6.9	12	15	139	130	40	*15	36	10	14	5.2	3.1
22	6.9	11	15	862	41	31	15	22	9.6	34	6.0	2.3
23	7.2	*10	14	143	28	27	15	17	9.3	12	5.6	2.1
24	7.2	8.7	13	57	24	25	15	16	8.5	8.1	5.2	2.1
25	6.9	8.7	12	45	22	23	15	15	8.5	7.0	4.9	2.1
26	6.9	8.3	12	45	20	32	14	14	8.1	6.6	*4.3	1.9
27	7.2	8.3	12	38	18	24	14	13	7.3	6.3	18	1.7
28	11	8.3	12	*28	27	25	14	13	6.6	5.6	16	1.7
29	7.2	8.0	12	23	-	24	13	19	6.6	5.2	5.6	1.5
30	7.2	8.0	*12	21	-	25	14	16	6.6	4.9	4.6	1.5
31	7.2	-	11	19	-	53	-	13	-	4.6	3.7	-
Total	225.1	247.4	746.0	1,824	589	1,235	670	591	369.1	234.6	189.0	61.5
Mean	7.26	8.25	24.1	58.8	21.0	39.8	22.3	19.1	12.3	7.57	6.10	2.05
Cfsm	0.335	0.380	1.11	2.71	0.968	1.83	1.03	0.880	0.567	0.349	0.281	0.094
In.	0.39	0.42	1.28	3.13	1.01	2.12	1.15	1.01	0.63	0.40	0.32	0.11

Calendar year 1953: Max 449 Min 4.6 Mean 23.1 Cfsm 1.06 In. 14.41
Water year 1953-54: Max 862 Min 1.4 Mean 19.1 Cfsm 0.880 In. 11.97

Peak discharge (base, 570 cfs).--Jan. 22 (4 p.m.) 1,660 cfs (9.78 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Fisher River near Copeland.

Yadkin River at Yadkin College, N. C.

Location.--Lat 35°51'24", long. 80°23'09", on left bank 80 ft downstream from bridge on U. S. Highway 64, 1½ miles south of Yadkin College, Davidson County, and 6¼ miles downstream from Reedy Creek.

Drainage area.--2,280 sq mi, approximately.

Records available.--July 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 638.65 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--26 years, 2,880 cfs.

Extremes.--Maximum discharge during year, 35,900 cfs Jan. 23 (gage height, 22.20 ft); minimum observed, 212 cfs Sept. 18 (gage height, -0.34 ft); minimum daily, 345 cfs Sept. 18.

1928-54: Maximum discharge, 80,200 cfs Aug. 15, 1940 (gage height, 33.75 ft); minimum, that of Sept. 18, 1954; minimum daily, that of Sept. 18, 1954.

Maximum stage known, 35.0 ft sometime in July 1916, from floodmarks (discharge, 86,600 cfs).

Remarks.--Records good except those for periods when gage-height record was reconstructed on basis of wire-weight-gage readings and those for periods of fragmentary gage-height record, which are fair. Diurnal fluctuation during low flow caused by small power-plant with little storage capacity about 10 miles upstream from station. Record of sediment loads for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 822: Drainage area. WSP 852: 1935-37(m).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

-0.1	320	6.0	5,900
0.0	370	9.0	9,740
.5	620	12.0	14,000
1.0	955	14.0	17,300
1.5	1,350	17.0	23,000
2.0	1,790	21.0	32,600
4.0	3,750		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	910	888	948	1,230	g2,300	5,860	4,450	1,740	1,610	824	716	824
2	824	873	948	1,150	g2,100	13,200	4,050	1,790	1,480	754	1,000	*674
3	782	838	940	1,190	g2,060	5,780	3,150	1,880	1,390	722	1,010	625
4	810	838	1,030	1,230	g2,060	4,150	2,750	2,750	1,350	859	940	577
5	845	824	1,110	1,150	f2,020	3,450	2,500	2,850	1,270	1,110	732	580
6	747	*845	1,520	1,150	1,880	2,950	2,350	2,200	1,270	888	662	550
7	796	803	3,150	1,150	1,840	2,650	2,300	1,880	1,230	775	638	550
8	796	845	2,250	1,150	1,840	2,550	2,990	1,740	1,190	764	610	500
9	761	866	1,700	1,110	1,740	2,350	3,900	1,790	*1,150	788	632	f470
10	775	852	1,790	1,150	1,740	2,250	2,350	1,740	1,350	1,030	1,090	f470
11	789	866	2,650	1,350	1,700	2,150	2,250	1,610	1,560	955	644	f405
12	831	852	2,550	1,740	1,660	2,060	2,250	1,560	1,390	940	560	440
13	747	859	3,650	1,520	1,610	2,100	2,150	1,520	1,190	812	512	470
14	782	852	g6,750	1,190	1,610	6,000	2,020	1,840	1,150	747	460	f460
15	710	866	g5,900	1,350	1,610	5,190	1,970	3,150	1,150	710	495	f430
16	796	888	f4,150	g5,870	1,610	3,350	2,450	4,350	1,430	788	520	f430
17	754	866	2,500	5,870	1,700	2,550	3,450	3,150	3,020	632	f500	f425
18	775	859	1,970	*3,350	1,790	2,400	2,950	2,450	4,750	632	f475	f345
19	782	859	1,560	2,300	1,880	2,400	2,400	2,150	2,500	1,130	818	g385
20	747	852	1,480	1,970	1,660	8,830	*2,200	2,840	1,880	1,190	886	*f425
21	747	838	1,700	g6,730	5,580	4,860	2,020	6,020	1,610	1,370	817	f460
22	761	1,070	1,660	g12,100	17,200	3,450	1,920	3,250	1,390	2,750	1,650	505
23	754	1,350	1,520	31,400	6,740	2,750	1,880	2,400	1,230	1,660	2,250	560
24	728	1,560	1,480	*f26,600	4,150	2,550	1,740	2,100	1,150	1,170	2,060	525
25	728	1,480	1,310	g6,880	3,450	2,400	1,920	1,920	1,070	910	1,150	f445
26	775	1,110	1,270	g5,080	2,950	2,550	1,970	1,790	970	880	902	485
27	775	1,010	1,270	g4,550	2,550	2,500	2,060	1,700	962	753	852	480
28	810	1,000	1,350	g3,650	2,350	2,550	1,970	1,660	925	734	1,090	f440
29	1,020	970	1,310	g2,950	-	2,400	2,200	1,560	859	763	1,070	f480
30	1,070	978	1,310	g2,550	-	2,300	2,020	1,740	824	684	1,560	*f405
31	880	-	1,270	g2,350	-	2,750	-	1,790	-	632	1,070	-
Total	24,807	28,457	63,996	143,010	81,380	113,280	74,580	70,910	44,300	29,356	28,371	14,820
Mean	800	949	2,064	4,613	2,906	3,654	2,486	2,287	1,477	947	915	494
Cfsm	0.351	0.416	0.905	2.02	1.27	1.60	1.09	1.00	0.648	0.415	0.401	0.217
In.	0.40	0.46	1.04	2.33	1.33	1.85	1.22	1.16	0.72	0.48	0.46	0.24

Calendar year 1953: Max 32,200 Min 620 Mean 2,442 Cfsm 1.07 In. 14.52
Water year 1953-54: Max 31,400 Min 345 Mean 1,965 Cfsm 0.862 In. 11.69

Peak discharge (base, 18,000 cfs).--Jan. 23 (11 p.m.) 35,900 cfs (22.20 ft); Feb. 22 (12 m.) 19,300 cfs (15.12 ft).

* Discharge measurement made on this day.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.
g Computed from once-daily, or more frequent, wire-weight-gage readings.

Rocky River at Turnersburg, N. C.

Location.--Lat 35°54', long. 80°48', on right bank 1,000 ft downstream from bridge on U. S. Highway 21 at Turnersburg, Iredell County, 1 mile downstream from Mud Creek, and 1½ miles upstream from mouth.

Drainage area.--85.5 sq mi.

Records available.--April 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 724.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 19, 1950, at site 170 ft upstream at same datum.

Average discharge.--14 years, 110 cfs.

Extremes.--Maximum discharge during year, 6,080 cfs Jan. 22 (gage height, 13.69 ft), from rating curve extended above 3,400 cfs on basis of computation of peak flow over dam; minimum, 7.3 cfs Sept. 24 (gage height, 1.07 ft); minimum daily, 13 cfs Sept. 19.
1940-54: Maximum discharge, that of Jan. 22, 1954; minimum, 1 cfs Oct. 18, 1940, Oct. 26, 1941; minimum daily, that of Sept. 19, 1954.
A stage of about 18 ft was reached by a flood sometime during the years 1936 to 1938, from information by local resident.
Revisions.--The maximum discharge for the water year 1945 has been revised to 5,120 cfs Sept. 18, 1945 (gage height, 12.08 ft), superseding figure published in WSP 1032.

Remarks.--Records good. Considerable diurnal fluctuation at low flow caused by mills above station in some past years but only slight fluctuation in recent years.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 26 to Feb. 21)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
1.4	25	2.5	200	1.2	13	3.0	348
1.6	42	3.0	357	1.4	27	4.0	776
1.8	62	3.5	568	1.6	44	6.0	1,770
2.0	92			1.8	68	8.0	2,810
				2.0	102	10.0	3,910
				2.5	203	13.7	6,080

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	37	39	48	76	831	293	88	63	39	92	21
2	38	37	39	46	71	258	185	81	62	38	56	20
3	37	37	39	47	68	178	150	92	*60	38	46	19
4	36	36	52	46	64	145	130	172	59	40	40	18
5	37	37	63	46	62	126	120	102	56	40	33	18
6	36	36	121	46	58	115	115	89	54	37	32	17
7	35	36	129	*46	54	106	111	81	54	34	29	16
8	34	37	73	45	52	100	155	82	53	35	29	14
9	36	38	59	46	52	97	149	78	52	40	54	15
10	36	38	89	46	50	91	113	74	96	40	52	15
11	39	38	73	59	48	89	111	71	70	38	34	15
12	37	38	123	58	46	*84	106	68	59	34	29	15
13	35	38	137	46	44	82	97	70	53	33	29	15
14	34	38	291	50	44	384	97	152	52	31	27	15
15	36	38	157	61	44	192	93	220	56	*31	27	15
16	36	39	101	303	43	*141	97	154	65	40	25	15
17	35	38	79	192	51	120	109	120	205	34	*24	15
18	34	38	65	122	46	109	95	106	102	34	25	*15
19	34	38	65	94	43	187	*89	98	79	42	44	*13
20	*34	38	65	84	46	274	82	129	64	48	33	16
21	32	50	66	557	375	178	81	116	59	55	48	25
22	33	66	65	*2,460	230	143	81	95	54	56	39	21
23	33	59	60	2,460	148	128	79	86	52	44	38	18
24	33	*52	55	824	124	122	81	81	48	39	39	18
25	32	45	52	436	111	115	79	76	47	35	34	18
26	33	41	50	291	100	130	79	73	46	36	32	17
27	34	40	52	213	91	116	76	70	44	83	29	16
28	42	40	49	158	95	116	141	73	41	45	30	16
29	38	39	51	*122	-	109	111	76	40	37	29	15
30	38	39	50	98	-	106	93	73	40	33	29	18
31	36	-	49	84	-	202	-	65	-	32	24	-
Total	1,101	1,221	2,458	9,234	2,336	5,174	3,398	3,011	1,885	1,241	1,131	505
Mean	35.5	40.7	79.3	298	83.4	167	113	97.1	62.8	40.0	36.5	16.8
Cfsm	0.415	0.476	0.927	3.49	0.975	1.95	1.32	1.14	0.735	0.468	0.427	0.196
In.	0.48	0.53	1.07	4.02	1.02	2.25	1.48	1.31	0.82	0.54	0.49	0.22

Calendar year 1953: Max 1,460 Min 25 Mean 92.4 Cfsm 1.08 In. 14.67
Water year 1953-54: Max 2,460 Min 13 Mean 89.6 Cfsm 1.05 In. 14.23

Peak discharge (base, 2,000 cfs).--Jan. 22 (10 p.m.) 6,080 cfs (13.69 ft).
* Discharge measurement made on this day.

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South Yadkin River near Mocksville, N. C.

Location.--Lat 35°51', long. 80°40', on right bank at downstream side of highway bridge, 1 mile upstream from Little Creek, 4 miles downstream from Fifth Creek, 4½ miles upstream from Hunting Creek, and 6½ miles southwest of Mocksville, Davie County.

Drainage area.--313 sq mi.

Records available.--October 1938 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 660 ft (by barometer).

Average discharge.--16 years, 314 cfs.

Extremes.--Maximum discharge during year, 9,240 cfs Jan. 23 (gage height, 16.73 ft); minimum, 37 cfs Sept. 20 (gage height, 1.32 ft).
1938-54: Maximum discharge, that of Jan. 23, 1954; minimum, that of Sept. 20, 1954. Maximum stage known, 22.6 ft Oct. 3, 1929, from floodmark established by local resident.

Remarks.--Records good. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.3	35	4.0	778
1.5	58	6.0	1,470
1.7	90	8.0	2,240
2.0	150	10 0	3,260
2.5	290	13.0	5,540
3.0	450	15.0	7,740

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	103	114	148	296	1,330	829	228	167	94	82	60
2	104	103	114	146	280	1,200	626	220	160	92	160	55
3	104	103	114	143	268	578	450	222	155	95	126	54
4	103	103	137	143	255	434	386	498	152	116	101	52
5	101	103	182	143	246	364	*344	373	146	106	85	49
6	101	104	294	141	234	325	322	261	141	101	78	48
7	99	103	546	*139	225	296	312	228	139	88	72	45
8	97	103	264	137	217	277	357	222	137	87	68	43
9	97	104	190	137	214	264	610	220	135	92	78	41
10	99	106	228	139	208	252	354	203	177	99	146	40
11	99	106	252	152	203	243	325	192	258	99	95	41
12	101	106	457	177	197	234	309	187	169	90	75	41
13	97	106	546	143	190	282	280	190	143	85	67	40
14	95	108	985	137	187	1,250	268	338	135	82	64	40
15	95	108	610	208	187	880	264	562	*141	108	62	41
16	97	108	360	880	187	*466	271	418	141	110	*62	41
17	99	108	264	812	203	373	332	*322	304	90	61	41
18	97	108	208	434	206	328	284	264	291	83	77	*41
19	97	108	205	325	187	559	249	246	190	*120	144	39
20	*95	108	205	277	190	1,260	234	271	160	193	110	38
21	94	128	206	1,550	853	659	228	335	146	172	87	48
22	95	167	206	2,740	950	466	222	246	135	181	118	62
23	95	162	197	*7,090	*482	389	220	217	128	157	94	55
24	97	*148	179	6,210	370	360	258	206	122	110	95	49
25	97	132	167	1,830	328	344	268	195	116	95	87	49
26	95	124	160	812	290	373	225	187	114	90	80	48
27	97	118	157	610	261	360	214	182	108	166	78	45
28	112	116	157	482	285	338	240	177	103	128	93	43
29	110	114	157	399	-	319	325	214	97	95	132	42
30	106	114	157	354	-	303	246	187	95	85	78	41
31	103	-	155	322	-	551	-	174	-	80	68	-
Total	3,084	3,432	8,173	27,360	8,199	15,657	9,852	7,985	4,605	3,389	2,823	1,372
Mean	99.5	114	264	883	293	505	328	258	154	109	91.1	45.7
Cfsm	0.318	0.364	0.843	2.82	0.936	1.61	1.05	0.824	0.492	0.348	0.291	0.146
In.	0.37	0.41	0.97	3.25	0.97	1.86	1.17	0.95	0.55	0.40	0.34	0.16

Calendar year 1953: Max 2,700 Min 60 Mean 279 Cfsm 0.891 In. 12.12
Water year 1953-54: Max 7,090 Min 38 Mean 263 Cfsm 0.840 In. 11.40

Peak discharge (base, 2,700 cfs).--Jan. 23 (9 p.m.) 9,240 cfs (16.73 ft).
* Discharge measurement made on this day.

Hunting Creek near Harmony, N. C.

Location.--Lat 36°00', long. 80°44', on right bank at downstream side of highway bridge, three-quarters of a mile downstream from Kennedy Creek, 1 mile east of Houstonville, Iredell County, 2 miles downstream from U. S. Highway 21, and 3½ miles northeast of Harmony.

Drainage area.--153 sq mi.

Records available.--January 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 731 ft (by barometer). Prior to Apr. 5, 1951, wire-weight gage on upstream side of bridge at same datum.

Extremes.--Maximum discharge during year, 6,110 cfs Jan. 22 (gage height, 18.30 ft); minimum, 24 cfs Sept. 18 (gage height, 1.23 ft).
1951-54: Maximum discharge, that of Jan. 22, 1954; minimum, that of Sept. 18, 1954.

Remarks.--Records good. Slight diurnal fluctuation at low flow caused by mills above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 22

1.5	46	6.0	950
2.0	108	8.0	1,550
3.0	266	10.0	2,250
4.0	457	13.4	3,660

Jan. 23 to Feb. 21

1.9	78	4.0	440
2.3	135	6.0	950
3.0	250		

Note.--Same as preceding table above 6.0 ft.

Feb. 22 to Sept. 30

1.2	21	4.0	482
1.5	56	6.0	950
2.0	122	8.0	1,550
3.0	284		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	56	65	73	145	1,280	427	144	107	62	75	56
2	56	56	63	73	138	426	266	137	104	57	156	55
3	58	57	64	71	130	284	224	197	*100	85	116	52
4	57	57	85	68	124	224	197	292	97	71	81	49
5	59	57	115	65	120	198	186	174	91	66	68	49
6	56	54	181	64	114	182	184	154	90	61	66	48
7	52	55	226	59	111	170	182	144	91	55	57	45
8	*49	55	121	58	108	162	187	149	89	58	55	42
9	52	57	105	56	106	155	171	137	89	73	64	39
10	52	59	186	57	101	*150	165	132	177	66	62	40
11	52	56	134	91	99	146	168	126	148	61	54	42
12	52	59	196	80	95	142	160	122	101	57	49	37
13	47	58	241	47	92	142	149	128	93	51	46	38
14	49	57	499	70	92	614	149	288	93	49	43	36
15	55	57	275	86	94	284	149	378	111	49	44	34
16	53	59	172	*418	92	216	157	258	162	*92	45	33
17	53	58	*132	250	117	189	181	198	280	58	*50	36
18	50	57	97	146	97	176	158	176	170	51	118	32
19	53	58	118	115	87	295	*144	182	134	92	243	28
20	49	58	119	98	97	449	142	289	112	84	89	34
21	52	87	116	473	834	284	142	240	101	109	115	54
22	52	122	111	*3,640	400	224	142	182	95	84	104	46
23	53	114	104	2,490	249	208	140	155	89	76	107	40
24	55	*89	95	536	197	194	140	143	82	63	85	38
25	49	74	88	348	173	186	138	132	78	55	77	37
26	53	67	89	293	155	216	140	124	77	122	71	33
27	56	64	90	250	142	192	138	119	73	303	62	37
28	69	64	84	*211	229	189	267	118	73	100	96	33
29	68	61	85	188	-	179	170	121	67	81	101	34
30	58	64	85	170	-	179	149	118	61	72	73	*34
31	58	-	77	156	-	307	-	111	-	69	60	-
Total	1,683	1,946	4,218	10,800	4,538	8,237	5,312	5,368	3,235	2,432	2,532	1,211
Mean	54.3	64.9	136	348	162	266	177	173	108	78.5	81.7	40.4
Cfsm	0.355	0.424	0.889	2.27	1.06	1.74	1.16	1.13	0.706	0.513	0.534	0.264
In.	0.41	0.47	1.03	2.63	1.10	2.00	1.29	1.30	0.79	0.59	0.62	0.29

Calendar year 1953: Max 2,490 Min 44 Mean 153 Cfsm 1.00 In. 13.57
Water year 1953-54: Max 3,640 Min 28 Mean 141 Cfsm 0.922 In. 12.52

Peak discharge (base, 2,000 cfs).--Jan. 22 (9:30 p.m.) 6,110 cfs (18.30 ft); Mar. 1 (7 a.m.) 2,140 cfs (9.71 ft).

* Discharge measurement made on this day.

South Yadkin River at Cooleemee, N. C.

Location.--Lat 35°48', long. 80°34', on left bank 150 ft downstream from tailrace of Erwin Cotton Mills at Cooleemee, Davie County, 550 ft upstream from bridge on State Highway 801, 2¼ miles downstream from Bear Creek, and 2½ miles upstream from Third Creek.

Drainage area.--569 sq mi.

Records available.--June 1928 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 624.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--24 years (1930-54), 616 cfs.

Extremes.--Maximum discharge during year, 15,200 cfs Jan. 24 (gage height, 24.10 ft); minimum, 35 cfs Sept. 18 (gage height, 1.09 ft); minimum daily, 37 cfs Sept. 19.
1928-54: Maximum discharge, 24,800 cfs Oct. 3, 1929 (gage height, 32.25 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam; minimum, 10 cfs Nov. 25, 1931 (gage height, 0.40 ft); minimum daily, 23 cfs Oct. 12, 19, 1941.
Flood of July 16, 1916, reached a stage of 27.2 ft, from floodmark in Erwin Cotton Mill.

Remarks.--Records fair except those above 1,500 cfs, which are poor. Large diurnal fluctuation and slight regulation during low and medium flow caused by Erwin Cotton Mill above station.

Revisions.--WSP 822: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 5)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
1.1	90	4.0	1,080	1.1	37	8.0	2,450
1.5	198	6.0	1,750	1.3	89	11.0	3,550
2.0	350	8.1	2,440	1.5	154	14.0	4,790
3.0	696			2.0	324	17.0	6,190
				3.0	696	20.0	8,690
				5.0	1,440	23.0	13,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	184	191	266	526	2,230	1,700	410	303	180	184	157
2	192	159	204	287	522	2,630	1,220	385	292	200	213	115
3	166	185	182	284	505	1,420	886	408	292	210	292	128
4	161	184	181	283	473	866	734	867	282	194	234	111
5	169	170	293	274	446	707	617	665	278	213	194	81
6	175	186	428	281	436	620	601	462	261	210	180	83
7	178	155	1,110	271	407	563	*573	413	254	200	170	105
8	175	163	522	270	394	513	580	379	258	167	151	105
9	175	190	361	233	382	492	1,120	385	247	154	134	81
10	141	173	393	272	376	475	639	383	310	174	254	95
11	184	171	470	305	369	451	582	351	544	190	194	81
12	152	173	857	346	342	439	549	346	335	184	204	86
13	209	173	1,190	302	345	593	506	339	282	174	124	83
14	165	160	2,000	232	335	3,090	492	574	254	180	105	83
15	154	181	1,470	308	360	2,250	485	1,080	261	194	134	83
16	107	201	725	2,040	332	943	529	848	303	170	*115	83
17	152	183	497	1,750	345	697	745	*663	601	204	115	83
18	172	168	401	795	367	614	578	413	734	170	118	*64
19	159	212	324	568	344	822	475	450	317	*190	323	37
20	*187	150	357	489	338	2,670	450	500	328	289	296	83
21	166	204	411	2,420	1,750	1,510	427	718	300	306	207	89
22	132	257	383	4,430	2,180	935	414	505	272	320	220	105
23	133	304	358	*9,910	1,150	768	410	432	*258	292	213	111
24	158	267	309	12,900	719	702	410	391	247	227	210	108
25	166	248	318	5,730	620	670	474	374	240	200	204	105
26	193	180	302	1,860	*548	720	408	354	223	164	197	105
27	163	204	299	1,260	488	715	384	344	227	334	151	92
28	165	198	333	909	469	658	436	337	187	346	*138	78
29	156	198	*298	815	-	610	606	344	*210	220	428	78
30	188	204	265	681	-	584	443	339	167	197	207	78
31	186	-	328	546	-	1,060	-	322	-	200	161	-
Total	5,189	5,785	15,760	51,317	15,868	32,017	18,473	14,781	9,067	6,653	6,070	2,776
Mean	167	193	508	1,655	567	1,033	616	477	302	215	196	92.5
Cfsm	0.293	0.339	0.893	2.91	0.996	1.82	1.08	0.838	0.531	0.378	0.344	0.163
In.	0.34	0.38	1.03	3.35	1.04	2.09	1.21	0.97	0.59	0.43	0.40	0.18

Calendar year 1953: Max 6,040 Min 82 Mean 521 Cfsm 0.917 In. 12.43
Water year 1953-54: Max 12,900 Min 37 Mean 503 Cfsm 0.884 In. 12.01

* Discharge measurement made on this day.

Third Creek at Cleveland, N. C.

Location.--Lat 35°45', long. 80°41', on left bank 200 ft downstream from highway bridge, three-quarters of a mile north of Cleveland, Rowan County, and 7 miles upstream from Fourth Creek.

Drainage area.--87.4 sq mi.

Records available.--April 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 684.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to May 22, 1950, on right bank at site 200 ft upstream at same datum.

Average discharge.--14 years, 88.1 cfs.

Extremes.--Maximum discharge during year, 2,260 cfs Jan. 24 (gage height, 14.28 ft); minimum, 10 cfs Sept. 19, 20 (gage height, 0.20 ft).
1940-54: Maximum discharge, 3,080 cfs about Sept. 19, 1945 (gage height, 15.76 ft, from floodmarks), from rating curve extended above 900 cfs by logarithmic plotting; minimum, that of Sept. 19, 20, 1954.
Maximum stage known, 22.5 ft sometime in July 1916, from floodmark witnessed by local resident. Creek channel improved considerably by dredging since 1916.

Remarks.--Records good. Town of Statesville diverts about three-quarters of a cubic foot per second into basin above station.

Revisions (water years).--WSP 1112: 1944-46.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 24				Jan. 25 to Sept. 30			
0.5	21	4.0	348	0.2	10	1.0	51
.7	31	5.0	475	.4	17	2.0	134
1.0	50	7.0	710	.6	27		
1.5	87	9.0	920				
2.0	134	11.0	1,280	Note.--Same as preceding table above 2.0 ft.			
3.0	237	14.0	2,150				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	24	28	41	74	526	184	57	43	26	20	14
2	28	24	28	40	71	164	115	57	43	24	24	14
3	28	24	28	40	68	114	98	57	41	26	26	13
4	27	24	42	39	65	94	87	86	41	28	20	13
5	26	24	44	39	63	83	*82	61	39	28	18	13
6	26	*25	96	39	62	77	80	56	38	24	17	12
7	26	25	128	*39	59	72	79	53	37	22	17	12
8	26	25	52	38	58	69	87	56	37	24	18	11
9	26	25	45	38	58	67	105	52	41	26	18	11
10	26	26	58	39	57	64	80	50	152	27	49	11
11	26	26	48	44	56	63	79	50	66	28	22	12
12	24	26	203	44	54	62	76	49	47	22	18	11
13	24	26	143	41	53	134	71	52	42	20	17	11
14	24	26	376	40	53	907	74	*117	39	20	17	12
15	24	26	130	51	53	394	71	97	*38	40	17	11
16	24	26	80	517	53	144	87	71	37	28	*18	12
17	22	26	64	214	62	109	106	62	78	24	21	12
18	22	26	56	107	54	94	79	58	51	22	42	*11
19	23	26	54	82	52	206	72	57	45	*43	32	11
20	22	26	52	72	54	574	67	62	41	40	66	38
21	*22	36	51	687	487	179	66	61	38	33	26	40
22	22	39	52	*912	189	121	64	54	37	43	24	20
23	23	34	49	*1,390	101	103	63	51	34	38	26	19
24	22	32	45	1,900	85	103	64	50	33	28	25	18
25	22	30	44	392	79	95	63	49	31	26	23	18
26	22	28	44	189	*71	124	72	47	30	24	20	17
27	23	28	43	139	67	101	*61	47	29	40	18	15
28	29	28	42	110	76	101	60	46	27	25	22	15
29	26	28	44	94	-	91	57	48	26	22	20	13
30	24	*28	44	85	-	83	57	46	26	20	18	13
31	24	-	42	79	-	190	-	44	-	20	15	-
Total	761	817	2,255	7,581	2,314	5,308	2,406	1,803	1,307	859	734	453
Mean	24.5	27.2	72.7	245	82.6	171	80.2	58.2	43.6	27.7	23.7	15.1
Cfsm	0.280	0.311	0.832	2.80	0.945	1.96	0.918	0.666	0.499	0.317	0.271	0.173
In.	0.32	0.35	0.96	3.23	0.98	2.26	1.02	0.77	0.56	0.37	0.31	0.19

Calendar year 1953: Max 1,300 Min 17 Mean 70.6 Cfsm 0.808 In. 10.96
Water year 1953-54: Max 1,900 Min 11 Mean 72.9 Cfsm 0.834 In. 11.32

Peak discharge (base, 1,050 cfs).--Jan. 24 (4 a.m.) 2,260 cfs (14.28 ft).
* Discharge measurement made on this day.

Abbotts Creek at Lexington, N. C.

Location.--Lat 35°48'24", long. 80°14'06", on right bank 200 ft downstream from small tributary, 300 ft upstream from highway bridge, 0.6 mile downstream from bridge on U. S. Highway 64, 1½ miles southeast of Lexington, Davidson County, and 4.9 miles downstream from Rich Fork.

Drainage area.--174 sq mi.

Records available.--March 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 622.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to July 28, 1949, at site 600 ft upstream at present datum.

Average discharge.--14 years, 160 cfs.

Extremes.--Maximum discharge during year, 4,890 cfs Jan. 23 (gage height, 14.62 ft); minimum, 3.1 cfs Sept. 28.
1940-54: Maximum discharge, 14,800 cfs Sept. 25, 1947 (gage height, 22.12 ft, site then in use, from floodmarks); minimum, 1.8 cfs Oct. 22, 1941.

Remarks.--Records good. Town of Lexington diverted an average of 2.8 cfs during water year 1954 above station for water supply. City of High Point discharges about 3 cfs sewage effluent diverted from Deep River (Cape Fear River basin) into Rich Fork above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 17 to Dec. 6)

Oct. 1 to Jan. 23

1.4	9.2	4.0	570
1.5	12	5.0	820
1.7	22	7.0	1,300
2.0	52	9.0	1,850
2.3	104	11.0	2,580
2.6	182	14.0	4,350
3.0	301		

Jan. 24 to Sept. 30

1.0	2.3	1.8	33
1.1	3.5	2.0	55
1.2	5.3	2.3	108
1.4	10	3.0	301
1.6	18		

Note.--Same as preceding table above 3.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	16	15	40	154	298	923	58	33	9.6	9.2	20
2	19	16	16	38	138	281	378	56	31	14	16	15
3	19	14	*16	38	131	175	212	71	30	32	47	13
4	18	14	25	36	*124	178	161	190	28	16	27	11
5	18	15	44	35	110	*129	131	94	26	18	13	10
6	14	17	55	36	98	108	122	62	24	13	12	9.8
7	15	17	150	35	88	96	117	53	24	9.8	11	7.1
8	13	18	88	34	79	88	113	58	23	9.0	9.0	6.7
9	13	16	39	33	79	83	566	55	23	15	11	9.0
10	15	15	71	36	75	77	388	48	28	12	118	*9.6
11	16	16	63	52	72	75	198	43	30	12	62	7.1
12	14	16	153	81	67	70	195	42	24	9.8	21	6.2
13	12	16	286	48	61	76	144	45	21	6.4	14	4.8
14	11	17	878	42	61	1,690	136	136	24	5.3	11	4.0
15	11	18	781	81	61	1,550	138	195	24	4.8	10	4.0
16	12	18	172	1,200	61	316	557	104	51	20	11	4.8
17	12	16	90	*1,310	75	192	1,230	72	106	27	7.1	4.9
18	12	17	64	324	70	154	1,180	56	84	14	6.7	4.8
19	*12	17	51	173	60	170	309	53	43	12	69	4.2
20	11	17	50	131	56	635	198	*64	32	14	29	4.2
21	11	19	54	1,260	224	408	151	192	26	40	50	8.9
22	10	21	64	3,130	263	189	131	94	21	59	48	9.8
23	12	22	61	4,240	136	148	*113	66	20	80	28	6.4
24	13	22	50	1,370	108	134	102	54	18	33	18	4.9
25	14	20	44	622	120	124	94	48	17	17	14	4.2
26	12	18	40	820	102	146	81	44	15	14	12	4.2
27	11	18	40	1,100	84	138	74	40	15	18	10	3.5
28	12	16	39	734	83	131	75	40	13	*11	49	3.4
29	16	16	42	321	-	126	68	41	*10	9.0	580	3.4
30	16	16	50	233	-	138	61	41	9.8	8.4	182	3.4
31	17	-	46	189	-	324	-	37	-	6.4	32	-
Total	431	514	3,617	17,822	2,840	8,447	8,346	2,252	873.8	569.5	1,537.0	212.3
Mean	13.9	17.1	117	575	101	272	278	72.6	29.1	18.4	49.6	7.08
Cfsm	0.080	0.098	0.672	3.30	0.580	1.56	1.60	0.417	0.167	0.106	0.285	0.041
In.	0.09	0.11	0.77	3.81	0.61	1.81	1.78	0.48	0.19	0.12	0.33	0.05

Calendar year 1953: Max 2,950 Min 8.3 Mean 172 Cfsm 0.989 In. 13.41
Water year 1953-54: Max 4,240 Min 3.4 Mean 130 Cfsm 0.747 In. 10.15

Peak discharge (base, 2,400 cfs).--Jan. 23 (7 a.m.) 4,890 cfs (14.62 ft); Mar. 14 (10:30 p.m.) 2,580 cfs (10.99 ft).
* Discharge measurement made on this day.

Yadkin River at High Rock, N. C.

Location.--Lat 35°35'46", long. 80°13'59", on right bank 0.3 mile downstream from High Rock Dam, 0.6 mile west of High Rock, Davidson County, 1¾ miles upstream from Lick Creek, and at mile 253.

Drainage area.--3,980 sq mi, approximately.

Records available.--January 1919 to November 1927, November 1941 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 558.68 ft above mean sea level, datum of 1929, and 590.00 ft above Carolina Aluminum Co. datum. January 1919 to November 1927 at datum 590.00 ft lower.

Average discharge.--19 years (1919-25, 1926-27, 1942-54), 4,724 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 56,400 cfs Jan. 24 (gage height, 13.65 ft); minimum, 14 cfs Aug. 1; minimum daily, 20 cfs Oct. 11.

1919-27, 1941-54: Maximum discharge, 76,600 cfs July 21, 1919 (gage height, 15.9 ft, present datum, from floodmarks determined by Tallassee Power Co.), from rating curve extended above 53,000 cfs on basis of velocity-area study; minimum, 10 cfs Aug. 10, 1942 (gage height, 1.84 ft); minimum daily, 12 cfs Aug. 9, 1942.

Maximum stage known, 22.1 ft (present datum) in July 1916, from floodmarks, from records by Tallassee Power Co.

Remarks.--Records good except those below 2,000 cfs, which are fair. Except for major floods, flow completely regulated by High Rock Reservoir since 1927 (usual capacity, 10,230,000,000 cu ft).

Revisions (water years).--WSP 972: 1919(M), drainage area. Previously published records for this station prior to November 1941 are occasionally subject to error, owing to faulty or no gage-height record and a rating curve extended above 26,000 cfs which gave results considerably larger than present rating.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	19	4.5	2,730
2.1	28	5.0	4,130
2.2	42	6.0	7,780
2.4	83	7.0	12,500
2.7	189	9.0	23,500
3.0	390	11.0	36,500
3.5	940	13.0	51,600
4.0	1,710		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,880	46	1,700	1,160	4,790	6,400	3,970	4,840	2,690	2,950	24	2,470
2	2,870	2,370	2,120	1,560	3,170	8,230	5,130	42	2,880	1,520	1,440	2,610
3	134	1,990	1,860	48	2,310	12,800	5,130	3,780	2,850	2,760	1,670	2,720
4	30	2,770	2,180	1,390	5,190	6,440	5,130	3,740	2,890	44	1,450	1,950
5	922	2,710	54	2,870	5,270	4,470	5,130	3,750	3,280	2,960	640	36
6	2,000	1,650	46	1,390	5,450	4,790	5,490	3,670	41	3,580	270	1,890
7	2,020	76	2,590	1,850	3,630	5,130	5,490	3,740	2,880	2,810	150	2,890
8	2,090	39	4,310	3,880	2,410	4,450	5,310	3,750	2,930	1,760	36	2,940
9	976	2,730	4,330	180	5,620	4,290	5,310	41	2,540	1,720	464	2,970
10	67	3,510	4,340	50	7,170	4,290	5,310	2,240	2,160	2,150	300	2,590
11	20	2,300	3,590	254	6,780	3,320	5,310	2,050	2,460	32	181	1,580
12	1,210	2,470	2,090	729	6,210	3,260	5,310	2,430	2,000	3,500	1,130	35
13	2,830	2,100	4,960	1,410	2,620	4,380	5,310	2,070	41	*2,830	740	1,200
14	136	38	7,540	1,240	39	11,800	5,490	3,080	1,520	2,080	29	1,010
15	904	39	6,430	1,230	1,870	14,800	5,310	3,050	1,460	2,500	26	1,050
16	1,000	2,990	7,050	5,630	4,170	7,960	*5,310	46	1,400	3,680	1,390	1,000
17	68	3,200	4,990	9,330	4,230	3,360	4,130	32	1,410	1,650	1,200	1,020
18	27	2,300	4,980	8,420	3,960	3,850	5,310	1,310	1,410	39	1,130	39
19	1,680	*1,710	4,690	9,100	4,270	7,540	5,130	1,620	1,280	2,840	702	27
20	1,440	1,760	2,830	9,100	1,110	12,800	5,490	1,900	42	4,350	1,940	980
21	1,620	50	5,420	5,900	4,170	9,990	5,310	2,660	3,950	2,700	107	461
22	1,550	39	5,140	24,500	8,420	5,850	5,310	3,650	3,980	1,830	36	1,640
23	1,460	1,640	5,020	46,100	6,400	6,570	5,490	4,410	4,050	2,510	511	1,880
24	46	1,090	3,290	*51,600	5,130	6,600	5,490	6,270	4,120	2,580	66	1,840
25	31	1,510	1,980	23,100	5,130	5,420	5,490	6,090	4,170	39	940	624
26	550	52	3,100	13,500	4,290	5,820	5,490	6,210	3,920	2,350	722	29
27	548	284	3,000	11,200	4,620	5,160	5,130	6,210	42	2,510	2,190	1,980
28	530	39	5,670	8,870	3,510	5,130	5,490	5,570	1,760	2,630	1,220	1,620
29	772	38	7,580	7,990	-	5,130	5,490	4,430	1,670	2,360	56	2,000
30	1,360	1,460	6,440	5,930	-	5,130	5,490	46	1,740	2,440	1,510	2,150
31	102	-	3,490	4,360	-	4,790	-	1,800	-	1,900	1,540	-
Total	31,873	43,000	122,810	263,871	121,939	199,950	157,680	94,527	67,566	69,604	23,810	45,231
Mean	1,028	1,433	3,962	8,512	4,355	6,450	5,256	3,049	2,252	2,245	768	1,508
(†)	0	-188	-532	+902	-182	+47	-683	+211	-133	-892	+609	-966
Adjusted for change in contents in High Rock Reservoir												
Mean	1,028	1,245	3,430	9,414	4,173	6,497	4,573	3,260	2,119	1,353	1,377	542
Cfsm	0.258	0.313	0.862	2.37	1.05	1.63	1.15	0.819	0.532	0.340	0.346	0.136
In.	0.30	0.35	0.99	2.73	1.09	1.88	1.28	0.94	0.59	0.39	0.40	0.15

	Observed	Adjusted
Calendar year 1953:	Max 46,800 Min 20 Mean 3,821	Mean 3,770 Cfsm 0.947 In. 12.87
Water year 1953-54:	Max 51,600 Min 20 Mean 3,402	Mean 3,255 Cfsm 0.818 In. 11.09

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in High Rock Reservoir, furnished by Carolina Aluminum Co.

Uwharrie River near Eldorado, N. C.

Location.--Lat 35°25'30", long. 80°01'00", on right bank 300 ft downstream from State Highway 109, 1 mile upstream from McLeans Creek, and 3 miles south of Eldorado, Montgomery County.

Drainage area.--347 sq mi.

Records available.--October 1938 to September 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 297 ft (by barometer).

Average discharge.--16 years, 318 cfs.

Extremes.--Maximum discharge during year, 7,670 cfs Jan. 22 (gage height, 12.62 ft); minimum, 0.9 cfs Sept. 23; minimum daily, 1.1 cfs Sept. 29, 30.

1938-54: Maximum discharge, 23,300 cfs Sept. 18, 1945 (gage height, 26.22 ft, from floodmark), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 0.5 cfs Sept. 21, Oct. 13, 14, 1941; minimum daily, 0.5 cfs Oct. 13, 1941.

Flood in August 1928 reached a stage of 22.2 ft, from floodmark established by local resident (discharge, 17,900 cfs).

Remarks.--Records good except those for period of no gage-height record, which are fair. Marked diurnal fluctuation and some regulation for short periods at low flow caused by gristmill above station. Town of Asheboro diverted an average of 1.2 cfs during the water year 1954 above station for water supply. Sewage is discharged into Deep River (Cape Fear River basin).

Revisions (water years).--WSP 892: 1939.

Rating table, water year 1953-54 (gage height, in feet and discharge, in cubic feet per second)

0.3	0.7	2.0	187
.4	1.4	2.5	343
.6	4.0	3.0	555
.8	8.2	4.0	1,090
1.0	16	6.0	2,400
1.2	29	9.0	4,500
1.4	56	12.0	7,100
1.6	91		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	18	24	91	278	414	1,710	134	77	27	8.8	28
2	31	20	29	77	253	640	782	129	70	19	12	22
3	27	25	17	70	230	354	490	137	64	22	14	18
4	27	28	33	68	221	365	369	510	59	35	17	11
5	18	26	50	64	209	298	298	341	56	16	31	17
6	28	20	70	59	190	244	269	182	52	9.3	22	10
7	25	22	75	56	182	212	250	144	48	8.0	23	12
8	27	a25	99	56	168	193	244	129	47	14	12	15
9	19	a28	64	53	163	182	537	120	44	17	11	14
10	24	a26	54	52	*155	168	394	118	59	15	20	8.8
11	19	a22	53	61	150	163	295	109	61	11	22	6.4
12	14	a25	253	78	139	152	275	101	68	10	13	3.4
13	9.0	a18	591	89	132	147	250	101	54	7.3	19	5.1
14	26	20	1,850	78	116	2,730	221	184	48	11	16	4.6
15	16	24	942	157	120	3,420	238	430	48	17	26	3.0
16	16	17	238	4,500	122	640	230	266	50	35	11	2.2
17	24	26	150	3,570	125	407	774	184	177	20	6.4	4.6
18	17	24	111	620	137	326	1,080	144	101	16	8.8	7.7
19	14	23	84	354	127	298	470	134	71	18	33	5.3
20	22	20	73	275	127	802	322	207	59	20	22	3.2
21	17	22	77	1,110	412	586	260	250	50	23	14	2.2
22	14	30	80	4,920	719	365	227	218	41	22	20	1.3
23	22	19	82	6,600	322	298	215	150	41	41	44	8.4
24	18	29	73	3,340	238	275	195	122	29	37	35	15
25	17	28	70	1,060	212	260	344	111	35	30	20	9.6
26	16	29	66	1,890	195	253	247	93	24	*20	11	5.0
27	15	24	63	1,980	171	241	187	91	29	20	9.9	2.8
28	24	25	61	948	155	398	168	86	18	15	20	1.4
29	22	26	*68	537	-	362	157	86	23	10	441	1.1
30	28	20	107	402	-	394	142	89	24	12	125	1.1
31	23	-	107	326	-	442	-	82	-	11	46	-
Total	655.0	709	5,714	33,541	5,768	16,089	11,640	5,182	1,627	588.6	1,131.9	249.2
Mean	21.1	23.6	184	1,082	206	519	388	167	54.2	19.0	36.5	8.31
Cfsm	0.061	0.068	0.530	3.12	0.594	1.50	1.12	0.481	0.156	0.055	0.105	0.024
In.	0.07	0.08	0.61	3.59	0.62	1.72	1 25	0.56	0.17	0.06	0.12	0.03

Calendar year 1953: Max 5,290 Min 8.8 Mean 331 Cfsm 0.954 In. 12.97
Water year 1953-54: Max 6,600 Min 1.1 Mean 227 Cfsm 0.654 In. 8.88

Peak discharge (base, 4,600 cfs).--Jan. 16 (11 a.m.) 7,100 cfs (11.95 ft); Jan. 22 (9 p.m.) 7,670 cfs (12.62 ft).

* Discharge measurement made on this day.

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

Rocky River near Norwood, N. C.

Location.--Lat 35°09'00", long. 80°10'30", on left bank 1,000 ft downstream from Lanes Creek, 1½ miles upstream from highway bridge, and 6 miles southwest of Norwood, Stanly County.

Drainage area.--1,370 sq mi, approximately.

Records available.--October 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 212.91 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--25 years, 1,258 cfs.

Extremes.--Maximum discharge during year, 41,000 cfs Jan. 23 (gage height, 25.25 ft); minimum, 22 cfs Sept. 23 (gage height, 0.05 ft).
1929-54: Maximum discharge, 155,000 cfs Sept. 18, 1945 (gage height, 46.37 ft, from floodmark), from rating curve extended above 70,000 cfs on basis of slope-area determination of peak flow; minimum, 19 cfs Oct. 28, 1931, Nov. 13, 1933.
Flood in August 1908 reached a stage of 35 ft, from information by local residents.

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

Revisions (water years).--WSP 822: Drainage area. WSP 852: 1937. WSP 1052: 1936(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.0	17	3.0	1,820
.1	28	5.0	4,100
.2	42	9.0	9,300
.5	107	13.0	15,600
1.0	261	18.0	25,000
1.5	500	23.0	35,700
2.0	810		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	321	102	85	804	890	1,150	15,500	321	142	85	124	74
2	257	95	*81	609	810	3,090	6,320	357	148	81	110	65
3	216	85	90	511	771	1,500	2,560	303	153	106	335	56
4	183	81	114	440	738	1,170	1,700	929	140	142	216	53
5	158	88	164	405	706	954	1,280	528	124	122	150	49
6	142	95	269	381	641	758	1,070	372	114	95	120	47
7	132	95	670	348	567	660	1,900	290	100	72	105	42
8	137	97	801	321	522	591	2,150	257	90	65	100	36
9	130	95	370	299	*494	555	1,400	231	*93	64	90	59
10	124	90	257	282	489	528	1,170	213	172	615	195	72
11	120	88	334	308	467	500	898	199	426	286	167	49
12	112	93	1,610	725	440	472	866	189	282	137	155	41
13	107	100	5,340	771	400	445	790	196	189	88	114	36
14	112	100	14,500	511	367	6,140	706	290	132	69	102	34
15	114	100	7,040	500	357	8,060	674	628	a110	119	81	*28
16	117	95	1,850	23,600	357	1,860	824	567	a130	11,700	74	26
17	117	90	1,020	24,500	376	1,080	3,950	381	a2,000	10,000	156	28
18	112	88	732	6,680	405	850	4,540	303	3,960	1,660	*167	35
19	105	95	579	2,180	381	790	1,960	290	1,990	544	167	35
20	90	100	467	1,560	357	5,180	1,040	646	570	898	137	36
21	78	105	456	5,250	2,620	3,230	790	930	321	573	309	34
22	83	110	478	18,200	4,550	1,490	680	616	253	966	174	28
23	88	114	522	35,700	1,820	1,020	591	381	192	946	155	*27
24	90	132	550	17,800	930	1,340	522	269	164	712	110	*39
25	88	124	478	6,240	810	3,310	489	223	148	344	85	38
26	88	114	478	4,330	804	2,000	573	203	132	213	83	38
27	81	110	533	3,420	674	1,840	467	189	114	*278	78	35
28	78	102	445	2,330	573	7,950	478	174	100	391	105	34
29	90	97	501	1,570	-	3,820	*372	167	88	234	430	29
30	97	90	*1,710	1,230	-	3,730	339	158	85	170	153	26
31	100	-	1,260	1,040	-	5,670	-	145	-	142	*100	-
Total	3,867	2,970	43,784	162,845	23,316	71,733	56,599	10,945	12,662	31,917	4,647	1,229
Mean	125	99.0	1,412	5,253	833	2,314	1,887	353	422	1,030	150	41.0
Cfsm	0.091	0.072	1.03	3.83	0.608	1.69	1.38	0.258	0.308	0.752	0.109	0.030
In.	0.10	0.08	1.19	4.42	0.63	1.95	1.54	0.30	0.34	0.87	0.13	0.03

Calendar year 1953: Max 19,200 Min 55 Mean 1,266 Cfsm 0.924 In. 12.53
Water year 1953-54: Max 35,700 Min 26 Mean 1,169 Cfsm 0.853 In. 11.58

Peak discharge (base, 16,000 cfs).--Dec. 14 (12 m.) 19,500 cfs (15.20 ft); Jan. 16 (8 p.m.) 37,100 cfs (23.63 ft); Jan. 23 (6 a.m.) 41,000 cfs (25.25 ft); Apr. 1 (7:30 a.m.) 17,700 cfs (14.15 ft).

* Discharge measurement made on this day.

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

Brown Creek near Polkton, N. C.

Location.--Lat 35°02'10", long. 80°08'40", on left bank 100 ft downstream from site of Medley's mill, 400 ft downstream from bridge on State Highway 742, 3½ miles downstream from Little Brown Creek, and 4 miles northeast of Polkton, Anson County.

Drainage area.--110 sq mi.

Records available.--October 1937 to September 1954.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 216 ft (by barometer).

Average discharge.--17 years, 82.9 cfs.

Extremes.--Maximum discharge during year, 2,040 cfs Jan. 23 (gage height, 10.81 ft); no flow for many days in July, August, and September.

1937-54: Maximum discharge, 17,300 cfs Sept. 18, 1945 (gage height, 17.68 ft, from floodmark), from rating curve extended above 3,000 cfs by logarithmic plotting; no flow for several days of most years.

Flood of August 1908 reached a stage of 16.4 ft, from floodmark witnessed by local resident (discharge, 12,500 cfs); July 1916, 15.7 ft (discharge, 10,400 cfs); September 1928, about 15 ft.

Remarks.--Records good above 5 cfs and fair below.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	0	2.5	108
.9	.42	3.0	168
1.0	1.14	4.0	268
1.1	2.0	6.0	470
1.3	4.2	8.0	741
1.5	7.2	10.0	1,470
1.7	14	10.6	1,870
2.0	37		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*17	0.16	0.04	121	44	100	984	13	1.30	0	0.31	
2	12	.16	.01	72	39	69	1,110	42	1.14	0	.31	
3	5.1	.11	.01	45	35	60	917	39	.90	0	.11	
4	3.3	.11	.55	34	33	60	493	44	.76	.07	.07	
5	2.4	.07	.90	27	30	49	177	24	.62	.07	.04	
6	1.65	.07	.90	23	26	39	87	15	.48	.04	0	
7	1.06	.07	.55	18	23	34	210	10	.42	.01	0	
8	.83	.07	.48	16	20	30	150	7.7	.36	0	0	
9	.62	.07	.36	13	*18	26	168	6.3	.42	0	2.0	
10	.55	.07	.36	12	18	25	155	5.2	.69	0	4.1	
11	.42	.07	.31	17	17	23	72	4.3	.36	0	2.0	
12	.36	.07	42	68	15	21	62	3.7	.31	0	.55	
13	.31	.07	79	63	13	19	49	3.7	.26	0	.16	
14	.26	.07	346	55	12	32	42	13	.26	0	.07	
15	.26	.07	260	53	12	62	46	28	.21	.82	.04	
16	.26	.04	218	803	12	69	262	23	.42	13.4	.01	
17	.26	.04	209	1,650	12	50	452	15	3.6	3.9	0	
18	.26	.01	64	1,470	14	32	353	12	.98	16	0	
19	.21	.01	29	879	13	28	346	15	.42	26	0	
20	.21	.01	19	397	14	105	209	18	.21	11	0	
21	.21	.04	16	193	592	122	68	42	.16	5.9	0	
22	.21	.04	17	707	896	124	43	36	.11	3.5	0	
23	.21	.04	26	1,870	637	66	33	19	.11	8.1	0	
24	.21	.07	26	1,530	445	81	29	11	.11	8.8	0	
25	.21	.07	26	989	174	162	29	7.2	.11	9.9	0	
26	.16	.07	48	530	93	193	32	5.0	.26	4.8	0	
27	.16	.04	50	242	63	244	20	3.7	.21	2.4	0	
28	.16	.04	44	127	52	317	17	2.9	.16	1.56	0	
29	.16	.04	*88	87	-	233	15	2.4	.07	.83	0	
30	.16	.04	183	64	-	284	12	2.0	.01	.55	0	
31	.16	-	139	53	-	447	-	1.65	-	.31	*0	
Total	49.33	1.91	1,933.47	12,228	3,372	3,206	6,642	474.75	15.43	117.96	9.77	0
Mean	1.59	0.064	62.4	394	120	103	221	15.3	0.514	3.81	0.315	0
Cfsm	0.014	0.00058	0.567	3.58	1.09	0.936	2.01	0.139	0.0047	0.035	0.0029	0
In.	0.02	0.0006	0.65	4.13	1.14	1.08	2.24	0.16	0.005	0.04	0.003	0

Calendar year 1953: Max 1,530 Min 0.01 Mean 88.6 Cfsm 0.805 In. 10.93
Water year 1953-54: Max 1,870 Min 0 Mean 76.9 Cfsm 0.699 In. 9.47

Peak discharge (base, 810 cfs). Jan. 17 (11 p.m.) 1,720 cfs (10.41 ft); Jan. 23 (9 a.m.) 2,040 cfs (10.81 ft); Feb. 21 (12 p.m.) 1,110 cfs (9.22 ft); Apr. 2 (2 p.m.) 1,150 cfs (9.30 ft).

* Discharge measurement or observation of no flow made on this day.

Little River near Star, N. C.

Location.--Lat 35°23', long. 79°50', on left bank 12 ft downstream from highway bridge, a quarter of a mile upstream from Norfolk Southern Railway bridge, 0.3 mile downstream from West Fork Little River, and 3 miles west of Star, Montgomery County.

Drainage area.--97.6 sq mi.

Records available.--April to September 1954.

Gage.--Water stage recorder. Altitude of gage is 420 ft (from topographic map).

Extremes.--Maximum discharge during period, 565 cfs May 15 (gage height, 3.69 ft); minimum, 0.5 cfs Sept. 20 (gage height, 0.77 ft).
Flood in September 1945 reached a stage of about 20 ft, from information by local resident.

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

Rating table, Apr. 28 to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

0.7	0.1	1.4	27
.8	.8	1.7	59
.9	3.2	2.0	112
1.0	6.1	3.0	340
1.2	14	3.1	370

Discharge, in cubic feet per second, April to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	68	40	14	a6	*7.2
2							-	65	39	14	6.1	5.5
3							-	64	37	16	7.9	4.2
4							-	171	36	18	9.7	4.0
5							-	96	33	16	12	3.7
6							-	68	32	14	9.7	2.9
7							-	60	30	12	7.5	2.3
8							-	56	30	12	5.1	1.8
9							-	54	29	11	5.5	1.8
10							-	52	*47	11	12	2.3
11							-	51	41	11	6.5	2.3
12							-	50	34	10	8.3	4.2
13							-	50	31	9.0	8.3	3.7
14							-	164	29	a8	5.8	3.2
15							-	350	33	10	4.2	*1.6
16							-	136	63	58	3.7	.8
17							-	79	133	19	8.3	.8
18							-	66	55	14	22	.6
19							-	68	38	12	*92	.6
20							-	122	32	12	25	.6
21							-	120	29	12	98	1.2
22							-	83	26	13	21	.8
23							-	64	26	26	12	*.8
24							-	56	22	17	8.6	4.0
25							-	52	21	13	7.2	3.2
26							-	49	19	*10	*6.1	2.9
27							-	47	19	a9	5.8	3.5
28							*87	50	18	a8	8.6	2.6
29							76	47	16	a8	9.9	2.1
30							70	45	14	a8	31	2.3
31							-	42	-	a7	12	-
Total							-	2,545	1,052	432.0	485.8	77.5
Mean							-	82.1	35.1	13.9	15.7	2.58
Cfsm							-	0.841	0.360	0.142	0.161	0.026
In.							-	0.97	0.40	0.16	0.19	0.03

Calendar year	: Max		Min	Mean	Cfsm	In.
Water year	: Max		Min	Mean	Cfsm	In.

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, and stream flow continuity.

Pee Dee River near Rockingham, N. C.

Location.--Lat 34°56'40", long. 79°52'10", on left bank at bridge on U. S. Highway 74, 2.5 miles upstream from Falling Creek, 3.3 miles downstream from Blewett Falls hydroelectric plant, 6 miles west of Rockingham, Richmond County, and at mile 187.
Drainage area.--6,870 sq mi, approximately.
Records available.--August 1906 to January 1912 (gage heights and fragmentary discharge, published as "Yadkin River near Peedee"), September 1927 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 120.68 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). August 1906 to January 1912 staff gage at site 4 miles upstream at different datum. September 1927 to Sept. 30, 1931, water-stage recorder at present site at datum 1.00 ft higher.
Average discharge.--27 years (1927-54), 7,795 cfs (unadjusted).
Extremes.--Maximum discharge during year, 97,000 cfs Jan. 23 (gage height, 15.43 ft); minimum, 120 cfs Aug. 22 (gage height, 0.46 ft); minimum daily, 154 cfs Aug. 22.
1927-54: Maximum discharge, 270,000 cfs Sept. 18, 1945 (gage height, 30.80 ft), from rating curve extended above 194,000 cfs; minimum, 50 cfs Dec. 2, 3, 1951; minimum daily, 58 cfs Dec. 2, 1951.
Maximum stage known, 31.28 ft Aug. 27, 1908 (present datum), from records of State Highway and Public Works Commission (discharge, 276,000 cfs).
Remarks.--Records good. Large diurnal fluctuation caused by powerplants above station. Flow largely regulated since 1928 by four reservoirs above station, which have a combined usable capacity for normal operation of 24,259,016,000 cu ft (revised).
Revisions (water years).--WSP 822: Drainage area. WSP 1203: 1928-37.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	129	3.5	6,200
.7	186	4.0	8,300
1.0	314	5.0	13,300
1.4	600	7.0	25,700
1.8	1,090	9.0	40,000
2.2	1,890	11.0	56,500
2.6	3,010	12.0	65,000
3.0	4,350	15.5	98,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,150	271	1,900	5,850	8,980	8,380	31,700	7,120	3,120	2,950	340	1,240
2	2,410	1,280	2,560	5,840	6,750	7,770	23,100	2,170	3,980	3,100	2,880	843
3	662	1,830	2,240	794	7,270	10,900	13,900	4,560	3,600	2,450	2,120	552
4	211	2,530	4,290	5,100	7,550	13,000	11,600	4,580	3,710	361	3,120	600
5	1,950	3,320	655	5,490	7,870	10,100	9,370	6,000	3,840	571	2,820	481
6	1,990	2,550	200	4,880	6,530	9,200	6,480	5,600	1,160	1,940	2,140	455
7	1,610	2,200	3,280	4,910	7,130	7,920	8,290	4,720	2,230	2,100	421	3,680
8	1,650	304	4,350	4,820	5,260	5,270	9,030	4,510	2,880	2,200	167	3,200
9	1,760	2,150	3,410	2,160	5,980	5,860	9,420	1,020	3,040	2,600	2,130	1,030
10	1,350	2,590	3,500	1,780	6,890	6,930	9,000	3,840	2,270	2,560	1,930	1,020
11	325	2,580	3,100	4,630	5,790	6,780	8,080	3,420	2,580	914	729	508
12	1,050	2,620	4,540	4,550	5,040	6,910	8,080	3,400	3,430	2,430	702	413
13	1,090	2,920	9,420	4,640	2,140	6,710	7,860	3,270	720	2,970	1,830	1,110
14	987	1,730	20,300	4,990	606	9,260	7,070	4,870	2,460	2,380	841	992
15	1,220	328	22,200	3,380	4,840	24,400	7,400	4,050	2,740	2,350	395	1,040
16	1,180	1,810	12,700	21,200	4,940	20,600	7,870	1,560	1,240	7,470	1,940	954
17	1,210	1,580	9,420	55,000	5,590	11,100	11,500	3,010	3,120	15,900	882	1,460
18	312	1,510	6,110	26,400	5,110	8,980	16,600	3,240	5,490	7,820	1,930	777
19	1,580	1,420	5,600	12,800	4,500	7,280	11,100	2,940	5,270	4,860	4,360	385
20	1,630	1,130	4,700	9,650	4,390	12,500	9,280	4,410	1,840	5,450	1,310	1,030
21	1,430	272	5,670	9,420	5,460	19,400	8,200	5,860	4,180	3,010	174	2,310
22	1,530	170	5,890	29,000	15,000	10,600	7,290	1,520	4,830	3,120	154	1,810
23	1,130	1,050	6,250	87,600	11,700	9,420	7,470	3,210	5,150	5,150	1,070	1,400
24	1,020	1,960	6,390	96,500	9,880	9,650	6,760	5,060	4,730	4,050	656	403
25	242	2,900	6,900	67,100	8,380	11,100	8,420	5,860	4,710	421	759	300
26	1,080	1,880	6,650	30,500	6,990	10,100	6,000	5,480	4,710	3,510	1,420	300
27	1,140	1,550	6,410	23,100	6,820	9,650	7,670	5,010	550	*3,700	1,820	474
28	1,410	480	*6,040	19,200	7,470	16,100	7,240	4,940	1,860	2,450	1,940	501
29	1,750	256	6,660	13,400	-	14,700	6,260	5,340	1,750	2,780	970	511
30	1,440	1,050	7,460	11,200	-	13,000	6,040	1,340	2,040	3,380	1,690	453
31	1,590	-	7,340	10,100	-	15,500	-	3,420	-	3,470	1,500	-
Total	40,089	48,221	196,135	585,984	184,656	339,070	298,080	125,330	93,230	108,417	45,140	30,232
Mean	1,293	1,607	6,327	18,900	6,595	10,940	9,936	4,043	3,108	3,497	1,456	1,008
(†)	-63	-250	-386	+918	-124	+293	-793	+217	-319	-891	+182	-519

	Observed			Adjusted			
Calendar year 1953:	Max 61,600	Min 170	Mean 6,775	Mean 6,704	Cfsm 0.976	In. 13.25	
Water year 1953-54:	Max 96,500	Min 154	Mean 5,739	Mean 5,598	Cfsm 0.815	In. 11.06	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in High Rock and Narrows Reservoirs, furnished by Carolina Aluminum Co., and Tillery and Blewett Reservoirs, furnished by Carolina Power and Light Co.

Juniper Creek near Cheraw, S. C.

Location.--Lat 34°39', long. 79°54', at left end of Eureka Lake Dam, 1½ miles upstream from mouth and 3½ miles south of Cheraw, Chesterfield County.

Drainage area.--64 sq mi, approximately.

Records available.--May 1940 to September 1954.

Gage.--Water-stage recorder and concrete spillway. Altitude of gage is 90 ft (from Corps of Engineers map).

Average discharge.--14 years, 75.1 cfs.

Extremes.--Maximum discharge during year, 316 cfs Dec. 15 (gage height, 1.20 ft); minimum, 0.6 cfs Sept. 23, 24.
1940-54: Maximum discharge, 3,910 cfs Sept. 18, 1945 (gage height, 5.71 ft), from rating curve extended above 310 cfs by logarithmic plotting and computation of peak flow over dam; no flow for May 30, 1945, and part of May 29, 1945, and May 7, 1951 (water below spillway crest and gates closed).

Remarks.--Records good except those for period of gate operation, which are fair. During some periods, water is drawn below crest of spillway and released through gates in dam.

Rating table, water year 1953-54, except period when gates in dam were open (gage height, in feet, and discharge, in cubic feet per second)

0.02	0.8	0.5	76
.05	2.4	.7	131
.1	6.2	1.0	235
.2	17.5	1.2	316
.3	33		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	37	*47	114	100	80	75	63	27.0	8.6	10.2	10.2
2	92	38	48	105	44	80	110	62	23.8	9.1	10.8	8.1
3	68	39	49	94	44	80	220	59	20.9	11.3	*10.2	7.1
4	55	39	68	81	44	75	180	81	18.8	14.3	10.2	8.1
5	49	37	114	75	44	75	140	89	17.5	14.3	8.1	9.1
6	46	40	150	90	70	70	120	92	16.2	17.5	5.8	7.1
7	41	43	163	80	95	70	110	79	16.2	17.5	5.8	9.1
8	39	44	134	65	95	65	140	58	15.6	15.6	5.8	7.6
9	38	44	102	60	*100	64	150	48	18.0	15.6	6.2	5.8
10	40	46	76	60	100	*60	160	42	54	16.8	8.6	5.3
11	41	48	61	90	100	60	160	39	67	19.5	10.2	4.9
12	*41	49	63	110	95	60	150	36	60	20.2	9.1	3.4
13	40	46	83	110	95	44	130	40	40	18.8	8.1	3.4
14	41	45	192	110	90	32	110	75	27.8	15.7	7.6	3.4
15	42	45	299	110	70	55	95	97	21.6	20.9	7.6	3.7
16	43	45	270	110	60	70	90	108	18.2	16.8	5.8	5.3
17	43	45	184	110	65	70	95	102	16.8	16.8	7.6	5.8
18	42	44	131	180	65	60	110	80	15.6	19.5	8.6	6.2
19	40	43	105	220	65	32	110	54	15.6	20.2	6.6	5.8
20	39	42	86	220	65	32	100	48	15.6	17.5	6.6	*4.5
21	37	44	81	200	65	34	85	46	14.9	16.8	5.8	3.0
22	36	50	81	200	75	34	80	44	*14.3	15.6	4.9	.8
23	37	59	86	200	85	36	80	39	14.3	18.8	4.9	.8
24	38	61	89	200	85	38	42	34	14.9	26.2	4.5	.8
25	36	60	97	190	85	40	8	32	17.5	30	4.5	1.3
26	36	51	108	190	85	40	*26	28.6	17.5	26.2	4.5	1.8
27	37	48	108	180	80	42	44	27.8	14.9	20.2	4.1	2.1
28	39	44	108	180	80	42	56	27.8	11.3	16.8	6.6	2.4
29	37	43	111	170	-	44	56	35	10.2	14.9	13.7	3.0
30	36	42	114	160	-	60	59	37	9.1	13.1	15.6	4.9
31	37	-	114	160	-	75	-	32	-	11.3	13.7	-
Total	1,414	1,361	3,522	4,224	2,146	1,720	3,091	1,735.2	665.1	536.4	242.3	144.8
Mean	45.6	45.4	114	136	76.6	55.5	103	56.0	22.2	17.3	7.82	4.83
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 750 Min 17.5 Mean 93.8 Cfsm 1.47 In. 19.90
Water year 1953-54: Max 299 Min 0.8 Mean 57.0 Cfsm 0.891 In. 12.08

Peak discharge (base, 250 cfs).--Dec. 15 (4 p.m.) 316 cfs (1.20 ft).
* Discharge measurement made on this day.
Note.--Gates in dam open, making spillway partly ineffective as control Jan. 6 to Apr. 26; discharge computed from flow over spillway plus computed flow through gates.

Pee Dee River at Peedee, S. C.

Location.--Lat 34°12'15", long. 79°32'55", in pier of bridge on U. S. Highway 76 at Peedee, Marion County, 0.2 mile downstream from Atlantic Coast Line Railroad bridge, 8½ miles downstream from Black Creek, and at mile 102.8 upstream from Winyah Bay.

Drainage area.--8,830 sq mi, approximately.

Records available.--January 1939 to September 1954. Prior to October 1947, published as "near Mars Bluff." Gage-height records collected at practically same sites since 1923 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 24.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1947, at site 1.6 miles downstream at datum 1.27 ft lower.

Average discharge.--15 years, 8,737 cfs.

Extremes.--Maximum discharge during year, 60,500 cfs Jan. 29 (gage height, 25.76 ft); minimum, 700 cfs Sept. 29 (gage height, 0.60 ft, from graph based on gage readings). 1939-54: Maximum discharge, 220,000 cfs Sept. 22, 1945 (gage height, 33.30 ft, site and datum then in use), from rating curve extended above 48,000 cfs on basis of discharge measurement of 221,000 cfs at Cheraw; minimum, that of Sept. 29, 1954.

Remarks.--Records good. Flow regulated by powerplants above station.

Revisions.--WSP 1233: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 27

1.7	1,040	18.0	15,200
3.0	1,820	20.0	19,900
7.0	4,640	22.0	29,800
12.0	8,460	24.0	43,700
16.0	12,300	26.0	62,600

Jan. 28 to Sept. 30

0.6	700	3.0	1,950
1.0	870	7.0	4,640
1.5	1,100		

Note.--Same as preceding table above 7.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,400	2,080	g1,240	9,220	39,000	8,620	14,500	7,660	3,520	2,280	3,660	1,760
2	5,840	2,140	*g1,480	8,620	29,800	8,780	16,200	7,900	4,010	2,600	3,520	1,760
3	4,190	g1,480	2,340	7,980	23,600	9,040	17,700	7,190	4,150	3,180	1,980	g1,640
4	3,660	1,680	2,950	6,660	18,000	9,760	19,600	5,320	4,500	3,380	2,660	g1,260
5	2,400	2,400	3,590	4,720	15,500	11,300	20,700	6,360	4,150	2,860	*2,800	g1,080
6	1,680	3,020	4,940	6,220	14,100	11,500	19,900	7,260	4,360	1,760	3,120	g1,010
7	2,270	3,300	3,300	6,440	12,500	10,900	17,200	7,580	4,010	g1,300	3,120	g915
8	2,670	2,950	2,740	6,360	11,300	10,000	15,700	7,120	2,600	2,080	2,540	g1,070
9	2,400	2,600	4,580	6,140	9,850	8,540	15,200	6,440	2,800	2,540	g1,420	2,920
10	2,340	g1,620	5,160	5,460	8,950	7,580	15,200	5,540	3,590	2,600	g1,160	2,990
11	2,340	2,200	4,720	4,340	8,700	7,580	15,000	3,800	3,800	2,920	1,820	g1,820
12	2,010	3,020	4,420	4,120	8,220	*7,660	14,400	4,720	3,380	2,990	2,140	g1,360
13	g1,500	3,090	4,640	5,760	7,740	7,820	13,800	4,860	3,660	1,950	g1,520	g1,060
14	*g1,440	3,090	8,050	6,060	6,440	7,820	13,100	4,790	3,940	2,600	g1,300	g915
15	1,620	3,090	12,000	6,220	4,640	8,540	12,100	5,240	2,470	3,120	1,820	g1,030
16	1,680	2,400	14,800	5,990	3,940	12,100	11,200	6,220	2,920	2,920	g1,470	*g1,300
17	1,750	g1,560	15,700	8,810	5,920	14,700	11,000	5,390	3,120	4,010	g1,300	g1,360
18	1,750	1,880	15,200	15,000	6,740	14,700	11,900	4,150	2,470	9,080	1,700	g1,260
19	1,750	2,080	13,200	17,000	6,960	13,700	13,500	4,790	3,870	10,000	g1,580	g1,470
20	g1,440	2,080	11,100	18,600	6,590	12,100	14,100	4,500	5,320	7,420	2,470	g1,360
21	1,680	1,940	9,220	19,900	6,290	11,900	13,500	4,640	4,570	6,140	3,450	g1,010
22	2,080	1,820	7,980	20,300	6,740	13,400	12,500	5,990	3,120	5,620	2,140	g1,060
23	2,010	g1,440	7,820	20,300	10,200	13,800	11,200	5,840	4,430	4,220	g1,260	2,080
24	2,010	g1,040	7,820	21,500	12,100	13,100	10,300	4,640	*5,160	4,360	g870	1,950
25	1,820	g1,380	7,820	23,300	11,900	12,300	9,490	4,720	5,160	5,090	g915	g1,640
26	1,620	2,530	8,220	26,400	11,200	12,100	9,400	5,920	5,020	4,290	g1,100	g1,180
27	g1,200	3,160	8,300	36,200	10,000	12,200	8,700	6,220	5,320	2,400	g1,080	g848
28	g1,180	2,530	8,220	*53,500	8,950	11,900	*8,540	5,990	4,220	3,520	g1,520	g741
29	g1,560	2,140	8,060	59,500	-	12,500	8,540	5,760	2,080	3,800	2,140	g720
30	1,820	g1,500	7,980	55,500	-	13,700	8,140	5,990	1,950	3,250	2,140	g826
31	2,080	-	8,780	48,000	-	13,900	-	5,320	-	3,380	g1,700	-
Total	73,190	67,240	226,350	544,120	325,870	343,540	402,310	177,860	113,670	117,660	61,415	41,395
Mean	2,361	2,241	7,302	17,550	11,640	11,080	13,410	5,737	3,789	3,795	1,981	1,380
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 39,700 Min 1,040 Mean 8,240 Cfsm - In. -
Water year 1953-54: Max 59,500 Min 720 Mean 6,835 Cfsm - In. -

* Discharge measurement made on this day.
g Computed from once-daily wire-weight-gage readings made by U. S. Weather Bureau.

Lynches River near Bishopville, S. C.

Location.--Lat 34°15', long. 80°13', near center of span on downstream side of bridge on U. S. Highway 15, 1 mile upstream from Seaboard Air Line Railroad bridge, 2.9 miles northeast of Bishopville, Lee County, and 3.3 miles downstream from Bells Branch.

Drainage area.--675 sq mi.

Records available.--May 1942 to September 1954.

Gage.--Wire-weight gage read twice daily. Altitude of gage is 161 ft (by barometer). Prior to June 11, 1948, at site 100 ft upstream at same datum.

Average discharge.--12 years, 726 cfs.

Extremes.--Maximum discharge during year, 5,800 cfs Apr. 4 (gage height, 14.73 ft, from graph based on gage readings); minimum, 125 cfs Sept. 16.
1942-54: Maximum discharge, 29,400 cfs Sept. 19, 1945 (gage height, 22.35 ft, from floodmark), from rating curve extended above 12,000 cfs by velocity-area studies; minimum, that of Sept. 16, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 3 to Nov. 22, Dec. 6-19)

4.7	134	9.0	779
5.0	163	11.0	1,270
5.5	213	12.0	1,870
6.0	269	13.0	2,970
7.0	411	15.0	6,400

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,250	282	350	1,060	759	599	1,090	443	295	163	183	193
2	1,010	269	350	971	719	719	1,400	459	269	163	203	183
3	459	269	350	779	699	883	3,080	459	269	173	183	173
4	395	269	427	699	659	799	5,230	563	257	183	173	173
5	336	282	799	679	679	679	3,200	699	245	223	*173	153
6	336	282	1,090	639	659	619	1,980	819	257	234	163	153
7	308	295	1,270	619	619	581	1,300	563	234	213	163	153
8	295	295	*1,230	581	599	563	927	510	223	193	153	143
9	282	295	819	545	659	545	1,040	527	223	183	153	143
10	269	295	563	545	581	545	1,200	380	223	173	183	153
11	269	282	545	563	563	510	1,230	350	223	183	213	143
12	269	295	599	679	563	*510	1,040	350	223	193	245	134
13	269	295	699	839	563	493	1,020	336	223	183	203	134
14	*269	295	1,200	883	545	510	993	427	213	163	183	134
15	269	295	1,810	719	527	527	799	599	203	173	173	*134
16	295	282	3,010	759	545	563	739	699	203	163	163	134
17	295	269	4,350	971	581	510	819	599	213	2,940	163	143
18	295	282	3,700	1,460	619	476	993	476	245	779	173	143
19	282	295	1,920	3,740	659	476	1,170	411	308	739	213	143
20	295	295	1,040	*4,350	599	581	1,230	365	295	395	203	143
21	295	322	719	2,660	563	819	949	350	234	282	203	143
22	282	443	739	1,660	699	949	659	380	203	295	183	143
23	269	679	819	1,400	993	779	619	380	183	350	173	134
24	269	819	861	1,350	1,200	679	619	336	*193	269	163	134
25	269	476	883	2,870	1,260	739	563	308	203	223	163	134
26	269	427	883	4,350	799	993	545	308	193	213	163	143
27	269	395	905	2,920	659	1,020	545	295	183	203	163	134
28	269	365	927	1,900	599	993	493	282	183	193	173	143
29	269	350	799	1,240	-	861	*459	308	183	193	183	143
30	269	350	759	905	-	883	459	322	173	193	193	134
31	269	-	905	799	-	927	-	322	-	173	213	-
Total	11,745	10,144	35,320	44,134	19,168	21,330	36,390	13,625	6,775	10,399	5,635	4,390
Mean	379	338	1,139	1,424	685	688	1,213	440	226	335	182	146
Cfsm	0.561	0.501	1.69	2.11	1.01	1.02	1.80	0.652	0.335	0.496	0.270	0.216
In.	0.65	0.56	1.95	2.43	1.05	1.18	2.01	0.75	0.37	0.57	0.31	0.24

Calendar year 1953: Max 4,350 Min 184 Mean 683 Cfsm 1.01 In. 13.75
Water year 1953-54: Max 5,230 Min 134 Mean 600 Cfsm 0.889 In. 12.07

Peak discharge (base, 3,000 cfs).--Dec. 17 (8 a.m.) 4,350 cfs (13.67 ft); Jan. 19 (11 p.m.) 5,230 cfs (14.41 ft); Jan. 26 (4 a.m.) 4,870 cfs (14.15 ft); Apr. 4 (10 a.m.) 5,800 cfs (14.73 ft).
* Discharge measurement made on this day.

Lynches River at Effingham, S. C.

Location.--Lat 34°03'05", long. 79°45'15", on left bank at downstream side of bridge on U. S. Highway 52, 75 ft upstream from Atlantic Coast Line Railroad bridge and 1 mile south of Effingham, Florence County.

Drainage area.--1,030 sq mi, approximately.

Records available.--August 1929 to September 1954. Gage-height records collected at same site since 1891 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 58.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 7, 1934, staff gage at same site and datum.

Average discharge.--25 years, 939 cfs.

Extremes.--Maximum discharge during year, 3,720 cfs Apr. 8 (gage height, 12.35 ft); minimum, 98 cfs Sept. 25.
1929-54: Maximum discharge, 25,000 cfs Sept. 22, 1945 (gage height, 21.21 ft), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum, that of Sept. 25, 1954.

Remarks.--Records good.

Cooperation.--Gage-height record collected in cooperation with U. S. Weather Bureau.

Revisions.--WSP 952: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 14, Jan. 23, 24)

Oct. 1 to Jan. 24				Jan. 25 to Sept. 30			
2.6	280	8.0	1,490	1.2	100	6.0	957
3.0	340	10.0	2,190	1.5	137	8.0	1,580
4.0	505	12.0	3,260	2.0	205	10.0	2,340
6.0	894			3.0	358	12.2	3,580
				4.0	525		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*613	288	378	1,340	*2,680	1,180	1,340	561	318	166	177	*127
2	722	295	362	1,340	2,260	1,240	1,370	525	326	159	171	154
3	822	295	348	1,300	1,900	1,100	1,300	507	310	155	164	174
4	921	295	362	*1,240	1,580	905	1,220	561	295	153	171	167
5	1,060	295	434	1,240	1,300	805	1,180	579	272	151	173	150
6	1,280	295	469	1,240	1,120	853	1,280	636	265	154	155	137
7	1,240	288	523	1,240	1,010	931	2,300	695	258	171	150	128
8	719	295	595	1,120	931	985	3,580	781	250	198	147	123
9	469	295	685	948	905	905	3,440	879	242	212	146	119
10	401	310	761	868	879	781	2,810	853	235	198	146	113
11	370	318	868	822	829	715	2,260	675	220	184	146	110
12	348	318	976	801	805	675	1,860	525	220	171	145	106
13	332	318	1,060	781	781	655	1,580	456	212	164	154	105
14	325	325	1,120	761	759	636	1,440	473	212	169	184	102
15	325	318	948	801	737	617	1,480	490	212	170	198	102
16	318	318	844	868	715	363	1,480	490	212	164	184	*107
17	310	310	894	1,000	715	636	1,480	525	205	169	162	106
18	310	310	1,040	1,100	695	636	1,400	598	198	160	153	102
19	325	310	1,180	1,120	675	655	1,240	655	191	158	153	102
20	332	310	1,300	1,100	675	675	1,070	675	191	280	150	106
21	325	310	1,840	1,120	759	636	957	579	235	406	156	116
22	318	310	2,500	1,220	829	617	985	473	288	490	176	113
23	318	310	2,500	1,700	805	655	1,040	422	265	507	177	108
24	318	332	2,190	2,910	759	759	1,120	406	220	342	176	100
25	302	401	1,800	3,250	759	879	1,180	406	205	326	160	100
26	295	469	1,520	2,890	*853	1,010	1,040	390	191	310	147	104
27	295	541	1,300	2,440	957	1,040	759	*358	184	265	140	100
28	295	541	1,180	2,100	1,070	1,010	636	334	177	228	136	100
29	288	487	1,180	2,220	-	1,040	598	326	*177	*205	137	105
30	*288	*417	1,280	3,120	-	1,100	*598	310	171	198	141	*100
31	288	-	1,340	3,120	-	*1,180	-	302	-	184	128	-
Total	14,872	10,224	33,777	47,120	28,742	26,147	44,023	16,445	6,947	6,967	4,903	3,486
Mean	480	341	1,090	1,520	1,026	843	1,467	530	232	225	158	116
Cfsm	0.466	0.331	1.06	1.48	0.996	0.818	1.42	0.515	0.225	0.218	0.153	0.113
In.	0.54	0.37	1.22	1.71	1.04	0.94	1.58	0.59	0.25	0.25	0.18	0.13

Calendar year 1953: Max 3,840 Min 220 Mean 844 Cfsm 0.819 In. 11.13
Water year 1953-54: Max 3,580 Min 100 Mean 668 Cfsm 0.649 In. 8.80

* Discharge measurement made on this day.

Little Pee Dee River near Dillon, S. C.

Location.--Lat 34°24', long. 79°20', near center of span on downstream side of bridge on State Highway 9, 1.1 miles east of Dillon, Dillon County, and 3 miles upstream from Maple Swamp.

Drainage area.--524 sq mi.

Records available.--March 1939 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 75.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Highway Department).

Average discharge.--15 years, 482 cfs.

Extremes.--Maximum discharge during year, 1,630 cfs Apr. 12, 13; maximum gage height, 9.01 ft Apr. 13, from graph based on gage readings; minimum discharge, 24 cfs Sept. 17, 23 (gage height, 2.95 ft).

1939-54: Maximum discharge, 9,810 cfs Sept. 20, 1945 (gage height, 14.64 ft), from rating curve extended above 2,800 cfs by velocity-area studies and logarithmic plotting; minimum, that of Sept. 17, 23, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-6)

Oct. 1 to Apr. 4

4.6	101	7.0	378
5.0	127	7.5	575
6.0	202	8.0	850
6.5	254	9.0	1,630

Apr. 5 to Sept. 30

2.9	22	4.0	75
3.0	26	5.0	134
3.5	50	6.0	202

Note.--Same as preceding table above 6.0 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	218	a134	*214	575	850	575	850	346	158	62	75	40
2	234	134	210	575	785	620	1,280	a332	146	62	a70	45
3	262	134	194	552	725	670	1,450	332	146	62	a58	*55
4	a358	134	198	575	670	645	a1,450	378	140	70	*42	55
5	396	134	228	575	620	598	1,540	432	134	a65	40	a48
6	378	138	a247	575	598	530	1,280	450	128	60	52	48
7	332	144	271	530	a552	a510	1,200	450	122	58	58	45
8	271	a148	292	490	490	510	1,130	450	116	58	50	38
9	240	155	317	450	470	490	1,060	470	110	65	48	30
10	214	162	362	a432	450	490	1,200	450	116	75	55	35
11	a186	166	396	432	432	*470	a1,360	432	158	a98	50	40
12	158	166	450	450	450	450	1,630	378	218	98	45	a35
13	*141	170	a510	432	450	432	1,630	332	a228	86	50	35
14	127	a170	552	413	a432	a396	1,450	317	218	65	52	40
15	120	a170	598	396	413	362	1,280	292	228	58	a50	*35
16	124	170	645	413	378	346	1,200	a292	254	65	48	26
17	134	162	620	a450	346	332	1,200	292	271	a80	42	26
18	a138	155	598	*530	332	332	a1,130	304	241	86	35	35
19	134	152	670	620	332	332	1,060	317	186	86	35	a38
20	127	155	a698	645	332	362	915	332	a158	86	38	40
21	130	158	670	670	a346	a378	785	317	134	70	42	40
22	134	a162	670	818	432	378	725	292	122	70	a50	30
23	134	166	698	985	530	378	670	a254	*110	98	42	24
24	134	178	670	a1,060	575	413	620	240	104	116	32	30
25	a127	186	a645	1,200	552	470	552	228	98	a122	28	35
26	116	a190	a620	1,200	552	530	530	218	104	116	26	a38
27	104	194	a575	1,130	530	552	*490	218	98	98	28	40
28	101	202	552	1,060	a510	575	450	210	92	98	35	38
29	107	a206	530	985	-	598	396	194	*80	104	a45	30
30	120	214	552	915	-	620	362	179	65	98	48	28
31	127	-	575	a915	-	620	-	a172	-	86	48	-
Total	5,626	4,909	15,027	21,048	14,134	14,964	30,875	9,900	4,483	2,521	1,417	1,122
Mean	181	164	485	679	505	483	1,029	319	149	81.3	45.7	37.4
Cfsm	0.345	0.313	0.926	1.30	0.964	0.922	1.96	0.609	0.284	0.155	0.087	0.071
In.	0.40	0.35	1.07	1.50	1.00	1.06	2.19	0.70	0.32	0.18	0.10	0.08

Calendar year 1953: Max 2,130 Min 62 Mean 468 Cfsm 0.893 In. 12.12
Water year 1953-54: Max 1,630 Min 24 Mean 345 Cfsm 0.658 In. 8.95

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated or estimated on basis of weather records.

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Drowning Creek near Hoffman, N. C.

Location.--Lat 35°03'38", long. 79°29'39", on right bank 10 ft downstream from bridge on U. S. Highway 1, three-quarters of a mile downstream from Deep Creek, 1 mile upstream from Seaboard Air Line Railroad bridge, and 4 miles northeast of Hoffman, Richmond County.

Drainage area.--178 sq mi.

Records available.--October 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

Average discharge.--15 years, 256 cfs.

Extremes.--Maximum discharge during year, 1,430 cfs Jan. 24 (gage height, 6.79 ft); minimum, 33 cfs Sept. 14 (gage height, 1.42 ft).
1939-54: Maximum discharge, 10,900 cfs Sept. 18, 1945 (gage height, 10.29 ft), from rating curve extended above 5,600 cfs by logarithmic plotting; minimum, 28 cfs Aug. 4, 1940 (gage height, 1.32 ft).

Remarks.--Records fair.

Revisions (water years).--WSP 972: 1941(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 11		Dec. 12 to Sept. 30			
2.4	87	1.4	32	5.0	302
3.0	120	2.0	68	5.5	460
4.0	185	3.0	125	6.0	709
5.0	299	4.0	187	6.5	1,100
5.4	444	4.5	230	6.8	1,440

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*328	112	120	390	369	324	637	273	113	59	60	62
2	168	106	*120	348	354	360	758	235	113	60	77	52
3	135	106	117	282	336	418	733	216	108	117	77	47
4	126	106	154	285	324	443	545	258	99	164	66	45
5	120	104	264	246	324	386	439	324	94	113	58	43
6	112	112	366	230	313	336	378	348	88	88	52	40
7	109	129	422	220	302	313	372	265	85	72	49	39
8	106	123	339	211	292	292	426	202	85	67	48	36
9	106	117	210	202	*282	273	439	190	*82	67	49	35
10	109	123	177	198	273	265	402	180	209	74	70	35
11	106	129	201	211	265	258	386	170	324	96	*77	38
12	104	123	239	251	258	251	394	161	363	82	62	37
13	98	117	324	302	251	246	394	161	211	65	51	36
14	104	114	590	292	246	258	372	206	128	57	47	34
15	114	114	932	265	240	324	336	282	152	55	47	36
16	*106	114	940	386	240	369	313	324	152	144	46	*39
17	101	114	687	675	251	282	375	273	147	246	48	43
18	98	112	482	915	265	246	495	198	225	302	*53	42
19	96	112	360	*790	258	240	527	176	273	183	68	39
20	93	112	302	541	246	265	464	230	164	119	108	61
21	93	114	282	439	273	313	363	292	122	108	77	74
22	90	123	282	491	363	324	302	282	105	110	80	59
23	93	140	302	*783	*780	*292	282	206	96	176	80	48
24	96	163	292	1,330	780	265	273	164	88	202	67	*42
25	96	156	282	1,040	513	302	292	149	82	120	57	40
26	96	138	292	709	398	313	302	137	77	94	*52	41
27	96	126	313	585	348	302	348	131	72	91	49	41
28	101	120	*302	527	324	313	313	149	67	*82	51	40
29	106	117	273	478	-	375	302	152	63	72	114	39
30	135	117	324	435	-	486	336	137	60	66	*96	43
31	132	-	378	398	-	555	-	125	-	62	77	-
Total	3,573	3,613	10,668	14,435	9,468	9,989	12,298	6,596	4,047	3,413	2,013	1,306
Mean	115	120	344	466	338	322	410	213	135	110	64.9	43.5
Cfsm	0.646	0.674	1.93	2.62	1.90	1.81	2.30	1.20	0.758	0.618	0.365	0.244
In.	0.75	0.75	2.23	3.02	1.98	2.09	2.57	1.38	0.85	0.71	0.42	0.27

Calendar year 1953: Max 1,000 Min 61 Mean 265 Cfsm 1.49 In. 20.22
Water year 1953-54: Max 1,330 Min 34 Mean 223 Cfsm 1.25 In. 17.02

Peak discharge (base, 850 cfs).--Dec. 15 (7 p.m.) 1,050 cfs (6.45 ft); Jan. 18 (6 p.m.) 992 cfs (6.39 ft); Jan. 24 (5 p.m.) 1,430 cfs (6.79 ft); Feb. 23 (9 p.m.) 1,020 cfs (6.42 ft).
* Discharge measurement made on this day.

Lumber River at Boardman, N. C.

Location.--Lat 34°26', long. 78°58', on right bank 15 ft downstream from bridge on U. S. Highway 74, 1 mile downstream from Atlantic Coast Line Railroad bridge at Boardman, Columbus County, and 1½ miles downstream from Big Swamp.

Drainage area.--1,220 sq mi, approximately.

Records available.--September 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 72.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1936, staff gage at site 100 ft downstream at same datum. Sept. 30, 1936, to June 8, 1943, wire-weight gage at present site and datum.

Average discharge.--25 years, 1,211 cfs.

Extremes.--Maximum discharge during year, 3,260 cfs Apr. 13-15; maximum gage height, 7.52 ft Apr. 14; minimum discharge, 92 cfs Sept. 19, 20 (gage height, 0.02 ft).
1929-54: Maximum discharge, 13,400 cfs Sept. 24, 1945 (gage height, 10.64 ft); minimum, that of Sept. 19, 20, 1954.
Maximum stage known, 11.8 ft in August 1928, from floodmark witnessed by local resident (discharge, 25,000 cfs).

Remarks.--Records fair.

Revisions.--WSP 892: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 11, 12, Dec. 4, 5, 14, May 31, June 1, 22, July 22, 27; shifting-control method used Apr. 10-19).

Oct. 1-9, Dec. 15 to Sept. 30				Oct. 10 to Dec. 14			
0.0	90	5.0	1,070	0.9	148	3.0	510
1.0	208	6.0	1,670	1.0	163	4.0	772
2.0	365	7.0	2,740	2.0	318	4.5	870
3.0	528	7.5	3,500				
4.0	722						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	333	160	400	1,390	2,810	1,330	1,750	1,270	467	200	218	g118
2	349	161	390	1,390	2,810	1,390	1,980	1,140	445	186	216	g127
3	365	169	371	1,390	2,610	1,500	2,240	1,050	413	180	193	143
4	381	178	399	1,360	2,420	1,670	2,540	990	389	186	174	150
5	397	186	535	1,330	*2,180	1,840	2,680	930	365	193	167	*144
6	429	198	590	1,300	1,980	1,840	2,740	890	341	186	155	130
7	*445	203	630	1,270	1,880	1,800	2,740	890	317	*186	a140	120
8	494	204	630	1,220	1,750	1,710	2,740	950	301	193	a140	112
9	528	209	630	1,200	1,640	1,640	2,740	990	278	216	a130	107
10	510	240	630	1,170	1,530	1,600	2,740	970	301	231	a130	102
11	365	263	650	1,170	1,460	1,560	2,960	950	293	239	a130	103
12	284	*263	672	1,140	1,390	1,500	3,100	890	293	231	*g127	100
13	263	271	722	1,120	1,330	1,460	3,260	838	301	208	g122	97
14	232	278	847	1,070	1,270	1,420	*3,260	838	333	200	g121	96
15	224	278	910	1,030	1,240	1,360	3,260	806	357	193	a130	94
16	216	271	*1,030	1,030	1,200	1,270	3,100	776	365	193	g130	97
17	209	263	1,070	1,050	1,140	1,200	3,030	748	381	231	g127	97
18	201	263	1,100	1,100	1,120	1,120	2,880	722	405	231	g124	95
19	199	255	1,070	1,200	1,070	1,070	2,810	696	445	200	g120	93
20	201	*248	1,050	1,330	1,030	1,070	2,740	696	478	200	*g116	96
21	199	310	1,070	1,390	1,030	1,050	2,540	672	478	246	g112	107
22	190	344	1,170	1,500	1,050	1,030	2,300	672	408	333	a110	113
23	184	400	1,300	1,750	1,050	1,030	2,080	696	381	365	g108	105
24	178	430	1,460	2,080	1,070	1,070	1,930	722	357	381	g114	102
25	172	450	1,560	2,420	1,120	1,140	1,800	722	341	389	g124	102
26	168	450	1,640	2,810	1,170	1,200	1,710	696	333	381	g129	110
27	163	440	1,600	2,960	1,220	1,220	1,670	*650	301	324	g133	110
28	161	420	1,530	2,960	1,220	1,270	1,560	630	262	293	g141	104
29	163	420	1,460	2,810	-	1,330	1,460	630	231	285	a135	99
30	163	410	1,420	2,810	-	1,360	1,360	612	216	270	g130	97
31	161	-	1,390	2,740	-	1,420	-	533	-	239	g126	-
Total	8,527	8,635	29,926	50,490	42,790	42,470	73,700	25,265	10,576	7,589	4,270	3,270
Mean	275	288	965	1,629	1,528	1,370	2,457	815	353	245	138	109
Cfsm	0.225	0.236	0.791	1.34	1.25	1.12	2.01	0.668	0.289	0.201	0.113	0.089
In.	0.26	0.26	0.91	1.54	1.30	1.29	2.25	0.77	0.32	0.23	0.13	0.10

Calendar year 1953: Max 3,850 Min 154 Mean 990 Cfsm 0.811 In. 11.02
Water year 1953-54: Max 3,260 Min 93 Mean 842 Cfsm 0.690 In. 9.36

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and streamflow continuity.
g Computed from twice-daily wire-weight-gage readings.

Little Pee Dee River at Galivants Ferry S. C.

Location.--Lat 34°03'25", long. 79°14'50", near left bank on downstream side of bridge on U. S. Highway 501, at Galivants Ferry, Horry County, 1.0 mile downstream from Lake Swamp.

Drainage area.--2,790 sq mi, approximately.

Records available.--January 1942 to September 1954.

Gage.--Wire-weight gage read twice daily, Datum of gage is 23.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--12 years, 2,837 cfs.

Extremes.--Maximum discharge during year, 7,930 cfs Apr. 12-16; maximum gage height, 9.10 ft Apr. 15, from graph based on gage readings; minimum discharge, 184 cfs Sept. 20, 27. 1942-54: Maximum discharge, 26,800 cfs Sept. 23, 1945 (gage height, 13.23 ft, from graph based on gage readings); minimum, that of Sept. 20, 27, 1954.
Maximum stage known, 16.0 ft in September 1928, from floodmark set by local resident.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.5	184	7.0	2,230
3.0	350	8.0	4,050
4.0	690	9.0	7,510
6.0	1,390	10.0	12,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	792	418	1,070	3,810	5,550	2,510	3,190	2,670	965	435	435	249
2	860	418	*1,040	3,810	5,210	2,510	3,190	2,510	895	418	418	232
3	860	418	1,040	3,810	5,210	2,510	3,590	2,370	860	384	401	*232
4	826	418	1,070	3,810	4,890	2,670	4,050	2,230	792	384	384	232
5	792	435	1,140	3,590	4,590	2,830	4,590	1,990	724	384	*367	232
6	758	452	1,210	3,190	4,590	2,830	4,890	1,890	690	384	333	249
7	792	452	1,320	3,190	4,590	3,010	5,910	1,720	656	384	316	249
8	792	452	1,350	3,190	4,050	3,190	6,690	1,640	622	367	299	249
9	826	486	1,440	3,010	3,810	3,190	7,510	1,570	588	350	299	232
10	826	520	1,570	3,010	3,590	3,190	7,510	1,500	554	367	299	216
11	860	554	1,640	2,830	3,390	3,190	7,510	1,500	554	367	299	206
12	860	554	1,800	2,830	3,190	3,190	7,930	1,500	554	367	282	200
13	*792	554	1,800	2,830	2,830	3,190	7,930	*1,500	554	401	266	194
14	724	554	1,990	2,670	2,670	3,010	7,930	1,640	588	401	266	190
15	622	588	1,990	2,670	2,510	2,830	7,930	1,640	588	401	249	200
16	588	588	2,110	2,670	2,370	2,670	7,930	1,570	622	384	249	*213
17	554	588	2,230	2,670	2,230	2,510	7,510	1,500	622	384	249	200
18	520	588	2,230	2,670	2,230	2,370	7,510	1,440	622	384	266	194
19	486	588	2,370	2,670	2,110	2,370	7,090	1,350	656	384	249	190
20	486	588	2,370	2,670	1,890	2,230	6,690	1,320	656	384	249	210
21	486	588	2,510	2,670	1,890	2,230	6,290	1,280	690	384	232	216
22	486	588	2,510	2,670	1,890	2,110	5,910	1,240	690	367	232	203
23	452	656	2,510	2,830	1,990	2,110	5,550	1,240	656	384	232	200
24	452	758	2,510	3,190	1,990	2,110	5,210	1,210	*622	418	216	200
25	452	826	2,670	3,390	2,230	2,110	4,590	1,180	588	435	213	203
26	452	930	2,830	3,810	2,230	2,110	4,310	1,140	554	486	206	190
27	452	1,000	2,830	4,050	2,230	2,230	3,810	1,100	520	486	216	184
28	435	1,040	3,010	4,310	2,230	2,370	3,590	1,070	520	486	232	190
29	435	1,040	3,190	4,590	-	2,510	3,190	1,070	486	486	249	194
30	418	1,070	3,590	4,890	-	2,670	3,010	1,040	486	452	249	197
31	418	-	3,590	5,210	-	2,830	-	1,000	-	435	249	-
Total	19,554	18,709	64,530	103,210	88,180	81,390	172,540	47,620	19,174	12,533	8,701	6,346
Mean	631	624	2,082	3,329	3,149	2,625	5,751	1,536	639	404	281	212
Cfsm	0.226	0.224	0.746	1.19	1.13	0.941	2.06	0.551	0.229	0.145	0.101	0.076
In.	0.26	0.25	0.86	1.37	1.18	1.08	2.30	0.64	0.26	0.17	0.12	0.08

Calendar year 1953: Max 9,730 Min 367 Mean 2,161 Cfsm 0.775 In. 10.52
Water year 1953-54: Max 7,930 Min 184 Mean 1,760 Cfsm 0.631 In. 8.57

* Discharge measurement made on this day.

Black River near Gable, S. C.

Location.--Lat 33°54'00", long. 80°09'55", near left bank on downstream side of McBride Crossing on U. S. Highway 378, 1 mile downstream from Church Branch and 6.3 miles northwest of Gable, Clarendon County.

Drainage area.--401 sq mi.

Records available.--June 1951 to September 1954.

Gage.--Wire-weight gage read twice daily. Altitude of gage is 95 ft (from topographic map).

Extremes.--Maximum discharge during year, 742 cfs Dec. 17 (gage height, 3.30 ft); no flow July 10-17, Aug. 2 to Sept. 30.
1951-54: Maximum discharge 4,150 cfs Sept. 3, 1952 (gage height, 5.22 ft); no flow July 10-17, Aug. 2 to Sept. 30, 1954.

Remarks.--Records good except those below 100 cfs, which are fair, and those below 15 cfs, which are poor.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 5, Apr. 23 to June 26)

Oct. 1 to June 26				June 27 to Sept. 30			
1.8	0	2.3	95	1.2	0	1.9	10
1.9	4	2.6	218	1.3	.9	2.1	16
2.0	20	3.0	501	1.5	3.3	2.2	24
2.1	40	3.3	795	1.7	6.7	2.3	38

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	58	189	680	476	264	323	89	34	12	0.1	
2	253	58	189	661	460	259	330	74	34	10	0	
3	316	58	184	651	435	253	323	74	34	9.0	0	
4	343	58	175	631	418	247	323	109	30	6.9	0	
5	323	58	323	592	396	247	310	158	24	5.4	*0	
6	289	64	373	574	373	247	310	218	22	3.2	0	
7	235	74	358	519	350	247	296	218	20	2.3	0	
8	184	74	*343	484	343	241	289	218	17	1.3	0	
9	154	83	343	460	*323	230	316	208	14	.5	0	
10	134	89	366	443	316	224	289	194	10	0	0	
11	120	92	380	435	310	224	276	175	9	0	0	
12	95	95	410	443	303	218	270	158	10	0	0	
13	83	95	451	435	296	218	270	146	9	*0	0	
14	*77	98	592	426	289	224	264	189	7	0	0	
15	74	102	690	418	276	224	270	204	4	0	0	
16	71	102	690	426	270	230	264	208	3	0	0	
17	60	106	742	443	270	259	264	199	6	0	0	(*)
18	62	102	690	460	270	*270	264	189	122	.5	0	
19	77	106	661	493	259	264	259	184	259	1.4	0	
20	74	109	641	528	253	264	241	166	396	2.3	0	
21	68	180	631	528	253	264	230	154	400	3.2	0	
22	62	230	631	519	259	259	224	134	224	3.8	0	
23	60	230	621	602	270	259	208	123	134	4.4	0	
24	60	189	546	641	283	276	180	106	98	4.7	0	
25	62	184	556	631	289	283	158	83	62	4.9	0	
26	60	184	574	612	296	283	138	65	36	4.9	0	
27	60	184	565	592	289	289	126	58	27	4.7	0	
28	60	184	565	565	270	296	120	52	*18	4.4	0	
29	60	189	592	519	-	303	106	50	15	3.6	0	
30	58	189	651	501	-	310	*98	45	14	2.4	0	
31	58	-	680	493	-	303	-	40	-	1.2	0	-
Total	3,896	3,625	15,402	16,405	8,895	7,979	7,339	4,288	2,092	97.0	0.1	0
Mean	126	121	497	529	318	257	245	138	69.7	3.13	0.003	0
Cfsm	0.314	0.302	1.24	1.32	0.793	0.641	0.611	0.344	0.174	0.0078	0.0000075	0
In.	0.36	0.34	1.43	1.52	0.83	0.74	0.68	0.40	0.19	0.009	0.000009	0

Calendar year 1953: Max 1,660 Min 2 Mean 309 Cfsm 0.771 In. 10.47
Water year 1953-54: Max 742 Min 0 Mean 192 Cfsm 0.479 In. 6.50

* Discharge measurement or observation of no flow made on this day.

Black River at Kingstree, S. C.

Location.--Lat 33°39'40", long. 79°50'10", on left bank at downstream side of bridge on U. S. Highway 52 at Kingstree, Williamsburg County, 1.0 mile downstream from Kingstree Swamp Canal.

Drainage area.--1,260 sq mi, approximately.

Records available.--August 1929 to September 1954. Gage-height records collected at same site since 1893 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 25.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 7, 1934, tape gage at same site and datum.

Average discharge.--25 years, 772 cfs.

Extremes.--Maximum discharge during year, 1,860 cfs Jan. 3, 4 (gage height, 9.09 ft); minimum, 2 cfs Sept. 12-15.

1929-54: Maximum discharge, 29,100 cfs Sept. 20, 1945 (gage height, 16.07 ft); minimum, that of Sept. 12-15, 1954.

Maximum stage known, 18.0 ft Sept. 21, 1928 (discharge, 41,600 cfs, from rating curve extended above 27,000 cfs).

Revisions.--Figures of maximum discharge for the water years 1930 and 1936 have been revised to 7,760 cfs Jan. 25, 1930 (gage height, 12.2 ft) and 11,800 cfs Apr. 13, 1936 (gage height, 13.07 ft), superseding those published in WSP 697 and 802, respectively.

Remarks.--Records good.

Cooperation.--Gage-height record collected in cooperation with U. S. Weather Bureau.

Revisions (water years).--WSP 1032: 1928(M), drainage area. Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1931 and 1936, superseding those published in WSP 712 and 802, are given herewith:

1931		1936-Con.	
May 13	2,070	Apr. 9	7,760
		10	7,760
1936		11	8,580
Apr. 4	8,160	12	10,900
5	9,480	13	11,800
6	9,940	14	11,400
7	9,480	15	10,900
8	9,020	16	9,480

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
May 1931	-	2,160	392	997	0.791	0.91
Water year 1930-31	-	3,120	12	719	.571	7.74
Calendar year 1931	-	3,120	5	546	.433	5.87
April 1936	177,150	11,800	1,090	5,905	4.69	5.23
Water year 1935-36	434,939	11,800	9	1,188	.943	12.84
Calendar year 1936	454,694	11,800	9	1,242	.986	13.43

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	32	204	1,720	1,480	495	671	158	67	158	6	4
2	112	30	204	1,790	1,430	462	694	134	57	104	7	6
3	104	28	199	1,860	1,330	462	694	121	*48	67	8	*6
4	101	26	216	1,860	1,200	446	671	108	41	46	6	5
5	108	26	306	1,790	1,120	446	627	104	34	33	6	4
6	130	26	373	1,720	1,050	462	606	112	29	24	6	4
7	183	25	416	1,660	987	446	567	108	26	19	6	3
8	238	26	462	1,600	927	446	567	94	22	16	6	3
9	262	32	462	1,540	898	416	548	81	20	22	6	3
10	274	36	478	1,430	844	401	548	74	18	24	8	3
11	280	37	462	1,380	792	387	530	70	16	15	7	3
12	280	39	478	1,330	742	373	530	69	16	13	6	2
13	268	42	512	1,240	694	359	530	80	18	11	6	2
14	250	42	671	1,200	671	359	*495	116	15	10	5	*2
15	226	42	818	1,120	627	373	478	168	14	9	5	4
16	205	43	927	1,090	606	373	462	221	13	9	4	8
17	178	44	1,020	1,050	586	352	446	256	12	13	4	11
18	153	45	1,090	1,020	567	326	462	262	14	26	4	9
19	134	49	1,160	1,020	530	319	478	256	11	52	5	7
20	116	51	1,200	1,020	512	332	478	238	11	39	5	7
21	100	53	1,240	1,020	512	352	462	221	10	26	6	7
22	86	56	1,330	1,050	567	359	446	210	10	29	5	6
23	74	68	1,430	1,200	586	359	416	194	9	20	4	6
24	64	79	1,430	1,430	567	359	373	183	9	15	4	5
25	56	*99	1,430	1,600	*567	373	345	163	8	12	4	5
26	49	116	1,480	1,660	548	387	306	144	17	10	4	4
27	44	134	1,540	1,790	530	416	268	121	108	9	4	4
28	42	163	1,480	1,790	495	495	244	101	188	8	4	4
29	38	188	1,480	1,790	-	606	210	86	221	8	3	4
30	37	199	1,540	1,720	-	649	183	80	204	7	4	4
31	34	-	1,600	1,600	-	649	-	74	-	6	3	-
Total	4,342	1,876	27,638	45,090	21,965	13,039	14,335	4,407	1,286	860	161	145
Mean	140	62.5	892	1,455	784	421	478	142	42.9	27.7	5.19	4.83
Cfsm	0.111	0.050	0.708	1.15	0.622	0.334	0.379	0.113	0.034	0.022	0.0041	0.0038
In.	0.13	0.06	0.82	1.33	0.65	0.39	0.42	0.13	0.04	0.03	0.005	0.004

Calendar year 1953: Max 5,240 Min 8 Mean 692 Cfsm 0.549 In. 7.46
Water year 1953-54: Max 1,860 Min 2 Mean 370 Cfsm 0.294 In. 4.01

* Discharge measurement made on this day.

Catawba River near Marion, N. C.

Location.--Lat 35°42'20", long. 82°02'10", on right bank 15 ft downstream from bridge on U. S. Highway 221, 0.2 mile downstream from Tom Creek, and 2.2 miles northwest of Marion, McDowell County. Records include flow of small tributary which enters above control.

Drainage area.--171 sq mi (including area of small tributary which enters above control).

Records available.--October 1941 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,208 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--13 years, 314 cfs.

Extremes.--Maximum discharge during year, 7,100 cfs Jan. 22 (gage height, 10 76 ft); minimum, 28 cfs Sept. 30 (gage height, 0.50 ft); minimum daily, 29 cfs Sept. 30.
1941-54: Maximum discharge, 19,700 cfs Aug. 28, 1949 (gage height, 15.02 ft), from rating curve extended above 10,000 cfs on basis of logarithmic plotting and contracted-opening determinations at gage heights 15.02 and 19.34 ft; minimum, that of Sept. 30, 1954; minimum daily, that of Sept. 30, 1954.
Maximum stage known, 19.34 ft Aug. 13, 1940 (discharge, 71,400 cfs, from rating curve extended above 10,000 cfs as explained above).

Remarks.--Records good. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station.

Revisions (water years).--WSP 1032: 1942, 1943(P).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	28	2.0	395
.6	35	2.5	610
.8	58	3.0	870
1.0	90	4.0	1,510
1.2	129	5.0	2,220
1.5	207	7.4	3,980

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	95	74	94	292	621	560	210	170	111	79	44
2	138	58	*71	92	245	*504	444	201	168	103	56	54
3	138	57	69	90	*201	427	367	293	165	125	51	40
4	131	*56	189	*92	231	379	311	*339	147	161	51	38
5	129	59	152	124	248	343	*343	224	170	92	*61	38
6	*127	80	159	117	173	323	304	214	145	113	54	34
7	58	61	217	88	168	255	359	204	123	81	45	*44
8	76	61	143	88	195	214	270	204	155	*121	44	43
9	58	84	209	90	165	214	311	178	161	98	46	31
10	56	98	387	116	152	227	300	152	157	143	72	44
11	56	61	238	129	175	221	248	175	157	109	61	52
12	54	59	246	90	217	214	245	162	145	83	43	63
13	71	58	288	76	173	242	227	180	129	107	44	36
14	61	58	621	85	140	542	252	1,120	*170	79	57	46
15	69	58	379	105	136	363	245	925	152	69	45	39
16	83	58	292	535	178	319	245	560	188	66	39	34
17	61	58	214	391	257	311	241	423	207	85	50	44
18	76	58	145	252	160	273	231	367	227	105	48	36
19	59	57	138	170	181	281	217	327	195	76	43	33
20	54	61	147	157	737	343	204	300	150	79	65	34
21	74	191	187	877	1,690	231	201	255	119	90	118	48
22	57	188	127	3,950	610	248	195	255	127	90	90	43
23	54	234	119	*2,140	444	281	231	231	145	109	56	34
24	56	123	113	842	383	465	288	221	117	69	68	33
25	56	103	127	588	347	529	300	207	101	62	62	39
26	85	94	147	471	277	504	270	175	103	62	48	34
27	58	86	103	419	234	471	273	198	129	102	61	33
28	66	81	101	367	265	431	241	190	98	72	98	35
29	86	79	211	327	-	359	221	210	83	56	85	44
30	66	76	137	255	-	319	214	190	83	54	72	29
31	82	-	96	263	-	488	-	187	-	68	58	-
Total	2,435	2,552	5,846	13,480	8,674	10,942	8,358	9,077	4,386	2,840	1,870	1,199
Mean	78.5	85.1	189	435	310	353	279	293	146	91.6	60.3	40.0
Cfsm	0.459	0.498	1.11	2.54	1.81	2.06	1.63	1.71	0.854	0.536	0.353	0.234
In.	0.53	0.56	1.27	2.93	1.89	2.38	1.82	1.97	0.95	0.62	0.41	0.26

Calendar year 1953: Max 3,240 Min 38 Mean 214 Cfsm 1.25 In. 16.98
Water year 1953-54: Max 3,950 Min 29 Mean 196 Cfsm 1.15 In. 15.59

Peak discharge (base, 3,400 cfs).--Jan. 22 (6 a.m.) 7,100 cfs (10.76 ft).
* Discharge measurement made on this day.

Linville River at Branch, N. C.

Location.--Lat 35°47'50", long. 81°53'20", on right bank 20 ft downstream from bridge on State Highway 126 at Branch, Burke County, and 0.2 mile upstream from Lake James.

Drainage area.--65 sq mi, approximately.

Records available.--May 1907 to December 1908 (fragmentary, published as "at Fonta Flora"), June 1922 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,205.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. May 1907 to December 1908 staff gage 1.2 miles downstream at different datum. June 7, 1922, to July 5, 1937, staff gage at present site and datum.

Average discharge.--32 years (1922-54), 139 cfs.

Extremes.--Maximum discharge during year, 3,370 cfs Jan. 22 (gage height, 5.38 ft); minimum, 13 cfs Sept. 19, 20 (gage height, 1.30 ft); minimum daily, 13 cfs Sept. 19, 20.
1907-8, 1922-54: Maximum discharge, 39,500 cfs Aug. 13, 1940 (gage height, 11.4 ft), from rating curve extended above 6,400 cfs on basis of slope-area determination of peak flow; minimum, 3 cfs Jan. 2, 1940, result of freezeup; minimum daily, 8 cfs Sept. 7-9, 1925.
Flood of July 1916 reached a stage about 0.4 ft lower than that of Aug. 13, 1940.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Occasional slight diurnal fluctuation caused by small mill above station.

Revisions (water years).--WSP 892: 1928-29, 1935, 1937.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.3	11	2.4	224
1.4	19	2.7	360
1.6	42	3.0	570
1.8	72	3.5	1,000
2.0	110	4.5	2,120
2.2	158		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*30	29	38	52	117	683	483	94	83	41	84	a20
2	30	27	*36	48	*110	*360	292	94	81	41	70	a18
3	28	25	33	49	108	292	228	130	77	73	52	a16
4	27	*24	52	*52	106	240	192	*196	81	53	41	a14
5	25	24	88	49	100	200	*170	140	74	48	*34	a14
6	24	24	77	48	96	186	155	123	69	42	32	a14
7	22	23	112	42	92	164	170	112	66	39	28	*14
8	22	23	88	38	85	158	145	119	62	*45	27	14
9	22	22	86	45	83	161	132	106	61	56	27	15
10	22	22	253	46	85	158	121	98	77	201	26	147
11	22	22	145	49	83	155	121	92	62	96	23	81
12	22	22	135	52	79	148	114	88	64	66	22	37
13	21	22	186	18	72	145	106	90	59	55	21	25
14	21	22	350	38	72	206	104	1,050	*90	49	21	20
15	22	22	248	62	74	189	102	802	76	43	20	17
16	23	21	161	277	74	158	102	396	81	45	19	17
17	22	21	121	206	117	150	150	278	170	64	18	16
18	21	21	88	135	106	142	123	220	128	48	18	15
19	21	21	90	117	86	145	108	200	112	56	a20	13
20	20	22	94	106	145	189	100	183	96	64	a20	13
21	20	42	96	463	1,570	158	96	177	79	67	a35	a40
22	20	72	88	1,980	437	142	92	148	76	62	a30	a35
23	20	302	81	1,110	273	137	92	135	69	56	a25	28
24	20	104	67	476	217	164	112	125	64	49	a30	22
25	20	69	58	315	186	189	108	117	59	42	a40	20
26	20	59	45	240	161	326	100	108	56	41	a35	18
27	20	50	55	203	142	264	108	104	53	38	a60	17
28	27	45	65	174	153	232	110	100	50	34	a55	17
29	39	41	61	150	-	203	102	102	45	32	a60	17
30	58	37	59	137	-	186	96	98	43	36	a35	17
31	37	-	56	125	-	255	-	86	-	32	a25	-
Total	768	1,280	3,212	6,902	5,029	6,485	4,234	5,911	2,263	1,714	1,053	771
Mean	24.8	42.7	104	223	180	209	141	191	75.4	55.3	34.0	25.7
Cfsm	0.382	0.657	1.60	3.43	2.77	3.22	2.17	2.94	1.16	0.851	0.523	0.395
In.	0.44	0.73	1.84	3.95	2.88	3.71	2.42	3.38	0.29	0.98	0.60	0.44

Calendar year 1953: Max 2,200 Min 13 Mean 122 Cfsm 1.88 In. 25.53
Water year 1953-54: Max 1,980 Min 13 Mean 109 Cfsm 1.68 In. 22.66

Peak discharge (base, 1,600 cfs).--Jan. 22 (5 p.m.) 3,370 cfs (5.38 ft); Feb. 21 (3 a.m.) 3,130 cfs (15.22 ft); May 14 (5 p.m.) 1,970 cfs (4.42 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and unpublished records for North Toe River at Altapass.

Lower Little River near All Healing Springs, N. C.

Location.--Lat 35°57', long. 81°14', on left bank 0.3 mile downstream from Grassy Creek, 0.4 mile upstream from Lambert Creek, 2.2 miles northeast of All Healing Springs, and 4 miles northwest of Taylorsville, Alexander County.

Drainage area.--31.2 sq mi.

Records available.--January 1953 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 1,070 ft (by barometer).

Extremes.--1953: Maximum discharge during period January to September, 662 cfs Feb. 21 (gage height, 8.40 ft, from floodmark); minimum, 6.4 cfs Sept. 1-3 (gage height, 0.81 ft).
1953-54: Maximum discharge during water year, 1,040 cfs Jan. 22 (gage height, 11.80 ft); minimum, 3.3 cfs Sept. 18, 19 (gage height, 0.57 ft).

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

Rating tables, Jan. 1, 1953, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

Jan. 1 to Sept. 30, 1953, Jan. 24 to Feb. 21, 1954

0.8	6.2	2.0	55
1.0	10	3.0	123
1.5	28	4.5	258

Oct. 1, 1953, to Jan. 23, 1954

0.9	6.7	1.5	27
1.0	8.8	2.0	55
1.2	15		

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

Feb. 22 to Sept. 30, 1954

0.5	2.3	1.0	13
.6	3.7	1.2	19
.7	5.4	1.5	29
.8	7.5	2.0	55

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-			28	24	33	37	24	15	18	12	7.8
2	-			23	22	57	34	23	15	17	12	7.2
3	-			23	20	54	33	23	14	*28	11	11
4	-			20	20	51	32	22	14	43	11	12
5	-			19	19	56	30	23	13	38	11	20
6	-			17	20	48	37	44	14	27	10	16
7	†10			17	51	42	33	28	109	23	12	12
8	-			19	36	37	31	26	146	22	20	10
9	-			19	30	34	30	23	67	20	15	9.5
10	-			44	23	31	29	23	127	18	11	9.3
11	-			33	23	34	28	23	85	17	10	9.3
12	-			26	45	54	27	22	*56	17	9.7	9.5
13	-			23	38	64	41	21	44	16	*9.5	8.9
14	-			22	34	55	28	20	38	16	9.3	8.6
15	-			21	87	71	27	18	33	16	9.1	8.4
16	-			20	72	*67	26	18	30	*16	8.9	8.0
17	-			19	50	56	26	19	28	16	10	7.8
18	-			23	41	48	25	19	25	16	14	8.2
19	-			24	35	*41	25	21	24	17	22	8.6
20	-			24	77	39	24	20	22	16	14	29
21	-			83	251	34	24	20	26	15	12	15
22	-			*48	120	41	24	20	*42	17	11	11
23	-		†14	33	78	88	24	19	32	20	11	10
24	-	†16		56	55	208	24	19	25	14	10	10
25	-			47	44	102	24	18	23	14	9.3	11
26	-			27	42	64	24	17	22	14	9.1	13
27	-			22	36	57	24	16	22	12	8.9	18
28	-			32	33	52	*23	15	22	13	8.4	13
29	-			31	-	48	23	15	20	12	8.0	11
30	†11			25	-	41	25	15	20	.12	8.0	*10
31	-	-		23	-	38	-	15	-	*12	*7.6	-
Total	-	-	-	891	1,426	1,765	842	649	1,173	572	344.8	343.1
Mean	11	14	15	28.7	50.9	56.9	28.1	20.9	39.1	18.5	11.1	11.4
Cfsm	0.353	0.449	0.481	0.920	1.63	1.82	0.901	0.670	1.25	0.593	0.356	0.365
In.	0.41	0.50	0.54	1.06	1.70	2.10	1.00	0.77	1.40	0.68	0.41	0.41

Calendar year 1952: Max - Min - Mean - Cfsm - In. -
Water year 1952-53: Max 251 Min 7.2 Mean 25.3 Cfsm 0.811 In. 10.98

Peak discharge (base, 550 cfs).--Feb. 21 (time unknown) 662 cfs (8.40 ft).
* Discharge measurement made on this day.
† Result of discharge measurement.
Note.--Monthly discharge for October to December estimated on basis of 4 discharge measurements and data available from twice-daily staff-gage readings at site about 2½ miles downstream.

Lower Little River near All Healing Springs, N. C.--Continued

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	9.7	11	12	a28	108	95	22	16	9.2	7.5	6.0
2	10	9.7	11	12	a26	60	60	21	15	11	8.8	5.8
3	9.4	9.4	11	12	a24	47	46	43	15	12	*8.8	5.6
4	9.4	9.4	18	12	a28	38	38	38	15	12	6.9	5.2
5	9.4	9.4	15	12	a22	33	34	28	14	10	6.4	5.2
6	8.8	9.4	26	12	a20	30	33	24	14	9.2	6.2	4.9
7	8.4	9.4	26	11	a20	28	31	*24	*13	9.0	5.6	4.7
8	8.4	9.1	*15	11	a20	27	31	23	13	*12	5.6	4.6
9	8.8	9.1	21	11	a18	26	29	21	14	11	5.4	4.6
10	9.7	9.4	27	12	*17	24	28	21	15	11	6.0	4.6
11	9.4	9.4	18	14	17	24	27	20	14	9.8	4.9	4.7
12	9.1	*9.7	36	12	16	23	26	20	13	9.2	4.9	4.6
13	8.6	10	30	11	16	26	24	22	27	8.5	4.9	4.6
14	9.1	10	64	a12	16	68	25	40	16	8.0	4.9	4.6
15	9.4	10	35	14	16	44	24	38	14	7.5	4.9	4.6
16	9.4	9.7	25	*63	16	36	24	31	46	8.8	4.7	4.6
17	8.6	9.7	21	36	20	31	24	27	26	7.8	4.6	*4.4
18	8.6	9.7	19	25	16	29	22	25	21	7.8	4.7	3.7
19	*8.6	9.7	18	*22	16	40	21	24	19	11	5.4	3.6
20	8.6	9.7	16	22	29	49	*21	26	16	8.5	13	5.8
21	8.4	18	17	*77	206	39	21	23	15	8.2	21	6.2
22	8.6	14	16	*594	73	34	20	21	14	12	22	5.1
23	9.1	14	15	160	49	31	22	20	14	8.2	12	4.7
24	8.6	12	14	82	40	31	21	19	12	7.5	*10	4.7
25	8.4	11	14	59	35	29	21	18	12	7.3	8.8	4.6
26	8.6	11	14	48	31	34	20	18	11	9.7	8.0	4.6
27	9.7	11	13	44	28	*30	31	18	11	9.0	7.3	4.4
28	18	11	13	38	33	30	38	17	10	7.1	8.8	4.0
29	11	11	13	34	-	29	26	18	9.8	6.7	8.0	3.9
30	10	11	13	31	-	28	24	17	9.5	6.4	7.1	4.0
31	10	-	12	30	-	89	-	16	-	7.1	6.2	-
Total	292.1	315.6	617	1,545	896	1,195	907	743	474.3	282.5	243.3	142.6
Mean	9.42	10.5	19.9	49.8	32.0	38.5	30.2	24.0	15.8	9.11	7.85	4.75
Cfsm	0.302	0.337	0.638	1.60	1.03	1.23	0.968	0.769	0.506	0.292	0.252	0.152
In.	0.35	0.38	0.74	1.84	1.07	1.42	1.08	0.89	0.57	0.34	0.29	0.17

Calendar year 1953: Max 251 Min 7.2 Mean 25.3 Cfsm 0.811 In. 11.00
Water year 1953-54: Max 594 Min 3.6 Mean 21.0 Cfsm 0.673 In. 9.14

Peak discharge (base, 550 cfs).--Jan. 22 (4:30 p.m.) 1,040 cfs (11.80 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby stations.

Catawba River at Catawba, N. C.

Location.--Lat 35°43', long. 81°04', on right bank at downstream side of bridge on U. S. Highways 64 and 70, half a mile upstream from Lyle Creek, five-eighths of a mile upstream from Southern Railway bridge, and 1 mile northeast of Catawba, Catawba County. Records include flow of Lyle Creek.

Drainage area.--1,535 sq mi, includes that of Lyle Creek.

Records available.--July 1896 to April 1902 (gage heights only, 1900, 1902), November 1934 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 746.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 1896 to April 1902, wire-weight gage at bridge five-eighths of a mile downstream at different datum.

Average discharge.--22 years (1896-99, 1935-54), 2,325 cfs (unadjusted).

Extremes.--Maximum discharge during year, 35,500 cfs Jan. 22 (gage height, 19.40 ft); minimum, 90 cfs Sept. 19 (gage height, 2.10 ft); minimum daily, 115 cfs Oct. 11, 25, Nov. 8.

1896-1902, 1934-54: Maximum discharge, 177,000 cfs Aug. 14, 1940 (gage height, 36.8 ft, from floodmarks), from rating curve extended above 24,000 cfs on basis of computation by Duke Power Co. of peak flow over dam; minimum, that of Sept. 19, 1954; minimum daily, 101 cfs July 12, 1953.

Maximum stage known, 44.1 ft July 16, 1916, affected by failure of earth dike at Lookout Shoals Dam, 4 miles above station, from information furnished by State Highway and Public Works Commission.

Remarks.--Records good except those below 1,000 cfs, which are fair. Flow regulated by four reservoirs above station which have a combined usable capacity of 14,975,000,000 cu ft.

Revisions (water years).--WSP 892: 1936-38. WSP 952: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.1	90	4.0	1,680
2.2	118	6.0	4,800
2.5	260	8.0	8,400
2.8	465	11.0	14,300
3.3	890	14.0	20,600

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,650	126	1,850	186	2,670	4,630	1,650	213	4,350	1,460	158	1,800
2	985	1,950	1,670	514	1,760	4,460	984	288	4,310	1,090	2,410	2,740
3	158	2,380	1,690	167	2,630	4,460	450	2,230	3,990	363	2,530	2,730
4	231	2,260	1,510	1,590	2,730	4,460	554	2,700	3,260	1,060	2,160	195
5	1,370	2,140	366	1,470	2,410	4,460	3,070	2,890	438	908	2,280	130
6	1,340	2,070	238	1,150	186	4,460	4,350	2,800	231	964	1,580	1,100
7	1,090	158	1,350	1,320	142	3,070	3,970	2,710	2,560	158	374	2,080
8	650	115	2,240	924	1,540	2,560	4,150	1,640	3,320	158	134	2,070
9	1,070	1,270	2,420	538	2,260	2,110	4,200	883	3,360	158	2,030	1,490
10	150	*1,460	2,460	150	2,000	1,420	2,210	2,500	3,390	150	2,040	622
11	115	1,420	1,840	2,200	1,950	2,490	230	2,920	2,650	142	1,750	366
12	1,070	1,260	903	2,050	1,440	2,890	2,680	3,410	1,390	1,230	1,490	134
13	1,150	1,040	249	1,740	172	2,310	2,880	2,550	308	1,780	2,040	644
14	866	304	1,130	1,570	154	1,950	3,660	2,890	1,990	1,820	222	1,400
15	1,060	146	452	1,130	1,500	2,310	3,840	2,970	2,440	1,890	134	706
16	1,010	1,350	1,540	516	1,430	2,750	3,500	2,080	2,460	1,340	2,040	620
17	158	1,650	2,070	300	1,850	2,960	353	2,920	3,080	182	1,920	1,360
18	118	1,880	1,450	537	1,050	3,140	514	3,080	2,740	138	*1,110	326
19	965	1,480	257	260	1,620	3,220	1,030	*3,320	1,570	1,740	1,370	134
20	744	1,140	167	244	174	1,780	1,470	4,220	380	1,940	2,280	926
21	1,280	191	1,840	1,600	2,980	241	1,840	3,230	2,820	2,280	383	680
22	1,160	142	2,510	13,300	4,460	2,590	2,260	2,460	2,280	2,420	134	256
23	681	1,760	3,070	19,800	4,290	3,040	1,790	2,130	2,140	1,460	1,210	253
24	352	1,500	746	7,140	*4,460	2,910	486	3,000	1,960	359	1,720	193
25	115	1,510	344	3,240	4,290	2,950	214	4,460	2,540	235	1,720	212
26	1,310	318	158	3,030	4,290	3,080	2,110	3,700	1,030	2,130	2,310	138
27	1,220	332	154	2,570	4,460	3,010	1,900	2,440	154	2,150	2,450	253
28	1,080	366	1,440	2,990	4,290	816	1,460	2,630	2,450	2,350	1,050	206
29	812	146	2,090	3,950	-	2,900	1,460	853	1,960	2,300	150	146
30	850	2,060	1,430	1,820	-	2,940	1,770	163	1,610	1,860	2,300	142
31	320	-	1,790	932	-	2,910	-	2,990	-	643	2,240	-
Total	25,230	33,924	41,424	78,928	63,188	89,277	61,035	77,270	67,161	36,858	45,719	24,052
Mean	814	1,131	1,336	2,546	2,257	2,880	2,034	2,493	2,239	1,189	1,475	802
(†)	-241	-458	+257	+1,189	+200	-184	-10	-473	-1,184	-428	-1,160	-208

	Observed			Adjusted				
Calendar year 1953:	Max 13,800	Min 101	Mean 1,612	Mean 1,743	Cfsm 1.14	In. 15.41		
Water year 1953-54:	Max 19,800	Min 115	Mean 1,765	Mean 1,539	Cfsm 1.00	In. 13.62		

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Bridgewater, Rhodhiss, Oxford, and Lookout Shoals Reservoirs; furnished by Duke Power Co.

Henry Fork near Henry River, N. C.

Location.--Lat 35°41', long. 81°24', on left bank 450 ft downstream from highway bridge at site of old Link Ford, 1¼ miles downstream from Burke-Catawba County line, and 2 miles southeast of village of Henry River, Burke County.

Drainage area.--80 sq mi, approximately.

Records available.--July 1925 to November 1931, December 1941 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 890.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 30, 1931, at site 450 ft upstream at same datum.

Average discharge.--18 years (1925-31, 1942-54), 125 cfs.

Extremes.--Maximum discharge during year, 6,500 cfs Jan. 22 (gage height, 12.82 ft), from rating curve extended above 2,000 cfs on basis of slope-area determination of peak flow and computation of peak flow over dam; minimum, 5.9 cfs June 30, July 1; minimum daily, 7.2 cfs Jan. 10, July 1.

1925-31, 1941-54: Maximum discharge, 15,300 cfs Oct. 2, 1929 (gage height, 18.40 ft, site then in use), from rating curve extended above 2,300 cfs on basis of computation of peak flow over dam at Henry River, at gage height 29.2 ft; minimum, 3 cfs Dec. 20, 1942; minimum daily, 4 cfs Nov. 15, Dec. 20, 1942.

Maximum stage known, 29.2 ft Aug. 13, 1940, at former site, from floodmarks (discharge, 31,300 cfs).

Remarks.--Records good. Considerable diurnal fluctuation and some regulation caused by mill above station. An average of about 3 cfs was diverted for water supply by city of Morganton and Morganton State Hospital and wasted into Catawba River. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Revisions (water years).--WSP 952: 1928, 1930.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	6.8	2.0	264
.7	11	3.0	625
.9	27	4.0	1,070
1.1	50	6.0	2,020
1.3	83	8.1	3,300
1.6	148		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	14	58	60	122	537	248	114	83	7.2	69	42
2	*74	38	59	47	114	305	211	111	89	27	56	41
3	74	59	60	56	111	220	185	131	81	64	52	*9.7
4	33	48	67	62	131	180	169	131	85	53	53	8.1
5	78	59	72	59	107	153	158	111	79	48	18	12
6	72	56	110	60	101	146	153	105	78	45	11	28
7	69	42	245	60	101	138	153	*107	81	43	32	26
8	62	8.1	124	58	103	134	350	107	76	49	31	31
9	38	42	107	100	97	124	413	99	79	54	53	24
10	26	58	174	7.2	*95	122	232	103	78	58	58	24
11	33	43	138	43	95	118	196	97	76	53	38	17
12	65	*60	264	62	81	116	180	95	78	61	34	24
13	56	67	281	64	83	145	158	112	74	34	32	30
14	58	27	418	64	85	645	158	425	153	53	32	18
15	59	8.1	242	31	99	312	153	356	85	50	31	30
16	60	49	153	325	101	211	151	217	72	53	30	26
17	29	60	118	247	99	174	153	164	58	24	28	26
18	9.4	62	95	143	99	153	141	148	*79	13	46	14
19	59	47	89	111	99	204	134	153	39	40	50	22
20	59	52	90	99	108	356	131	174	64	41	60	33
21	59	37	91	1,040	1,650	242	131	156	87	39	72	44
22	60	76	85	3,290	396	191	126	129	87	62	53	34
23	63	107	72	975	238	171	129	116	79	52	48	29
24	9.3	69	70	410	191	238	136	114	69	42	46	28
25	14	58	67	278	166	274	134	105	27	39	43	21
26	56	59	67	223	148	278	134	103	12	*38	38	25
27	60	59	64	191	129	*245	124	99	50	38	38	25
28	60	42	69	164	153	220	120	97	48	36	44	24
29	60	15	65	146	-	196	111	139	132	35	46	23
30	60	53	64	136	-	180	114	101	31	44	52	24
31	55	-	*62	126	-	208	-	95	-	37	58	-
Total	1,639.7	1,474.2	3,740	8,737.2	5,102	6,936	5,086	4,314	2,189	1,332.2	1,352	762.8
Mean	52.9	49.1	121	282	182	224	170	139	73.0	43.0	43.6	25.4
Cfsm	0.661	0.614	1.51	3.52	2.28	2.80	2.12	1.74	0.912	0.538	0.545	0.318
In.	0.76	0.69	1.74	4.06	2.37	3.22	2.36	2.01	1.02	0.62	0.63	0.35

Calendar year 1953: Max 1,890 Min 7.6 Mean 121 Cfsm 1.51 In. 20.55
Water year 1953-54: Max 3,290 Min 7.2 Mean 117 Cfsm 1.46 In. 19.83

Peak discharge (base, 2,800 cfs).--Jan. 22 (4 p.m.) 6,500 cfs (12.82 ft); Feb. 21 (9 a.m.) 3,940 cfs (9.07 ft).

* Discharge measurement made on this day.

Indian Creek near Laboratory, N. C.

Location.--Lat 35°25'20", long. 81°15'50", on left bank 250 ft upstream from remains of Rudisill Mill dam, half a mile upstream from highway bridge, 1½ miles upstream from mouth, 1½ miles south of Laboratory, Lincoln County, and 3½ miles south of Lincolnton.

Drainage area.--68.4 sq mi.

Records available.--August 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 736 ft (by barometer).

Extremes.--Maximum discharge during year, 3,950 cfs Jan. 23 (gage height, 7.58 ft); minimum, 5.2 cfs Sept. 8 (gage height, 0.60 ft).

1951-54: Maximum discharge, 5,030 cfs Mar. 4, 1952 (gage height, 8.74 ft), from rating curve extended above 830 cfs on basis of computation of peak flow over dam at gage heights, 4.95, 6.27, and 8.74 ft; minimum, that of Sept. 8, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	5.2	2.0	300
.7	11	2.5	355
.8	19	3.0	420
1.0	48	4.0	740
1.2	95	6.0	2,440
1.5	183		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	21	24	38	63	245	210	50	41	19	26	8.8
2	25	21	24	36	63	103	123	50	41	19	25	8.8
3	25	21	24	36	61	90	103	50	40	23	15	8.2
4	23	21	52	36	65	77	90	61	41	25	13	7.1
5	23	21	43	*36	58	69	82	48	38	21	12	7.1
6	23	21	143	34	56	67	79	*45	38	18	11	6.6
7	21	23	90	34	52	63	82	45	36	16	11	6.6
8	21	23	46	33	52	61	77	48	34	17	10	*6.1
9	21	23	41	33	52	58	72	45	34	21	11	6.6
10	21	23	69	33	50	58	67	43	40	29	17	7.1
11	21	23	46	40	*50	58	72	40	58	23	11	8.2
12	21	23	266	38	48	56	69	41	38	19	9.4	7.1
13	20	23	148	34	46	58	65	45	34	17	9.4	6.6
14	20	23	332	34	46	316	69	95	31	16	9.4	7.6
15	23	23	95	46	46	109	67	79	43	17	25	7.1
16	23	23	69	*499	48	85	98	63	*31	35	11	7.1
17	21	*23	56	239	58	74	87	54	34	19	9.4	7.6
18	21	24	50	106	48	69	69	52	36	17	9.4	7.1
19	20	24	48	85	46	189	63	56	34	17	19	6.1
20	20	24	46	74	63	219	61	61	31	17	14	24
21	20	45	50	*666	337	115	58	74	29	17	38	21
22	20	33	52	1,430	123	87	58	54	27	34	16	9.4
23	21	30	48	2,240	90	87	56	50	27	19	16	8.8
24	21	28	45	252	82	217	54	46	25	16	15	8.8
25	20	25	41	147	72	144	69	45	25	15	14	8.8
26	20	25	40	112	67	197	56	43	24	*25	12	8.8
27	21	25	40	95	61	126	52	43	23	21	11	8.8
28	31	25	40	82	95	123	50	43	21	14	14	7.6
29	23	24	41	77	-	101	48	48	20	14	18	7.6
30	21	24	43	74	-	*111	50	74	20	13	13	7.6
31	21	-	40	67	-	213	-	46	-	15	9.4	-
Total	677	733	2,192	6,786	1,998	3,645	2,256	1,637	994	608	454.4	258.7
Mean	21.8	24.4	70.7	219	71.4	118	75.2	52.8	33.1	19.6	14.7	8.62
Cfsm	0.319	0.357	1.03	3.20	1.04	1.73	1.10	0.772	0.484	0.287	0.215	0.126
In.	0.37	0.40	1.19	3.69	1.09	1.98	1.23	0.89	0.54	0.33	0.25	0.14

Calendar year 1953: Max 1,110 Min 15 Mean 65.2 Cfsm 0.953 In. 12.95
Water year 1953-54: Max 2,240 Min 6.1 Mean 60.9 Cfsm 0.890 In. 12.10

Peak discharge (base, 1,500 cfs).--Jan. 23 (4 a.m.) 3,950 cfs (7.58 ft).
* Discharge measurement made on this day.

Long Creek near Bessemer City, N. C.

Location.--Lat 35°18'20", long. 81°14'05", on right bank at upstream side of highway bridge, 2 miles northeast of Bessemer City limits, Gaston County, and 8¼ miles upstream from mouth.

Drainage area.--31.4 sq mi.

Records available.--December 1952 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 706.1 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 980 cfs Feb. 21 (gage height, 5.35 ft); minimum, 0.7 cfs Sept. 12 (gage height, 0.77 ft).
1952-54: Maximum discharge, that of Feb. 21, 1954; minimum, that of Sept. 12, 1954.

Remarks.--Records good. Bessemer City diverts out of basin approximately 0.5 cfs for water supply causing slight diurnal fluctuation at low flow.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	1.0	2.4	76
1.0	3.8	3.0	175
1.2	7.1	3.5	296
1.4	10	4.0	452
1.6	16	4.5	635
2.0	35		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	6.6	7.4	12	22	172	148	21	14	6.4	5.4	2.8
2	7.1	6.2	6.9	12	22	47	58	19	13	5.4	4.3	2.4
3	7.1	6.2	7.4	12	22	40	44	22	13	11	*3.8	2.3
4	6.8	6.2	20	12	23	*33	38	23	12	7.9	2.8	2.6
5	*6.8	6.2	11	12	21	29	34	18	12	5.7	2.6	1.6
6	6.2	6.8	45	12	20	28	34	17	12	5.2	2.6	2.3
7	6.2	6.4	21	11	20	27	40	17	11	*4.9	1.9	1.5
8	6.4	6.8	11	11	19	25	32	17	11	5.1	2.6	1.4
9	6.4	6.8	11	11	19	24	30	17	10	5.7	6.3	*1.5
10	6.6	6.8	16	12	19	24	29	15	10	6.6	8.1	1.3
11	6.8	6.9	*11	14	18	23	32	15	11	6.6	3.4	1.3
12	6.4	6.8	133	13	18	22	30	16	10	5.4	2.9	1.1
13	6.2	6.9	49	11	17	26	28	20	9.7	4.8	3.0	1.3
14	6.2	6.8	126	11	17	146	28	33	11	4.1	2.3	*2.0
15	6.8	7.1	28	17	17	41	*38	23	15	4.3	27	1.9
16	6.8	6.8	20	*431	18	32	36	20	9.9	11	12	1.4
17	6.2	6.8	16	78	22	28	44	17	9.9	6.1	4.9	2.4
18	6.2	*6.8	15	39	18	27	30	17	12	6.4	5.3	1.8
19	6.4	6.9	14	30	17	151	27	17	10	7.0	6.5	1.1
20	6.2	6.9	13	27	30	111	25	29	9.4	7.1	7.0	3.7
21	6.6	11	15	*226	468	48	25	24	9.2	6.4	16	4.1
22	*6.1	8.7	15	479	65	35	23	18	8.4	5.1	5.1	2.2
23	6.2	8.1	15	252	41	33	23	17	7.7	4.9	5.1	2.0
24	5.7	7.6	13	75	33	99	23	15	7.9	4.0	5.2	*1.8
25	5.9	7.6	13	50	30	64	36	15	7.6	3.8	4.8	2.3
26	6.1	7.1	12	39	27	68	23	14	7.3	3.8	4.3	2.3
27	5.9	7.4	12	33	25	83	21	*15	6.8	4.4	3.5	2.3
28	6.6	7.1	12	29	45	91	20	15	6.6	3.8	3.6	1.5
29	6.2	7.1	14	27	-	53	20	15	6.2	3.2	3.8	1.6
30	5.9	7.4	15	25	-	48	20	15	6.6	3.0	4.0	1.8
31	6.2	-	13	24	-	157	-	14	-	3.6	2.9	-
Total	198.3	212.8	730.7	2,047	1,133	1,835	1,039	570	300.2	172.9	173.0	59.6
Mean	6.40	7.09	23.6	66.0	40.5	59.2	34.6	18.4	10.0	5.58	5.58	1.99
Cfsm	0.204	0.226	0.751	2.10	1.29	1.88	1.10	0.586	0.318	0.178	0.178	0.063
In.	0.23	0.25	0.87	2.42	1.34	2.17	1.23	0.68	0.36	0.20	0.20	0.07

Calendar year 1953: Max 517 Min 3.8 Mean 26.7 Cfsm 0.850 In. 11.53
Water year 1953-54: Max 479 Min 1.1 Mean 23.2 Cfsm 0.739 In. 10.02

Peak discharge (base, 650 cfs).--Jan. 16 (7 a.m.) 754 cfs (4.80 ft); Jan. 22 (4 p.m.) 898 cfs (5.13 ft); Feb. 21 (7 a.m.) 980 cfs (5.35 ft).
* Discharge measurement made on this day.

South Fork Catawba River at Lowell, N. C.

Location.--Lat 35°17'09", long. 81°06'04", on right bank 50 ft north of private mill road, 120 ft downstream from Housers Creek, 1 mile north of Lowell, Gaston County, and 3 miles downstream from Long Creek.

Drainage area.--630 sq mi.

Records available.--January 1942 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 603.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--12 years, 800 cfs.

Extremes.--Maximum discharge during year, 13,700 cfs Jan. 23 (gage height, 13.32 ft); minimum, 25 cfs Sept. 27 (gage height, 0.76 ft); minimum daily, 38 cfs Sept. 11.
1942-54: Maximum discharge, 22,000 cfs Sept. 19, 1945 (gage height, 16.98 ft); minimum, that of Sept. 27, 1954; minimum daily, that of Sept. 11, 1954.
Maximum stage known, 21.33 ft in August 1940, from floodmarks (discharge, 34,000 cfs).

Remarks.--Records good except those below 250 cfs, which are poor. Considerable diurnal fluctuation and slight regulation for short periods at low flow caused by powerplant above station. City of Gastonia diverted an average of 6.2 cfs during water year 1954 for water supply from Long Creek. For diversion by town of Morganton see Henry Fork near Henry River.

Revisions (water years).--WSP 1002: 1943(m).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	33	4.0	1,040
1.0	40	5.0	1,720
1.2	60	6.0	2,500
1.5	103	8.0	4,500
2.0	211	10.0	7,200
2.5	365	13.0	13,000
3.0	547		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	348	196	258	407	714	2,470	2,300	509	450	272	182	175
2	324	268	198	361	668	1,800	1,380	509	418	196	203	148
3	297	258	236	364	647	1,250	1,100	606	414	167	224	162
4	270	200	306	392	668	*950	920	626	418	282	226	138
5	*298	200	454	365	647	810	865	586	390	254	180	72
6	268	248	591	376	606	760	838	509	361	169	153	123
7	292	222	1,080	361	586	668	810	490	414	214	149	128
8	262	202	714	361	606	668	785	472	340	196	104	120
9	284	252	547	348	528	647	1,040	490	354	154	136	112
10	238	246	586	358	547	626	1,190	509	*376	232	230	100
11	227	200	*647	414	528	606	865	472	443	244	337	38
12	244	212	1,400	354	528	586	838	465	361	243	216	116
13	268	248	1,880	351	509	566	737	490	317	232	137	56
14	215	246	2,500	354	490	2,470	737	647	385	207	142	142
15	277	203	1,720	361	509	2,500	737	1,100	417	164	98	119
16	216	238	1,040	3,010	509	1,560	*838	1,040	376	305	222	100
17	246	242	737	2,550	566	980	920	760	402	264	228	55
18	202	210	606	1,320	547	838	737	626	393	168	189	111
19	262	228	547	865	509	1,220	691	606	368	216	142	47
20	238	260	509	714	528	2,440	647	668	348	226	*389	112
21	173	279	490	*3,000	3,450	1,490	626	810	314	192	461	135
22	212	324	509	6,590	2,500	1,130	606	668	304	239	294	142
23	266	390	509	12,400	2,340	920	586	566	311	226	274	123
24	213	324	465	11,100	1,130	1,320	581	566	314	238	226	116
25	208	368	447	4,230	865	1,460	737	509	278	188	204	122
26	216	238	436	1,720	760	1,520	626	490	250	220	198	70
27	222	254	422	1,250	691	1,420	586	466	230	244	132	90
28	220	246	443	1,070	689	1,420	566	472	212	218	214	132
29	262	248	429	920	-	1,130	547	454	219	196	208	102
30	283	278	447	838	-	1,040	528	547	234	186	330	106
31	225	-	422	760	-	1,910	-	547	-	145	210	-
Total	7,776	7,528	21,575	57,864	23,865	39,175	24,964	18,275	10,391	6,677	6,638	3,312
Mean	251	251	696	1,867	852	1,264	832	590	346	215	214	110
Cfsm	0.398	0.398	1.10	2.96	1.35	2.01	1.32	0.937	0.549	0.341	0.340	0.175
In.	0.46	0.44	1.27	3.42	1.41	2.31	1.47	1.08	0.61	0.39	0.39	0.20

Calendar year 1953: Max 5,660 Min 146 Mean 644 Cfsm 1.02 In. 13.87
Water year 1953-54: Max 12,400 Min 38 Mean 625 Cfsm 0.992 In. 13.45

Peak discharge (base, 8,000 cfs).--Jan. 23 (7:30 p.m.) 13,700 cfs (13.32 ft).
* Discharge measurement made on this day.

Catawba River near Rock Hill, S. C.

Location.--Lat 34°59', long. 80°58', on right bank at downstream side of bridge on U. S. Highway 21, 3½ miles downstream from Catawba Dam, 5 miles northeast of Rock Hill, York County, and 7½ miles upstream from Sugar Creek.

Drainage area.--3,050 sq mi, approximately.

Records available.--September 1895 to July 1903, April 1942 to September 1954. Revised records for period September 1895 to July 1903, published in North Carolina Department of Conservation and Development Bulletin 34 and South Carolina Reserach, Planning, and Development Board Bulletin 17.

Gage.--Water-stage recorder. Altitude of gage is 492 ft (by barometer). Sept. 23, 1895, to July 31, 1903, chain gage at Southern Railway bridge, 2 miles downstream at different datum.

Average discharge.--19 years (1895-1902, 1942-54), 4,657 cfs.

Extremes.--Maximum discharge during year, 51,000 cfs Jan. 23 (gage height, 16.01 ft); minimum, 615 cfs July 18 (gage height, 3.07 ft); minimum daily, 865 cfs Aug. 31.
1895-1903, 1942-54: Maximum discharge, 151,000 cfs May 23, 1901 (gage height, 24.15 ft, site and datum then in use); minimum, 143 cfs (revised) Apr. 25, 1943 (gage height, 2.59 ft); minimum daily, 815 cfs Sept. 2, 1945.
Revisions.--The figures of minimum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
952	1942	July 26, 1942	260	2.73
972	1943	Apr. 25, 1943	143	2.59
1273	1953	July 12, 1953	458	2.93

Remarks.--Records good. Flow regulated by Catawba Reservoir (usable capacity, 6,542,000,000 cu ft) and by other powerplants above station.

Revisions.--See Records available.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.2	773	5.0	4,670
3.5	1,210	10.0	23,400
4.0	2,120	15.0	46,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,910	1,050	1,910	1,070	6,030	7,680	1,860	1,160	4,680	2,250	1,010	920
2	*1,100	2,430	2,860	1,400	5,390	8,790	3,930	992	4,250	1,420	2,480	1,020
3	992	2,540	2,230	1,250	5,740	7,870	4,890	5,240	3,990	978	3,600	1,590
4	948	1,680	1,200	2,310	5,700	8,790	4,320	6,040	2,980	1,010	2,910	920
5	1,700	1,130	1,270	2,030	3,930	8,610	8,430	5,170	978	992	3,140	982
6	1,500	1,330	1,080	*1,700	1,010	8,250	8,970	4,550	1,130	1,140	1,240	963
7	1,440	1,010	2,270	1,900	972	4,370	8,790	2,880	4,640	1,030	934	1,450
8	1,440	1,020	3,890	1,280	5,290	8,080	8,080	1,870	4,080	992	978	1,380
9	1,100	978	3,380	1,180	5,660	5,260	6,390	2,280	3,830	1,070	2,620	1,020
10	920	1,160	4,120	1,050	3,900	4,860	2,390	4,640	3,500	1,050	1,780	920
11	978	992	2,180	1,540	4,340	6,490	1,340	4,920	3,100	1,040	2,040	992
12	1,470	1,010	1,620	1,590	2,860	6,720	6,150	3,430	1,750	1,010	1,640	985
13	1,520	992	1,300	1,760	1,210	2,130	7,020	2,230	1,250	978	905	879
14	1,720	963	1,300	1,640	1,080	3,760	5,940	2,290	4,210	1,130	948	905
15	2,080	1,010	1,390	1,380	1,820	5,720	4,460	2,730	3,770	948	1,010	920
16	1,820	1,240	5,940	2,060	1,910	7,910	2,240	2,950	3,610	1,040	1,810	920
17	978	1,390	7,910	1,050	2,210	8,790	2,300	5,930	2,390	992	*2,900	905
18	948	1,300	7,780	5,260	3,120	8,080	1,530	6,340	2,950	937	1,050	920
19	1,840	1,040	1,150	8,610	*2,630	8,080	5,250	4,400	1,390	1,040	920	963
20	1,880	1,120	1,080	6,260	1,060	4,860	4,110	4,950	1,040	1,720	920	981
21	1,840	1,050	4,670	6,570	4,810	1,200	5,020	6,160	3,840	1,190	905	934
22	2,010	1,050	7,910	17,100	8,820	6,120	4,140	2,790	*3,590	1,590	963	948
23	1,910	1,340	7,960	43,900	10,800	8,150	2,000	3,560	4,060	1,640	920	1,020
24	963	1,330	1,190	30,400	10,800	6,510	1,020	6,170	3,510	986	920	920
25	948	1,060	1,050	13,400	8,970	6,630	1,020	5,410	2,510	948	920	948
26	2,080	992	1,110	7,400	9,330	6,500	4,660	4,040	1,900	2,720	920	929
27	1,700	1,320	1,230	6,480	6,750	7,910	*4,020	4,250	978	2,560	1,100	964
28	2,710	1,260	2,980	8,250	3,490	1,720	3,920	4,310	3,320	2,500	948	905
29	2,150	1,020	3,930	8,140	-	5,260	3,760	1,900	2,540	2,710	978	920
30	1,080	1,450	2,210	5,910	-	8,270	3,840	1,420	2,130	2,250	1,000	920
31	1,040	-	3,380	2,190	-	3,540	-	4,620	-	1,030	865	-
Total	46,725	37,257	93,480	196,060	129,632	196,910	131,790	119,622	87,896	42,891	45,274	29,943
Mean	1,507	1,242	3,015	6,325	4,630	6,352	4,393	3,859	2,930	1,384	1,460	998
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 25,900 Min 899 Mean 3,087 Cfsm - In. -
Water year 1953-54: Max 43,900 Min 865 Mean 3,171 Cfsm - In. -

* Discharge measurement made on this day.

Little Sugar Creek near Charlotte, N. C.

Location.--Lat 35°09'20", long. 80°51'10", on right bank 50 ft downstream from tributary on right, 500 ft downstream from Briar Creek, 600 ft upstream from sewage-disposal plant of city of Charlotte, and 4.7 miles south of city hall, Charlotte, Mecklenburg County.

Drainage area.--41.4 sq mi.

Records available.--July 1924 to September 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 571.6 ft above mean sea level (city of Charlotte datum). Prior to Apr. 21, 1927, staff gage at same site and datum.

Average discharge.--30 years, 44.4 cfs.

Extremes.--Maximum discharge during year, 3,370 cfs Jan. 22 (gage height, 10.33 ft); minimum, 1.2 cfs Sept. 27 (gage height, 1.44 ft).
1924-54: Maximum discharge, 8,370 cfs Apr. 6, 1936 (gage height, 16.2 ft, from floodmarks), from rating curve extended above 2,000 cfs on basis of slope-area determinations at gage heights 10.42, 11.47, and 12.00 ft; minimum, that of Sept. 27, 1954.

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

Revisions (water years).--WSP 1052: 1939-44.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.4	0.7	2.2	62
1.5	2.2	2.5	126
1.6	4.6	3.0	277
1.7	9.0	5.0	897
1.8	16	7.0	1,710
2.0	35		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	4.4	7.7	14	20	261	187	18	14	a6.6	12	4.6
2	5.9	5.0	7.7	12	20	45	58	16	19	a6.4	9.0	4.6
3	5.5	6.8	7.2	12	25	50	42	19	11	a16	8.1	4.6
4	4.6	6.8	64	12	26	32	34	18	10	a8.0	7.7	4.4
5	5.5	6.8	15	13	19	27	32	15	8.6	a7.0	7.7	3.4
6	7.2	6.8	172	12	19	23	31	15	7.7	a6.4	7.7	3.2
7	5.9	5.5	29	11	17	22	80	14	8.1	5.9	6.4	4.4
8	5.9	5.0	14	10	18	21	37	13	8.1	6.4	4.6	4.6
9	5.5	5.9	14	9.7	18	22	33	12	9.0	5.9	65	4.4
10	5.5	6.8	79	12	18	21	28	12	12	8.1	14	4.4
11	4.6	6.8	12	43	17	20	33	12	8.6	6.4	7.7	4.1
12	5.5	7.2	321	24	16	19	30	11	7.7	5.9	6.4	3.2
13	6.4	6.8	161	15	15	32	26	29	6.4	5.9	5.9	2.9
14	8.1	5.9	276	14	15	995	26	47	7.2	6.8	3.9	4.4
15	6.8	5.5	32	46	15	68	27	23	12	53	11	4.6
16	5.9	5.9	19	1,260	17	39	43	15	9.0	341	4.6	4.4
17	5.5	7.2	15	88	*24	31	70	14	153	19	6.7	4.1
18	4.6	*6.4	13	39	16	28	30	15	33	9.7	4.4	3.9
19	5.5	5.5	12	30	15	191	24	19	17	11	3.9	2.9
20	6.8	5.9	11	26	34	120	22	46	11	*15	*11	3.2
21	7.2	30	16	364	89	43	21	27	11	32	11	4.1
22	6.8	7.7	18	1,320	28	33	20	15	11	44	3.4	3.6
23	6.8	7.7	15	308	21	29	19	12	10	15	3.4	2.9
24	5.9	6.4	11	76	27	137	19	13	a9.0	7.7	4.4	*2.7
25	4.6	8.1	12	52	23	62	27	13	a8.2	5.5	4.4	2.7
26	5.0	5.9	12	40	20	45	19	12	a7.6	25	4.1	2.0
27	6.8	5.9	9.7	34	18	204	19	12	7.2	61	3.9	2.0
28	7.2	5.5	12	29	79	149	19	12	a7.0	8.6	29	3.2
29	6.8	4.6	36	25	-	54	19	12	a6.8	7.7	4.6	3.4
30	7.2	5.9	24	23	-	*79	19	9.0	a6.6	8.6	4.4	3.6
31	5.5	-	17	21	-	308	-	9.0	-	7.7	5.0	-
Total	186.9	210.6	1,464.3	3,994.7	689	3,210	1,094	529.0	456.8	773.2	285.3	110.5
Mean	6.03	7.02	47.2	129	24.6	104	36.5	17.1	15.2	24.9	9.20	3.68
Cfsm	0.146	0.170	1.14	3.12	0.594	2.51	0.882	0.413	0.367	0.601	0.222	0.089
In.	0.17	0.19	1.32	3.59	0.62	2.88	0.98	0.48	0.41	0.69	0.26	0.10

Calendar year 1953: Max 823 Min 4.4 Mean 38.9 Cfsm 0.940 In. 12.76
Water year 1953-54: Max 1,320 Min 2.0 Mean 35.6 Cfsm 0.860 In. 11.69

Peak discharge (base, 2,100 cfs).--Jan. 16 (6:30 p.m.) 2,850 cfs (9.42 ft); Jan. 22 (3:30 p.m.) 3,370 cfs (10.33 ft); Mar. 14 (2 a.m.) 3,150 cfs (10.00 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.

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Rocky Creek at Great Falls, S. C.

Location.--Lat 34°34', long. 80°55', on left bank 350 ft downstream from Turkey Branch, 1 mile west of Great Falls, Chester County, and 1.6 miles upstream from mouth.

Drainage area.--194 sq mi.

Records available.--February 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 299 ft (by barometer).

Extremes.--Maximum discharge during year, 5,860 cfs Jan. 17 (gage height, 8.08 ft); minimum, 0.07 cfs Sept. 29, 30.
1951-54: Maximum discharge, 8,880 cfs Mar. 4, 1952 (gage height, 9.77 ft); minimum, that of Sept. 29, 30, 1954.

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation, which are fair.

Rating tables, water year 1953-54, except period of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 20						Sept. 25-30	
-0.1	0.11	0.5	5.0	2.5	289	0.2	0.01
0.0	.34	.6	7.6	3.0	477	.3	.08
.1	.74	.8	15	4.0	1,080	.4	.30
.2	1.3	1.1	33	5.0	1,880		
.3	2.2	1.5	72	6.0	2,930		
.4	3.4	2.0	155	8.0	5,700		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	14	20	112	97	1,780	4,990	130	32	5.3	16	4.0
2	16	14	20	97	94	1,020	1,000	100	32	5.3	16	2.9
3	16	14	20	99	91	267	354	91	30	9.4	14	2.4
4	15	14	35	100	88	221	241	140	29	14	13	2.1
5	14	15	84	85	81	159	184	88	25	9.6	11	1.8
6	14	16	52	*78	76	135	162	72	24	7.1	a19	1.5
7	12	16	215	70	73	121	157	64	22	5.8	a11	1.2
8	11	15	71	66	71	110	145	59	21	4.5	a11	*1.0
9	11	15	44	62	70	100	128	53	20	4.0	a44	.74
10	12	16	57	62	68	94	119	50	29	4.2	a14	.85
11	12	16	59	109	67	90	120	47	22	5.3	a9	.74
12	12	16	505	190	64	85	139	46	32	5.0	a9	.66
13	12	17	1,080	115	59	82	107	50	18	3.9	a9	.58
14	12	17	1,880	88	59	270	100	75	17	3.0	a8	.38
15	16	17	632	90	59	229	97	80	16	3.5	a8	.32
16	21	18	163	2,480	60	121	98	66	16	1,360	a8	*.25
17	16	*18	108	3,810	73	100	152	55	15	364	*7.9	.27
18	14	18	82	428	66	92	105	48	30	56	11	.34
19	13	18	70	244	*60	172	86	47	23	38	23	.66
20	12	18	68	192	60	875	78	71	17	187	10	.85
21	12	22	72	195	456	314	73	188	15	757	7.1	e.7
22	12	49	86	1,840	178	177	71	72	*13	115	5.5	e.5
23	12	33	174	3,670	107	143	78	53	13	58	4.8	e.3
24	13	27	120	670	94	636	68	46	11	43	5.0	e.2
25	13	22	99	328	96	825	64	43	10	33	4.8	.12
26	12	20	192	235	85	324	62	39	9.3	36	4.7	.15
27	12	18	125	192	76	226	*57	38	8.3	36	4.0	.17
28	14	18	94	159	84	445	188	37	7.1	26	23	*.12
29	16	18	106	130	-	326	1,100	39	6.3	23	15	.07
30	18	18	243	119	-	328	234	36	5.5	20	8.3	.07
31	15	-	164	108	-	1,390	-	33	-	18	6.0	-
Total	428	567	6,740	16,223	2,612	11,257	10,557	2,056	568.5	3,259.9	360.1	25.94
Mean	13.8	18.9	217	523	93.3	363	352	66.3	19.0	105	11.6	0.865
Cfsm	0.071	0.097	1.12	2.70	0.481	1.87	1.81	0.342	0.098	0.541	0.060	0.0045
In.	0.08	0.11	1.29	3.11	0.50	2.16	2.02	0.39	0.11	0.62	0.07	0.005

Calendar year 1953: Max 3,200 Min 2.3 Mean 162 Cfsm 0.835 In. 11.37
Water year 1953-54: Max 4,990 Min 0.07 Mean 150 Cfsm 0.773 In. 10.46

Peak discharge (base, 2,600 cfs).--Jan. 17 (4:45 a.m.) 5,860 cfs (8.08 ft); Jan. 23 (12 m.) 4,490 cfs (7.23 ft); Mar. 1 (11:15 p.m.) 3,050 cfs (6.12 ft); Apr. 1 (12 m.) 5,700 cfs (8.00 ft).

* Discharge measurement made on this day.

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

e Stage-discharge relation indefinite; discharge estimated on basis of weather records.

Wateree River near Camden, S. C.

Location.--Lat 34°14'40", long. 80°39'15", in pier of bridge on U. S. Highway 1, 1,500 ft downstream from Twentyfivemile Creek, 4,000 ft upstream from Seaboard Air Line Railroad bridge, 2.2 miles west of Camden, Kershaw County, and 7.4 miles downstream from Wateree Dam.

Drainage area.--5,070 sq mi, approximately.

Records available.--January to December 1903 (gage heights only), September 1904 to June 1910, October 1929 to September 1954. Gage-height records collected at site 1½ miles downstream 1891-1934, at site 1,000 ft upstream January 1935 to September 1942, and at present site since October 1942, are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 119.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. January 1903 to June 1910 staff or chain gage at site 1½ miles downstream at different datum. Oct. 1, 1929, to Sept. 1, 1942, water-stage recorder at site 1,000 ft upstream at present datum.

Average discharge.--25 years (1929-54) 5,834 cfs.

Extremes.--Maximum discharge during year, 67,000 cfs Jan. 24 (gage height, 29.36 ft); minimum daily, 321 cfs July 8, Sept. 14.

1904-10, 1929-54: Maximum discharge uncertain, occurred Aug. 26, 1908 (gage height, 39.7 ft, site and datum then in use, from records of U. S. Weather Bureau); minimum daily, 170 cfs June 3, 1941.

Maximum stage known, 40.4 ft July 18, 1916, at site 1½ miles downstream, from records of U. S. Weather Bureau (discharge uncertain).

Remarks.--Records fair. Flow regulated at Wateree Reservoir (capacity, 7,626,000,000 cu ft) and by other powerplants above station.

Cooperation.--Gage-height record collected in cooperation with U. S. Weather Bureau.

Revisions (water years).--WSP 802: 1930. WSP 952: Drainage area. WSP 1082: 1908(M), 1934(m).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,340	396	4,740	2,590	5,730	7,340	16,000	3,100	5,210	3,090	483	446
2	3,610	4,180	4,490	1,920	6,700	*14,900	16,100	1,950	5,280	2,100	3,450	849
3	1,950	4,790	2,570	917	7,540	15,700	15,800	5,130	5,090	454	3,340	2,090
4	428	5,200	2,780	4,510	7,720	14,100	13,900	*5,980	5,090	416	2,620	1,120
5	2,700	3,550	1,950	4,320	7,730	14,400	13,700	6,390	2,200	411	3,330	415
6	2,980	4,340	993	3,820	4,150	12,700	12,800	5,070	553	340	3,620	1,000
7	2,050	1,290	3,550	3,320	809	1,890	12,500	5,790	4,470	340	1,590	1,990
8	2,390	410	5,220	2,090	5,940	5,880	12,400	5,630	4,770	321	528	2,250
9	1,610	1,100	5,940	1,100	7,110	8,080	12,500	940	4,640	354	4,150	981
10	788	1,180	5,560	652	4,790	8,640	7,620	5,190	3,770	359	4,600	710
11	516	1,450	4,120	2,420	4,600	8,920	1,060	5,270	4,620	369	2,630	472
12	2,270	829	5,450	3,140	4,880	11,100	4,740	2,990	4,080	1,600	1,620	364
13	2,710	736	3,910	4,210	1,850	5,030	6,520	3,380	822	2,030	525	333
14	5,140	776	11,200	3,590	642	704	7,810	4,850	4,320	2,190	450	321
15	4,570	519	15,500	3,680	4,460	6,500	7,200	4,010	4,230	1,950	450	1,140
16	3,470	956	15,900	7,820	4,240	11,200	5,870	682	4,920	3,710	1,110	842
17	1,130	2,040	14,900	12,400	4,630	12,400	6,520	4,800	5,730	1,140	626	576
18	*528	2,480	9,390	15,200	5,170	11,100	1,260	6,000	3,540	455	521	1,390
19	4,110	1,460	4,910	15,700	5,680	11,000	4,510	7,490	566	6,560	564	373
20	3,940	1,390	1,140	15,700	2,410	11,300	5,590	7,700	411	8,750	818	*1,890
21	2,510	829	5,710	15,400	3,420	2,660	6,520	6,940	2,230	6,960	467	1,660
22	4,610	572	9,860	16,200	9,240	6,290	7,540	3,400	4,050	4,780	444	932
23	2,770	1,340	11,500	22,000	12,900	11,400	6,540	838	4,340	4,930	462	524
24	856	1,340	4,790	55,300	14,700	8,940	1,980	5,840	3,480	1,510	468	391
25	385	1,950	1,890	*46,800	13,300	13,000	572	8,180	4,200	484	420	574
26	1,930	1,420	965	27,200	11,300	14,300	4,160	6,550	1,920	2,680	650	324
27	3,520	1,220	745	18,000	10,000	11,700	4,830	4,630	433	2,540	1,450	1,500
28	3,580	550	4,630	16,500	1,310	1,800	4,790	4,490	3,250	3,420	1,230	2,100
29	3,140	344	5,920	16,500	-	6,440	5,630	2,870	*3,130	3,180	526	1,690
30	2,430	3,800	5,170	16,200	-	9,790	7,320	592	3,180	2,290	1,220	1,730
31	1,280	-	4,700	9,350	-	9,910	-	4,560	-	1,260	898	-
Total	78,241	52,437	180,093	368,549	172,951	289,114	234,282	141,232	104,525	70,973	45,260	30,977
Mean	2,524	1,748	5,809	11,890	6,177	9,326	7,809	4,556	3,484	2,289	1,460	1,033
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 23,800 Min 179 Mean 4,750 Cfsm - In. -
Water year 1953-54: Max 55,300 Min 321 Mean 4,846 Cfsm - In. -

* Discharge measurement made on this day.

Broad River near Chimney Rock, N. C.

Location.--Lat 35°25'35", long. 82°10'45", 1,000 ft downstream from Lake Lure Dam, 1.5 miles downstream from Buffalo Creek, and 3 miles east of Chimney Rock, Rutherford County.

Drainage area.--97 sq mi, approximately.

Records available.--May 1907 to June 1909 (fragmentary, published as "at Uree"), March 1927 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 860 ft (from topographic map). May 17, 1907, to June 30, 1909, staff gage at site 1 1/8 miles downstream at different datum.

Average discharge.--27 years (1927-54), 173 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs Jan. 22 (gage height, 4.20 ft); minimum, 2.9 cfs Apr. 18 (gage height, 0.50 ft); minimum daily, 3.5 cfs Apr. 4, 18.
1927-54: Maximum discharge, 26,000 cfs Aug. 15, 1928 (gage height, 16.8 ft), from rating curve extended above 4,200 cfs on basis of computation of peak flow over Lure Dam at gage heights 12.2 and 16.8 ft; minimum, 0.7 cfs Sept. 13, 1928 (gage height, 0.26 ft); minimum daily, 0.8 cfs Sept. 13, 14, 1928.

Remarks.--Records good. Large diurnal fluctuation and complete regulation at low flow caused by powerplant above station.

Revisions (water years).--WSP 892: 1927(M), 1928-30, 1933, 1935-39(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	2.9	1.3	115
.6	5.9	1.5	183
.7	10	2.0	420
.8	18	2.5	750
.9	30	3.0	1,240
1.1	64		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	70	78	84	151	212	296	73	155	13	5.3	6.8
2	151	90	82	4.7	168	213	265	5.0	152	13	81	84
3	10	90	*4.4	4.4	148	*256	84	146	152	14	79	6.8
4	7.3	48	5.0	79	*144	284	3.5	149	157	14	83	6.8
5	84	6.8	4.7	*82	146	303	216	*147	7.7	93	5.9	7.3
6	*87	6.8	5.0	80	70	89	*268	150	6.8	93	81	85
7	83	6.8	151	80	5.3	5.0	305	155	87	91	6.8	7.3
8	84	37	150	80	148	146	263	77	47	83	6.8	*7.3
9	84	89	146	5.0	148	123	120	5.3	88	*11	81	7.3
10	5.9	90	68	4.7	150	192	85	152	88	12	82	71
11	41	59	167	81	142	144	4.4	153	85	13	6.8	36
12	86	5.9	169	80	80	142	219	154	88	158	6.4	5.9
13	85	5.9	168	81	42	70	222	146	6.8	91	77	65
14	52	5.6	191	116	5.0	5.6	216	218	86	93	6.8	35
15	5.3	41	138	52	79	276	147	282	151	90	6.4	5.9
16	5.6	87	144	5.0	79	410	217	137	155	91	80	5.6
17	5.6	87	141	5.0	80	412	158	219	86	14	6.8	25
18	38	52	145	142	79	341	3.5	217	87	14	83	11
19	88	5.3	4.1	129	79	330	152	221	89	86	6.8	88
20	53	5.3	4.1	144	108	165	146	223	7.7	15	7.3	5.3
21	5.6	5.6	141	208	351	3.8	147	219	152	76	7.3	5.3
22	5.3	40	142	1,080	405	142	150	72	158	15	7.3	70
23	5.3	130	81	673	345	145	148	5.3	88	85	80	31
24	5.3	50	80	580	245	330	71	219	91	14	7.3	5.6
25	45	81	4.4	527	292	421	4.1	149	89	14	80	5.9
26	90	80	79	366	296	377	216	84	8.2	84	84	5.9
27	89	79	4.4	316	87	228	217	84	9.1	88	128	32
28	67	40	83	398	5.3	4.4	220	83	89	14	132	75
29	5.6	5.0	78	351	-	206	216	43	94	14	46	6.8
30	5.6	79	79	127	-	304	144	5.0	92	81	165	6.8
31	5.6	-	81	4.6	-	375	-	155	-	5.3	128	-
Total	1,469.0	1,478.0	2,818.1	5,969.4	4,073.6	6,654.8	4,923.5	4,147.6	2,652.3	1,592.3	1,662.0	816.6
Mean	47.4	49.3	90.9	193	145	215	164	134	88.4	51.4	53.6	27.2
Cfsm	0.489	0.508	0.937	1.99	1.49	2.22	1.69	1.38	0.911	0.530	0.553	0.280
In.	0.56	0.57	1.08	2.29	1.56	2.55	1.89	1.59	1.02	0.61	0.64	0.31

Calendar year 1953: Max 676 Min 3.5 Mean 113 Cfsm 1.16 In. 15.87
Water year 1953-54: Max 1,080 Min 3.5 Mean 105 Cfsm 1.08 In. 14.67

* Discharge measurement made on this day.

Green River near Mill Spring, N. C.

Location.--Lat 35°20'10", long. 82°04'50", on right bank at abandoned ford, 1.5 miles northeast of Pea Ridge Church, 2 miles downstream from Walnut Creek, and 5.2 miles northeast of Mill Spring, Polk County.
Drainage area.--174 sq mi.
Records available.--December 1939 to December 1954 (discontinued).
Gage.--Water-stage recorder. Altitude of gage is 770 ft (by barometer).
Average discharge.--15 years, 379 cfs.
Extremes.--1953-54: Maximum gage height during year, 12.71 ft Jan. 22 (maximum discharge at gage not determined); maximum discharge at Turner Shoals Dam, 9 miles upstream, drainage area, 135 sq mi, 8,800 cfs Jan. 22, by computation of flow over dam; minimum daily discharge at gage, 30 cfs Sept. 19.
1954: Maximum discharge at gage during period October to December, 968 cfs Dec. 29 (gage height, 3.31 ft); minimum daily, 29 cfs Oct. 16.
1939-54: Maximum gage height, 22.15 ft Aug. 13, 1940 (maximum discharge at gage not determined); maximum discharge at Turner Shoals Dam, 12,000 cfs Aug. 28, 1949, by computation of peak flow over dam; minimum daily discharge at gage, 25 cfs July 6, 1940 (gage height, 1.42 ft).
Maximum stage known, 24.2 ft in July 1916, from floodmark placed by local resident.
Remarks.--Records good except those above 2,000 cfs, which are poor. Large diurnal fluctuation caused by powerplants above station; considerable regulation by Lake Summitt and Turner Shoals Reservoirs (combined usable storage, 338,875,000 cu ft).
Revisions (water years).--WSP 1233: 1940(M).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	42	221	145	298	310	712	256	264	145	186	197
2	76	97	150	47	359	528	589	62	248	241	125	138
3	116	97	*157	44	437	741	359	539	291	73	111	193
4	42	82	530	306	*330	481	94	362	337	55	111	174
5	114	*138	239	*232	320	324	497	*521	109	42	153	182
6	83	95	266	275	367	373	*559	252	44	154	118	132
7	72	44	392	284	64	135	400	499	355	130	150	189
8	78	48	306	148	288	284	354	193	198	108	94	164
9	76	108	377	47	333	406	560	55	268	*134	180	157
10	79	88	548	43	357	406	329	418	304	116	206	96
11	101	81	330	231	319	326	242	326	265	108	137	69
12	106	124	410	151	314	367	295	246	98	107	178	74
13	60	138	450	47	197	210	448	297	60	86	127	113
14	70	44	681	239	64	426	711	648	157	135	165	74
15	86	75	605	242	280	633	552	618	*265	133	202	154
16	78	98	338	430	340	668	349	216	310	119	155	150
17	66	94	366	96	318	342	343	222	306	42	195	115
18	67	102	466	294	317	329	110	355	406	102	137	34
19	123	146	326	320	292	579	280	565	139	160	193	30
20	60	143	182	314	399	367	317	556	62	217	198	106
21	72	293	498	850	934	194	331	336	277	139	181	157
22	169	84	476	e4,800	944	290	529	244	192	178	111	123
23	214	304	320	e4,200	639	333	331	60	226	130	139	78
24	95	291	253	1,340	558	588	250	273	277	159	194	129
25	64	150	55	1,010	330	496	64	320	204	164	139	35
26	143	128	231	967	478	523	492	201	50	125	122	125
27	249	253	182	452	384	554	251	252	42	119	127	158
28	164	65	179	746	202	161	324	222	188	153	37	53
29	115	44	258	534	-	303	320	124	200	158	95	128
30	102	257	260	355	-	663	318	53	250	124	55	128
31	53	-	247	74	-	640	-	230	-	157	37	-
Total	3,067	3,753	10,299	19,263	10,462	12,980	11,310	9,521	6,372	4,013	4,358	3,655
Mean	98.9	125	332	621	374	419	377	307	212	129	141	122
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 2,810 Min 38 Mean 288 Cfsm 1.66 In. 22.53
Water year 1953-54: Max 4,800 Min 30 Mean 271 Cfsm 1.56 In. 21.18

* Discharge measurement made on this day.
e Stage-discharge relation indefinite; discharge at gaging station estimated on basis of power company records at Turner Shoals Dam, 9 miles upstream.

Discharge, in cubic feet per second, 1954

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	42	114	105	9	42	59	86	17	114	106	83	25	126	65	41
2	31	59	84	10	111	134	62	18	112	108	66	26	69	41	39
3	119	125	110	11	114	128	43	19	64	94	46	27	122	39	92
4	92	126	47	12	69	53	38	20	130	85	91	28	137	39	101
5	62	51	42	13	127	42	168	21	138	86	84	29	47	43	447
6	139	38	476	14	139	107	210	22	46	47	219	30	34	46	573
7	129	106	143	15	42	100	83	23	32	42	67	31	111	-	508
8	41	122	86	16	29	67	121	24	116	44	42				
Total													2,726	2,316	4,403
Mean													87.9	77.2	142
Cubic feet per second per square mile													-	-	-
Runoff in inches													-	-	-

Calendar year 1954: Max 4,800 Min 29 Mean 250 Cfsm 1.44 In. 19.55

Note.--Discharge measurement of 59.4 cfs made on Jan. 11, 1955.

Second Broad River at Cliffside, N. C.

Location.--Lat 35°14', long. 81°46', on left bank a quarter of a mile downstream from dam of Cliffside Mills, at Cliffside, Rutherford County, and 1½ miles upstream from mouth.

Drainage area.--211 sq mi.

Records available.--June 1925 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 670 ft (by barometer).

Average discharge.--29 years, 292 cfs.

Extremes.--Maximum discharge during year, 6,670 cfs Jan. 23 (gage height, 8.98 ft); minimum, 7.0 cfs Apr. 29 (gage height, 0.50 ft); minimum daily, 20 cfs Sept. 10.
1925-54: Maximum discharge, 15,000 cfs Aug. 14, 1940 (gage height, 17.93 ft), from rating curve extended above 9,100 cfs on basis of computation of peak flow over Cliffside Mills dam; minimum, 4 cfs July 24, 1943, minimum daily, 6 cfs June 9, 1940.

Remarks.--Records good except those below 100 cfs, which are fair, and those for period of no gage-height record, which are poor. Considerable diurnal fluctuation and some regulation caused by mills above station.

Revisions (water years).--WSP 892: 1928(M), drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	13	2.0	445
.7	22	2.5	735
.8	35	3.0	1,160
1.0	67	4.0	2,030
1.2	109	6.0	3,770
1.5	208	8.5	6,120

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	88	82	130	a260	620	555	235	165	91	43	80
2	157	118	82	70	a250	464	420	288	175	116	126	52
3	95	95	202	100	a230	380	365	248	156	111	92	31
4	95	117	136	164	a290	330	320	374	136	81	83	79
5	143	81	274	138	a230	237	330	225	126	54	66	77
6	145	93	129	*112	a230	264	258	*177	138	84	26	60
7	55	69	237	151	a180	242	322	197	153	126	70	57
8	174	84	242	110	a190	240	259	204	118	91	84	*62
9	32	112	190	109	a200	161	268	182	110	159	95	58
10	115	108	373	132	a180	229	246	197	152	115	126	20
11	107	111	260	168	a170	206	242	154	96	104	126	21
12	129	105	485	137	*a160	209	240	178	141	137	76	22
13	90	80	481	148	154	190	229	177	124	104	68	62
14	97	84	726	102	164	1,140	268	350	161	84	27	96
15	100	76	492	106	197	688	201	445	199	114	55	48
16	95	91	325	853	171	410	396	310	145	77	98	22
17	95	*93	280	716	189	295	290	259	*124	54	82	22
18	88	88	326	386	201	286	250	233	153	100	83	76
19	100	88	156	257	180	325	256	218	148	100	75	25
20	118	93	145	242	166	544	198	216	126	78	23	81
21	124	148	158	1,890	1,650	390	216	216	137	76	78	86
22	74	164	221	3,920	1,330	360	193	182	126	168	102	86
23	80	160	201	6,010	478	294	197	175	115	121	123	78
24	98	118	115	1,880	415	488	204	203	133	115	99	21
25	88	118	154	702	259	716	470	174	122	76	85	61
26	124	98	168	488	282	652	349	161	75	*70	80	57
27	82	118	161	437	259	544	272	135	82	90	56	65
28	80	104	178	325	264	484	249	161	124	93	67	74
29	109	98	145	330	-	410	193	161	127	62	86	68
30	109	124	171	290	-	385	154	193	70	58	63	27
31	95	-	244	277	-	415	-	190	-	77	84	-
Total	3,208	3,124	7,519	20,880	8,929	12,598	8,410	6,818	3,957	2,986	2,447	1,674
Mean	103	104	243	674	319	406	280	220	132	96.3	78.9	55.8
Cfsm	0.488	0.493	1.15	3.19	1.51	1.92	1.33	1.04	0.626	0.456	0.374	0.264
In.	0.57	0.55	1.33	3.68	1.57	2.22	1.48	1.20	0.70	0.53	0.43	0.30

Calendar year 1953: Max 2,420 Min 15 Mean 225 Cfsm 1.07 In. 14.52
Water year 1953-54: Max 6,010 Min 20 Mean 226 Cfsm 1.07 In. 14.56

Peak discharge (base, 3,000 cfs).--Jan. 23 (11:30 a.m.) 6,670 cfs (8.98 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby stations.

Broad River near Boiling Springs, N. C.

Location.--Lat 35°12'35", long. 81°41'50", on right bank half a mile upstream from Sandy Run Creek, 3 miles downstream from Second Broad River, and 3½ miles southwest of Boiling Springs, Cleveland County.

Drainage area.--864 sq mi.

Records available.--June 1925 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 639.92 ft above mean sea level (Duke Power Co. benchmark). Prior to July 20, 1934, at site 500 ft upstream at datum 1 ft higher.

Average discharge.--29 years, 1,409 cfs.

Extremes.--Maximum discharge during year, 20,600 cfs Jan. 22 (gage height, 12.72 ft); minimum, 95 cfs Sept. 19 (gage height, 1.20 ft); minimum daily, 126 cfs Sept. 19.
1925-54: Maximum discharge, 73,300 cfs Aug. 16, 1928 (gage height, 24.3 ft, former site, present datum); minimum, 61 cfs July 21, 1940 (gage height, 1.06 ft); minimum daily, that of Sept. 19, 1954.

Remarks.--Records good. Considerable diurnal fluctuation and some regulation caused by powerplants above station.

Revisions (water years).--WSP 892: 1928, drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.2	95	3.0	1,900
1.3	146	5.0	4,750
1.5	271	8.0	9,480
2.0	690	12.0	18,600

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	681	370	578	760	931	1,630	2,940	1,200	844	615	393	378
2	561	370	604	483	1,170	1,770	2,110	1,150	942	508	491	393
3	552	475	681	466	1,280	1,770	1,900	811	908	605	417	271
4	483	517	770	491	1,280	1,770	1,390	1,700	942	401	401	386
5	417	483	1,340	794	1,130	1,480	1,030	1,230	931	362	393	354
6	*500	442	822	*671	1,080	1,430	1,580	1,320	578	370	346	331
7	417	370	1,190	780	1,030	1,200	1,770	*999	543	534	331	316
8	543	354	1,140	740	730	833	1,580	1,320	833	483	393	378
9	393	370	1,060	605	1,020	1,060	1,770	844	596	947	331	*278
10	475	517	1,490	491	1,090	1,190	1,640	681	822	682	710	346
11	450	508	1,280	517	1,030	1,260	1,300	1,090	790	491	442	217
12	442	491	2,360	705	*1,050	1,120	1,110	1,050	801	508	386	237
13	475	442	2,040	643	976	1,150	1,300	987	605	534	393	217
14	458	433	2,870	491	790	2,800	1,510	1,580	543	466	294	301
15	491	338	2,110	690	652	2,110	1,590	2,240	710	722	378	271
16	417	370	1,640	3,030	908	1,970	1,700	1,770	920	792	458	271
17	393	483	1,230	2,310	1,070	1,900	1,420	1,050	976	458	386	271
18	370	483	1,230	1,150	1,060	1,550	1,290	1,170	1,010	378	442	286
19	386	500	1,130	1,190	999	1,580	854	1,290	999	425	393	126
20	526	466	916	1,150	999	2,440	1,090	1,590	671	500	386	251
21	491	643	730	5,530	4,850	1,480	1,150	1,580	*526	534	425	362
22	370	811	1,150	12,500	3,950	1,170	1,140	1,230	800	690	466	362
23	378	596	1,180	18,600	2,380	1,280	1,320	931	710	552	393	294
24	526	876	886	6,390	1,900	1,770	1,150	720	690	508	417	237
25	401	730	760	3,590	1,700	2,720	1,350	1,060	730	466	466	278
26	386	578	587	2,940	1,540	2,580	920	1,030	605	425	393	169
27	517	561	760	2,240	1,550	2,380	1,440	790	370	*433	393	230
28	652	671	596	1,900	1,300	2,110	1,180	865	409	466	378	316
29	624	475	690	2,110	-	1,320	1,260	844	517	442	425	230
30	466	417	811	1,770	-	1,640	1,090	770	552	378	331	271
31	409	-	904	1,200	-	*2,380	-	652	-	401	378	-
Total	14,650	15,140	35,535	76,927	39,445	52,843	42,874	35,544	21,873	16,076	12,629	8,628
Mean	473	505	1,146	2,482	1,409	1,750	1,429	1,147	729	519	407	288
Cfsm	0.547	0.584	1.33	2.87	1.63	1.97	1.65	1.33	0.844	0.601	0.471	0.333
In.	0.63	0.65	1.53	3.31	1.70	2.27	1.85	1.53	0.94	0.69	0.54	0.37

Calendar year 1953: Max 9,320 Min 286 Mean 1,071 Cfsm 1.24 In. 16.81
Water year 1953-54: Max 18,600 Min 126 Mean 1,020 Cfsm 1.18 In. 16.01

Peak discharge (base, 9,000 cfs).--Jan. 22 (12 p.m.) 20,600 cfs (12.72 ft).
* Discharge measurement made on this day.

First Broad River near Lawndale, N. C.

Location.--Lat 35°22'50", long. 81°32'40", on left bank 0.2 mile upstream from Shoal Rock Creek, 0.4 mile downstream from highway bridge at Double Shoals, and 2½ miles southeast of Lawndale, Cleveland County.

Drainage area.--198 sq mi.

Records available.--February 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 735.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years, 268 cfs.

Extremes.--Maximum discharge during year, 8,900 cfs Jan. 23 (gage height, 18.96 ft); minimum, 14 cfs Sept. 26; minimum daily, 23 cfs Sept. 19.
1940-54: Maximum discharge, 32,500 cfs Aug. 14, 1940 (gage height, 37.8 ft), from rating curve extended above 12,000 cfs on basis of records for nearby streams; minimum, that of Sept. 26, 1954; minimum daily, that of Sept. 19, 1954.
Flood of July 1916 reached a stage of 37.8 ft, from floodmark established by local resident.

Remarks.--Records good. Considerable diurnal fluctuation and slight regulation at low flow caused by powerplants and mills above station.

Revisions (water years).--WSP 952: Drainage area. WSP 1142: 1945-46(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.4	23	3.0	625
1.6	46	4.0	1,240
1.8	81	6.0	2,040
2.0	134	8.0	2,950
2.5	350	12.0	4,950

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	92	96	131	236	827	521	189	159	88	60	68
2	171	96	99	122	231	482	416	208	156	100	68	60
3	134	96	99	115	226	380	345	193	156	138	70	57
4	99	94	164	128	277	325	305	268	152	90	70	43
5	84	96	204	*122	226	291	295	200	148	92	68	28
6	*112	99	258	115	231	240	282	*189	138	88	59	40
7	109	94	245	115	181	240	295	179	148	83	54	49
8	109	94	208	112	189	236	286	200	148	81	51	*49
9	106	94	189	109	197	231	263	163	138	238	54	49
10	88	96	272	109	189	217	226	174	148	125	68	49
11	72	96	259	134	*185	213	240	163	138	101	72	38
12	109	96	652	131	181	213	231	163	122	99	70	27
13	103	94	527	112	178	233	231	181	122	90	66	45
14	101	94	857	106	166	1,570	240	338	178	85	34	48
15	103	94	422	141	166	546	268	360	178	148	51	48
16	106	99	310	1,040	174	375	325	268	*128	94	56	45
17	103	*99	240	678	193	310	254	226	156	77	57	48
18	96	94	213	370	185	282	231	204	159	79	52	37
19	101	94	174	282	170	360	213	204	141	85	81	23
20	103	94	156	231	2,440	548	208	299	131	85	144	168
21	101	169	178	2,780	1,740	406	204	316	118	83	187	116
22	101	174	189	4,710	750	330	204	208	115	81	96	64
23	94	118	163	4,780	428	305	197	197	112	90	85	57
24	81	128	156	951	360	590	208	189	112	79	81	54
25	90	112	145	589	320	615	236	185	106	75	77	54
26	99	103	141	438	291	690	272	174	92	*72	81	50
27	96	101	138	370	226	510	226	183	94	123	72	42
28	103	99	141	325	259	189	204	166	96	79	72	52
29	112	96	141	295	-	148	193	235	92	79	54	49
30	99	99	141	259	-	*345	193	174	88	73	68	48
31	96	-	134	236	-	512	-	159	-	62	66	-
Total	3,270	3,104	7,311	20,136	10,595	12,759	7,812	6,555	3,969	2,962	2,244	1,605
Mean	105	103	236	650	378	412	260	211	132	95.5	72.4	53.5
Cfsm	0.530	0.520	1.19	3.28	1.91	2.08	1.31	1.07	0.667	0.482	0.366	0.270
In.	0.61	0.58	1.37	3.78	1.99	2.40	1.47	1.23	0.75	0.56	0.42	0.30

Calendar year 1953: Max 3,640 Min 52 Mean 221 Cfsm 1.12 In. 15.13
Water year 1953-54: Max 4,780 Min 23 Mean 226 Cfsm 1.14 In. 15.46

Peak discharge (base, 5,000 cfs).--Jan. 23 (2:30 a.m.) 8,900 cfs (18.96 ft).
* Discharge measurement made on this day.

Broad River near Gaffney, S. C.

Location.--Lat 35°05'20", long. 81°34'20", on right bank at downstream side of bridge on U. S. Highway 29A, 0.3 mile upstream from Cherokee Creek, 4.4 miles downstream from Gaston Shoals Dam, and 4.5 miles east of Gaffney, Cherokee County.

Drainage area.--1,490 sq mi, approximately.

Records available.--July 1896 to December 1899, December 1938 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 539.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. July 12, 1896, to Dec. 31, 1899, chain or staff gages at sites 1.1 miles upstream at different datum.

Average discharge.--17 years (1896-98, 1939-54), 2,498 cfs.

Extremes.--Maximum discharge during year, 41,000 cfs Jan. 23 (gage height, 13.24 ft); minimum, 168 cfs Sept. 5; minimum daily, 399 cfs Sept. 27.
1896-99, 1938-54: Maximum discharge, 119,000 cfs Aug. 14, 1940 (gage height, 19.78 ft), by computation of flow over Gaston Shoals Dam; minimum, that of Sept. 5, 1954; minimum daily, that of Sept. 27, 1954.

Remarks.--Records good except those for period of no gage-height record, which are fair. Some regulation at medium and low flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Revisions.--WSP 972: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 12-21, Jan. 17 to Feb. 1, Feb. 22 to Apr. 2)

Oct. 1 to Jan. 16, July 10 to Sept. 30

2.6	362	4.0	2,100
3.0	670	6.0	6,520
3.5	1,250	7.0	9,360

Jan. 17 to July 9

2.9	550	8.0	12,800
3.5	1,120	10.0	21,400
4.0	1,890	13.0	40,200
6.0	6,400		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,300	740	892	1,530	1,660	3,800	6,830	1,820	1,130	834	570	636
2	1,110	824	917	1,200	1,810	3,600	4,180	2,030	1,300	827	896	652
3	1,100	784	1,210	1,080	1,940	3,400	3,510	1,600	1,380	880	745	669
4	1,080	918	1,230	1,110	2,080	3,400	2,770	2,290	1,300	766	706	594
5	934	908	2,320	1,220	1,810	2,800	2,210	2,250	1,290	732	718	414
6	856	752	1,900	1,420	1,590	2,600	2,580	*2,040	1,120	550	702	685
7	995	875	2,700	1,340	1,780	2,400	3,030	1,710	1,040	565	547	656
8	938	680	2,100	*1,330	1,370	1,900	*2,770	2,050	1,120	734	528	578
9	816	852	1,770	1,380	1,420	1,900	2,930	1,430	1,070	914	657	556
10	782	774	2,520	1,040	1,630	2,000	2,700	1,280	1,070	2,420	1,220	534
11	920	932	2,400	1,180	1,760	2,400	2,270	1,500	1,180	864	870	474
12	787	*900	4,350	1,150	1,350	2,000	2,120	1,510	1,150	890	708	405
13	845	866	5,100	1,260	1,440	2,000	2,070	1,650	948	884	711	411
14	921	877	6,040	1,240	1,340	6,000	2,460	2,130	897	943	599	405
15	880	740	4,520	1,180	1,230	4,800	2,650	3,180	1,040	934	656	411
16	854	792	3,090	7,770	1,320	3,800	2,740	2,870	1,210	1,540	793	452
17	782	833	2,350	7,060	1,480	3,800	2,400	1,790	1,460	734	866	488
18	758	900	2,010	3,080	*1,680	3,200	2,250	1,640	1,440	646	785	481
19	790	914	1,970	2,310	1,600	2,870	1,800	1,870	1,450	860	*986	445
20	747	877	1,570	2,160	1,630	3,940	1,720	2,240	1,150	766	880	405
21	945	1,020	1,380	8,900	6,500	2,920	1,860	2,640	982	807	1,530	744
22	916	1,640	1,990	22,500	8,500	1,920	1,880	1,850	1,010	1,390	917	600
23	754	1,160	1,950	36,400	4,600	1,850	2,060	1,510	1,110	1,040	874	569
24	816	1,240	1,610	13,400	3,800	2,800	1,780	1,210	*1,020	679	794	434
25	750	1,290	1,320	6,140	3,200	4,410	2,450	1,430	1,030	812	792	466
26	839	1,040	1,280	4,880	2,800	4,300	1,840	1,410	999	826	730	430
27	797	991	1,210	3,950	3,000	4,300	2,230	1,320	741	826	772	399
28	1,120	1,140	1,430	2,870	2,400	4,180	1,890	1,240	709	733	800	582
29	971	896	1,160	3,180	-	2,850	2,170	1,260	714	746	584	430
30	956	969	1,450	2,770	-	2,560	1,760	1,320	814	717	810	452
31	759	-	1,710	2,210	-	4,070	-	1,180	-	569	586	-
Total	27,818	28,124	67,449	148,240	66,720	98,570	75,910	55,250	32,872	27,428	24,332	15,457
Mean	897	937	2,176	4,782	2,383	3,180	2,530	1,782	1,096	885	785	515
Cfsm	0.602	0.629	1.46	3.21	1.60	2.13	1.70	1.20	0.736	0.594	0.527	0.346
In.	0.69	0.70	1.68	3.70	1.67	2.46	1.90	1.38	0.82	0.68	0.61	0.39

Calendar year 1953: Max 17,800 Min 486 Mean 1,992 Cfsm 1.34 In. 18.14
Water year 1953-54: Max 36,400 Min 399 Mean 1,831 Cfsm 1.23 In. 16.68

Peak discharge (base, 16,000 cfs).--Jan. 23 (7 a.m.) 41,000 cfs (13.24 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Feb. 21 to Mar. 18; discharge estimated on basis of powerplant records.

North Pacolet River at Fingerville, S. C.

Location.--Lat 35°07', long. 81°59', on right bank at McMillin Mill, about 400 ft downstream from Obed Creek and 1 mile south of Fingerville, Spartanburg County.

Drainage area.--116 sq mi.

Records available.--November 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 715.56 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 24, 1933, at site 400 ft downstream at datum 5.60 ft higher.

Average discharge.--24 years (1930-54), 204 cfs.

Extremes.--Maximum discharge during year, 5,040 cfs Jan. 23 (gage height, 15.96 ft), from rating curve extended above 1,400 cfs on basis of computation of flow over dam 2 miles above station; minimum, about 14 cfs Sept. 14; minimum daily, 29 cfs Sept. 14.
1929-54: Maximum discharge, 12,500 cfs Aug. 14, 1940 (gage height, 27.13 ft), from rating curve extended above 1,400 cfs as explained above; minimum, 10 cfs Oct. 7, 1940, June 22, 1941; minimum daily, that of Sept. 14, 1954.

Remarks.--Records fair. Some diurnal fluctuation at low and medium flow caused by mill above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 4-17, Jan. 16-19, 21-23, Feb. 21-23, 28, Mar. 1, 14, 15, 19, 20, 24, 25, Mar. 28 to Apr. 12, May 4, 5, 14, 15, 20, June 18, 19, July 16, July 25 to Aug. 2)

2.7	23	4.0	238
2.8	31	7.0	1,050
3.0	52	10.0	2,120
3.5	132	14.0	3,930

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	64	76	101	192	264	588	184	116	74	74	41
2	83	64	74	98	183	201	334	162	121	96	71	39
3	78	64	76	98	176	190	281	214	116	107	57	38
4	76	62	220	98	179	179	257	238	118	93	51	37
5	74	64	214	96	170	170	234	166	107	107	50	36
6	72	64	184	96	160	162	229	*140	105	90	43	35
7	65	61	303	94	152	158	264	134	107	78	46	33
8	65	64	187	93	152	156	*334	138	103	76	50	32
9	70	65	168	91	148	154	549	132	100	131	51	31
10	66	65	250	93	144	152	288	128	114	162	52	39
11	68	65	190	105	142	146	260	125	105	96	48	41
12	60	*65	408	101	136	144	276	125	101	90	44	36
13	60	65	549	*90	131	152	190	130	100	83	49	34
14	61	62	601	90	123	419	185	303	98	78	46	29
15	70	64	497	96	130	245	179	267	103	111	61	35
16	68	65	274	553	128	181	172	181	114	228	55	35
17	62	62	194	687	152	164	172	160	116	114	45	37
18	64	62	150	322	132	158	162	150	231	94	*42	33
19	64	65	130	231	127	249	158	160	154	88	48	31
20	61	66	120	168	156	394	150	250	125	88	48	35
21	60	145	130	792	585	236	148	174	105	88	43	34
22	60	128	150	1,910	464	194	146	144	96	86	48	33
23	62	123	134	3,620	245	183	146	140	85	83	48	31
24	62	99	121	1,300	*190	291	142	136	*78	74	48	32
25	59	91	116	550	179	288	154	130	88	78	55	32
26	58	85	114	400	166	308	152	125	82	77	50	32
27	61	80	110	334	154	276	144	123	78	74	45	32
28	76	77	109	291	190	310	151	123	82	71	43	30
29	78	76	112	252	-	267	148	123	78	70	70	30
30	68	76	110	234	-	264	142	127	76	68	58	31
31	64	-	107	209	-	453	-	119	-	74	48	-
Total	2,081	2,258	6,178	13,293	5,186	7,108	6,735	4,951	3,202	2,927	1,587	1,024
Mean	67.1	75.3	199	429	185	229	224	160	107	94.4	51.2	34.1
Cfsm	0.578	0.649	1.72	3.70	1.59	1.97	1.93	1.38	0.922	0.814	0.441	0.294
In.	0.67	0.72	1.98	4.27	1.66	2.27	2.15	1.59	1.03	0.94	0.51	0.33

Calendar year 1953: Max 1,510 Min 42 Mean 163 Cfsm 1.41 In. 19.05
Water year 1953-54: Max 3,620 Min 29 Mean 155 Cfsm 1.34 In. 18.12

Peak discharge (base, 1,600 cfs).--Jan. 23 (9 a.m.) 5,040 cfs (15.96 ft).
* Discharge measurement made on this day.

South Pacolet River Reservoir near Fingerville, S. C.

Location.--Lat 35°07', long. 81°59', on downstream side of right pier of highway bridge, 1 mile upstream from dam and 1¾ miles south of Fingerville, Spartanburg County.

Drainage area.--92 sq mi, approximately.

Records available.--March 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 761.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum gage height during year, 16.48 ft Jan. 23; minimum, 6.35 ft Sept. 25.
1930-54: Maximum gage height, 17.68 ft Oct. 19, 1937; minimum, 2.76 ft Oct. 8, 1930.

Remarks.--Reservoir is formed by concrete dam completed in 1926. Capacity, 879,000,000 gal between gage heights 0.0 ft (limit of drawdown) and 15.0 ft (top of flashboards). Dead storage is about 350,000,000 gal. Figures given herein represent usable contents. Spillway crest is at gage height 12.0 ft. City of Spartanburg diverted about 8,950,000 gal per day (13.8 cfs) from reservoir for municipal supply during water year 1954. Surplus water is used for generation of power.

Mean gage height, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1	12.65	9.86	12.30	10.64	12.60	13.92	15.00	13.80	11.77	11.19	10.77	9.02
2	12.58	9.77	12.36	10.60	12.54	13.91	15.23	13.91	11.72	11.00	10.48	8.90
3	12.53	9.65	12.43	10.56	12.58	13.76	14.90	13.97	11.71	10.82	10.20	8.78
4	12.47	9.59	12.65	10.73	12.52	13.54	14.64	14.05	11.73	10.65	9.99	8.69
5	12.39	9.53	13.11	10.89	12.43	13.28	14.57	13.77	11.72	10.68	9.82	8.54
6	12.35	9.49	13.41	11.03	12.31	12.95	13.98	12.91	11.75	10.77	9.75	8.28
7	12.28	9.48	13.60	11.12	12.28	12.73	13.98	12.72	11.75	10.61	9.80	8.01
8	12.18	9.47	13.76	11.10	12.26	12.63	13.48	12.58	11.70	10.47	9.95	7.68
9	12.09	9.47	13.50	11.08	12.02	12.27	12.79	12.42	11.60	10.53	10.00	7.44
10	12.03	9.44	13.33	11.19	11.87	11.83	11.80	12.35	11.55	11.10	9.87	7.26
11	12.01	9.30	13.50	11.39	12.00	11.41	11.43	12.27	11.51	11.49	9.71	7.20
12	11.96	9.31	13.81	11.59	12.00	11.03	11.94	12.19	11.40	11.55	9.57	7.16
13	11.86	9.37	14.82	11.70	12.08	10.68	12.11	12.13	11.28	11.50	9.40	7.09
14	11.73	9.43	15.18	11.77	12.27	11.21	12.20	12.47	11.16	11.35	9.26	6.91
15	11.59	9.53	15.08	11.90	12.37	12.55	12.36	13.09	10.98	11.03	9.13	6.82
16	11.55	9.61	14.92	12.95	12.38	12.82	12.45	13.40	10.97	11.11	9.22	6.79
17	11.51	9.64	14.17	15.23	12.31	12.80	12.40	13.28	11.14	13.57	9.17	6.79
18	11.40	9.71	13.58	15.25	12.28	12.70	12.38	12.91	12.30	14.76	9.15	6.77
19	11.31	9.77	13.24	14.78	12.24	12.68	12.35	12.70	14.68	14.38	8.98	6.75
20	11.21	9.83	12.98	14.06	12.15	13.10	12.31	12.82	14.66	13.90	8.81	6.71
21	11.10	10.10	12.72	14.22	12.63	14.21	12.51	13.09	14.19	13.55	8.77	6.62
22	10.97	10.70	12.45	15.86	14.06	14.49	12.59	13.19	13.67	13.24	8.88	6.55
23	10.87	11.15	12.14	16.31	14.73	14.37	12.54	13.09	13.19	12.89	8.82	6.45
24	10.74	11.44	11.85	15.68	14.60	14.36	12.55	13.02	12.70	12.61	8.67	6.38
25	10.60	11.64	11.72	15.24	14.34	14.87	12.49	12.77	12.31	12.36	8.58	6.38
26	10.43	11.75	11.50	14.94	14.06	15.11	12.39	12.48	12.03	12.17	8.53	6.43
27	10.29	11.86	11.24	14.55	13.76	15.15	12.44	12.19	11.82	11.99	8.40	6.50
28	10.21	11.99	10.99	13.96	13.65	15.20	12.53	11.94	11.68	11.78	8.25	6.51
29	10.16	12.10	10.92	13.18	-	15.10	13.08	11.79	11.50	11.57	8.45	6.49
30	10.06	12.20	10.82	12.48	-	14.64	13.83	11.74	11.33	11.30	8.89	6.48
31	9.96	-	10.69	12.48	-	14.34	-	11.75	-	11.05	9.04	-

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (millions of gallons)	Change in contents during month (equivalent in cfs)
Sept.30	12.66	663	-
Oct. 31	9.89	458	-10.2
Nov. 30	12.24	629	+8.8
Dec. 31	10.67	512	-5.8
Calendar year 1953	-	-	-.3
Jan. 31	12.56	655	+7.1
Feb. 28	13.80	763	+6.0
Mar. 31	14.56	835	+3.6
Apr. 30	13.87	769	-3.4
May 31	11.79	594	-8.7
June 30	11.26	554	-2.1
July 31	10.91	529	-1.2
Aug. 31	9.04	403	-6.3
Sept.30	6.48	255	-7.6
Water year 1953-54	-	-	-1.7

† Gage height at 12 p.m.

Pacolet River near Fingerville, S. C.

Location.--Lat 35°07', long. 81°58', on right bank 100 ft upstream from bridge on State Highway 55, a quarter of a mile downstream from confluence of North Pacolet and South Pacolet Rivers, and 2½ miles southeast of Fingerville, Spartanburg County.

Drainage area.--212 sq mi.

Records available.--November 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 706.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years (1930-54), 334 cfs.

Extremes.--Maximum discharge during year, 7,750 cfs Jan. 23 (gage height, 10.38 ft); minimum daily, 44 cfs Sept. 27-30.
1929-54: Maximum discharge, 22,800 cfs Aug. 14, 1940 (gage height, 22.43 ft), from rating curve extended above 9,600 cfs by velocity-area studies; minimum daily, 38 cfs Oct. 4, 1931.
Maximum stage known, 46 ft in June 1903, from floodmark (discharge not determined).

Remarks.--Records good except those for period of no gage-height record, which are fair. Some regulation by South Pacolet River Reservoir (see preceding page). Some diurnal fluctuation caused by mill on North Pacolet River. About 8,950,000 gal per day (13.8 cfs) diverted above station for city of Spartanburg water supply.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13		Dec. 14 to Sept. 30			
0.4	83	0.1	42	1.5	446
.5	102	.3	72	2.0	697
1.0	233	.5	111	5.0	2,740
1.5	419	1.0	248	9.0	6,250
2.0	674				
2.5	990				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	138	109	106	175	316	408	972	351	180	100	109	55
2	134	109	106	175	305	368	844	279	170	133	110	60
3	129	109	113	162	296	352	580	354	176	156	90	55
4	126	102	297	149	313	340	411	455	164	139	80	55
5	117	102	344	146	302	324	451	424	156	144	70	55
6	115	102	283	146	283	316	301	*308	156	129	60	55
7	109	102	465	149	249	276	486	242	154	113	60	60
8	109	102	331	154	276	287	*574	242	149	107	65	55
9	111	104	298	146	276	298	803	229	151	172	75	50
10	106	109	432	144	238	294	546	210	155	196	75	60
11	109	109	323	156	232	280	341	207	151	131	70	60
12	103	*98	585	152	229	272	394	204	151	125	70	55
13	106	98	800	*144	211	275	332	210	149	118	65	55
14	111	98	1,100	144	201	511	313	384	150	136	75	50
15	113	100	875	149	219	360	302	415	153	165	95	50
16	106	100	578	711	238	313	302	305	161	294	75	50
17	106	97	474	1,290	276	290	294	305	156	205	60	50
18	106	96	309	847	238	276	276	283	261	232	*70	48
19	106	99	290	497	235	345	280	283	275	213	65	46
20	109	102	248	442	275	554	241	379	238	195	65	50
21	106	182	290	1,030	699	360	219	304	242	172	60	48
22	109	170	309	3,460	604	352	245	248	201	172	65	48
23	109	158	283	6,070	428	332	238	232	195	167	65	46
24	106	131	232	2,340	*381	459	235	232	*187	140	65	46
25	108	124	222	1,040	360	478	262	232	152	125	70	46
26	106	120	229	692	340	575	242	232	146	122	70	46
27	109	115	216	606	313	595	222	226	122	118	65	44
28	120	109	199	545	293	642	242	207	118	116	60	44
29	124	109	201	511	-	595	255	207	116	113	90	44
30	113	109	213	408	-	530	283	195	104	112	75	44
31	109	-	181	316	-	696	-	175	-	113	65	-
Total	3,488	3,374	10,932	23,096	8,626	12,353	11,486	8,559	5,039	4,673	2,254	1,530
Mean	113	112	353	745	308	398	383	276	168	151	72.7	51.0
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 2,710 Min 66 Mean 273 Cfsm - In. -
Water year 1953-54: Max 6,070 Min 44 Mean 261 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Aug. 3 to Sept. 30; discharge estimated on basis of records for station near Clifton, North Pacolet River at Fingerville, and records of powerplant operation on South Pacolet River.

Pacolet River near Clifton, S. C.

Location.--Lat 34°58'10", long. 81°48'05", on left bank 1.2 miles downstream from dam at Clifton Mill 2, 1.3 miles southeast of Clifton, Spartanburg County, 2.7 miles upstream from Lawson Fork, and 2.7 miles northeast of Glendale.

Drainage area.--320 sq mi.

Records available.--November 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 540 ft (from topographic map).

Average discharge.--14 years (1940-54), 478 cfs.

Extremes.--Maximum discharge during year, 8,520 cfs Jan. 22 (gage height, 9.14 ft), from rating curve extended above 4,400 cfs as explained below; minimum daily, 34 cfs Sept. 5. 1939-54: Maximum discharge, 26,800 cfs Aug. 14, 1940 (gage height, 21.19 ft), from rating curve extended above 4,400 cfs on basis of computation of peak flow over dam at Clifton Mill 2; minimum daily, 17 cfs Oct. 19, 1941.

Remarks.--Records fair. Some regulation at low and medium flow by powerplants above station and South Pacolet River Reservoir (see p. 211). City of Spartanburg diverts water above station from South Pacolet River Reservoir for municipal supply.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	34	1.5	306
.8	50	2.0	706
1.0	97	5.0	3,580
1.2	164	9.0	8,380

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	143	164	262	488	675	1,600	422	249	156	110	91
2	201	188	168	218	494	541	1,200	440	278	162	200	84
3	198	165	166	264	442	478	876	459	265	260	157	83
4	150	156	350	264	481	453	697	654	261	168	130	93
5	190	158	466	222	449	437	653	584	234	264	124	34
6	166	156	494	238	430	429	671	506	197	201	112	54
7	167	166	584	226	379	342	642	359	254	171	98	98
8	164	139	476	240	445	413	*688	326	224	126	54	86
9	162	182	362	241	423	401	1,050	320	219	154	89	77
10	188	168	580	206	399	375	739	346	218	366	98	80
11	105	169	478	275	356	402	557	302	245	226	116	68
12	174	166	1,400	247	388	346	590	290	216	213	109	48
13	164	*166	982	222	300	376	504	302	188	180	100	87
14	161	164	1,510	*224	300	827	442	490	239	173	109	80
15	172	130	1,090	238	362	640	442	568	228	200	66	75
16	172	180	812	2,050	350	452	442	442	266	388	171	70
17	172	163	644	1,410	410	433	404	438	302	233	116	73
18	131	158	493	1,240	364	413	389	384	397	264	102	46
19	185	160	402	750	364	498	430	366	293	301	*98	39
20	164	172	335	627	394	792	391	540	321	247	116	68
21	162	214	426	2,000	969	590	338	586	323	228	132	70
22	160	255	430	5,310	926	577	338	334	284	216	50	66
23	170	241	398	7,740	646	521	369	341	*256	233	110	60
24	186	218	306	3,510	*558	766	333	348	244	202	102	55
25	141	189	306	1,470	548	776	502	328	233	144	102	42
26	135	181	319	1,010	504	856	426	326	186	204	96	42
27	154	186	298	864	460	1,310	323	310	171	173	104	39
28	166	159	350	776	416	1,180	565	306	206	158	189	58
29	184	172	302	732	-	956	590	279	152	150	139	55
30	170	146	292	716	-	847	424	266	160	150	146	54
31	173	-	290	430	-	1,360	-	302	-	160	102	-
Total	5,191	5,210	15,673	34,222	13,045	19,462	17,615	12,244	7,309	6,471	3,547	1,975
Mean	167	174	506	1,104	466	628	587	395	244	209	114	65.8
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 3,560 Min 66 Mean 397 Cfsm - In. -
Water year 1953-54: Max 7,740 Min 34 Mean 389 Cfsm - In. -

* Discharge measurement made on this day.

Broad River near Carlisle, S. C.

Location.--Lat 34°36', long. 81°25', on right bank at downstream side of bridge on State Highway 72, 2 miles upstream from Sandy River, 2 miles downstream from Seaboard Air Line Railroad bridge, 2½ miles east of Carlisle, Union County, and 5 miles downstream from Neals Shoals Dam.

Drainage area.--2,790 sq mi, approximately.

Records available.--November 1938 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 290.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--15 years (1939-54), 3,715 cfs.

Extremes.--Maximum discharge during year, 49,200 cfs Jan. 24 (gage height, 20.63 ft); minimum, 52 cfs Sept. 19 (gage height, 1.06 ft); minimum daily, 57 cfs Sept. 19.
1938-54: Maximum discharge, 103,000 cfs Aug. 15, 1940 (gage height, 29.41 ft), from rating curve extended above 52,000 cfs on basis of computation of peak flow over Neals Shoals Dam; minimum, 47 cfs July 28, 1952; minimum daily, 57 cfs July 28, 1952, Sept. 19, 1954.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Revisions (water years).--WSP 892: 1939(m), drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 25 to July 23)

1.0	37	3.0	1,770
1.3	120	4.0	3,540
1.5	206	10.0	17,400
1.8	400	15.0	30,900
2.0	565	20.0	46,800
2.5	1,090		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,250	872	1,140	2,660	3,840	6,470	17,400	2,360	1,710	881	404	818
2	2,030	896	1,110	1,720	2,400	6,300	11,800	2,330	1,350	828	918	765
3	1,800	1,550	1,580	1,460	2,760	4,870	6,960	3,270	1,830	1,620	947	925
4	1,060	1,100	2,010	2,040	3,240	4,140	5,200	2,940	2,230	1,170	981	1,390
5	1,140	1,300	2,830	1,900	3,040	3,440	4,440	3,430	1,400	1,080	1,040	335
6	1,460	1,120	3,130	1,780	2,760	3,640	3,440	2,770	1,470	1,130	981	756
7	1,370	1,130	5,530	2,020	2,130	2,580	4,340	2,360	1,560	958	1,370	817
8	1,220	820	3,740	*1,680	2,840	3,070	4,340	2,240	1,400	826	814	696
9	1,210	790	2,940	1,820	2,520	2,530	*3,540	1,830	1,620	849	629	696
10	1,660	1,530	3,100	1,530	1,930	2,320	4,240	2,700	1,330	1,080	726	677
11	528	1,150	3,600	2,220	2,670	2,940	3,640	1,860	1,940	1,620	770	657
12	776	1,110	6,880	2,180	2,370	2,850	3,540	1,890	1,230	1,580	1,090	207
13	1,630	1,480	13,500	1,550	2,180	2,240	3,140	2,220	1,320	1,000	992	497
14	1,290	1,290	13,000	1,890	1,710	7,350	3,030	3,150	1,220	1,040	1,490	696
15	1,310	583	10,400	1,700	2,720	10,100	3,440	2,580	1,600	1,100	662	716
16	1,160	*956	6,300	16,500	1,830	5,640	3,640	3,220	1,270	1,660	512	726
17	1,700	1,660	5,090	26,400	2,040	4,540	3,540	3,940	1,470	2,330	716	735
18	741	1,200	3,320	11,800	2,580	3,940	2,640	2,530	3,240	1,040	726	422
19	726	1,030	2,940	6,080	2,780	3,840	3,530	1,820	1,910	672	1,770	57
20	1,430	1,690	2,030	4,440	1,810	8,720	2,550	2,940	1,230	1,380	1,350	358
21	1,260	1,180	3,330	6,420	8,690	7,180	2,610	3,740	1,880	972	1,330	657
22	1,160	1,320	2,350	25,000	14,700	5,090	2,960	3,240	1,330	881	1,330	677
23	1,150	2,080	3,340	29,800	7,910	3,490	2,580	1,720	1,460	1,590	765	667
24	1,440	1,220	2,940	46,700	5,640	5,200	2,390	2,760	1,330	1,900	844	706
25	543	1,870	1,850	19,500	4,620	7,840	2,220	1,740	*1,770	676	1,000	528
26	871	1,580	2,680	8,280	3,140	6,960	4,140	1,920	1,310	890	864	158
27	1,610	1,410	1,470	6,520	3,510	6,960	2,710	2,280	782	903	914	552
28	1,160	1,280	2,370	6,080	3,340	11,800	2,650	1,970	840	981	2,080	657
29	1,360	1,010	2,400	4,440	-	9,420	3,490	1,370	1,360	981	1,030	657
30	1,190	1,670	2,220	3,640	-	5,860	3,440	1,530	797	1,450	606	648
31	1,460	-	2,450	3,570	-	6,890	-	2,640	-	1,480	786	-
Total	38,695	37,877	121,550	263,320	101,700	168,210	127,580	77,290	45,189	36,548	30,428	18,853
Mean	1,248	1,263	3,921	8,494	3,632	5,426	4,253	2,493	1,506	1,179	982	628
Cfsm	0.447	0.453	1.41	3.04	1.30	1.94	1.52	0.894	0.540	0.423	0.352	0.225
In.	0.52	0.51	1.63	3.50	1.35	2.24	1.70	1.03	0.60	0.49	0.41	0.25

Calendar year 1953: Max 30,000 Min 460 Mean 3,309 Cfsm 1.19 In. 16.10
Water year 1953-54: Max 46,700 Min 57 Mean 2,924 Cfsm 1.05 In. 14.23

Peak discharge (base, 25,000 cfs).--Jan. 17 (5:30 a.m.) 28,400 cfs (14.15 ft); Jan. 24 (6 a.m.) 49,200 cfs (20.63 ft).
* Discharge measurement made on this day.

North Tyger River near Fairmont, S. C.

Location.--Lat 34°55'45", long. 82°02'40", on left bank 80 ft downstream from Frey Creek and 2.2 miles north of Fairmont, Spartanburg County.

Drainage area.--44 sq mi, approximately.

Records available.--October 1950 to September 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 680 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,170 cfs Jan. 22 or 23 (gage height, 7.15 ft, from floodmark); minimum, 6.0 cfs Sept. 19, 20; minimum daily, 7.0 cfs Sept. 19.
1950-54: Maximum discharge, 2,280 cfs Mar. 4, 1952 (gage height, 10.56 ft); minimum, that of Sept. 19, 20, 1954; minimum daily, that of Sept. 19, 1954.

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 22 to July 9)

0.0	6.0	1.5	89
.1	7.2	2.0	172
.3	10	3.0	418
.6	18	4.0	619
.9	33	6.0	829
1.2	54		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	22	23	35	55	60	a220	70	32	*21	14	11
2	26	22	23	34	54	52	a150	58	33	21	13	10
3	26	21	23	34	53	48	a130	84	32	36	13	10
4	24	21	64	33	74	46	a110	93	34	37	16	9.4
5	24	22	44	33	56	44	a95	*58	31	39	15	9.1
6	24	22	56	32	53	43	*a80	49	29	32	14	9.0
7	23	22	61	*32	52	42	71	46	28	22	15	8.5
8	22	22	40	32	49	42	60	44	27	20	16	8.1
9	22	22	36	31	48	41	54	42	26	32	16	8.0
10	23	22	66	33	48	40	52	40	26	34	*16	8.5
11	23	22	45	35	47	39	54	38	24	29	15	8.8
12	22	22	214	32	45	39	57	38	24	22	*12	7.4
13	22	22	172	30	44	40	50	41	23	21	13	7.8
14	22	22	193	32	44	103	50	69	27	19	13	8.3
15	24	22	90	35	43	60	49	59	25	20	12	8.2
16	24	22	62	496	43	47	48	50	34	44	13	9.3
17	22	22	52	283	*46	45	48	42	108	28	16	9.4
18	22	*21	43	86	45	44	44	40	179	21	16	8.3
19	22	21	40	65	42	81	42	71	65	20	13	7.0
20	22	22	37	57	48	113	40	100	42	20	11	8.0
21	21	28	42	a200	134	68	39	66	37	22	11	8.7
22	21	32	48	a500	70	56	39	52	34	21	17	7.8
23	21	28	45	a800	58	51	38	45	31	19	15	7.9
24	21	25	40	a220	52	112	37	41	31	16	14	8.1
25	20	24	38	a130	49	90	88	38	28	16	14	8.2
26	20	24	37	a100	47	106	156	37	27	16	13	8.3
27	21	23	36	80	45	a160	60	36	25	24	12	8.5
28	22	23	35	70	48	a260	53	35	24	21	12	*7.7
29	25	22	39	64	-	a180	273	35	22	16	19	*7.9
30	22	23	39	61	-	a140	88	35	22	15	15	8.3
31	22	-	36	57	-	a140	-	32	-	15	14	-
Total	703	688	1,819	3,762	1,497	2,432	2,375	1,584	1,130	740	438	255.5
Mean	22.7	22.9	58.7	121	53.5	78.4	79.2	51.1	37.7	23.9	14.1	8.52
Cfsm	0.516	0.520	1.33	2.75	1.22	1.78	1.80	1.16	0.857	0.543	0.320	0.194
In.	0.59	0.58	1.53	3.17	1.27	2.05	2.01	1.34	0.96	0.63	0.37	0.22

Calendar year 1953: Max 635 Min 12 Mean 51.0 Cfsm 1.16 In. 15.72
Water year 1953-54: Max 800 Min 7.0 Mean 47.7 Cfsm 1.08 In. 14.72

Peak discharge (base, 700 cfs).--Jan. 17 (12:15 a.m.) 702 cfs (4.78 ft); Jan. 22 or 23 (time unknown)1,170 cfs (7.15 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for station near Moore and Middle Tyger River at Lyman.

Middle Tyger River at Lyman, S. C.

Location.--Lat 34°56'35", long. 82°08'00", on left bank 200 ft upstream from bridge on State Highway 292 at Lyman, Spartanburg County, 600 ft downstream from Southern Railway bridge, and 0.8 mile northeast of Duncan.

Drainage area.--68.3 sq mi.

Records available.--January 1938 to September 1954.

Gage.--Water-stage recorder and masonry control. Datum of gage is 776.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--16 years, 96.4 cfs.

Extremes.--Maximum discharge during year, 2,520 cfs Jan. 23 (gage height, 8.74 ft); minimum, 9.6 cfs on several days in August and September; minimum daily, 11 cfs Sept. 9, 20.

1938-54: Maximum discharge, 4,800 cfs Aug. 14, 1940 (gage height, 16.16 ft), from rating curve extended above 2,900 cfs on basis of computation of peak flow over dam; minimum, 1 cfs Sept. 25, 1940; minimum daily, that of Sept. 9, 20, 1954.

Remarks.--Records good. Some diurnal fluctuation caused by steam powerplant above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*47	40	41	62	86	108	296	130	64	*35	22	28
2	47	37	40	60	84	86	192	112	66	35	21	26
3	45	39	41	57	82	82	138	124	64	36	21	25
4	44	38	103	59	92	77	118	203	64	38	23	23
5	41	37	127	58	79	73	106	*106	59	46	21	23
6	42	39	89	57	73	71	*103	89	58	37	22	21
7	40	40	129	*55	72	68	129	85	56	33	31	19
8	39	41	89	55	71	72	105	79	53	30	20	19
9	40	37	74	54	70	67	94	78	52	82	25	11
10	42	40	144	55	68	67	88	71	53	50	*25	15
11	41	40	107	63	67	66	89	70	53	45	24	17
12	36	40	198	60	65	59	110	69	51	34	19	14
13	37	39	390	54	63	65	89	72	50	37	22	15
14	37	42	323	53	55	165	85	120	49	34	22	16
15	43	32	340	59	63	113	79	117	48	40	22	14
16	42	35	145	368	61	82	78	90	56	111	51	16
17	39	*34	102	887	73	74	85	80	52	51	59	15
18	39	36	84	257	66	72	76	75	176	42	36	16
19	37	35	76	138	63	100	74	127	111	37	28	15
20	38	37	72	113	67	229	72	112	66	41	24	11
21	39	73	83	371	191	141	66	108	53	41	26	13
22	38	67	94	1,410	138	100	66	86	47	38	31	13
23	39	56	81	2,140	*92	84	66	71	48	38	23	12
24	40	51	72	596	85	145	65	70	49	39	25	13
25	39	45	68	242	81	175	105	68	48	29	26	14
26	37	45	67	171	76	176	87	66	45	27	23	14
27	39	44	65	142	72	220	66	67	43	30	22	15
28	42	42	64	121	74	336	62	64	40	27	25	14
29	42	41	70	106	-	200	1,030	65	38	26	82	14
30	39	38	70	100	-	153	344	82	33	25	41	14
31	41	-	64	92	-	169	-	67	-	31	32	-
Total	1,251	1,260	3,512	8,115	2,229	3,695	4,163	2,823	1,745	1,245	894	495
Mean	40.4	42.0	113	262	79.6	119	139	91.1	58.2	40.2	28.8	16.5
Cfsm	0.592	0.615	1.65	3.84	1.17	1.74	2.04	1.33	0.852	0.589	0.422	0.242
In.	0.68	0.69	1.90	4.43	1.22	2.01	2.28	1.53	0.95	0.68	0.49	0.27

Calendar year 1953: Max 1,170 Min 20 Mean 90.5 Cfsm 1.33 In. 17.96
Water year 1953-54: Max 2,140 Min 11 Mean 86.1 Cfsm 1.26 In. 17.13

Peak discharge (base, 1,000 cfs).--Jan. 17 (10 a.m.) 1,180 cfs (5.35 ft); Jan. 23 (9:45 a.m.) 2,520 cfs (8.74 ft); Apr. 29 (4 p.m.) 2,000 cfs (7.30 ft).

* Discharge measurement made on this day.

North Tyger River near Moore, S. C.

Location.--Lat 34°48'10", long. 81°57'57", on right bank at Ott Shoals, 2.0 miles upstream from Wards Creek, 2.6 miles southeast of Moore, Spartanburg County, and 5.3 miles upstream from confluence with South Tyger River.

Drainage area.--162 sq mi.

Records available.--April 1934 to September 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 564.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years, 226 cfs.

Extremes.--Maximum discharge during year, 3,510 cfs Jan. 23 (gage height, 4.19 ft); minimum, 61 cfs Sept. 28; minimum daily, 19 cfs Sept. 29.
1934-54: Maximum discharge, 12,300 cfs Aug. 14, 1940 (gage height, 7.15 ft), from rating curve extended above 7,800 cfs by velocity-area studies; minimum, 13 cfs (revised) Dec. 29, 1935; minimum daily, that of Sept. 29, 1954.
Revisions.--Figures of minimum discharge for the water years 1936 and 1940 have been revised to 13 cfs Dec. 29, 1935, and 20 cfs July 1, 1940, superseding those published in WSP 802 and 892, respectively.

Remarks.--Records good. Some regulation at low flow by powerplants above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	14	1.5	256
.7	22	1.8	443
.8	34	2.0	604
1.0	71	3.0	1,580
1.2	129	4.0	3,120

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	47	74	234	227	252	680	500	104	73	42	29
2	99	84	88	87	180	257	623	200	135	67	54	52
3	103	51	73	67	213	174	373	223	117	66	78	52
4	62	83	152	98	209	221	280	320	128	102	78	46
5	62	53	226	103	205	144	288	258	97	77	34	30
6	95	103	200	131	188	203	267	187	81	102	32	29
7	102	56	288	126	123	110	*245	125	123	117	44	29
8	62	46	161	130	197	181	261	190	99	67	74	42
9	100	96	151	79	146	150	228	98	112	90	39	49
10	66	54	228	85	181	179	209	174	88	144	44	42
11	52	93	243	163	142	137	168	104	85	81	*54	32
12	102	53	487	146	133	157	246	168	83	70	56	27
13	60	96	776	127	181	141	231	126	58	79	57	26
14	95	55	820	*81	97	280	207	210	98	84	57	29
15	63	47	715	144	151	304	186	205	105	71	43	30
16	101	96	457	1,030	152	231	218	152	96	114	37	33
17	61	*100	292	1,640	156	145	187	179	154	159	52	68
18	52	63	179	1,180	*191	173	150	153	518	58	84	97
19	103	63	187	448	116	250	195	218	301	99	61	30
20	61	73	104	304	196	420	234	233	132	75	64	29
21	97	76	200	607	320	336	220	260	149	109	51	33
22	56	105	234	1,920	370	270	160	181	102	142	39	30
23	95	140	263	3,120	279	219	158	103	108	81	49	30
24	54	110	161	2,140	224	327	159	177	91	66	60	30
25	45	113	84	841	199	396	136	99	*106	48	52	29
26	78	54	85	463	192	353	356	147	82	65	53	28
27	56	61	133	320	186	490	185	135	58	83	51	28
28	95	94	166	288	146	1,090	91	111	93	74	46	21
29	66	50	187	267	-	785	284	*128	75	80	30	19
30	106	114	146	197	-	443	919	88	79	56	30	20
31	58	-	156	188	-	423	-	163	-	58	28	-
Total	2,373	2,329	7,716	16,754	5,300	9,221	8,144	5,615	3,657	2,657	1,573	1,069
Mean	76.5	77.6	249	540	189	297	271	181	122	85.7	50.7	35.6
Cfsm	0.472	0.479	1.54	3.33	1.17	1.83	1.67	1.12	0.753	0.529	0.313	0.220
In.	0.54	0.53	1.78	3.84	1.22	2.11	1.86	1.29	0.84	0.61	0.36	0.25

Calendar year 1953: Max 1,950 Min 29 Mean 198 Cfsm 1.22 In. 16.59
Water year 1953-54: Max 3,120 Min 19 Mean 182 Cfsm 1.12 In. 15.23

Peak discharge (base, 1,800 cfs).--Jan. 17 (2 a.m.) 1,820 cfs (3.22 ft); Jan. 23 (2:15 a.m.) 3,510 cfs (4.19 ft).
* Discharge measurement made on this day.

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South Tyger River near Reidville, S. C.

Location.--Lat 34°52'35", long. 82°05'10", on left bank 0.4 mile upstream from bridge on State Highway 296, 1.2 miles downstream from Berry Shoals, 1.8 miles northeast of Reidville, Spartanburg County, and 4 miles upstream from Bens Creek.

Drainage area.--106 sq mi.

Records available.--April 1934 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 626.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years, 155 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Jan. 22 (gage height, 7.73 ft); minimum, 9.6 cfs Sept. 30 (gage height, 0.73 ft); minimum daily, 11 cfs Sept. 4-11, 16-30. 1934-54: Maximum discharge, 6,420 cfs Oct. 7, 1949 (gage height, 14.23 ft); minimum, 4.6 cfs June 5, 6, 1941 (gage heignt, 0.60 ft); minimum daily, 5.5 cfs June 6, 1941.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	8.5	2.0	209
.8	14	3.0	517
1.0	30	5.0	1,370
1.2	54	6.0	1,870
1.5	104		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*14	22	12	13	154	238	535	21	137	47	15	46
2	14	92	12	17	254	148	415	29	118	*117	43	46
3	66	78	12	21	77	139	68	173	59	55	45	39
4	29	13	164	160	60	208	78	208	61	38	47	11
5	96	79	100	92	219	245	268	215	45	33	44	11
6	80	89	29	12	146	18	215	46	46	162	13	11
7	82	52	174	*163	53	24	*244	51	134	44	25	11
8	13	15	235	223	140	132	291	40	99	45	29	11
9	16	82	248	73	261	139	105	44	56	13	53	11
10	54	62	263	12	70	187	46	164	53	13	48	11
11	18	16	168	90	55	167	63	51	16	13	*47	11
12	99	84	235	15	240	80	226	128	30	45	44	12
13	97	79	274	82	149	29	170	279	39	45	44	41
14	13	51	542	96	50	78	271	106	78	13	13	41
15	130	15	437	201	45	287	57	55	68	17	13	43
16	96	86	344	643	45	166	269	49	63	115	13	11
17	48	16	250	708	197	246	33	189	80	73	13	11
18	14	*77	199	630	*254	100	49	53	281	40	13	11
19	81	79	15	445	73	97	192	48	69	88	12	11
20	78	16	16	343	137	183	53	127	48	45	12	11
21	12	67	167	373	94	162	195	299	168	49	12	11
22	84	23	258	1,490	168	345	273	28	270	45	19	11
23	82	114	291	1,770	295	184	58	36	53	65	52	11
24	49	113	89	1,290	354	414	15	156	50	85	48	11
25	13	293	24	526	239	248	16	52	54	40	48	11
26	82	13	26	376	50	288	136	56	47	83	45	11
27	12	83	30	327	55	212	280	110	40	48	15	11
28	84	46	162	127	54	390	76	265	127	48	86	11
29	95	13	152	93	-	474	85	20	39	81	47	11
30	81	81	199	231	-	360	341	19	47	15	63	11
31	58	-	224	80	-	338	-	87	-	15	52	-
Total	1,790	1,940	5,351	10,722	3,988	6,326	5,123	3,204	2,475	1,635	1,073	521
Mean	57.7	65.0	173	346	142	204	171	103	82.5	52.7	34.6	17.4
Cfsm	0.544	0.613	1.63	3.26	1.34	1.92	1.61	0.972	0.778	0.497	0.326	0.164
In.	0.63	0.68	1.88	3.76	1.40	2.21	1.80	1.12	0.87	0.57	0.38	0.18

Calendar year 1953: Max 1,350 Min 8.0 Mean 142 Cfsm 1.34 In. 18.23
Water year 1953-54: Max 1,770 Min 11 Mean 121 Cfsm 1.14 In. 15.48

Peak discharge (base, 1,400 cfs).--Jan. 22 (7:45 p.m.) 2,780 cfs (7.73 ft).
* Discharge measurement made on this day.

South Tyger River near Woodruff, S. C.

Location.--Lat 34°45'21", long. 81°56'19", on left bank at Chesnee Shoals, 0.5 mile upstream from confluence with North Tyger River and 5½ miles east of Woodruff, Spartanburg County.

Drainage area.--174 sq mi.

Records available.--March 1934 to September 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 508.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--20 years, 229 cfs.

Extremes.--Maximum discharge during year, 2,930 cfs Jan. 23 (gage height, 5.40 ft); minimum, 12 cfs Sept. 12, 20 (gage height, 1.41 ft); minimum daily, 13 cfs Sept. 11, 12, 19, 29, 30.
1934-54: Maximum discharge, 9,510 cfs Apr. 6, 1936 (gage height, 9.78 ft), from rating curve extended above 7,700 cfs by velocity-area studies; minimum, that of Sept. 12, 20, 1954; minimum daily, that of Sept. 11, 12, 19, 29, 30, 1954.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.4	13	3.0	431
1.6	33	3.5	721
1.8	59	4.0	1,120
2.1	111	6.0	3,800
2.5	221		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*106	80	99	167	130	190	846	242	123	65	32	50
2	49	53	48	67	294	232	617	87	161	87	31	45
3	52	107	43	70	217	236	320	122	134	112	49	46
4	82	99	97	90	122	214	185	235	93	65	50	44
5	59	46	211	166	169	307	230	*284	88	58	52	18
6	105	98	188	123	284	125	310	193	78	73	48	17
7	96	108	169	78	119	78	*311	99	83	140	28	16
8	96	74	242	250	105	122	344	93	141	61	34	15
9	45	48	288	180	292	125	274	94	115	65	37	14
10	47	99	338	98	204	272	168	116	76	65	*54	14
11	74	84	264	70	103	221	133	170	71	41	50	13
12	50	48	618	124	175	136	187	98	45	36	48	13
13	111	103	544	64	272	109	230	252	57	62	48	14
14	111	100	666	*111	112	190	296	261	67	61	46	39
15	66	74	575	169	94	216	258	160	94	35	21	40
16	151	48	467	1,690	90	317	187	111	85	104	20	43
17	108	*98	330	1,180	*140	294	254	138	105	107	18	18
18	74	46	276	831	284	169	109	176	281	75	18	15
19	46	94	147	617	206	244	135	94	248	70	18	13
20	98	96	73	446	165	408	214	112	97	83	18	16
21	98	75	108	556	281	213	162	258	95	60	18	20
22	46	87	292	1,350	159	326	294	242	197	60	18	15
23	101	61	334	2,500	323	341	230	80	222	60	22	15
24	99	194	256	2,000	368	479	106	98	82	90	49	15
25	70	260	82	1,100	325	538	78	165	*77	71	46	15
26	44	203	78	572	185	265	118	91	72	59	45	16
27	100	52	77	436	104	426	234	89	73	84	43	16
28	49	101	99	322	115	907	258	193	83	60	40	14
29	116	74	196	158	-	564	115	213	107	67	76	*13
30	109	46	211	245	-	575	290	65	63	79	48	13
31	103	-	276	220	-	456	-	59	-	39	56	-
Total	2,561	2,756	7,692	16,048	5,437	9,295	7,493	4,690	3,313	2,194	1,181	655
Mean	82.6	91.9	248	518	194	300	250	151	110	70.8	38.1	21.8
Cfsm	0.475	0.528	1.43	2.98	1.11	1.72	1.44	0.868	0.632	0.407	0.219	0.125
In.	0.55	0.59	1.65	3.44	1.16	1.98	1.61	1.00	0.71	0.47	0.25	0.14

Calendar year 1953: Max 1,430 Min 28 Mean 210 Cfsm 1.21 In. 16.38
Water year 1953-54: Max 2,500 Min 13 Mean 173 Cfsm 0.994 In. 13.55

Peak discharge (base, 1,800 cfs).--Jan. 16 (7:30 p.m.) 2,350 cfs (5.00 ft); Jan. 23 (4 p.m.) 2,930 cfs (5.40 ft).
* Discharge measurement made on this day.

Tyger River near Woodruff, S. C.

Location.--Lat 34°45'15", long. 81°55'30", on left bank at upstream side of Nesbitts Bridge on State Highway 49, 0.5 mile downstream from confluence of North Tyger and South Tyger Rivers and 6½ miles east of Woodruff, Spartanburg County.

Drainage area.--351 sq mi.

Records available.--October 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 489.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--24 years (1930-54), 473 cfs.

Extremes.--Maximum discharge during year, 5,990 cfs Jan. 23 (gage height, 6.56 ft); minimum, 34 cfs Sept. 29, 30; minimum daily, 34 cfs Sept. 29, 30.

1929-54: Maximum discharge, 19,200 cfs Aug. 14, 1940 (gage height, 13.27 ft), from rating curve extended above 11,000 cfs on basis of rating curves for North Tyger River near Moore and South Tyger River near Woodruff; minimum, that of Sept. 29, 30, 1954; minimum daily, that of Sept. 29, 30, 1954.

Flood on June 6, 1903, reached a stage of 20.4 ft, from floodmark set by local resident, at site 0.3 mile below gage; that of August 1928, 20.0 ft (present site); that of September 1929, 14.65 ft, from floodmarks (discharge, 19,600 cfs).

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station.

Revisions.--WSP 742: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 6-17, Jan. 23, Mar. 20, 24, 25, Mar. 28 to Apr. 2, May 1, June 18, 19)

1.5	25	3.0	695
1.7	55	4.0	1,770
1.9	100	5.0	3,150
2.2	196	7.0	6,500
2.5	332		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	135	187	437	355	439	1,590	775	233	149	78	86
2	143	128	130	173	491	513	1,290	293	303	168	74	95
3	156	179	120	147	436	419	722	331	267	192	124	102
4	166	181	241	173	327	446	477	537	221	182	146	99
5	117	111	459	318	386	458	524	*581	222	134	91	51
6	216	196	427	264	469	356	588	384	167	167	81	50
7	191	191	456	215	267	191	*576	253	198	291	55	45
8	182	129	435	414	295	288	634	294	264	135	114	50
9	129	135	462	300	436	280	516	196	232	168	74	60
10	130	179	591	198	398	474	391	282	172	222	*100	59
11	136	173	519	238	252	376	312	310	161	155	98	50
12	136	119	1,240	299	331	305	439	268	130	103	106	41
13	196	193	1,310	206	457	255	490	388	117	158	109	40
14	203	185	1,530	220	227	462	505	497	151	151	107	68
15	144	129	1,310	*315	230	528	478	388	214	118	82	71
16	247	132	940	3,040	278	588	422	288	192	228	59	78
17	190	*218	639	2,850	299	480	455	321	343	302	74	50
18	128	132	480	2,080	491	355	280	348	823	157	94	154
19	132	169	340	1,220	324	523	328	305	581	158	101	48
20	179	189	190	828	363	868	472	360	252	190	84	46
21	191	181	294	1,180	681	567	408	536	248	146	82	57
22	112	199	519	3,290	535	604	486	474	330	234	59	48
23	193	218	642	5,650	*599	580	414	189	*356	143	72	45
24	173	330	440	4,270	589	839	368	268	194	162	110	45
25	119	392	178	2,130	548	975	230	294	197	120	112	45
26	105	284	171	1,130	385	637	460	247	163	122	105	45
27	177	99	220	790	294	881	468	224	141	163	102	43
28	131	214	267	623	250	2,080	372	326	170	147	94	41
29	205	124	403	429	-	1,390	366	362	215	131	119	34
30	209	137	375	458	-	1,040	1,260	174	150	165	84	34
31	190	-	444	403	-	890	-	218	-	100	88	-
Total	5,122	5,381	15,968	34,288	10,993	19,087	16,221	10,711	7,407	5,161	2,878	1,780
Mean	165	179	515	1,106	393	616	541	346	247	166	92.8	59.3
Cfsm	0.470	0.510	1.47	3.15	1.12	1.75	1.54	0.986	0.704	0.473	0.264	0.169
In.	0.54	0.57	1.70	3.63	1.17	2.02	1.72	1.14	0.79	0.55	0.30	0.19

Calendar year 1953: Max 3,470 Min 63 Mean 420 Cfsm 1.20 In. 16.26
Water year 1953-54: Max 5,650 Min 34 Mean 370 Cfsm 1.05 In. 14.32

Peak discharge (base, 3,000 cfs).--Jan. 16 (10:45 a.m.) 4,040 cfs (5.56 ft); Jan. 23 (1:45 p.m.) 5,990 cfs (6.56 ft).

* Discharge measurement made on this day.

Fairforest Creek near Union, S. C.

Location.--Lat 34°41', long. 81°41', on right bank at downstream side of bridge on State Highway 92, 0.3 mile downstream from Buffalo Creek and 4.3 miles southwest of Union, Union County.

Drainage area.--183 sq mi.

Records available.--June 1940 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 393.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years, 199 cfs.

Extremes.--Maximum discharge during year, 4,140 cfs Jan. 17 (gage height, 5.77 ft); minimum, 6.3 cfs Sept. 29, 30; minimum gage height, 1.70 ft Sept. 29.
1940-54: Maximum discharge, 8,690 cfs Nov. 29, 1948 (gage height, 7.61 ft), from rating curve extended above 4,300 cfs by velocity-area studies and logarithmic plotting; minimum, that of Sept. 29, 30, 1954.

Remarks.--Records good. Discharge includes some water diverted from South Pacolet River Reservoir (see p. 211) which is discharged into this stream after use.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 26-30)

1.6	6.3	2.7	264
1.7	10	3.0	458
1.8	15	3.5	830
1.9	23	4.0	1,300
2.0	34	5.0	2,670
2.2	68	6.0	4,690
2.4	124		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	46	51	118	171	245	1,540	128	68	*36	64	17
2	55	44	51	112	167	265	861	118	70	37	40	16
3	53	44	51	118	162	195	431	133	70	38	33	14
4	49	46	80	115	162	167	294	176	70	38	25	14
5	48	44	108	108	171	147	236	*138	68	42	22	12
6	48	46	303	105	151	139	209	108	62	34	21	12
7	44	48	282	102	143	132	200	102	60	30	21	11
8	43	48	241	96	135	128	195	99	58	30	20	10
9	44	48	127	96	128	124	*171	93	57	206	21	9.6
10	46	48	196	99	118	124	162	90	55	68	23	9.6
11	46	48	162	134	118	124	167	88	55	59	27	9.6
12	43	48	1,000	151	115	118	171	88	53	42	*20	9.6
13	42	48	1,260	*118	108	127	154	90	51	36	18	7.8
14	44	48	1,330	102	106	1,050	151	138	48	36	18	*7.0
15	59	49	712	128	108	404	151	176	48	81	16	8.5
16	49	*49	397	2,910	108	236	147	134	54	90	15	9.3
17	46	49	210	3,620	*124	171	158	108	113	40	15	10
18	43	49	154	1,440	121	158	143	96	348	34	16	11
19	43	49	132	446	108	373	128	93	297	31	37	9.3
20	44	49	121	282	159	790	121	178	99	30	22	7.8
21	44	63	128	619	1,250	651	118	176	68	30	26	8.2
22	43	76	158	1,780	1,130	301	118	131	58	28	25	10
23	43	62	176	3,120	415	220	135	96	55	27	19	8.9
24	44	58	143	1,750	236	519	124	88	51	26	17	7.8
25	43	55	128	575	200	586	121	*83	48	23	18	7.8
26	43	53	128	344	171	438	168	78	46	23	16	7.8
27	43	51	115	264	154	403	128	76	43	44	14	7.4
28	46	49	112	220	148	711	115	78	42	36	37	7.8
29	49	49	127	195	-	1,000	150	78	38	27	64	8.2
30	51	49	154	195	-	514	154	76	37	23	36	7.0
31	48	-	135	186	-	806	-	70	-	28	21	-
Total	1,444	1,513	8,472	19,648	6,389	11,366	7,121	3,404	2,290	1,353	787	296.0
Mean	46.6	50.4	273	634	228	367	237	110	76.3	43.6	25.4	9.87
Cfsm	0.255	0.275	1.49	3.46	1.25	2.01	1.30	0.601	0.417	0.238	0.139	0.054
In.	0.29	0.31	1.72	3.99	1.30	2.32	1.45	0.69	0.47	0.27	0.16	0.06

Calendar year 1953: Max 2,260 Min 19 Mean 180 Cfsm 0.984 In. 13.34
Water year 1953-54: Max 3,620 Min 7.0 Mean 176 Cfsm 0.962 In. 13.03

Peak discharge (base, 2,500 cfs).--Jan. 17 (4 a.m.) 4,140 cfs (5.77 ft); Jan. 23 (5 a.m.) 3,610 cfs (5.52 ft).
* Discharge measurement made on this day.

Enoree River near Enoree, S. C.

Location.--Lat 34°36', long. 81°54', on left bank at upstream side of bridge on State Highway 30, three-quarters of a mile upstream from Warrior Creek and 4 miles southeast of Enoree, Spartanburg County.

Drainage area.--307 sq mi.

Records available.--August 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 448.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 20, 1929, staff gage at same site and datum.

Average discharge.--25 years, 411 cfs.

Extremes.--Maximum discharge during year, 6,120 cfs Jan. 17 (gage height, 5.00 ft); minimum, 12 cfs Aug. 22; minimum daily, 21 cfs Sept. 20.
1929-54: Maximum discharge, 30,000 cfs Oct. 2, 1929 (gage height, 10.5 ft, from floodmark), from rating curve extended above 17,000 cfs by logarithmic plotting; minimum, about 4 cfs Oct. 20, 1935; minimum daily, that of Sept. 20, 1954.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station.

Revisions (water years).--WSP 802: 1930(M). WSP 892: 1929-30, 1931(M), 1932-33, 1935. WSP 1112: 1934(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 17				June 18 to Sept. 30			
1.8	61	3.0	1,200	1.4	14	1.8	66
1.9	95	3.5	2,120	1.5	22	1.9	97
2.0	144	4.0	3,320	1.6	33	2.0	144
2.2	275	5.0	6,120	1.7	47		
2.5	545						

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	199	139	129	275	373	349	2,630	266	208	113	40	54
2	193	139	139	261	339	382	1,010	261	187	114	87	39
3	187	139	144	268	302	323	600	306	168	124	74	37
4	134	134	221	261	333	328	505	341	174	74	59	25
5	188	129	310	254	350	311	445	*345	168	149	51	39
6	156	134	482	254	297	266	418	251	162	125	65	25
7	144	134	532	152	301	271	409	260	162	108	41	46
8	139	139	384	233	295	*275	390	248	150	94	67	37
9	144	129	268	226	299	276	373	226	150	119	32	23
10	144	134	388	233	290	259	373	240	144	184	63	37
11	139	134	373	282	278	244	309	240	139	74	*74	25
12	139	134	1,250	288	285	251	373	246	120	138	82	32
13	147	124	1,880	270	254	243	347	228	115	117	72	22
14	116	129	1,700	231	268	464	330	322	81	98	32	32
15	174	129	1,240	268	268	450	330	307	168	97	64	35
16	174	*129	704	3,580	268	356	325	328	193	186	29	23
17	168	124	455	4,870	315	278	333	338	150	228	83	38
18	144	124	373	*2,170	307	282	275	251	1,120	100	34	25
19	144	124	331	811	293	423	*315	238	629	171	39	27
20	139	124	307	545	287	951	352	*258	333	*55	68	21
21	139	153	315	899	1,020	633	287	298	212	91	70	40
22	134	193	355	2,610	587	465	283	265	205	102	30	45
23	144	200	382	4,520	436	400	347	230	187	104	26	28
24	139	158	331	3,440	380	524	240	228	205	91	62	23
25	134	144	307	1,330	318	679	275	224	174	79	*75	22
26	87	139	299	679	329	567	331	200	139	93	40	28
27	164	139	283	545	301	592	277	199	139	100	49	22
28	156	134	275	475	304	1,690	266	202	98	87	65	31
29	150	124	291	427	-	1,480	264	202	156	81	30	26
30	139	120	323	400	-	763	285	193	137	87	79	26
31	139	-	299	373	-	1,390	-	194	-	77	96	-
Total	4,637	4,129	15,070	31,430	9,677	16,165	13,297	7,935	6,373	3,456	1,778	933
Mean	150	138	486	1,014	346	521	443	256	212	111	57.4	31.1
Cfsm	0.489	0.450	1.58	3.30	1.13	1.70	1.44	0.834	0.691	0.362	0.187	0.101
In.	0.56	0.50	1.82	3.80	1.18	1.96	1.61	0.96	0.77	0.42	0.22	0.11

Calendar year 1953: Max 3,840 Min 51 Mean 371 Cfsm 1.21 In. 16.38
Water year 1953-54: Max 4,870 Min 21 Mean 315 Cfsm 1.03 In. 13.91

Peak discharge (base, 3,500 cfs).--Jan. 17 (3 a.m.) 6,120 cfs (5.00 ft); Jan. 23 (7:30 p.m.) 4,660 cfs (4.52 ft).
* Discharge measurement made on this day.

Broad River at Richtex, S. C.

Location.--Lat 34°11'05", long. 81°11'48", on right bank 0.8 mile west of Richtex, Fairfield County, 1.2 miles upstream from Little River, and 11 miles downstream from Parr Shoals Dam.

Drainage area.--4,850 sq mi, approximately.

Records available.--November 1925 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 184.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--26 years (1926-27, 1929-54), 5,812 cfs.

Extremes.--Maximum discharge during year, 64,700 cfs Jan. 24 (gage height, 14.68 ft); minimum daily, 422 cfs Sept. 6.
1925-54: Maximum discharge, 228,000 cfs Oct. 3, 1929 (gage height, 30.7 ft, from floodmarks), on basis of computation of flow over Parr Shoals Dam; minimum daily, 149 cfs Oct. 13, 1935, from rating curve extended below 320 cfs.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Revisions (water years).--WSP 757: 1930(M). WSP 972: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7		Dec. 8 to Sept. 30			
0.9	910	0.4	355	3.0	5,650
1.0	1,040	.5	450	5.0	12,200
1.5	1,860	1.0	1,040	8.0	24,600
2.0	2,840	1.5	1,870	11.0	40,800
3.0	5,300	2.0	2,940	15.0	66,800
4.0	8,390				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,020	1,740	2,210	3,560	5,800	6,660	28,700	4,970	3,190	1,380	1,220	942
2	1,800	1,560	1,680	3,850	5,360	10,800	31,200	3,820	2,710	1,400	1,130	1,010
3	2,400	1,620	1,920	3,360	4,470	8,020	20,600	4,710	2,190	1,540	1,230	949
4	2,060	1,930	2,560	2,740	5,000	7,250	11,600	4,310	3,220	2,140	1,170	1,180
5	1,590	1,660	3,150	3,050	4,860	5,650	8,020	4,940	2,590	1,780	1,140	1,400
6	1,960	1,820	3,900	3,150	4,880	5,360	7,100	*4,780	1,410	1,560	1,340	422
7	1,710	1,370	6,330	2,910	4,090	5,200	6,380	4,030	2,840	1,580	1,230	971
8	*1,820	1,560	7,400	2,740	3,650	4,070	6,810	3,840	2,570	1,430	1,340	860
9	1,610	1,720	4,780	2,740	*4,340	4,640	6,660	2,780	2,000	1,330	1,190	828
10	1,640	1,460	*4,510	2,920	4,220	3,280	5,940	3,420	*2,440	1,570	1,080	790
11	1,720	1,980	4,700	3,260	3,780	3,750	5,940	3,200	2,450	2,100	*1,000	698
12	1,360	1,710	6,070	3,380	4,060	4,420	5,800	2,940	2,340	2,030	1,060	708
13	1,560	1,500	17,800	3,580	3,460	4,530	5,310	3,300	1,170	1,800	1,110	566
14	2,020	2,080	22,800	2,930	3,690	5,470	5,060	3,930	2,590	*1,490	1,370	478
15	1,600	1,150	20,600	2,870	3,240	*14,600	4,960	4,790	1,850	1,700	1,460	762
16	2,010	1,460	14,100	12,800	3,710	10,900	5,450	4,520	2,040	6,780	1,170	1,140
17	1,750	1,950	9,020	40,800	3,380	7,250	5,470	4,850	2,030	7,550	724	812
18	1,910	1,760	6,960	36,700	3,960	6,520	5,000	4,460	3,640	3,190	376	598
19	1,400	1,820	4,750	22,800	4,030	5,940	4,510	3,420	4,550	1,880	1,610	662
20	1,350	1,580	4,250	13,000	4,160	9,840	4,330	3,310	3,660	1,450	1,720	501
21	1,910	2,590	3,530	11,100	5,330	14,100	4,100	4,780	2,800	1,740	1,820	594
22	1,710	1,010	4,060	23,300	18,100	9,700	4,230	5,240	2,590	1,850	1,380	574
23	1,830	2,670	4,700	46,200	16,300	7,400	4,430	4,260	2,420	1,720	1,610	788
24	1,380	2,490	5,600	60,500	9,020	6,520	4,110	2,910	2,380	2,400	933	748
25	1,680	2,300	4,190	51,300	7,700	10,700	3,360	3,230	2,120	1,950	1,130	762
26	1,440	2,580	3,750	23,400	6,080	11,800	4,520	3,080	2,810	1,220	1,100	629
27	1,660	1,860	3,940	12,600	5,360	10,000	4,700	2,760	1,100	1,220	1,190	569
28	1,760	1,980	2,870	9,360	5,470	13,100	4,150	3,290	1,610	1,300	1,340	472
29	1,750	1,730	3,900	8,020	-	16,800	4,640	2,920	1,540	1,480	2,340	894
30	1 700	1,770	3,880	6,810	-	13,300	5,370	2,180	1,780	1,460	1,140	*714
31	1,730	-	4,310	5,420	-	10,000	-	2,900	-	1,890	836	-
Total	54,840	54,410	194,220	431,150	157,500	257,570	228,450	117,870	72,630	63,910	39,089	23,021
Mean	1,769	1,814	6,265	13,910	5,625	8,309	7,615	3,802	2,421	2,062	1,261	767
Cfsm	0.365	0.374	1.29	2.87	1.16	1.71	1.57	0.784	0.499	0.425	0.260	0.158
In.	0.42	0.42	1.49	3.31	1.21	1.97	1.75	0.90	0.56	0.49	0.30	0.18

Calendar year 1953: Max 38,400 Min 1,010 Mean 4,906 Cfsm 1.01 In. 13.73
Water year 1953-54: Max 60,500 Min 422 Mean 4,643 Cfsm 0.957 In. 13.00

Peak discharge (base, 35,000 cfs).--Jan. 17 (11 p.m.) 43,200 cfs (11.42 ft); Jan. 24 (10:30 p.m.) 64,700 cfs (14.68 ft).
* Discharge measurement made on this day.

Saluda River near Greenville, S. C.

Location.--Lat 34°50'30", long. 82°28'50", on right bank 500 ft upstream from bridge on U. S. Highway 123 alternate, 1.5 miles downstream from Saluda Lake Dam, 2.5 miles upstream from George Creek, and 4.6 miles west of county courthouse in Greenville, Greenville County.

Drainage area.--293 sq mi.

Records available.--January 1942 to September 1954. Prior to October 1948, published as "near West Greenville."

Gage.--Water-stage recorder. Altitude of gage is 810 ft (from topographic map).

Average discharge.--12 years, 618 cfs.

Extremes.--Maximum discharge during year, 8,040 cfs Jan. 23 (gage height, 15.05 ft); minimum, 92 cfs Aug. 30, 31 (gage height, 1.95 ft); minimum daily, 118 cfs Sept. 26.
1942-54: Maximum discharge, 11,000 cfs Oct. 7, 1949 (gage height, 19.38 ft), from rating curve extended above 7,500 cfs on basis of computation of peak flow over dam at Saluda Lake; minimum, 8 cfs July 21, 1946 (gage height, 1.67 ft); minimum daily, 107 cfs Oct. 7, 1951.

Remarks.--Records good. Some regulation at low and medium flow by powerplant at Saluda Lake. Capacity of reservoir insufficient to affect monthly figures of runoff.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.1	110	4.0	962
2.4	162	5.0	1,760
2.7	249	7.0	3,210
3.0	370	10.0	5,020
3.5	630	14.0	7,420

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	307	189	*282	384	772	871	1,150	529	384	257	203	182
2	232	189	262	384	755	892	1,000	795	370	257	195	188
3	195	215	267	379	717	679	927	673	467	257	195	160
4	272	242	308	379	615	736	775	710	440	249	195	137
5	257	239	927	323	421	673	775	674	388	253	202	137
6	246	215	534	327	402	584	723	528	357	257	200	131
7	242	189	1,100	323	395	556	927	512	354	257	200	135
8	242	192	922	331	601	*654	927	539	*421	257	200	126
9	206	192	544	370	556	550	788	528	398	257	198	122
10	192	217	889	327	556	550	788	470	324	257	200	125
11	195	234	938	327	561	556	782	465	260	253	214	127
12	232	192	961	384	544	517	685	475	276	257	264	125
13	246	192	1,460	361	550	558	749	475	361	257	232	*125
14	*242	192	1,460	323	437	966	685	628	586	221	227	125
15	246	192	1,380	340	544	970	660	667	384	202	228	127
16	242	229	899	1,660	492	673	667	584	370	264	205	127
17	232	239	729	2,310	543	667	660	544	361	257	198	127
18	189	239	560	*1,590	556	667	736	539	492	264	192	127
19	192	212	556	824	556	640	595	484	445	264	188	130
20	192	189	462	729	464	1,070	595	560	388	253	190	131
21	222	273	496	1,490	1,380	922	561	507	323	*231	167	127
22	242	465	648	3,090	1,840	679	601	394	331	198	180	125
23	218	323	539	6,920	1,220	685	550	478	327	222	185	*127
24	189	366	520	5,370	788	892	595	379	323	264	182	128
25	186	340	402	2,080	729	927	667	481	327	260	186	127
26	189	268	465	1,680	729	962	667	388	283	220	198	118
27	189	260	384	1,420	584	1,220	618	384	264	198	192	127
28	222	210	440	1,260	638	1,180	556	384	268	198	202	127
29	291	189	481	923	-	998	556	411	268	198	198	125
30	272	243	388	859	-	1,040	556	596	264	195	157	125
31	203	-	384	857	-	857	-	408	-	195	141	-
Total	7,022	7,126	20,587	38,324	19,145	24,391	21,521	16,189	10,804	7,429	6,114	3,970
Mean	227	238	664	1,236	684	787	717	522	360	240	197	132
Cfsm	0.775	0.812	2.27	4.22	2.33	2.69	2.45	1.78	1.23	0.819	0.672	0.451
In.	0.89	0.91	2.62	4.86	2.43	3.10	2.73	2.05	1.37	0.94	0.77	0.50

Calendar year 1953: Max 4,000 Min 186 Mean 535 Cfsm 1.83 In. 24.83
Water year 1953-54: Max 6,920 Min 118 Mean 500 Cfsm 1.71 In. 23.17

Peak discharge (base, 2,800 cfs).--Jan. 23 (5 p.m.) 8,040 cfs (15.05 ft).
* Discharge measurement made on this day.

Saluda River near Pelzer, S. C.

Location.--Lat 34°40', long. 82°28', on right bank half a mile downstream from Hurricane Creek and 2 miles north of Pelzer, Anderson County.

Drainage area.--405 sq mi.

Records available.--September 1929 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 727.75 ft above mean sea level, unadjusted.

Average discharge.--25 years, 781 cfs.

Extremes.--Maximum discharge during year, 9,220 cfs Jan. 24 (gage height, 7.89 ft); minimum, 10 cfs Sept. 19 (gage height, 0.68 ft); minimum daily, 88 cfs Sept. 19.
1929-54: Maximum discharge, 13,600 cfs Oct. 7, 1949 (gage height, 10.53 ft); minimum, 6 cfs Oct. 8, 1951 (gage height, 0.65 ft); minimum daily, 62 cfs Oct. 25, 1931.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff. Records of chemical analyses for the water year 1954 are given in WSP 1350.

Revisions.--WSP 872: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 7				Sept. 8-30	
1.1	91	3.0	1,480	1.0	71
1.3	162	4.0	2,860	1.3	173
1.5	250	6.0	6,040		
2.0	546	8.0	9,390		
2.5	960				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	360	241	*310	512	1,010	970	1,720	652	492	283	218	192
2	360	226	350	518	887	1,140	1,530	799	532	293	223	205
3	231	239	318	518	896	860	1,160	852	525	322	218	192
4	265	270	508	518	804	860	1,030	869	644	300	218	136
5	348	290	892	477	652	799	988	852	446	298	227	162
6	280	276	843	445	497	765	942	667	464	432	232	166
7	280	245	982	439	598	632	998	613	406	322	255	94
8	283	218	1,340	432	791	699	1,190	644	*514	270	227	144
9	275	231	751	452	632	*699	1,010	652	471	259	203	120
10	263	232	852	464	705	660	896	608	477	310	232	144
11	255	295	1,210	477	652	660	951	576	318	311	219	173
12	218	260	1,510	491	660	652	914	576	340	298	270	116
13	*282	227	2,190	491	652	620	878	598	395	292	280	112
14	314	227	2,410	451	605	935	889	675	573	310	244	*124
15	331	236	1,980	477	583	1,340	843	869	596	264	274	154
16	306	241	1,440	3,240	667	820	791	749	484	285	232	131
17	298	278	930	4,440	644	799	799	662	414	322	216	116
18	242	285	874	2,640	675	782	843	660	509	305	221	146
19	228	285	658	*1,500	667	860	834	652	598	285	235	88
20	227	235	675	951	605	1,400	*660	580	471	300	214	158
21	234	304	644	1,580	1,070	1,250	746	732	437	*305	222	146
22	285	485	757	3,960	2,120	955	696	472	374	231	218	123
23	285	474	791	6,840	1,720	826	712	590	389	236	217	134
24	243	401	683	8,370	1,040	1,090	675	507	384	310	209	122
25	218	426	598	3,800	896	1,240	808	532	372	290	213	166
26	232	349	598	2,260	856	1,240	860	525	395	286	242	89
27	227	311	561	1,780	765	1,650	791	464	290	242	210	134
28	236	316	546	1,660	669	2,790	674	464	316	223	224	134
29	316	241	652	1,220	-	1,450	675	477	300	222	258	131
30	354	210	620	1,100	-	1,360	699	620	306	222	232	131
31	274	-	525	979	-	1,360	-	639	-	245	120	-
Total	8,550	8,554	27,998	53,482	23,018	32,163	27,182	19,827	13,232	8,873	7,023	4,183
Mean	276	285	903	1,725	822	1,038	906	640	441	286	227	139
Cfsm	0.681	0.704	2.23	4.26	2.03	2.56	2.24	1.58	1.09	0.706	0.560	0.343
In.	0.79	0.79	2.57	4.91	2.11	2.95	2.50	1.82	1.22	0.81	0.65	0.38

Calendar year 1953: Max 5,720 Min 210 Mean 713 Cfsm 1.76 In. 23.91
Water year 1953-54: Max 8,370 Min 88 Mean 641 Cfsm 1.58 In. 21.50

Peak discharge (base, 3,000 cfs).--Jan. 16 (11:45 p.m.) 5,720 cfs (5.75 ft); Jan. 24 (9 a.m.) 9,220 cfs (7.89 ft); Mar. 28 (4 a.m.) 3,560 cfs (4.48 ft).
* Discharge measurement made on this day.

Saluda River near Ware Shoals, S. C.

Location.--Lat 34°23', long. 82°14', on right bank 2 miles southeast of Ware Shoals, Greenwood County, 2½ miles downstream from Ware Shoals Dam, and 5 miles upstream from Turkey Creek.

Drainage area.--569 sq mi.

Records available.--March 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 448 ft (by barometer).

Average discharge.--15 years, 970 cfs.

Extremes.--Maximum discharge during year, 9,700 cfs Jan. 24 (gage height, 15.34 ft), from rating curve extended above 6,300 cfs as explained below; minimum, 34 cfs Sept. 18, 19; minimum daily, 60 cfs Sept. 11.
1939-54: Maximum discharge, 20,600 cfs Aug. 13, 1940 (gage height, 20.48 ft), from rating curve extended above 6,300 cfs on basis of computation of peak flow over dam; minimum, 3 cfs Sept. 18, 1939; minimum daily, 11 cfs Oct. 12, 19, 1941.

Remarks.--Records good. Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Revisions (water years).--WSP 892: 1939.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	507	298	242	401	1,640	1,240	4,880	752	624	273	266	238
2	452	312	266	483	1,370	1,200	2,580	624	728	208	259	270
3	434	273	440	487	1,200	1,370	1,970	1,380	632	606	248	231
4	313	266	754	624	1,170	908	1,530	1,320	640	640	259	270
5	259	445	784	540	1,040	952	1,480	1,040	841	450	252	133
6	295	544	1,510	491	819	1,100	1,100	965	475	478	242	238
7	416	357	1,660	341	412	749	1,320	688	*476	412	280	256
8	451	245	1,310	352	1,120	904	1,120	883	467	346	228	248
9	393	291	1,530	375	908	*930	1,270	688	514	286	475	212
10	309	262	1,240	548	908	688	1,240	822	603	453	424	191
11	218	256	1,290	608	885	718	860	819	603	277	345	60
12	*280	324	3,060	520	885	882	1,200	516	417	302	266	175
13	276	424	3,600	405	710	660	932	667	287	273	245	182
14	491	420	3,960	460	720	1,140	885	1,000	362	366	218	*167
15	694	324	3,120	410	732	1,370	998	684	744	543	246	161
16	463	270	2,240	5,450	775	1,530	932	998	704	459	262	159
17	406	261	1,530	7,270	908	876	908	908	485	338	270	152
18	262	272	1,010	3,920	863	954	732	775	517	203	238	128
19	273	451	849	*2,360	819	1,200	1,000	667	841	325	245	82
20	302	420	510	1,530	874	1,700	*918	852	548	277	238	194
21	259	466	744	1,310	995	1,640	552	688	455	464	204	172
22	422	409	828	4,270	1,840	1,640	975	646	471	*439	248	169
23	440	431	942	6,840	2,410	1,260	667	646	459	630	242	126
24	408	527	705	8,880	1,800	1,220	678	710	398	440	248	104
25	262	441	667	7,110	1,420	1,580	646	667	423	405	235	143
26	238	502	561	3,480	998	1,580	1,120	710	401	370	238	172
27	295	442	540	2,820	863	1,580	998	624	467	280	245	169
28	270	428	603	2,410	952	3,190	693	459	341	270	250	124
29	430	447	742	2,140	-	2,700	606	457	368	259	298	148
30	455	*434	733	1,750	-	1,920	1,020	710	356	248	272	138
31	459	-	656	1,480	-	2,240	-	876	-	242	406	-
Total	11,432	11,242	38,626	70,065	30,036	41,621	35,810	24,241	15,647	11,562	8,392	5,212
Mean	369	375	1,246	2,260	1,073	1,343	1,194	782	522	373	271	174
Cfsm	0.649	0.659	2.19	3.97	1.89	2.36	2.10	1.37	0.917	0.656	0.476	0.306
In.	0.75	0.74	2.52	4.58	1.97	2.72	2.34	1.58	1.02	0.76	0.55	0.34

Calendar year 1953: Max 7,360 Min 207 Mean 960 Cfsm 1.69 In. 22.89
Water year 1953-54: Max 8,880 Min 60 Mean 833 Cfsm 1.46 In. 19.87

Peak discharge (base, 4,000 cfs).--Dec. 12 (9:45 p.m.) 4,880 cfs (9.45 ft); Jan. 16 (6:15 p.m.) 9,180 cfs (14.88 ft); Jan. 24 (9:45 p.m.) 9,700 cfs (15.34 ft); Mar. 28 (4:30 p.m.) 4,420 cfs (8.94 ft); Apr. 1 (3:45 p.m.) 6,280 cfs (11.63 ft).
* Discharge measurement made on this day.

Reedy River near Greenville, S. C.

Location.--Lat 34°48'00", long. 82°21'55", on right bank 200 ft upstream from State highway bridge, 0.5 mile upstream from Brushy Creek, 2.5 miles upstream from dam at Conestee, and 3.9 miles southeast of county courthouse in Greenville, Greenville County.

Drainage area.--48.6 sq mi.

Records available.--November 1941 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 800 ft (from topographic map).

Average discharge.--12 years (1942-54), 81.1 cfs.

Extremes.--Maximum discharge year, 1,580 cfs Jan. 16 (gage height, 4.52 ft); minimum, 7 cfs Aug. 16.
1941-54: Maximum discharge, 3,590 cfs Oct. 7, 1949 (gage height, 7.88 ft), from rating curve extended above 2,000 cfs by velocity-area studies; minimum, 7 cfs Aug. 17, 1953, Aug. 16, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	7	1.5	242
.7	20	2.0	426
.8	37	3.0	845
1.0	82	4.0	1,300

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	15	*27	43	60	93	180	58	56	28	16	11
2	30	17	25	41	58	68	124	52	47	30	12	11
3	28	23	37	41	60	65	93	97	56	28	14	15
4	23	28	174	39	65	56	77	68	52	23	19	12
5	23	25	82	41	56	52	75	54	39	27	19	11
6	27	23	92	39	54	48	76	50	35	22	22	11
7	34	20	80	39	52	48	96	45	*37	17	20	10
8	27	16	57	37	50	*48	80	43	37	16	16	11
9	23	19	74	35	50	48	70	39	37	23	12	15
10	17	23	114	45	50	45	68	35	37	27	21	18
11	16	32	74	54	48	45	72	35	35	22	15	16
12	15	25	401	45	48	45	70	35	32	22	14	17
13	*17	23	274	39	43	49	63	53	25	20	22	*14
14	23	21	314	37	43	127	68	86	48	69	19	15
15	46	15	182	79	43	70	65	63	41	46	10	12
16	30	16	103	1,180	56	52	63	52	54	33	12	12
17	22	28	72	602	69	48	70	50	52	22	61	14
18	20	23	56	*204	48	48	63	54	74	20	17	12
19	20	22	50	124	48	203	58	93	41	22	21	17
20	20	34	45	101	61	157	*54	147	32	30	19	27
21	23	71	81	497	111	108	57	69	32	*30	24	19
22	28	33	74	1,010	87	72	61	48	32	28	21	15
23	25	30	65	915	63	68	54	43	35	28	11	14
24	20	28	52	304	58	175	54	43	35	23	11	14
25	15	30	48	156	56	118	54	41	34	15	14	14
26	16	32	45	112	52	134	54	39	32	14	17	17
27	19	30	43	96	45	466	50	43	28	19	16	12
28	30	25	43	82	64	304	48	43	28	23	14	14
29	27	23	67	72	-	170	46	52	28	20	12	12
30	23	25	54	68	-	135	60	50	28	20	10	12
31	19	-	50	60	-	156	-	41	-	17	*11	-
Total	738	775	2,955	6,237	1,598	3,321	2,125	1,721	1,179	784	542	424
Mean	23.8	25.8	95.3	201	57.1	107	70.8	55.5	39.3	25.3	17.5	14.1
Cfsm	0.490	0.531	1.96	4.14	1.17	2.20	1.46	1.14	0.809	0.521	0.360	0.290
In.	0.56	0.59	2.26	4.77	1.22	2.54	1.63	1.31	0.90	0.60	0.42	0.32

Calendar year 1953: Max 958 Min 10 Mean 67.0 Cfsm 1.38 In. 18.71
Water year 1953-54: Max 1,180 Min 10 Mean 61.4 Cfsm 1.26 In. 17.12

Peak discharge (base, 1,000 cfs).--Dec. 12 (10 a.m.) 1,070 cfs (3.49 ft); Jan. 16 (11:45 a.m.) 1,580 cfs (4.52 ft); Jan. 22 (1:30 p.m.) 1,520 cfs (4.47 ft); Mar. 27 (6:30 p.m.) 1,380 cfs (4.17 ft).
* Discharge measurement made on this day.

Reedy River near Ware Shoals, S. C.

Location.--Lat 34°27', long. 82°12', on left bank 1¾ miles downstream from dam at Boyd's mill, 4.5 miles northeast of Ware Shoals, Greenwood County, and 10.5 miles upstream from Redburn Creek.

Drainage area.--228 sq mi.

Records available.--March 1939 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 489 ft (by barometer).

Average discharge.--15 years, 291 cfs.

Extremes.--Maximum discharge during year, 4,500 cfs Jan. 17 (gage height, 7.12 ft), from rating curve extended above 2,700 cfs on basis of computations of flow over dam at gage heights 7.56 and 13.32 ft; minimum, 12 cfs May 9 (gage height, 0.78 ft); minimum daily, 14 cfs Apr. 27.
1939-54: Maximum discharge, 7,750 cfs Aug. 14, 1940 (gage height, 13.32 ft), by computation of peak flow over dam at Boyd's mill; minimum, 6 cfs Nov. 11, 1948 (gage height, 0.54 ft); minimum daily, 10 cfs Oct. 14, 18, Dec. 31, 1950, Mar. 4, 1951.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Some regulation at low and medium flow by powerplants above station. Capacity of reservoirs insufficient to affect monthly figures of runoff.

Revisions (water years).--WSP 892: 1939. WSP 922: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	11	2.2	332
.9	22	2.5	516
1.1	40	3.0	960
1.3	66	4.0	1,980
1.6	120	6.0	3,760
1.9	202	7.0	4,430

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	157	27	133	230	179	217	2,480	227	158	127	66	109
2	106	32	140	177	251	308	1,320	235	171	106	99	71
3	50	108	135	147	270	293	633	247	225	40	116	45
4	29	131	135	171	274	225	468	322	149	40	82	48
5	117	131	218	237	266	231	418	296	124	127	33	47
6	133	129	342	279	262	250	365	244	130	150	34	46
7	126	81	666	373	257	201	393	231	*142	113	34	45
8	129	34	489	266	234	223	405	236	138	76	85	42
9	104	104	332	155	131	*176	382	125	133	39	41	39
10	27	131	262	41	252	210	296	142	131	41	94	38
11	31	142	a280	154	243	213	265	197	57	144	74	38
12	*104	135	a480	202	311	213	303	195	52	129	33	38
13	135	59	a550	192	230	206	293	169	258	127	39	*41
14	133	33	a600	210	123	333	298	145	131	124	45	41
15	129	66	a600	202	198	427	274	86	128	131	45	53
16	133	109	625	1,840	262	266	253	155	116	127	105	41
17	79	138	482	3,870	266	236	283	175	118	104	120	42
18	114	138	372	2,170	262	244	249	131	470	118	60	40
19	112	91	171	*913	262	289	*221	186	367	116	75	39
20	135	98	60	531	262	837	302	149	177	*125	40	77
21	139	90	272	496	283	682	200	239	145	117	47	92
22	198	41	256	1,560	518	411	101	288	147	122	45	77
23	178	190	346	2,480	1,140	289	18	210	142	101	44	28
24	28	213	281	2,180	583	359	21	169	142	36	44	27
25	28	195	133	1,180	293	602	d20	133	145	45	104	27
26	104	143	199	639	196	462	d17	124	142	99	58	27
27	129	131	206	496	312	468	d14	124	156	122	33	27
28	140	58	257	468	191	1,010	d17	129	147	120	35	27
29	118	30	218	462	-	1,530	124	131	133	120	56	28
30	87	*110	241	316	-	684	193	127	129	59	58	28
31	23	-	242	182	-	960	-	122	-	75	52	-
Total	3,255	3,118	9,723	22,819	8,311	13,055	10,626	5,689	4,803	3,120	1,896	1,368
Mean	105	104	314	736	297	421	354	184	160	101	61.2	45.6
Cfsm	0.461	0.456	1.38	3.23	1.30	1.85	1.55	0.807	0.702	0.443	0.268	0.200
In.	0.53	0.51	1.59	3.72	1.35	2.13	1.73	0.93	0.78	0.51	0.31	0.22

Calendar year 1953: Max 2,870 Min 22 Mean 276 Cfsm 1.21 In. 16.43
Water year 1953-54: Max 3,870 Min 14 Mean 241 Cfsm 1.06 In. 14.31

Peak discharge (base, 2,200 cfs).--Jan. 17 (2 p.m.) 4,500 cfs (7.12 ft); Jan. 23 (8 p.m.) 2,780 cfs (4.76 ft); Apr. 1 (9 a.m.) 2,580 cfs (4.62 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and powerplant records at Boyd's mill.
d Doubtful gage-height record; discharge computed from reconstructed gage-height based on recorded graph and weather records.

Lake Greenwood near Chappells, S. C.

Location.--Lat 34°10', long. 81°54', at left upstream end of dam on Saluda River, 0.7 mile upstream from Wilson Creek and 2.4 miles west of Chappells, Newberry County.
Drainage area.--1,150 sq mi, approximately.
Records available.--May 1940 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Dan T. Duncan Engineering Co.); gage readings have been reduced to elevations above mean sea level. Prior to June 11, 1940, staff gage at same site and datum.
Extremes.--Maximum elevation during year, 441.63 ft Jan. 26; minimum, 425.18 ft Oct. 13, 14.
1940-54: Maximum elevation, 442.02 ft Mar. 5, 1952; minimum elevation since normal reservoir level was first reached, 424.42 ft Oct. 16, 1947.
Remarks.--Lake is formed by earth dam; storage began in May 1940; dam completed in 1940. Usable capacity, about 8,330,000,000 cu ft between elevations 420.0 ft (limit of drawdown) and 441.5 ft (top of 1½-foot flashboards on top of spillway gates) above mean sea level. Dead storage is about 3,500,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest is 415.0 ft above mean sea level. Water is used for generation of power.
Revisions.--WSP 972: Drainage area.

Mean elevation, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25.89	25.58	28.15	33.30	40.52	38.83	39.89	39.23	39.21	37.66	37.23	36.48
2	25.58	25.60	28.20	33.02	40.07	38.69	40.57	39.37	39.22	37.48	37.20	36.44
3	25.42	25.62	28.25	33.00	39.57	38.62	40.57	39.50	39.20	37.39	37.12	36.42
4	25.38	25.66	28.47	32.94	39.05	38.40	40.54	39.68	39.18	37.52	37.05	36.38
5	25.31	25.72	28.78	32.67	38.60	38.21	40.29	39.61	39.18	37.60	36.97	36.31
6	25.28	25.83	29.16	32.41	38.50	38.18	39.85	39.47	39.23	37.64	36.86	36.27
7	25.27	25.95	29.79	32.10	38.58	38.31	39.44	39.28	39.25	37.70	36.74	36.24
8	25.30	26.03	30.27	31.80	38.58	38.33	39.29	39.20	39.15	37.70	36.69	36.19
9	25.34	26.03	30.61	31.62	38.39	38.21	39.17	39.32	39.03	37.70	36.64	36.15
10	25.35	26.08	30.86	31.66	38.15	38.09	39.09	39.3e	38.90	37.83	36.72	36.12
11	25.32	26.15	30.94	31.67	37.98	37.92	39.20	39.15	38.84	37.86	36.75	36.02
12	25.26	26.21	31.48	31.39	37.78	37.83	39.31	38.97	38.80	37.80	36.75	35.94
13	25.22	26.31	32.92	31.12	37.68	37.86	39.28	38.84	38.81	37.77	36.75	35.91
14	25.19	26.41	34.25	30.88	37.78	38.20	39.21	38.81	38.79	37.72	36.69	35.89
15	25.28	26.53	34.92	30.64	37.73	38.45	39.15	38.86	38.66	37.70	36.65	35.86
16	25.42	26.61	35.14	31.64	37.48	38.57	39.10	39.00	38.58	37.75	36.60	35.90
17	25.51	26.67	35.09	34.92	37.31	38.59	39.21	39.11	38.48	37.72	36.61	35.89
18	25.57	26.73	34.90	37.10	37.19	38.50	39.34	39.15	38.44	37.73	36.61	35.81
19	25.56	26.81	34.72	37.56	37.14	38.43	39.41	39.10	38.50	37.71	36.63	35.75
20	25.48	26.92	34.70	37.56	37.18	38.37	39.41	39.13	38.62	37.68	36.61	35.71
21	25.47	27.06	34.67	37.37	37.62	38.66	39.31	39.10	38.63	37.65	36.60	35.69
22	25.47	27.23	34.33	37.53	37.98	38.88	39.20	39.12	38.51	37.68	36.58	35.64
23	25.52	27.38	34.15	38.70	38.28	38.87	39.13	39.25	38.40	37.67	36.60	35.60
24	25.61	27.50	34.21	39.84	38.52	38.63	39.10	39.32	38.30	37.62	36.58	35.55
25	25.63	27.66	34.37	41.32	38.56	38.41	39.24	39.29	38.18	37.61	36.55	35.47
26	25.59	27.78	34.48	41.56	38.55	38.34	39.31	39.25	38.10	37.65	36.53	35.43
27	25.54	27.92	34.56	41.42	38.51	38.40	39.31	39.16	38.14	37.68	36.52	35.40
28	25.50	28.01	34.55	41.17	38.70	38.82	39.27	39.09	38.12	37.63	36.47	35.36
29	25.49	28.05	34.39	40.89	-	39.45	39.16	39.04	37.99	37.52	36.48	35.30
30	25.50	28.10	34.09	40.65	-	39.37	39.17	39.14	37.82	37.40	36.47	35.25
31	25.54	-	33.73	40.62	-	39.14	-	39.20	-	37.24	36.48	-

Note.--Add 400 ft to obtain elevation above mean sea level.

Monthly elevation and usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (billions of cubic feet)	Change in contents during month (equivalent in cfs)
Sept.30	425.97	1.87	-
Oct. 31	425.58	1.73	-52
Nov. 30	428.11	2.62	+343
Dec. 31	433.50	4.72	+784
Calendar year 1953	-	-	+101
Jan. 31	440.65	7.94	+1,202
Feb. 28	438.83	7.10	-347
Mar. 31	439.23	7.28	+67
Apr. 30	439.22	7.28	0
May 31	439.20	7.27	-4
June 30	437.72	6.59	-262
July 31	437.20	6.36	-86
Aug. 31	436.47	6.03	-123
Sept. 30	435.21	5.47	-216
Water year 1953-54	-	-	+114

† Elevation at 12 p.m.

Saluda River at Chappells, S. C.

Location.--Lat 34°11', long. 81°52', on left bank at downstream side of bridge on State Highway 39 at Chappells, Newberry County, 7 miles downstream from dam at Lake Greenwood and 8¼ miles upstream from Little River.

Drainage area.--1,350 sq mi, approximately.

Records available.--May 1927 to September 1954. Gage-height records collected at practically same site since 1905 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 363.89 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 1, 1939, at site 300 ft downstream at datum 0.10 ft lower.

Average discharge.--27 years, 1,960 cfs.

Extremes.--Maximum discharge during year, 6,320 cfs Jan. 24 (gage height, 13.57 ft); minimum, 33 cfs Nov. 27; minimum daily, 124 cfs Nov. 14.

1927-54: Maximum discharge, 63,700 cfs Oct. 2, 1929 (gage height, 31.5 ft), from rating curve extended above 27,000 cfs on basis of velocity-area studies; minimum, 8 cfs Oct. 29, 1939; minimum daily, 8 cfs Oct. 29, 1939, caused by construction work above station.

Maximum stage known, 35.7 ft Aug. 26, 1908 (present datum), from reports of U. S. Weather Bureau.

Remarks.--Records good. Flow regulated by Lake Greenwood (see preceding page).

Revisions.--WSP 972: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13		Dec. 14 to Sept. 30			
0.4	113	0.6	176	6.0	2,120
1.0	228	1.0	268	8.0	3,110
2.0	510	2.0	542	10.0	4,190
4.0	1,240	4.0	1,260	12.0	5,290
6.0	2,090				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,810	426	335	3,100	3,160	1,990	4,850	856	1,330	1,400	313	249
2	1,740	324	307	2,070	4,680	2,460	4,900	380	1,330	1,430	604	276
3	650	330	328	939	4,580	2,830	3,920	1,500	1,370	800	726	262
4	740	252	306	2,270	4,520	2,490	3,250	2,370	1,260	256	756	680
5	665	304	150	2,480	3,860	2,350	4,190	2,380	761	243	774	335
6	569	302	606	2,440	1,530	1,290	4,630	2,340	277	268	656	438
7	510	153	*816	2,490	599	596	4,190	2,240	997	286	728	352
8	*540	354	735	2,440	2,070	1,750	2,960	1,250	1,360	388	624	451
9	506	303	1,040	1,460	2,510	2,090	2,910	406	1,450	390	444	455
10	442	212	1,330	710	2,530	*2,100	2,760	1,580	1,760	298	314	376
11	478	208	1,380	2,110	2,600	2,120	996	2,020	810	342	238	724
12	582	202	1,690	2,610	2,560	1,650	1,850	2,130	1,020	736	251	193
13	592	209	1,830	2,170	1,350	984	2,240	1,860	378	487	228	306
14	640	124	3,540	2,180	639	604	2,150	1,520	1,150	697	622	280
15	516	215	3,680	2,040	2,260	1,440	*2,250	820	1,530	738	464	*307
16	414	272	3,300	2,570	2,710	1,720	1,840	305	1,510	766	330	276
17	363	199	3,160	2,370	2,470	1,710	1,130	1,080	1,460	714	360	306
18	374	222	3,120	3,510	1,800	2,060	416	1,170	1,580	317	371	670
19	772	276	2,030	3,580	1,630	2,770	1,540	1,220	1,040	*604	405	242
20	578	178	1,060	*3,560	994	4,470	1,710	1,250	284	611	391	434
21	551	150	2,360	3,630	1,020	988	1,890	1,110	1,060	644	454	360
22	536	129	3,310	4,050	1,800	2,140	1,990	728	1,420	604	254	268
23	475	338	2,570	4,850	2,130	2,620	1,550	323	1,300	613	467	276
24	315	385	1,130	4,950	2,230	3,480	851	898	1,340	734	337	280
25	398	296	844	3,420	2,240	3,420	380	1,190	1,300	328	328	570
26	564	152	942	4,850	2,020	2,870	1,290	1,190	850	400	334	202
27	648	259	972	4,630	1,090	1,800	1,420	*1,340	304	500	342	306
28	619	261	1,590	4,630	458	720	1,520	1,270	1,020	872	632	361
29	580	433	2,720	4,460	-	2,710	1,400	910	1,390	830	213	344
30	520	483	3,430	3,670	-	4,460	1,320	315	1,370	1,230	352	404
31	292	-	3,470	1,690	-	4,520	-	1,010	-	893	244	-
Total	19,179	7,951	54,081	91,929	62,040	69,202	68,293	38,961	34,011	19,419	13,556	10,983
Mean	619	265	1,745	2,965	2,216	2,232	2,276	1,257	1,134	626	437	366
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 5,210 Min 124 Mean 1,608 Cfsm - In. -
Water year 1953-54: Max 4,950 Min 124 Mean 1,341 Cfsm - In. -

* Discharge measurement made on this day.

Saluda River near Silverstreet, S. C.

Location.--Lat 34°11', long. 81°44', on left bank 200 ft upstream from Higgins Ferry Bridge on State Highway 19, 1 mile downstream from Little River, and 2½ miles south of Silverstreet, Newberry County.

Drainage area.--1,620 sq mi, approximately.

Records available.--January 1927 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 345.13 ft above mean sea level, unadjusted. Prior to Oct. 15, 1929, staff gage at same site and datum. Since Mar. 8, 1939, water-stage recorder for station on Lake Murray near Columbia has been used as an auxiliary gage for this station.

Average discharge.--27 years, 2,241 cfs.

Extremes.--Maximum discharge during year, 7,760 cfs Apr. 2 (gage height, 14.96 ft); minimum daily, 160 cfs Nov. 22.
1927-54: Maximum discharge, 83,800 cfs Oct. 3, 1929 (gage height, 33.97 ft), from rating curve extended above 19,000 cfs on basis of discharge measurements made at Chappells and near Chapin; minimum daily, 49 cfs July 4, 1940.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Lake Greenwood (see p. 229).

Revisions.--WSP 972: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,910	434	420	3,480	2,660	1,310	6,270	1,000	1,300	1,540	472	238
2	2,070	446	360	2,540	4,940	2,530	7,300	500	1,440	1,600	466	250
3	1,370	382	380	1,350	4,940	2,710	6,120	1,400	1,440	1,150	802	276
4	815	320	800	1,610	4,710	2,860	3,480	2,400	1,380	442	786	489
5	709	340	1,000	2,620	4,260	2,230	4,340	2,400	894	230	830	526
6	619	360	1,400	2,550	1,870	1,770	5,010	2,400	311	318	760	390
7	583	240	*1,160	2,580	551	636	4,780	2,400	564	296	805	240
8	*572	300	918	2,540	1,470	1,140	3,340	1,400	1,350	336	440	434
9	594	360	837	1,880	2,530	2,080	3,130	600	1,440	434	811	429
10	568	280	1,380	704	2,540	*2,090	3,260	1,500	1,880	404	302	421
11	536	260	1,480	1,560	2,600	2,150	1,380	2,000	1,080	356	285	639
12	593	260	2,170	2,790	2,580	1,850	1,500	2,200	1,060	794	250	359
13	618	260	3,540	2,370	1,680	1,150	2,290	1,900	544	560	231	196
14	698	220	4,700	2,250	595	684	2,230	1,600	782	617	548	268
15	598	180	5,430	2,170	1,500	1,560	*2,320	1,000	1,600	958	392	*318
16	516	260	3,900	3,550	2,750	1,880	2,020	500	1,660	1,080	463	338
17	513	240	3,480	5,580	2,640	1,820	1,300	1,000	1,600	930	294	289
18	424	260	3,340	6,270	1,930	1,970	448	1,200	1,820	499	364	668
19	675	320	2,590	4,680	1,660	2,520	1,400	1,300	1,510	*547	382	332
20	748	240	1,310	*3,770	1,130	5,580	1,800	1,300	501	700	416	350
21	635	200	1,710	3,960	1,350	2,220	1,820	1,200	718	686	494	370
22	596	160	3,540	4,630	2,000	1,840	2,000	900	1,540	692	302	338
23	549	280	3,200	6,000	2,280	2,590	1,700	500	1,440	675	407	260
24	477	420	1,560	6,940	2,240	3,630	1,000	800	1,490	805	358	284
25	437	360	880	3,690	2,360	3,860	362	1,200	1,440	484	320	498
26	531	260	855	5,410	2,150	3,300	1,000	1,200	1,160	395	338	316
27	672	280	934	5,090	1,500	2,210	1,500	*1,320	382	515	304	244
28	709	320	1,350	5,010	493	1,150	1,600	1,270	730	762	606	306
29	668	420	2,490	4,780	-	2,120	1,500	1,080	1,440	1,010	315	379
30	613	500	3,760	4,180	-	4,860	1,400	422	1,540	1,130	319	345
31	509	-	3,900	2,030	-	4,940	-	596	-	1,230	257	-
Total	22,125	9,162	64,774	108,564	63,909	73,240	77,600	40,488	36,036	22,175	14,119	10,790
Mean	714	305	2,089	3,502	2,282	2,363	2,587	1,306	1,201	715	455	360
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 6,360 Min 160 Mean 1,810 Cfsm - In. -
Water year 1953-54: Max 7,300 Min 160 Mean 1,488 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 4 to Dec. 6, Apr. 17, 19, 20, 22-24, Apr. 26 to May 26; discharge estimated on basis of weather records and records for station at Chappells.

Lake Murray near Columbia, S. C.

Location.--Lat 34°03'05", long. 81°13'15", in intake tower 500 ft upstream from dam on Saluda River, 10 miles upstream from confluence of Saluda and Broad Rivers at Columbia, Richland County.
Drainage area.--2,420 sq mi, approximately.
Records available.--August 1929 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 0.64 ft below mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Oct. 31, 1930, staff gage at same site and datum.
Extremes.--Maximum gage height during year, 347.74 ft June 1; minimum, 325.48 ft Dec. 4. 1929-54: Maximum gage height, 361.51 ft Apr. 10, 1936; minimum gage height since generation of power was started, 320.96 ft Dec. 23, 1941.
Remarks.--Lake is formed by earth dam; storage began Aug. 31, 1929; dam completed in 1930. Usable capacity, 70,300,000,000 cu ft between gage heights 300.0 ft (limit of drawdown) and 360.0 ft (maximum normal lake level). Dead storage, 21,800,000,000 cu ft. Figures given herein represent usable contents. Gage height of one spillway crest (completed in 1946), 330 ft, with top of gates 362 ft; gage height of other spillway crest 340 ft, with top of gates 365 ft. Water is used for generation of power.
Revisions.--WSP 972: Drainage area.

Mean gage height, in feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38.37	32.98	26.14	30.66	36.48	39.71	43.40	46.84	47.64	46.30	45.21	41.65
2	38.13	32.84	25.79	30.85	36.65	39.81	43.75	46.89	47.62	46.24	45.14	41.51
3	38.00	32.60	25.58	31.00	36.90	40.00	44.15	46.92	47.62	46.22	45.03	41.38
4	38.00	32.35	25.55	31.00	37.12	40.06	44.39	46.97	47.59	46.24	44.95	41.24
5	37.91	32.05	25.60	30.95	37.34	40.18	44.60	47.07	47.60	46.24	44.87	41.21
6	37.63	31.75	25.65	30.90	37.55	40.27	44.80	47.17	47.60	46.19	44.76	41.19
7	37.33	31.60	25.78	30.89	37.60	40.34	45.05	47.24	47.57	46.16	44.64	41.05
8	37.02	31.55	25.82	30.90	37.61	40.34	45.24	47.32	47.50	46.06	44.60	40.80
9	36.74	31.42	25.80	30.97	37.67	40.37	45.40	47.34	47.40	46.05	44.55	40.55
10	36.62	31.03	25.84	31.06	37.74	40.47	45.68	47.33	47.28	46.07	44.42	40.28
11	36.62	30.71	25.84	31.06	37.89	40.59	45.83	47.30	47.24	46.07	44.28	40.10
12	36.53	30.39	26.04	30.93	38.00	40.60	45.90	47.31	47.18	46.05	44.08	39.97
13	36.34	30.12	26.54	30.80	38.10	40.67	45.97	47.34	47.18	45.99	43.92	39.91
14	36.14	29.99	27.27	30.70	38.13	40.77	46.05	47.46	47.13	45.92	43.79	39.72
15	35.97	29.94	27.73	30.65	38.13	40.79	46.16	47.53	47.01	45.92	43.78	39.55
16	35.85	29.77	28.04	30.93	38.23	40.81	46.31	47.54	46.93	45.97	43.68	39.45
17	35.74	29.40	28.26	31.55	38.40	40.86	46.54	47.53	46.86	46.10	43.48	39.29
18	35.70	29.04	28.44	32.00	38.45	40.87	46.55	47.53	46.87	46.14	43.29	39.20
19	35.58	28.69	28.59	32.40	38.48	40.99	46.58	47.53	46.95	46.12	43.11	39.20
20	35.35	28.32	28.70	32.62	38.53	41.27	46.61	47.56	46.96	46.00	42.95	39.12
21	35.05	28.10	28.79	32.86	38.70	41.54	46.63	47.57	46.96	45.92	42.78	38.84
22	34.78	28.08	28.96	33.24	38.82	41.57	46.68	47.57	46.91	45.81	42.82	38.53
23	34.58	27.97	29.25	33.98	38.95	41.65	46.71	47.58	46.84	45.74	42.91	38.25
24	34.45	27.64	29.46	34.41	39.08	41.79	46.75	47.58	46.78	45.69	42.79	38.10
25	34.40	27.28	29.59	34.77	39.20	41.99	46.76	47.58	46.76	45.61	42.65	38.04
26	34.25	27.02	29.67	35.06	39.32	42.19	46.77	47.58	46.76	45.57	42.46	38.04
27	33.92	26.93	29.75	35.40	39.41	42.36	46.80	47.57	46.72	45.50	42.21	37.98
28	33.64	26.73	29.84	35.68	39.52	42.47	46.78	47.60	46.59	45.41	42.09	37.82
29	33.34	26.64	29.93	35.90	-	42.55	46.74	47.65	46.48	45.32	42.04	37.64
30	33.10	26.52	30.13	36.13	-	42.77	46.81	47.67	46.37	45.28	41.98	37.45
31	33.02	-	30.41	36.38	-	43.03	-	47.66	-	45.21	41.81	-

Note.--Add 300 ft to obtain gage heights. Gage heights for Feb. 20 to Mar. 10, Aug. 23-30 computed from 4 gage readings daily at powerhouse.

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (billions of cubic feet)	Change in contents during month (equivalent, in cfs)
Sept.30	338.43	33.34	-
Oct. 31	333.01	26.69	-2,483
Nov. 30	326.30	19.54	-2,758
Dec. 31	330.52	23.91	+1,632
Calendar year 1953	-	-	+121
Jan. 31	336.44	30.80	+2,572
Feb. 28	339.66	34.98	+1,728
Mar. 31	343.18	39.92	+1,844
Apr. 30	346.82	45.49	+2,149
May 31	347.64	46.81	+493
June 30	346.32	44.70	-814
July 31	345.23	43.00	-635
Aug. 31	341.72	37.83	-1,930
Sept.30	337.35	31.95	-2,269
Water year 1953-54	-	-	-44

† Gage height at 12 p.m.

Saluda River near Columbia, S. C.

Location.--Lat 34°00'50", long. 81°05'17", on left bank 0.4 mile upstream from site of old Saluda mill, 1.6 miles upstream from confluence with Broad River, and 3.3 miles west of State Capitol in Columbia, Richland County.

Drainage area.--2,510 sq mi, approximately.

Records available.--August 1925 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 149.46 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Sept. 1, 1929, at datum 1.00 ft higher.

Average discharge.--29 years, 2,846 cfs.

Extremes.--Maximum discharge during year, 9,600 cfs Nov. 9 (gage height, 6.10 ft); minimum, 105 cfs June 21; minimum daily, 127 cfs June 20.
1925-54: Maximum discharge, 67,000 cfs Oct. 2, 1929 (gage height, 15.22 ft), from rating curve extended above 26,000 cfs on basis of discharge measurements made at Wise Ferry Bridge near Chapin; minimum, 11 cfs July 13, 1930; minimum daily, 12 cfs July 13, 1930, caused by construction work above station.

Remarks.--Records good. Flow regulated by Lake Murray (see preceding page) and Lake Greenwood (see p. 229).

Revisions.--WSP 972: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.1	110	2.5	975
1.3	155	3.0	1,620
1.5	220	4.0	3,440
1.7	320	5.0	6,050
2.0	521		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,920	728	4,880	782	896	994	476	200	1,980	1,980	374	2,670
2	5,090	4,060	3,210	612	1,040	780	380	164	1,520	1,840	2,230	2,520
3	1,040	2,600	2,130	359	1,290	654	416	1,208	2,030	696	2,040	2,400
4	580	3,650	1,580	2,620	1,100	524	367	582	1,270	392	2,530	1,240
5	4,650	4,700	849	3,370	730	490	474	308	348	194	2,610	336
6	4,820	3,310	346	2,940	518	438	410	678	143	872	2,830	1,350
7	4,900	1,250	854	2,520	567	306	486	1,050	2,040	1,130	2,150	4,060
8	4,830	269	1,140	1,890	1,330	1,460	903	476	2,440	1,090	532	4,580
9	3,780	4,790	1,140	814	1,110	1,050	1,090	932	3,320	704	2,810	4,910
10	633	5,040	1,140	357	884	960	526	1,090	1,910	162	3,310	4,060
11	294	4,220	1,300	3,970	748	820	371	1,550	1,700	151	3,260	2,100
12	*3,160	4,260	812	4,450	668	900	1,110	1,700	757	992	2,610	696
13	3,410	2,730	430	3,920	868	668	990	1,370	1,100	1,490	2,820	2,240
14	3,300	1,740	1,910	3,480	722	470	1,040	511	2,830	1,690	1,480	2,790
15	2,980	442	1,060	3,150	871	1,020	972	383	2,940	1,470	434	2,870
16	2,630	4,570	592	1,140	1,260	1,020	1,020	504	2,600	1,810	3,190	2,610
17	1,460	4,690	1,080	1,170	833	1,200	461	1,180	1,440	784	3,720	2,680
18	364	4,780	1,180	1,350	1,890	1,060	206	1,080	478	212	3,420	1,010
19	4,560	4,720	734	982	972	990	748	880	202	1,570	3,500	870
20	4,630	4,510	881	930	260	369	1,150	690	127	2,960	3,240	3,200
21	4,570	1,820	678	957	198	198	1,270	764	916	2,300	2,130	5,270
22	3,700	278	375	1,160	411	998	1,260	606	2,210	2,150	521	4,900
23	3,670	4,110	434	1,160	602	1,010	957	338	2,190	1,890	2,400	3,270
24	1,400	4,680	312	1,070	650	815	538	574	*2,090	2,280	3,020	1,940
25	268	4,860	364	608	594	648	308	664	1,400	530	3,120	482
26	4,620	898	238	665	448	474	668	1,320	638	1,740	3,690	262
27	5,000	2,330	206	758	189	294	1,170	1,100	2,220	2,060	3,770	2,290
28	4,420	1,930	957	1,050	512	209	1,910	464	2,640	2,270	2,180	2,550
29	4,720	541	1,680	1,440	-	501	636	517	2,840	1,400	444	*2,830
30	1,960	4,000	1,390	320	-	463	613	562	2,700	1,960	2,960	2,990
31	1,020	-	788	295	-	606	-	1,450	-	848	3,020	-
Total	97,379	92,506	34,670	50,289	22,161	22,389	22,926	24,895	51,019	41,617	76,345	75,976
Mean	3,141	3,084	1,118	1,622	791	722	764	803	1,701	1,342	2,463	2,533
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 5,880 Min 155 Mean 2,026 Cfsm - In. -
Water year 1953-54: Max 5,270 Min 127 Mean 1,677 Cfsm - In. -

* Discharge measurement made on this day.

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Lakes Marion-Moultrie diversion canal near Pineville, S. C.

Location.--Lat 33°23'15", long. 80°08'25", on right bank 0.6 mile upstream from bridge on State Highway 45 and 7.0 miles southwest of Pineville, Berkeley County.

Records available.--February 1944 to September 1954.

Gage.--Water-stage recorder. Auxiliary water-stage recorder 3.9 miles downstream from base gage. Datum of gage is 60.0 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by South Carolina Public Service Authority).

Average discharge.--10 years, 14,170 cfs.

Extremes.--1944-54: Maximum daily discharge, 40,200 cfs Mar. 10, 1952; maximum daily reverse flow, 12,100 cfs Feb. 9, 1947.

Remarks.--Records good except those for periods of very low fall between gages, which are poor. Canal diverts water from Lake Marion to Lake Moultrie for generation of power and for navigation. Water is discharged from powerplant and navigation lock into West Branch Cooper River.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,900	e3,350	8,000	14,700	33,900	17,100	20,000	13,400	10,100	11,200	4,040	e2,520
2	11,800	4,920	8,750	14,500	32,200	16,500	19,700	12,200	11,500	11,600	3,420	e2,760
3	11,700	7,200	8,900	14,200	30,300	18,500	20,100	12,200	12,400	11,700	3,210	3,400
4	9,930	*8,070	9,140	13,400	28,200	19,000	19,800	13,000	13,000	11,000	2,810	3,380
5	8,820	8,830	8,690	13,200	25,700	18,700	20,900	12,300	12,200	10,100	4,650	3,380
6	9,060	9,330	7,840	*13,300	23,400	19,200	21,700	12,600	10,400	10,000	4,650	e2,740
7	9,960	9,160	7,990	13,100	20,700	19,700	22,400	12,200	8,960	*10,300	4,080	3,560
8	10,500	8,140	7,990	13,000	18,900	19,400	22,000	13,300	9,520	10,200	3,910	3,130
9	11,400	6,240	8,460	13,000	18,100	19,700	21,100	11,000	10,100	9,760	4,320	*4,410
10	11,200	7,200	9,560	12,900	17,300	19,700	20,800	11,000	11,000	9,360	5,160	6,710
11	9,640	8,660	9,560	12,700	17,400	19,000	19,900	11,700	11,600	9,040	4,740	5,810
12	8,440	8,660	9,320	11,700	17,200	18,100	18,900	12,200	11,000	8,640	5,000	4,360
13	8,660	8,830	8,760	10,800	15,900	17,600	17,500	12,000	10,100	8,580	5,380	3,100
14	9,730	8,830	10,100	11,200	15,100	18,000	16,300	13,100	9,860	8,510	4,620	e2,680
15	10,100	8,760	11,000	11,400	13,700	17,500	15,600	12,600	14,500	a8,470	3,990	e2,260
16	10,500	8,920	12,200	11,200	12,900	16,500	14,800	10,700	11,100	a8,060	e2,280	3,310
17	10,700	9,160	13,400	10,700	14,000	16,500	17,100	10,700	11,300	a7,190	e1,850	3,310
18	9,560	*8,850	14,400	10,600	13,600	17,100	14,400	*11,400	11,100	6,590	2,920	e2,710
19	8,130	8,850	16,000	11,900	13,700	17,600	14,100	11,900	10,800	7,540	3,780	e2,060
20	7,730	8,850	17,000	13,200	13,800	18,600	14,400	13,300	9,390	a8,060	3,810	e2,300
21	7,350	8,850	17,300	a15,200	13,400	18,400	13,700	12,300	9,660	a8,450	3,810	3,160
22	7,790	7,990	17,100	a17,600	13,400	17,800	14,000	11,600	10,100	a8,780	3,590	3,160
23	7,790	7,110	16,900	a19,800	14,500	18,500	14,600	9,380	10,500	a8,380	e2,550	3,380
24	7,480	7,660	16,700	a21,100	16,100	18,600	14,600	7,100	11,000	7,590	e1,890	4,280
25	6,690	8,930	16,700	a22,200	17,100	*18,600	13,600	7,100	11,400	6,660	e2,300	3,850
26	3,520	8,850	16,200	*22,200	17,200	19,100	13,300	6,670	11,600	5,810	3,190	e2,350
27	4,020	7,990	15,300	25,100	16,000	18,800	13,100	9,600	11,000	4,810	3,190	e2,120
28	6,090	8,380	14,800	29,900	14,900	19,500	14,000	9,900	10,200	3,590	3,630	e1,890
29	7,140	7,590	14,600	35,000	-	19,600	13,500	9,600	10,600	3,630	3,850	e2,330
30	7,140	7,220	14,600	*37,100	-	19,900	13,600	8,470	10,700	3,420	4,490	3,190
31	5,920	-	14,900	36,300	-	19,900	-	8,090	-	4,240	3,160	-
Total	270,390	241,380	382,160	532,200	518,600	572,700	509,500	342,610	326,690	251,260	114,270	97,600
Mean	8,722	8,046	12,330	17,170	18,520	18,470	16,980	11,050	10,890	8,105	3,686	3,253
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 28,100 Min 1,170 Mean 12,330 Cfsm - In. -
Water year 1953-54: Max 37,100 Min 1,850 Mean 11,400 Cfsm - In. -

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of fall between Lake Marion near Pineville and Lake Moultrie near Pinopolis.
e Very low fall between gages.

Lake Marion near Pineville, S. C.

Location.--Lat 33°27'00", long. 80°09'50", at right upstream end of spillway, 2.8 miles upstream from old Santee Canal, 5.4 miles upstream from Dead River, and 8 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Records available.--January 1942 to September 1954. Prior to October 1942, published as Santee Reservoir near Pineville.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 6, 1942, staff gage at same site and datum.

Extremes.--Maximum elevation during year, 75.13 ft Jan. 31; minimum, 64.18 ft July 17. 1942-54: Maximum elevation, 77.12 ft Mar. 11, 1952; minimum, 61.36 ft Oct. 17, 1951.

Remarks.--Lake is formed by earth dam. Storage began in November 1941; dam completed in 1941. Usable capacity, 39,640,000,000 cu ft between elevations 60.0 ft (limit of drawdown) and 75.0 ft (maximum normal lake elevation). Dead storage, about 15,250,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest, 63.0 ft; top of spillway gates, 76.8 ft. Some water used for generation of power. Major portion of water is diverted from Lake Marion through canal to Lake Moultrie (see p. 237) for generation of power and for navigation.

Elevation at 12 p.m., in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68.20	67.14	66.17	68.32	75.08	72.79	72.52	73.40	71.70	67.99	64.52	65.00
2	68.17	67.12	66.16	68.22	74.97	72.78	72.65	73.40	71.61	67.81	64.53	65.00
3	68.18	67.07	66.19	68.10	74.88	72.96	72.79	73.34	71.54	67.58	64.50	64.99
4	68.18	67.10	66.38	67.94	74.65	72.86	72.96	73.22	71.44	67.35	64.53	64.98
5	68.10	67.10	66.34	67.79	74.44	72.82	73.30	73.16	71.26	67.07	64.57	64.99
6	67.99	67.13	66.60	67.70	74.26	72.82	73.63	73.10	71.14	66.76	64.59	64.97
7	67.88	67.15	66.43	67.58	74.11	72.79	73.82	73.06	71.05	66.50	64.63	64.87
8	67.80	67.18	66.48	67.48	74.10	72.73	73.96	73.02	70.88	66.21	64.70	64.83
9	67.72	67.18	66.62	67.37	73.78	72.67	74.01	72.97	70.80	65.95	64.73	64.86
10	67.60	67.13	66.73	67.18	73.65	72.54	74.09	72.84	70.71	65.71	64.70	64.87
11	67.46	67.12	66.80	67.02	73.57	72.42	74.21	72.73	70.63	65.42	64.77	64.85
12	67.31	67.10	66.95	66.80	73.31	72.32	74.21	72.60	70.54	65.11	64.85	64.79
13	67.12	67.06	67.18	66.80	73.21	72.28	74.20	72.77	70.48	64.85	64.88	64.77
14	67.00	67.00	67.64	66.81	73.10	72.29	74.22	72.68	70.35	64.64	64.88	64.72
15	66.92	66.88	67.68	66.83	72.98	72.16	74.21	72.58	70.21	64.42	64.90	64.75
16	66.85	66.73	67.93	66.87	72.85	72.05	74.30	72.55	70.10	64.30	64.89	64.80
17	66.75	66.57	68.17	66.89	72.76	72.07	74.26	72.50	70.00	64.28	64.87	64.81
18	66.67	66.50	68.48	67.19	72.58	72.08	74.23	72.38	69.87	64.45	64.89	64.84
19	66.59	66.49	68.78	67.48	72.52	72.13	74.20	72.37	69.77	64.48	64.95	64.88
20	66.53	66.51	69.03	67.81	72.45	72.12	74.10	72.30	69.69	64.34	64.95	64.98
21	66.58	66.52	69.14	68.28	72.43	72.09	74.08	72.16	69.60	64.35	64.98	64.94
22	66.70	66.52	69.08	69.14	72.28	72.14	74.06	72.10	69.45	64.39	65.03	64.97
23	66.72	66.52	69.03	69.68	72.28	72.20	74.00	72.14	69.28	64.40	65.00	65.02
24	66.81	66.43	68.95	70.13	72.38	72.20	73.99	72.16	69.13	64.42	64.99	65.06
25	66.82	66.50	69.05	70.52	72.46	72.19	73.95	72.08	69.01	64.48	65.01	65.08
26	66.82	66.49	68.96	71.08	72.54	72.18	73.82	72.08	68.88	64.50	65.00	65.10
27	66.84	66.49	68.82	72.18	72.62	72.20	73.70	72.07	68.72	64.43	65.01	65.07
28	67.00	66.32	68.67	73.53	72.74	72.33	73.60	72.07	68.52	64.43	65.05	65.03
29	67.00	66.31	68.52	74.52	-	72.39	73.50	72.00	68.31	64.47	65.09	65.03
30	67.04	66.28	68.48	75.01	-	72.46	73.40	71.93	68.14	64.50	65.02	65.08
31	67.10	-	68.40	75.12	-	72.52	-	71.83	-	64.52	64.93	-

Monthly elevation and usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (billions of cubic feet)	Change in contents during month (equivalent in cubic feet per second)
Sept. 30	68.23	16.16	-
Oct. 31	67.10	13.36	-1,045
Nov. 30	66.28	11.48	-725
Dec. 31	68.40	16.61	+1,915
Calendar year 1953	-	-	+278
Jan. 31	75.12	40.18	+8,800
Feb. 28	72.74	30.49	-4,005
Mar. 31	72.52	29.67	-306
Apr. 30	73.40	33.04	+1,300
May 31	71.83	27.16	-2,195
June 30	68.14	15.92	-4,336
July 31	64.52	7.75	-3,050
Aug. 31	64.93	8.57	+306
Sept. 30	65.08	8.88	+120
Water year 1953-54	-	-	-231

† Elevation at 12 p.m.

Santee River near Pineville, S. C.

Location.--Lat 33°27'15", long. 80°09'25", on right bank 3.0 miles upstream from Dead River, 3.3 miles downstream from Lake Marion Dam, and 6.7 miles west of Pineville, Berkeley County.

Drainage area.--14,700 sq mi, approximately.

Records available.--April 1942 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 23.00 ft above mean sea level (levels by South Carolina Public Service Authority).

Average discharge.--12 years, 2,270 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs Apr. 17 (gage height, 3.53 ft); minimum daily, 423 cfs Nov. 10.
1942-54: Maximum discharge, 155,000 cfs Sept. 23, 1945 (gage height, 31.1 ft, from floodmarks), from rating curve extended above 13,000 cfs by computations of flow over spillway at Lake Marion and by logarithmic plotting; minimum daily, 9 cfs Feb. 23, 1947 (caused by repair work at spillway).

Remarks.--Records good. Flow completely regulated by Lake Marion (see preceding page). Water is diverted above station from Lake Marion through canal (see p.234) into Lake Moultrie (see p.237) for generation of power and for navigation, then discharged into Cooper River basin.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*492	510	492	510	545	617	545	563	545	492	492	475
2	510	510	492	492	510	545	528	563	545	510	492	475
3	510	492	492	475	528	545	545	563	545	510	492	475
4	510	510	510	492	510	545	545	545	*545	510	427	492
5	510	528	492	492	528	510	545	581	545	510	492	492
6	510	545	492	510	528	545	545	563	563	492	475	492
7	475	528	510	510	528	528	545	563	545	492	458	475
8	510	510	510	492	528	528	563	563	545	458	458	475
9	510	510	510	492	599	545	545	563	545	475	475	475
10	492	423	492	492	545	528	545	563	545	475	475	492
11	492	492	510	492	545	528	528	563	545	475	475	475
12	475	492	510	510	563	528	528	563	510	475	475	475
13	492	492	528	475	563	528	545	581	510	475	458	475
14	492	492	545	*492	545	545	545	581	510	458	458	475
15	492	475	528	492	545	545	*528	581	510	458	458	*475
16	492	492	510	492	563	528	545	563	510	475	458	475
17	492	492	510	492	545	545	744	563	510	475	458	475
18	492	492	528	492	563	563	581	545	510	492	458	475
19	492	475	475	492	545	545	563	545	492	475	458	475
20	492	492	492	492	545	545	563	545	510	458	475	492
21	492	492	492	510	528	545	563	528	510	475	475	492
22	492	492	492	545	545	528	563	545	492	492	475	492
23	510	492	492	581	545	528	563	528	528	*475	458	492
24	492	*510	510	545	545	528	563	528	528	475	475	510
25	492	510	528	528	545	528	563	528	510	475	475	510
26	492	510	510	528	*545	528	563	528	510	475	475	492
27	492	510	510	528	545	528	581	528	510	475	475	492
28	510	510	510	492	545	545	581	528	492	510	475	492
29	510	510	492	492	-	528	563	528	492	510	475	492
30	492	510	492	545	-	528	563	528	492	475	492	492
31	510	-	492	545	-	528	-	528	-	492	475	-
Total	15,416	14,998	15,648	15,717	15,214	16,678	16,787	17,085	15,649	14,969	14,592	14,541
Mean	497	500	505	507	543	538	560	551	522	483	471	485
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 1,870 Min 423 Mean 576 Cfsm - In. -
Water year 1953-54: Max 744 Min 423 Mean 513 Cfsm - In. -

* Discharge measurement made on this day.

Lake Moultrie near Pinopolis, S. C.

Location.--Lat 33°14'40", long. 79°59'30", at powerplant 0.7 mile upstream from Atlantic Coast Line Railroad bridge and 2.8 miles northeast of Pinopolis, Berkeley County.

Records available.--January 1942 to September 1954. Prior to October 1942, published as Pinopolis Reservoir near Pinopolis.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Harza Engineering Co.). Prior to May 16, 1942, staff gage at same site and datum.

Extremes.--Maximum elevation during year, 74.08 ft Apr. 17; minimum, 63.31 ft July 22. 1942-54: Maximum elevation, 76.18 ft Feb. 24, 1946 (caused by high wind); minimum, 58.52 ft Dec. 21, 1951.

Remarks.--Lake is formed by earth dikes and dam, with concrete navigation lock; dikes and dam completed in 1941. Storage began in November 1941. Water is diverted through canal from Lake Marion (see p. 235) and discharged through tailrace canal into West Branch Cooper River. Usable capacity, 28,314,000,000 cu ft between elevations 60.0 ft (limit of drawdown) and 75.0 ft (maximum normal elevation). Dead storage, about 19,600,000,000 cu ft. Figures given herein represent usable contents. Water is used for generation of power and for navigation.

Elevation at 12 p.m., in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67.31	67.18	65.69	66.85	71.17	72.17	71.19	73.16	71.40	67.09	64.49	64.99
2	67.22	66.95	65.52	66.81	71.66	71.98	71.26	73.23	71.20	66.76	64.49	64.98
3	67.52	66.80	65.52	66.89	72.08	71.98	71.44	73.10	71.08	66.56	64.45	64.98
4	67.93	66.72	65.75	66.72	72.39	71.84	71.67	73.04	70.99	66.51	64.46	64.91
5	67.81	66.70	65.89	66.60	72.61	71.68	71.82	72.97	70.89	66.35	64.41	65.02
6	67.58	66.64	66.18	66.43	72.91	71.60	72.03	72.89	70.99	65.94	64.48	64.92
7	67.25	66.85	66.19	66.21	73.30	71.57	72.29	72.78	70.83	65.45	64.50	64.86
8	67.01	67.15	66.15	66.04	73.29	71.42	72.66	72.85	70.63	65.24	64.62	64.78
9	66.81	67.12	66.16	65.97	73.12	71.32	72.84	72.89	70.48	64.95	64.59	64.66
10	66.88	66.95	66.12	65.86	72.99	71.35	73.11	72.68	70.31	64.80	64.62	64.58
11	67.19	66.79	66.15	65.87	72.94	71.35	73.46	72.50	70.18	64.68	64.59	64.65
12	66.90	66.69	66.42	65.95	72.72	71.36	73.58	72.38	70.22	64.22	64.66	64.79
13	66.63	66.61	66.77	65.83	72.70	71.32	73.65	72.46	70.29	63.79	64.73	64.76
14	66.39	66.63	66.88	65.79	72.79	71.48	73.86	72.39	70.07	63.58	64.70	64.76
15	66.14	66.53	66.92	65.81	72.74	71.41	73.89	72.40	69.82	63.53	64.88	64.75
16	65.95	66.29	66.88	65.95	72.55	71.26	73.90	72.45	69.67	63.58	64.88	64.77
17	65.88	66.00	66.82	66.17	72.45	71.16	74.01	72.29	69.53	63.77	64.88	64.79
18	66.26	65.99	66.75	66.29	72.28	71.05	74.05	72.15	69.46	63.96	64.87	64.84
19	66.34	65.98	66.71	66.19	72.10	70.95	73.96	72.07	69.47	63.63	64.87	64.93
20	66.38	65.89	66.89	66.15	72.01	70.92	73.89	72.06	69.50	63.46	64.90	64.95
21	66.39	66.05	67.00	66.20	72.17	71.00	73.89	71.94	69.33	63.33	64.89	64.96
22	66.44	66.37	67.12	66.58	71.84	70.95	73.80	71.92	69.06	63.39	65.00	64.95
23	66.50	66.29	67.10	66.89	71.68	70.94	73.73	72.13	68.84	63.51	64.99	64.95
24	66.67	66.13	67.03	67.31	71.60	70.91	73.74	72.06	68.62	63.87	64.96	64.96
25	66.82	65.95	67.24	67.52	71.61	70.86	73.79	71.98	68.37	64.15	64.94	65.05
26	66.81	66.12	67.32	67.63	71.79	70.84	73.65	71.94	68.27	64.26	64.93	65.20
27	66.79	66.01	67.47	67.87	72.03	70.88	73.43	71.85	68.34	64.31	64.95	65.15
28	66.84	65.99	67.27	68.24	72.29	70.97	73.31	71.86	68.00	64.34	64.93	65.09
29	66.88	66.18	67.17	68.84	-	70.97	73.21	71.83	67.75	64.39	65.09	65.05
30	66.89	65.95	67.01	69.69	-	71.07	73.11	71.83	67.45	64.41	64.97	65.05
31	66.99	-	66.90	70.65	-	71.16	-	71.63	-	64.31	64.97	-

Monthly elevation and usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (billions of cubic feet)	Change in contents during month (equivalent in cubic feet per second)
Sept.30	67.39	11.20	-
Oct. 31	66.99	10.44	-284
Nov. 30	65.99	8.65	-691
Dec. 31	66.90	10.28	+609
Calendar year 1953	-	-	+192
Jan. 31	70.65	17.88	+2,836
Feb. 28	72.29	21.59	+1,534
Mar. 31	71.16	19.01	-963
Apr. 30	73.11	23.53	+1,744
May 31	71.63	20.07	-1,292
June 30	67.45	11.32	-3,376
July 31	64.31	5.93	-2,012
Aug. 31	64.97	6.97	+388
Sept.30	65.05	7.10	+50
Water year 1953-54	-	-	-130

† Elevation at 12 p.m.

South Fork Edisto River near Montmorenci, S. C.

Location.--Lat 33°34'35", long. 81°30'50", near center of span on downstream side of bridge on State Highway 215, 0.4 mile upstream from Cedar Creek, 1 mile upstream from Shaw Creek, and 7.6 miles northeast of Montmorenci, Aiken County.

Drainage area.--198 sq mi.

Records available.--April 1940 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 250.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--14 years, 235 cfs.

Extremes.--Maximum discharge during year, 858 cfs Dec. 15 (gage height, 7.07 ft, from graph based on gage readings); minimum, 37 cfs July 4, Sept. 26 (gage height, 1.00 ft). 1940-54: Maximum discharge, 2,460 cfs Aug. 15, 1940, July 19, 1941 (gage height, 8.81 ft, from graph based on gage readings); minimum, that of July 4, Sept. 26, 1954.

Remarks.--Records fair except those below 50 cfs, which are poor.

Revisions.--WSP 1032: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-3, Oct. 5 to Dec. 5)

1.1	40	5.5	249
1.5	53	6.0	334
2.0	73	6.5	502
3.0	113	7.0	820
5.0	204		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	285	121	141	358	204	219	211	221	*145	61	81	65
2	*222	121	137	313	198	251	211	214	141	61	77	53
3	204	125	145	277	*192	277	211	153	171	57	73	49
4	176	121	186	238	192	238	186	157	167	40	69	65
5	153	125	289	228	198	211	176	149	198	52	65	65
6	141	137	422	228	186	192	166	141	161	73	65	61
7	133	145	581	219	192	186	166	129	153	65	61	57
8	129	149	401	211	186	181	166	129	113	53	61	61
9	125	137	334	204	181	181	176	125	105	57	61	57
10	125	141	263	204	186	181	181	121	101	81	69	*53
11	125	133	228	211	186	186	198	121	97	89	89	57
12	129	129	228	226	181	186	*204	121	97	73	81	53
13	121	133	219	229	186	181	228	137	97	57	77	49
14	117	133	429	247	186	176	249	210	93	61	73	49
15	121	133	820	238	186	153	249	286	85	65	65	65
16	125	*137	742	228	181	161	313	292	85	105	61	97
17	121	a130	418	238	186	176	334	261	89	113	61	129
18	113	a130	281	258	198	171	313	178	85	129	61	125
19	109	a130	245	294	198	166	294	121	85	*129	105	105
20	113	a130	238	249	157	172	245	137	81	97	137	101
21	113	a140	238	238	198	253	204	129	77	85	129	85
22	113	a150	238	228	221	294	192	133	77	69	117	77
23	113	a180	277	238	248	219	192	125	81	65	93	69
24	113	176	294	277	228	198	186	117	77	65	85	61
25	117	166	313	294	211	192	176	113	73	69	81	46
26	117	153	306	262	211	192	171	113	73	61	77	40
27	117	145	262	238	228	204	161	113	73	81	73	73
28	121	145	294	228	211	228	153	113	65	93	69	81
29	121	137	294	219	-	238	145	113	61	105	77	89
30	125	137	294	204	-	219	157	129	*85	101	81	85
31	125	-	334	a204	-	219	-	149	-	85	73	-
Total	4,182	4,169	9,891	7,528	5,516	6,301	6,214	4,750	3,071	2,397	2,447	2,122
Mean	135	139	319	243	197	203	207	153	102	77.3	78.9	70.7
Cfsm	0.682	0.702	1.61	1.23	0.995	1.03	1.05	0.773	0.515	0.390	0.398	0.357
In.	0.79	0.78	1.86	1.42	1.04	1.19	1.17	0.89	0.57	0.45	0.46	0.40

Calendar year 1953: Max 1,240 Min 84 Mean 225 Cfsm 1.14 In. 15.46
Water year 1953-54: Max 820 Min 40 Mean 161 Cfsm 0.813 In. 11.02

Peak discharge (base, 900 cfs).--No peak above base.
* Discharge measurement made on this day.
a No gage-height record; discharge estimated from graph based on weather records.

South Fork Edisto River near Denmark, S. C.

Location.--Lat 33°23'35", long. 81°08'00", on left bank at downstream side of bridge on U. S. Highway 321, 200 ft downstream from Seaboard Air Line Railroad bridge, 1.8 miles downstream from Little River, and 4.8 miles north of Denmark, Bamberg County.

Drainage area.--720 sq mi, approximately.

Records available.--August 1931 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 155.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 27, 1931, chain gage at same site and datum.

Average discharge.--23 years, 759 cfs.

Extremes.--Maximum discharge during year, 2,010 cfs at 12:01 a.m., Oct. 1, stage falling, peak occurred Sept. 29, 1953; maximum peak discharge during year, 1,750 cfs Dec. 16 (gage height, 7.25 ft); minimum discharge, 171 cfs Sept. 13.
1931-54: Maximum discharge, 13,500 cfs Apr. 11, 1936 (gage height, 10.91 ft), from rating curve extended above 4,800 cfs on basis of velocity-area studies and logarithmic plotting; minimum, that of Sept. 13, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 15		Dec. 16 to Sept. 30			
5.0	397	2.9	171	6.0	565
5.4	457	3.5	237	6.5	780
		4.0	292	7.0	1,330
Note.--Same as following table above 5.4 ft.		5.0	405	7.4	2,030
		5.4	457		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,950	397	541	1,320	750	780	750	472	*375	242	281	248
2	1,900	*397	531	1,290	694	855	720	457	393	232	264	232
3	1,940	404	521	1,200	669	864	694	443	430	226	248	220
4	1,790	404	541	1,130	669	882	669	464	450	232	237	210
5	1,370	412	755	1,110	648	840	648	480	480	242	220	204
6	1,000	412	1,060	1,090	627	780	627	480	487	248	210	204
7	790	427	1,160	1,030	610	732	593	464	503	248	204	193
8	649	434	1,110	956	610	720	593	430	512	232	198	193
9	565	442	1,090	864	610	720	648	405	512	232	*204	182
10	521	457	1,090	810	610	669	694	387	450	242	276	182
11	487	464	1,120	802	610	648	694	375	369	259	270	182
12	472	472	1,150	*810	610	610	648	364	369	281	248	176
13	457	472	1,130	780	627	593	*610	383	352	292	248	171
14	457	472	1,360	762	627	593	630	557	347	286	248	176
15	457	472	1,680	732	610	627	760	648	336	264	237	182
16	450	472	1,710	726	610	627	855	669	325	254	226	232
17	442	464	1,810	768	593	627	891	726	308	242	215	286
18	*442	464	1,460	795	593	627	936	694	338	254	210	308
19	442	464	1,510	840	593	627	832	627	405	276	242	330
20	442	464	1,590	848	593	669	780	627	399	286	264	330
21	427	472	1,490	802	627	694	774	610	369	*292	281	320
22	420	503	1,320	774	694	720	756	541	320	276	292	298
23	412	531	1,170	832	669	694	732	464	292	248	303	276
24	412	541	1,070	882	*669	669	726	411	325	232	298	259
25	404	553	989	873	694	648	694	387	352	226	276	248
26	397	553	1,020	848	694	669	627	364	358	220	259	248
27	397	553	1,070	825	669	720	579	358	314	215	248	248
28	397	553	1,070	802	694	780	541	352	281	215	237	248
29	397	553	1,110	795	-	802	503	399	264	226	259	242
30	397	541	1,210	818	-	780	487	399	254	248	254	242
31	397	-	1,300	802	-	768	-	387	-	270	254	-
Total	21,480	14,219	35,538	27,716	17,973	22,034	20,691	14,824	11,269	7,738	7,711	7,070
Mean	693	474	1,146	894	642	711	690	478	376	250	249	236
Cfsm	0.962	0.658	1.59	1.24	0.892	0.988	0.958	0.664	0.522	0.347	0.346	0.328
In.	1.11	0.73	1.83	1.43	0.93	1.14	1.07	0.77	0.58	0.40	0.40	0.37

Calendar year 1953: Max 2,600 Min 272 Mean 726 Cfsm 1.01 In. 13.70
Water year 1953-54: Max 1,950 Min 171 Mean 571 Cfsm 0.793 In. 10.76

* Discharge measurement made on this day.

North Fork Edisto River at Orangeburg, S. C.

Location.--Lat 33°29'00", long. 80°52'25", on left bank at downstream side of bridge on U. S. Highway 301 at Orangeburg, Orangeburg County, 0.5 mile upstream from Atlantic Coast Line Railroad bridge and 1½ miles downstream from Caw Caw Swamp.

Drainage area.--683 sq mi.

Records available.--December 1938 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 149.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Feb. 23, 1939, wire-weight gage at same site and datum.

Average discharge.--15 years (1939-54), 724 cfs.

Extremes.--Maximum discharge during year, 1,550 cfs Oct. 1 (gage height, 7.77 ft); minimum, 190 cfs Sept. 13, 14.

1938-54: Maximum discharge, 9,500 cfs Sept. 18, 1945 (gage height, 14.28 ft), from rating curve extended above 3,900 cfs on basis of velocity-area studies and logarithmic plotting; minimum, that of Sept. 13, 14, 1954.

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

Revisions.--WSP 1032: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-3		Oct. 4 to Sept. 30			
7.1	1,120	2.3	186	5.0	530
7.6	1,440	2.5	204	6.0	728
		3.0	253	7.0	1,020
		4.0	375	8.0	1,560

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,400	348	480	1,020	642	662	684	480	*389	218	233	a200
2	1,210	348	464	955	622	706	684	464	389	213	228	a200
3	1,150	348	448	920	602	728	684	448	389	213	233	a200
4	1,020	348	496	890	602	728	642	530	403	233	233	a195
5	860	348	602	830	584	728	622	602	389	243	228	195
6	728	361	848	803	566	728	602	530	375	233	218	a195
7	622	375	990	776	566	706	566	448	361	*228	213	a195
8	548	375	955	752	566	684	584	403	348	228	213	a195
9	496	389	890	728	566	662	891	375	335	228	218	a195
10	464	403	860	684	566	622	1,360	361	316	233	253	195
11	433	403	830	684	566	602	1,190	348	304	233	298	195
12	403	*403	830	*706	566	566	925	335	304	233	292	195
13	389	403	830	684	566	548	*776	365	328	233	270	190
14	389	403	1,020	684	566	566	830	654	348	228	258	190
15	389	403	1,100	662	548	584	990	803	322	228	248	195
16	375	403	1,220	662	548	566	1,020	803	304	243	243	208
17	375	403	1,200	684	548	566	990	706	286	238	233	238
18	375	403	1,130	728	548	566	920	642	275	228	238	258
19	375	403	1,020	728	530	566	860	602	270	233	238	264
20	375	403	1,020	706	548	602	830	602	270	243	238	264
21	375	418	1,020	706	584	662	776	584	264	258	238	258
22	375	448	955	728	602	642	752	530	258	280	243	253
23	361	496	890	728	642	622	728	448	248	280	248	248
24	361	496	830	776	*642	602	728	403	248	270	248	248
25	361	513	803	752	642	622	706	375	248	258	a250	243
26	361	513	830	728	662	622	642	361	243	248	a250	243
27	361	496	860	728	642	642	584	328	238	248	a240	a245
28	361	496	890	706	642	728	530	322	233	243	a230	a245
29	361	480	890	706	-	752	496	335	233	248	a220	*248
30	348	480	955	684	-	752	480	361	223	253	a210	243
31	348	-	1,020	684	-	728	-	389	-	248	a200	-
Total	16,349	12,509	27,176	23,212	16,474	20,060	23,072	14,937	9,141	7,444	7,403	6,636
Mean	527	417	877	749	588	647	769	482	305	240	239	221
Cfsm	0.772	0.611	1.28	1.10	0.861	0.947	1.13	0.706	0.447	0.351	0.350	0.324
In.	0.89	0.68	1.48	1.27	0.90	1.09	1.26	0.81	0.50	0.40	0.40	0.36

Calendar year 1953: Max 2,120 Min 271 Mean 649 Cfsm 0.950 In. 12.89
Water year 1953-54: Max 1,400 Min 190 Mean 505 Cfsm 0.739 In. 10.04

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for South Fork Edisto River near Denmark and Edisto River near Branchville.

Edisto River near Branchville, S. C.

Location.--Lat 33°10'35", long. 80°48'05", on right bank 400 ft downstream from bridge on U. S. Highway 21, 4.7 miles downstream from Brier Branch, and 5.2 miles south of Branchville, Orangeburg County.

Drainage area.--1,720 sq mi, approximately.

Records available.--November 1945 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 80.02 ft above mean sea level (levels by Corps of Engineers). Prior to May 19, 1949, at datum 1.00 ft higher.

Average discharge.--8 years (1946-54), 1,837 cfs.

Extremes.--Maximum discharge during year, 3,030 cfs Oct. 3 (gage height, 6.79 ft); minimum, 380 cfs Sept. 13-15.
1945-54: Maximum discharge, 10,000 cfs Oct. 6, 1948 (gage height, 10.21 ft, present datum); minimum, that of Sept. 13-15, 1954.

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

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1, 2		Oct. 3 to Sept. 30			
4.3	1,590	-0.1	380	2.0	943
5.0	1,850	0.0	403	4.0	1,570
6.0	2,400	.5	526	6.0	2,420
		1.0	658	7.0	3,220

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,590	798	1,090	2,620	1,830	1,640	1,870	1,300	*827	514	488	464
2	2,360	800	1,060	2,690	1,790	1,640	1,830	1,210	827	501	488	451
3	3,030	800	1,060	2,770	1,790	1,640	1,790	1,120	798	488	501	439
4	2,940	800	1,120	2,770	1,750	1,710	1,710	1,120	827	476	501	420
5	2,850	810	1,210	2,690	1,680	1,790	1,640	1,090	856	476	476	420
6	2,770	820	1,270	2,550	1,600	1,830	1,570	1,060	856	488	464	420
7	2,620	840	1,400	2,420	1,570	1,830	1,540	1,090	856	488	451	420
8	2,420	850	1,540	2,300	1,500	1,830	1,500	1,090	856	501	439	420
9	2,150	870	1,710	2,250	1,460	1,790	1,500	1,030	856	526	427	410
10	1,870	890	1,910	2,200	1,430	1,750	1,430	972	856	501	451	400
11	1,600	900	2,030	2,110	1,430	1,680	1,430	885	856	488	476	400
12	1,330	*900	2,070	*2,070	1,430	1,600	1,570	827	827	488	526	390
13	1,180	914	2,070	1,990	1,430	1,570	*1,830	943	798	501	552	380
14	1,060	914	2,150	1,950	1,460	1,570	2,030	1,330	741	514	526	380
15	1,000	914	2,300	1,910	1,460	1,540	2,030	1,540	713	513	526	380
16	943	914	2,550	1,870	1,430	1,460	1,990	1,600	713	514	514	*396
17	943	914	2,690	1,870	1,430	1,430	1,990	1,680	685	514	488	420
18	914	914	2,850	1,830	1,400	1,400	2,110	1,710	658	514	464	440
19	914	914	2,940	1,790	1,360	1,400	2,200	1,750	672	501	464	464
20	885	914	2,940	1,790	1,360	1,400	2,200	1,710	699	488	451	501
21	885	914	2,850	1,830	1,360	1,430	2,110	1,600	699	*501	464	526
22	885	914	2,770	1,870	1,330	1,460	2,030	1,500	685	514	476	526
23	885	943	2,770	1,950	1,360	1,500	1,950	1,360	658	526	488	539
24	856	972	2,770	1,990	*1,400	1,540	1,910	1,300	631	539	514	539
25	856	1,030	2,690	1,990	1,540	1,540	1,790	1,210	604	526	514	526
26	827	1,060	2,620	1,950	1,600	1,500	1,710	1,000	604	501	514	514
27	827	1,060	2,550	1,950	1,640	1,500	1,680	885	604	488	501	514
28	827	1,090	2,420	1,990	1,640	1,540	1,600	827	604	476	501	501
29	827	1,090	2,420	1,950	-	1,570	1,540	798	578	464	501	501
30	798	1,090	2,420	1,950	-	1 680	1,430	769	539	464	476	488
31	798	-	2,550	1,870	-	1,790	-	798	-	476	464	-
Total	44,640	27,553	66,790	65,730	42,460	49,550	53,510	37,104	21,983	15,470	15,086	13,589
Mean	1,440	918	2,155	2,120	1,516	1,598	1,784	1,197	733	499	487	453
Cfsm	0.837	0.534	1.25	1.23	0.881	0.929	1.04	0.696	0.426	0.290	0.283	0.263
In.	0.96	0.60	1.44	1.42	0.92	1.07	1.16	0.80	0.48	0.33	0.33	0.29

Calendar year 1953: Max 4,950 Min 614 Mean 1,569 Cfsm 0.912 In. 12.38
Water year 1953-54: Max 3,030 Min 380 Mean 1,242 Cfsm 0.722 In. 9.80

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 2-11, Sept. 4-15, 17, 18; discharge estimated on basis of weather records and records for other stations in same drainage basin.

Edisto River near Givhans, S. C.

Location.--Lat 33°01'40", long. 80°23'30", on left bank at downstream side of bridge on State Highway 61, 2.3 miles downstream from Four Hole Swamp and 2.8 miles west of Givhans, Dorchester County.

Drainage area.--2,730 sq mi, approximately.

Records available.--January 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 20.46 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--15 years, 2,439 cfs.

Extremes.--Maximum discharge during year, 3,610 cfs Dec. 27-29, Jan. 6, 7; maximum gage height, 7.91 ft Jan. 6; minimum discharge, 310 cfs Sept. 14 (gage height, 0.64 ft).
1939-54: Maximum discharge, 24,300 cfs Sept. 21, 1945 (gage height, 17.28 ft), from rating curve extended above 14,000 cfs by logarithmic plotting; minimum, that of Sept. 14, 1954.

Remarks.--Records good. About 45,040,000 gal a day (69.7 cfs) diverted above station for Charleston water supply during year.

Revisions.--WSP 1032: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	300	3.0	1,020
1.0	406	4.0	1,420
1.5	546	6.0	2,380
2.0	690	8.0	3,700

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,080	735	1,050	3,440	2,760	1,930	2,080	2,080	878	490	406	406
2	1,240	735	1,020	3,440	2,760	1,980	2,130	1,880	846	462	420	406
3	1,460	735	1,020	3,440	2,700	1,980	2,180	1,600	*814	448	434	392
4	1,730	735	1,050	3,440	2,600	1,930	2,180	1,460	782	434	434	378
5	2,030	735	1,160	3,520	2,540	1,930	2,130	1,420	766	434	434	378
6	2,380	750	1,240	3,610	2,430	1,980	2,080	1,320	782	420	420	365
7	2,600	750	1,280	3,610	2,380	2,030	1,980	1,200	782	420	406	352
8	2,700	750	1,370	3,520	2,280	2,080	1,930	1,160	782	434	392	352
9	2,700	782	1,460	3,440	2,180	2,080	1,930	1,120	782	448	378	339
10	2,700	782	1,600	3,360	2,080	2,080	1,980	1,050	766	462	392	339
11	2,600	798	1,730	3,280	1,980	2,080	1,930	980	766	448	392	326
12	2,380	814	1,880	3,210	1,880	2,030	1,830	878	766	434	406	318
13	2,080	*814	2,080	*3,070	1,880	1,980	1,730	945	750	434	434	313
14	1,600	846	2,330	2,940	1,880	1,880	*1,630	1,600	735	434	462	310
15	1,200	846	2,540	2,820	1,830	1,830	2,080	2,080	690	448	462	313
16	1,020	846	2,650	2,700	1,880	1,780	2,280	2,280	660	448	448	*326
17	945	846	2,700	2,650	1,880	1,780	2,480	2,430	630	448	448	339
18	910	846	2,820	2,540	1,830	1,730	2,600	2,430	616	462	448	352
19	878	846	2,940	2,480	1,780	1,680	2,600	2,380	588	462	406	365
20	878	846	3,070	2,430	1,780	1,680	2,600	2,330	588	434	406	392
21	846	846	3,210	2,380	1,730	1,640	2,600	2,280	602	434	392	434
22	814	846	3,360	2,380	1,680	1,640	2,650	2,230	602	*434	392	448
23	814	878	3,360	2,430	1,680	1,640	2,700	2,130	602	448	406	462
24	814	878	3,360	2,480	1,640	1,680	2,700	2,030	588	462	420	462
25	798	910	3,360	2,540	*1,680	1,680	2,650	1,880	574	462	434	462
26	782	945	3,520	2,600	1,730	1,730	2,480	1,730	546	462	434	448
27	766	980	3,610	2,650	1,780	1,730	2,380	1,500	532	448	434	448
28	766	1,020	3,610	2,700	1,880	1,880	2,280	1,240	532	434	434	462
29	750	1,020	3,610	2,700	-	1,980	2,180	1,080	518	420	448	434
30	750	1,050	3,520	2,760	-	2,030	2,230	1,020	518	406	448	434
31	735	-	3,520	2,760	-	2,080	-	910	-	406	420	-
Total	43,746	25,210	75,030	91,320	57,110	58,160	67,410	50,653	20,383	13,720	13,090	11,555
Mean	1,411	840	2,420	2,946	2,040	1,876	2,247	1,634	679	443	422	385
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 10,200 Min 574 Mean 2,041 Cfsm - In. -
Water year 1953-54: Max 3,610 Min 310 Mean 1,445 Cfsm - In. -

* Discharge measurement made on this day.

Salkehatchie River near Miley, S. C.

Location.--Lat 32°59'20", long. 81°03'10", near right bank at downstream side of bridge on U. S. Highway 601, 2.6 miles downstream from Savannah Creek, 3.1 miles upstream from Hampton and Branchville Railroad bridge, and 3.1 miles northwest of Miley, Hampton County.

Drainage area.--341 sq mi.

Records available.--February 1951 to September 1954.

Gage.--Staff gage read twice daily. Datum of gage is 64.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 941 cfs at 12:01 a.m., Oct. 1, stage falling, peak occurred Sept. 30, 1953; maximum peak discharge during year, 860 cfs May 15 (gage height, 3.87 ft); minimum discharge, 17 cfs Sept. 13.
1951-54: Maximum discharge, 950 cfs Sept. 30, 1953 (gage height, 4.04 ft, from graph based on gage readings); minimum, that of Sept. 13, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 20 to May 18)

Oct. 1 to May 12				May 13 to Sept. 30			
2.0	98	3.4	422	0.9	18	1.5	54
2.5	163	4.0	860	1.0	24	2.0	98
3.0	262	4.1	950				

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	932	121	*236	614	278	*350	372	171	*128	40	33	37
2	905	121	225	578	278	350	372	171	128	37	30	38
3	817	121	214	543	*262	350	329	179	156	35	32	34
4	691	121	254	511	249	329	293	214	156	36	29	31
5	511	128	372	511	249	372	225	214	179	38	25	30
6	350	134	543	479	236	422	196	188	205	40	21	29
7	244	148	578	450	249	450	188	163	214	42	22	27
8	179	148	578	422	249	422	188	141	188	42	22	26
9	148	154	652	372	249	350	214	128	141	74	*22	25
10	128	163	652	329	249	293	236	115	104	93	63	24
11	121	171	652	329	236	262	236	109	88	83	69	22
12	121	171	614	329	236	249	236	104	78	69	69	20
13	115	171	614	329	225	236	236	278	78	*58	78	18
14	115	171	614	311	225	249	236	655	78	51	69	18
15	115	171	614	311	225	262	249	817	83	45	58	24
16	115	163	578	329	236	293	262	691	88	40	48	40
17	115	163	614	350	236	311	278	732	78	72	42	58
18	115	163	642	350	236	311	329	732	74	128	54	61
19	141	163	652	329	225	311	329	691	65	148	69	65
20	246	163	614	329	225	329	350	578	61	218	58	65
21	213	188	614	329	236	311	329	422	58	282	68	58
22	141	196	578	350	236	293	329	249	61	155	83	56
23	121	205	511	422	225	278	350	163	58	83	83	48
24	121	205	450	422	249	293	329	134	54	61	74	45
25	115	236	422	372	293	293	293	115	51	54	54	42
26	109	249	450	372	329	278	278	109	48	51	48	42
27	*115	236	479	350	350	262	262	104	51	*51	42	73
28	115	249	511	350	372	329	*249	104	54	48	40	*93
29	115	249	*543	329	-	372	205	109	*48	*45	36	88
30	115	249	578	311	-	*372	188	128	45	41	*34	88
31	115	-	578	293	-	372	-	134	-	37	33	-
Total	7,619	5,293	16,236	12,005	7,143	9,954	8,166	8,842	2,898	2,297	1,508	1,323
Mean	246	176	524	387	255	321	272	285	96.6	74.1	48.6	44.1
Cfsm	0.721	0.516	1.54	1.13	0.748	0.941	0.798	0.836	0.283	0.217	0.143	0.129
In.	0.83	0.58	1.78	1.30	0.78	1.08	0.89	0.96	0.32	0.25	0.16	0.14

Calendar year 1953: Max 932 Min 43 Mean 280 Cfsm 0.821 In. 11.15
Water year 1953-54: Max 932 Min 18 Mean 228 Cfsm 0.669 In. 9.07

* Discharge measurement made on this day.

Combahee River near Yemassee, S. C.

Location.--Lat 32°42'25", long. 80°49'35", near left bank on downstream side of pile bent of bridge on U. S. Highway 15, 0.2 mile upstream from Atlantic Coast Line Railroad bridge, 1.8 miles northeast of Yemassee, Hampton County, and 5 miles downstream from Black Creek.

Drainage area.--1,100 sq mi, approximately.

Records available.--June 1951 to September 1954.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936. Auxiliary water-stage recorder 10.2 miles downstream from base gage.

Extremes.--Maximum discharge during year, 3,530 cfs May 18 (gage height, 7.51 ft); minimum daily, 9 cfs July 7.
1951-54: Maximum discharge, 3,530 cfs Feb. 19, 1952, May 18, 1954 (gage height, 7.51 ft); minimum daily, that of July 7, 1954.

Remarks.--Records fair except those below 40 cfs, which are poor.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	422	97	215	1,110	*748	508	646	570	310	24	58	41
2	426	96	233	1,110	706	520	647	567	*308	54	55	27
3	468	116	254	1,110	681	564	674	565	320	60	46	42
4	511	120	296	1,140	657	556	651	598	337	62	34	45
5	614	123	378	1,130	631	581	623	570	289	46	37	35
6	670	116	448	1,110	616	587	606	496	245	29	38	15
7	691	124	450	1,080	571	610	552	452	211	9	10	18
8	647	132	456	1,050	553	598	595	397	197	38	25	19
9	600	153	474	966	496	584	685	342	168	44	14	12
10	556	148	484	897	474	587	816	326	164	40	36	18
11	499	151	526	881	462	578	1,030	301	155	38	28	27
12	432	150	602	865	450	567	1,170	240	146	34	31	28
13	324	138	665	843	456	552	1,160	317	122	38	39	18
14	223	162	790	781	446	543	1,030	670	96	58	47	66
15	182	168	928	739	438	474	988	929	93	58	53	86
16	173	163	1,050	702	428	429	913	1,280	90	68	58	76
17	155	172	1,050	673	418	408	950	2,290	83	68	62	49
18	145	160	993	665	405	395	972	3,420	78	138	45	45
19	137	164	939	654	420	401	892	3,310	59	134	60	42
20	117	167	935	648	418	437	851	2,930	55	116	41	48
21	126	187	933	627	422	438	850	2,430	98	109	40	41
22	146	202	891	640	418	456	812	1,960	108	99	36	35
23	147	203	892	657	415	469	783	1,590	88	71	26	21
24	176	182	892	693	422	462	756	1,280	54	55	41	24
25	174	197	959	708	438	462	713	1,040	30	78	59	47
26	157	210	1,110	722	485	451	696	815	63	107	58	41
27	159	217	1,260	729	481	440	664	622	64	98	48	44
28	*144	209	1,220	735	514	559	641	458	54	*91	58	31
29	123	204	1,140	773	-	683	601	389	69	83	69	*41
30	99	202	1,110	785	-	698	575	376	52	59	49	52
31	92	-	1,110	754	-	*638	-	351	-	51	*55	-
Total	9,535	4,833	23,683	25,977	14,069	16,235	23,542	31,881	4,206	2,057	1,356	1,134
Mean	308	161	764	838	502	524	785	1,028	140	66.4	43.7	37.8
Cfsm	0.280	0.146	0.695	0.762	0.456	0.476	0.714	0.935	0.127	0.060	0.040	0.034
In.	0.32	0.16	0.80	0.88	0.47	0.55	0.80	1.08	0.14	0.07	0.05	0.04

Calendar year 1953: Max 3,110 Min 37 Mean 583 Cfsm 0.530 In. 7.20
Water year 1953-54: Max 3,420 Min 9 Mean 434 Cfsm 0.395 In. 5.36

* Discharge measurement made on this day.

Coosawhatchie River near Hampton, S. C.

Location.--Lat 32°50'10", long. 81°07'55", near left bank on downstream side of bridge on U. S. Highway 601, 1.6 miles downstream from Black Creek and 2.5 miles southwest of Hampton, Hampton County.

Drainage area.--203 sq mi.

Records available.--February 1951 to September 1954.

Gage.--Wire-weight gage read twice daily. Datum of gage is 50.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 2,360 cfs May 16 (gage height, 5.45 ft, from graph based on gage readings), from rating curve extended above 800 cfs by velocity-area studies; no flow for many days.
1951-54: Maximum discharge, 2,750 cfs Mar. 24, 1953 (gage height, 5.78 ft, from graph based on gage readings), from rating curve extended above 800 cfs by velocity-area studies; no flow Aug. 31, Sept. 1, 1951, and for many days during summer months of 1954.

Remarks.--Records fair.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 15 to June 2, June 15 to Sept. 30)

1.5	0	2.2	4.5	3.4	163
1.6	.2	2.3	7.2	3.8	321
1.7	.6	2.4	11	4.3	649
1.8	1.0	2.5	16	4.8	1,160
1.9	1.5	2.6	23	5.4	2,010
2.0	2.0	2.8	41		
2.1	2.8	3.1	88		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	466	20	*40	466	173	*185	173	433	*239	0	0	
2	404	18	38	404	169	224	129	466	220	0	0	
3	337	16	39	353	*137	244	94	433	185	0	0	
4	302	14	74	311	126	231	79	216	166	0	0	
5	231	14	151	297	126	220	65	202	157	0	0	
6	182	17	248	287	129	160	59	195	148	0	0	
7	126	23	235	269	129	134	53	199	132	0	0	
8	109	29	213	248	126	119	41	378	87	0	0	
9	92	32	189	231	126	105	47	97	46	0	0	
10	70	34	154	252	124	101	208	45	27	0	0	
11	53	35	157	252	119	98	278	42	21	0	0	
12	48	34	176	244	114	92	206	78	17	0	0	
13	46	31	182	244	107	90	169	247	14	0	.2	
14	46	30	238	244	101	90	148	752	10	0	.2	
15	46	30	466	244	98	98	137	1,900	4.9	0	.2	
16	46	28	466	244	94	96	132	1,920	2.8	0	.2	
17	46	26	433	239	92	92	124	846	2.3	0	0	
18	42	25	404	199	90	92	126	692	1.9	0	0	
19	40	26	348	185	88	96	107	649	1.6	.7	0	
20	37	29	244	185	88	105	96	534	1.4	.6	0	
21	30	34	202	189	98	114	96	433	1.1	.5	0	
22	29	42	192	213	114	114	112	239	.8	.1	.1	
23	28	53	189	217	112	107	132	189	.8	0	.1	
24	26	56	213	217	109	90	137	157	.7	0	0	
25	23	56	269	217	109	83	129	132	.6	0	0	
26	21	56	375	220	109	81	109	109	.4	0	0	
27	*20	57	433	220	107	94	88	92	.4	*0	0	
28	21	56	433	209	189	150	*56	81	.2	0	0	(*)
29	22	54	*433	202	-	239	54	136	0	0	0	
30	22	44	433	189	-	*287	290	179	0	0	*0	
31	21	-	466	176	-	227	-	252	-	0	0	
Total	3,032	1,019	8,133	7,667	3,303	4,258	3,674	12,323	1,488.9	1.9	1.0	0
Mean	97.8	34.0	262	247	118	137	122	398	49.6	0.06	0.03	0
Cfsm	0.482	0.167	1.29	1.22	0.581	0.675	0.601	1.96	0.244	0.00030	0.00015	0
In.	0.56	0.19	1.49	1.41	0.60	0.78	0.67	2.26	0.27	0.0003	0.0002	0

Calendar year 1953: Max 2,550 Min 0.1 Mean 180 Cfsm 0.887 In. 12.02
Water year 1953-54: Max 1,920 Min 0 Mean 123 Cfsm 0.606 In. 8.23

* Discharge measurement or observation of no flow made on this day.

Chattooga River near Clayton, Ga.

Location.--Lat 34°49', long. 83°18', on left bank 150 ft downstream from new bridge on U. S. Highway 76, 2¾ miles upstream from Stekoa Creek, 7 miles southeast of Clayton, Rabun County, 9 miles downstream from War Woman Creek, and 9 miles upstream from confluence with Tallulah River.

Drainage area.--203 sq mi.

Records available.--May 1907 to June 1908, November 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 1,165.6 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by State Highway Department of Georgia). May 1907 to June 1908 staff gage at site 400 ft upstream at different datum.

Average discharge.--15 years (1939-54), 603 cfs.

Extremes.--Maximum discharge during year, 6,230 cfs Jan. 22 (gage height, 5.5 ft); minimum, 90 cfs Sept. 28, 29.
1907-8, 1939-54: Maximum discharge, 29,000 cfs Aug. 30, 1940 (gage height, 13.8 ft), from rating curve extended above 4,700 cfs on basis of slope-area determinations at gage heights 9.9 and 13.8 ft; minimum, that of Sept. 28, 29, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	80	2.5	1,260
1.0	160	3.0	1,900
1.4	338	4.0	3,410
2.0	760	4.4	4,100

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	221	174	209	429	832	877	1,110	696	558	266	217	154
2	213	171	200	410	805	736	904	656	632	266	196	*147
3	209	167	204	404	769	728	832	648	523	285	182	144
4	200	164	884	398	744	696	778	680	495	306	174	141
5	196	164	712	392	712	656	736	624	441	280	167	134
6	192	164	810	374	680	632	814	608	423	262	167	131
7	185	160	1,080	362	656	600	960	593	410	252	204	128
8	182	160	*640	356	640	586	841	586	398	243	182	120
9	182	157	1,020	350	*624	572	841	565	386	252	209	120
10	182	157	1,590	350	600	565	769	551	374	301	234	131
11	178	157	877	398	586	551	752	544	398	333	185	164
12	174	157	1,260	423	558	537	720	530	435	262	167	128
13	171	157	1,110	350	551	558	680	544	386	243	174	120
14	196	157	1,310	350	544	1,040	720	680	386	243	167	120
15	296	154	1,000	516	537	760	680	624	429	257	160	118
16	234	154	796	3,530	551	664	728	572	*488	238	154	118
17	196	154	672	1,530	640	624	1,040	537	676	230	147	123
18	182	151	586	1,000	551	608	814	523	648	221	138	115
19	176	151	558	841	523	720	744	530	467	225	138	107
20	178	167	523	760	841	940	704	516	410	221	138	105
21	174	541	593	4,040	1,700	744	680	509	380	213	164	102
22	171	426	656	3,940	970	688	680	488	362	230	171	102
23	171	822	648	3,250	805	656	656	481	344	217	615	99
24	167	398	551	1,970	744	*940	704	474	333	204	312	99
25	164	317	509	1,550	696	940	859	460	317	217	296	95
26	164	280	481	1,330	656	950	904	448	312	317	217	102
27	182	252	454	1,220	616	1,020	850	441	301	225	192	95
28	243	234	441	1,100	720	1,120	760	448	290	*217	178	92
29	213	221	516	1,000	-	931	728	474	280	209	185	92
30	182	213	502	931	-	868	704	488	276	196	185	*92
31	178	-	454	877	-	850	-	429	-	204	167	-
Total	5,954	6,901	21,846	34,731	19,851	23,357	23,692	16,947	12,558	7,635	6,182	3,538
Mean	192	230	705	1,120	709	753	790	547	419	246	199	118
Cfsm	0.946	1.13	3.47	5.52	3.49	3.71	3.89	2.69	2.06	1.21	0.980	0.581
In.	1.00	1.26	4.00	6.36	3.63	4.28	4.34	3.10	2.30	1.40	1.13	0.65

Calendar year 1953: Max 4,740 Min 151 Mean 568 Cfsm 2.80 In. 38.00
Water year 1953-54: Max 4,040 Min 92 Mean 502 Cfsm 2.47 In. 33.54

Peak discharge (base, 3,400 cfs).--Jan. 16 (8 a.m.) 4,840 cfs (4.8 ft); Jan. 22 (6 p.m.) 6,230 cfs (5.5 ft).

* Discharge measurement made on this day.

Panther Creek near Toccoa, Ga.

Location.--Lat 34°41', long. 83°21', on left bank at Yonah Dam Settlement, a quarter of a mile upstream from mouth and 7 miles north of Toccoa, Stevens County.

Drainage area.--31.4 sq mi.

Records available.--January 1943 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 673.53 ft above mean sea level, datum of 1929 (levels by Georgia Power Co.).

Average discharge.--11 years, 74.3 cfs.

Extremes.--Maximum discharge during year, 2,570 cfs Jan. 22 (gage height, 7.2 ft); minimum, 10 cfs Sept. 30.
1943-54: Maximum discharge, 15,100 cfs June 16, 1949 (gage height, 18.0 ft, from floodmark), from rating curve extended above 800 cfs on basis of slope-area determination of peak flow; minimum, that of Sept. 30, 1954.

Remarks.--Records good. City of Toccoa diverted approximately 33,200,000 gal about 2 miles above station during period Aug. 24 to Sept. 12 for municipal supply, equivalent to a mean discharge of 2.6 cfs at station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 15				June 16 to Sept. 30	
1.6	25	3.0	350	1.4	10
1.8	48	4.0	730	1.7	36
2.0	77	4.5	950	Note.--Same as preceding table above 1.7 ft.	
2.5	192				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	29	30	57	86	100	150	92	113	40	31	18
2	35	29	29	56	86	85	117	88	85	40	29	*16
3	34	29	32	56	85	86	106	86	72	43	27	16
4	34	28	141	53	81	81	98	85	67	43	27	16
5	33	29	66	53	79	77	92	*79	61	42	25	14
6	33	29	74	53	75	75	109	77	58	42	27	14
7	30	29	71	52	74	72	117	74	57	40	28	15
8	30	29	*53	51	74	72	158	72	57	38	26	14
9	32	29	129	49	*72	71	142	71	54	41	33	15
10	32	29	146	51	72	69	117	71	54	42	34	17
11	30	28	79	52	72	69	109	69	61	41	27	24
12	30	28	220	49	69	67	102	69	58	40	27	16
13	29	29	131	47	66	77	98	74	54	37	28	18
14	35	29	162	47	66	115	98	100	54	37	26	21
15	40	28	104	74	66	83	92	81	54	38	26	20
16	34	28	81	928	71	75	104	75	*56	36	26	21
17	32	28	71	176	75	72	100	71	56	36	24	21
18	32	28	64	113	67	72	94	69	57	40	24	20
19	32	28	61	96	66	100	90	69	54	41	23	19
20	30	43	58	86	132	100	88	67	52	36	23	18
21	30	70	72	241	119	85	86	66	51	34	24	15
22	30	64	74	776	88	79	85	66	49	35	24	*13
23	30	57	72	274	81	*81	86	64	48	34	28	13
24	30	42	66	176	79	102	94	63	47	33	26	13
25	29	38	63	142	74	96	124	61	47	32	24	12
26	29	35	58	124	72	104	94	61	47	32	22	14
27	34	34	56	115	69	160	88	61	44	32	23	14
28	33	32	57	104	100	160	92	61	43	*37	21	12
29	30	30	67	100	-	119	96	63	41	33	24	12
30	29	30	64	92	-	106	92	60	41	31	22	12
31	29	-	60	90	-	126	-	57	-	32	20	-
Total	986	1,018	2,511	4,433	2,216	2,836	3,118	2,222	1,692	1,158	799	483
Mean	31.8	33.9	81.0	143	79.1	91.5	104	71.7	56.4	37.4	25.8	16.1
Cfsm	1.01	1.08	2.58	4.55	2.52	2.91	3.31	2.28	1.80	1.19	0.822	0.513
In.	1.16	1.20	2.97	5.25	2.62	3.36	3.69	2.63	2.01	1.37	0.95	0.57

Calendar year 1953: Max 634 Min 28 Mean 67.5 Cfsm 2.15 In. 29.14
Water year 1953-54: Max 928 Min 12 Mean 64.3 Cfsm 2.05 In. 27.70

Peak discharge (base, 900 cfs).--Jan. 16 (4 a.m.) 1,710 cfs (5.9 ft); Jan. 22 (11 a.m.) 2,570 cfs (7.2 ft).
* Discharge measurement made on this day.

Tugaloo River near Hartwell, Ga.

Location.--Lat 34°29', long. 82°55', on right bank three-quarters of a mile upstream from Beaverdam Creek, 5 miles upstream from confluence with Seneca River, and 10 miles north of Hartwell, Hart County.

Drainage area.--905 sq mi.

Records available.--April 1925 to September 1927, February 1940 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 570 ft (by barometer). April 1925 to September 1927 at datum about 1 ft higher.

Average discharge.--16 years (1925-27, 1940-54), 1,998 cfs (unadjusted).

Extremes.--Maximum discharge during year, 19,200 cfs Jan. 16 (gage height, 8.98 ft); minimum, 191 cfs Sept. 20, 26.
1925-27, 1940-54: Maximum discharge, 28,600 cfs Aug. 31, 1940 (gage height, 10.8 ft); minimum daily, 189 cfs Oct. 6, 1941.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by powerplant above station and by Burton and Mathis Reservoirs on Tallulah River. Burton Reservoir, completed in 1920, and Mathis Reservoir, completed in 1914, have combined usable capacity of 129,000 acre-ft and regulate the flow from 150 sq mi of Tallulah River basin.

Cooperation.--Records of monthly reservoir contents furnished by Georgia Power Co.

Revisions (water years).--WSP 1142: 1926.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.4	176	4.0	2,630
2.0	370	5.0	4,740
2.5	652	7.0	10,600
3.0	1,180	7.9	14,000

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,390	395	1,010	1,050	1,800	1,790	5,930	2,590	2,480	1,490	382	730
2	1,080	368	1,300	1,220	1,700	2,440	3,980	1,170	2,830	1,370	454	647
3	1,140	1,240	1,180	1,360	1,600	2,780	3,670	1,060	1,800	758	697	*396
4	400	1,560	3,700	813	1,800	2,440	2,440	3,660	1,880	435	552	1,010
5	380	1,820	2,970	2,370	2,600	2,210	1,370	1,950	3,110	414	766	268
6	965	1,820	1,710	1,720	1,500	2,060	2,850	*1,800	685	374	978	218
7	692	1,250	2,380	2,000	1,000	1,800	3,280	2,020	580	938	1,090	204
8	940	398	2,100	1,420	1,500	860	3,560	2,860	1,380	713	310	1,200
9	1,300	376	3,090	1,560	*2,200	2,230	3,400	1,000	2,240	1,390	286	848
10	980	426	6,200	604	2,070	2,300	2,900	648	1,720	1,020	1,000	862
11	388	462	3,860	814	2,280	2,120	1,550	1,060	2,140	380	748	914
12	362	1,030	6,800	2,360	2,180	2,290	1,360	2,400	2,010	349	678	290
13	545	1,050	4,280	1,880	2,080	2,400	2,560	2,070	792	947	724	226
14	1,360	848	3,980	1,730	834	1,970	2,920	2,970	937	1,230	760	651
15	1,560	409	4,860	1,830	1,250	2,020	2,360	2,910	*2,340	1,230	278	1,070
16	1,730	740	3,340	13,900	2,190	2,580	2,520	985	1,970	1,050	273	1,030
17	1,070	666	2,840	9,420	2,580	2,300	3,480	668	937	1,300	980	1,320
18	415	441	2,420	4,170	2,030	2,520	890	1,620	1,980	350	968	1,300
19	390	1,280	2,640	2,850	1,950	2,920	1,010	1,810	1,880	784	1,090	262
20	1,230	1,210	2,190	2,880	2,770	6,660	2,280	1,910	543	1,320	833	197
21	1,670	1,340	1,690	5,130	4,610	1,500	2,080	1,950	467	*1,090	1,030	419
22	2,280	634	2,830	8,600	2,690	1,280	2,480	1,700	1,620	644	332	772
23	1,120	1,650	2,650	12,000	2,350	*2,860	2,800	830	1,390	1,250	279	404
24	708	1,940	2,460	6,000	2,640	3,070	2,230	698	1,410	826	680	576
25	392	1,900	2,060	5,000	2,360	4,010	1,320	1,800	1,680	339	814	358
26	360	1,250	1,070	4,700	2,200	3,960	1,450	2,180	1,180	316	850	218
27	*1,310	638	645	3,500	2,570	3,600	3,320	1,700	648	1,030	1,070	408
28	1,500	1,200	965	2,200	2,200	5,240	2,410	1,700	526	1,010	1,130	642
29	1,420	430	3,370	1,900	-	2,680	2,180	1,640	2,260	570	348	1,040
30	1,270	391	2,880	1,000	-	3,930	2,480	660	1,540	1,030	310	1,210
31	930	-	2,470	720	-	4,410	-	698	-	707	921	-
Total	31,277	29,162	85,940	106,701	59,534	85,230	77,060	52,717	46,955	26,654	21,611	19,690
Mean	1,009	972	2,772	3,442	2,126	2,749	2,569	1,701	1,565	860	697	656
(†)	-211	-133	-75	+358	+144	+89	+180	-76	-155	-54	-112	-319

Adjusted for change in reservoir contents

Mean	798	839	2,697	3,800	2,270	2,838	2,749	1,625	1,410	806	585	337
Cfsm	0.882	0.927	2.98	4.20	2.51	3.14	3.04	1.80	1.56	0.891	0.646	0.372
In.	1.02	1.03	3.44	4.84	2.61	3.62	3.39	2.08	1.74	1.03	0.74	0.42

	Observed			Adjusted			
Calendar year 1953:	Max 14,000	Min 353	Mean 1,901	Mean 1,919	Cfsm 2.12	In. 28.79	
Water year 1953-54:	Max 13,900	Min 197	Mean 1,760	Mean 1,742	Cfsm 1.92	In. 25.96	

Peak discharge (base, 10,000 cfs).--Jan. 16 (7 p.m.) 19,200 cfs (8.98 ft); Jan. 23 (8 a.m.) 15,800 cfs (8.26 ft).

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Burton and Mathis Reservoirs, furnished by Georgia Power Co.

Note.--No gage-height record Jan. 23 to Feb. 9; discharge estimated on basis of recorded range in stage and power output at Yonah Dam.

Keowee River near Newry, S. C.

Location (revised).--Lat 34°44'09", long. 82°52'19", on left bank 800 ft downstream from Lawrence Bridge, 0.7 mile upstream from Sixmile Creek, and 2¼ miles east of Newry, Oconee County.

Drainage area.--455 sq mi.

Records available.--December 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 625.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years (1940-54), 1,184 cfs.

Extremes.--Maximum discharge during year, 19,700 cfs Jan. 22; maximum gage height, 21.19 ft Jan. 23; minimum discharge, 126 cfs Sept. 29, 30; minimum daily, 156 cfs Sept. 26, 30.

1939-54: Maximum discharge, 25,200 cfs Aug. 13, 1940; maximum gage height, 24.60 ft Aug. 13, 1940; minimum discharge, that of Sept. 29, 30, 1954; minimum daily, that of Sept. 26, 30, 1954.

Remarks.--Records good except those for period of no gage-height record, which are fair. Some regulation at low flow by powerplant above station. Records of chemical analyses for the water year 1954 are given in WSP 1350.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	550	382	480	1,050	1,720	2,100	2,270	1,120	791	396	306	225
2	518	402	*466	1,040	1,630	1,590	1,720	1,060	1,290	422	*350	217
3	498	382	444	1,030	1,590	1,460	1,550	1,250	1,080	589	283	213
4	444	389	2,980	1,000	1,500	1,380	1,380	1,630	1,020	503	269	222
5	451	382	2,100	961	1,420	1,250	1,290	1,160	816	757	241	191
6	444	356	2,360	936	1,380	1,160	1,460	1,120	782	488	254	202
7	396	369	3,380	902	1,290	1,120	1,970	1,060	791	422	315	190
8	a400	376	1,760	868	1,290	1,120	1,500	1,050	714	396	278	196
9	a400	389	1,930	859	1,210	*1,050	1,630	995	698	512	298	196
10	a600	382	4,060	842	1,160	1,030	1,380	986	664	513	356	185
11	a300	389	2,180	978	1,120	986	1,340	918	639	376	288	252
12	a360	389	4,320	1,040	1,080	978	1,250	918	850	429	254	199
13	a420	382	3,380	850	1,020	970	1,120	927	825	389	245	185
14	*a500	356	3,880	834	961	2,610	1,210	1,550	*740	363	234	196
15	893	382	2,700	1,050	978	1,590	1,120	1,550	647	409	235	181
16	647	402	2,100	11,100	1,050	1,290	1,160	1,290	740	376	229	196
17	556	389	1,760	4,170	1,290	1,160	2,180	1,160	1,080	413	209	203
18	389	382	1,550	2,100	1,030	1,120	1,460	1,120	1,340	321	209	213
19	437	389	1,380	1,500	944	1,460	1,340	1,120	859	386	221	160
20	415	402	1,340	*1,340	1,970	2,360	1,210	1,050	757	350	246	173
21	409	1,160	1,500	5,720	8,240	1,590	1,160	995	714	327	288	*169
22	402	859	1,630	12,000	2,440	1,380	1,210	936	622	315	291	178
23	396	2,360	1,590	10,900	1,840	1,290	1,120	936	581	321	580	171
24	389	1,000	1,380	4,400	1,630	1,970	1,210	936	573	333	344	166
25	369	800	1,290	3,290	1,500	1,970	1,420	884	518	304	356	165
26	382	647	1,290	2,780	1,380	2,060	1,340	850	511	304	327	156
27	389	598	1,120	2,440	1,250	2,440	*1,420	842	466	327	288	166
28	503	542	1,160	2,270	1,380	2,700	1,210	842	488	333	258	161
29	444	511	1,290	2,100	-	1,930	1,120	876	415	304	362	160
30	396	503	1,250	1,970	-	1,720	1,120	1,040	429	288	304	156
31	389	-	1,160	1,800	-	1,720	-	842	-	267	254	-
Total	14,086	16,651	59,210	84,120	45,293	48,554	41,870	33,013	22,440	12,233	8,972	5,643
Mean	454	555	1,910	2,714	1,618	1,566	1,396	1,065	748	395	289	188
Cfsm	0.998	1.22	4.20	5.96	3.56	3.44	3.07	2.34	1.64	0.868	0.635	0.413
In.	1.15	1.36	4.84	6.87	3.71	3.97	3.42	2.70	1.83	1.00	0.73	0.46

Calendar year 1953: Max 14,900 Min 300 Mean 1,238 Cfsm 2.72 In. 36.93
Water year 1953-54: Max 12,000 Min 156 Mean 1,074 Cfsm 2.36 In. 32.04

Peak discharge (base, 10,000 cfs).--Jan. 16 (3:45 p.m.) 16,000 cfs (17.97 ft at 4:15 p.m.); Jan. 22 (11:45 p.m.) 19,700 cfs (21.19 ft at 12:45 a.m. Jan. 23).

* Discharge measurement made on this day.

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

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Seneca River near Anderson, S. C.

Location.--Lat 34°30', long. 82°50', on right bank a quarter of a mile downstream from bridge on State Highway 80, 1½ miles downstream from Deep Creek, 4 miles upstream from confluence with Tugaloo River, and 10½ miles west of Anderson, Anderson County.

Drainage area.--1,026 sq mi.

Records available.--October 1931 to September 1954 in reports of Geological Survey. May 1928 to September 1931 in House Document 64, 74th Congress, 1st session.

Gage.--Water-stage recorder. Altitude of gage is 520 ft (from Corps of Engineers profile). Prior to Oct. 13, 1933, water-stage recorder at site 15 ft downstream at same datum.

Average discharge.--23 years (1931-54), 2,034 cfs.

Extremes.--Maximum discharge during year, 23,600 cfs Jan. 23 (gage height, 13.26 ft), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum, 189 cfs Sept. 21; minimum daily, 215 cfs Sept. 27.
1931-54: Maximum discharge, 55,200 cfs Oct. 1, 1936 (gage height, 20.07 ft), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum, about 90 cfs Nov. 18, 1934; minimum daily, that of Sept. 27, 1954.
Flood of Aug. 17, 18, 1928, reached a gage height of 25 ft, observed (discharge, 77,000 cfs, from rating curve extended above 18,000 cfs by logarithmic plotting).

Remarks.--Records good. Some regulation at low flow by powerplants above station.

Revisions.--WSP 757: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 2				July 3 to Sept. 30	
2.8	393	5.0	2,870	2.4	189
3.0	536	7.0	6,170	2.8	424
3.5	980	10.0	13,000	3.0	567
4.0	1,540	13.0	22,600	3.5	1,030
				4.0	1,620

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	882	744	788	1,390	2,240	2,580	6,170	1,850	1,260	770	567	445
2	844	699	808	1,380	2,170	2,440	3,640	1,980	2,020	770	575	378
3	863	717	*784	1,310	2,100	2,100	2,800	1,720	1,720	1,300	646	366
4	779	717	2,250	1,290	2,040	2,040	2,440	2,440	1,650	1,050	*530	347
5	744	717	3,980	1,260	1,980	1,910	2,240	1,910	1,390	1,150	515	359
6	779	708	2,160	1,220	1,910	1,780	2,170	1,720	1,220	1,150	530	316
7	752	699	4,770	1,190	1,780	1,780	3,170	1,660	1,360	946	575	353
8	717	726	2,630	1,150	1,720	1,720	2,580	1,620	1,330	806	575	304
9	726	682	1,780	1,180	1,720	*1,620	2,720	1,540	1,180	628	523	304
10	1,000	708	4,210	1,150	1,660	1,640	2,370	1,490	1,100	1,150	575	326
11	682	699	3,130	1,200	1,650	1,600	2,240	1,480	1,090	881	583	328
12	455	717	4,770	1,360	1,640	1,550	2,170	1,440	1,330	778	537	358
13	615	726	7,140	1,210	1,540	1,560	2,040	1,450	1,280	778	486	275
14	649	717	6,170	1,110	1,540	3,200	2,040	1,720	1,300	706	530	286
15	*1,060	665	4,710	1,270	1,540	2,830	2,040	2,170	*1,300	825	493	330
16	1,380	657	2,870	11,100	1,550	2,040	1,980	1,780	1,330	788	456	304
17	951	699	2,240	18,500	1,850	1,850	2,760	1,550	1,330	769	466	311
18	806	699	1,850	5,990	1,780	1,720	2,300	1,510	1,570	693	464	359
19	726	682	1,660	3,320	1,540	2,080	2,040	1,660	1,390	663	465	298
20	770	699	1,540	*2,720	1,660	4,030	1,910	1,500	1,160	825	465	231
21	761	970	1,650	5,390	7,070	2,800	1,910	1,420	1,070	689	547	*246
22	726	1,470	1,980	11,700	4,610	2,300	1,850	1,400	1,060	715	603	292
23	726	1,900	1,850	19,600	2,720	2,040	1,910	1,300	980	638	1,040	304
24	761	1,510	1,660	13,900	2,240	2,460	1,910	1,290	960	655	806	290
25	717	1,080	1,550	5,120	2,170	3,480	1,980	1,300	931	646	567	270
26	665	941	1,520	4,040	1,980	3,020	2,100	1,260	902	530	545	270
27	744	902	1,360	3,480	1,910	4,270	*2,040	1,260	854	663	486	215
28	788	892	1,390	3,020	1,780	8,330	1,910	1,280	797	630	486	276
29	816	835	1,520	2,800	-	4,260	1,980	1,320	970	622	472	268
30	779	788	1,720	2,650	-	3,100	1,910	1,480	761	567	515	241
31	744	-	1,540	2,440	-	3,590	-	1,300	-	599	508	-
Total	24,407	25,365	77,980	134,440	60,090	81,720	71,320	48,800	36,595	24,380	17,133	9,250
Mean	787	846	2,515	4,337	2,146	2,636	2,377	1,574	1,220	786	553	308
Cfsm	0.767	0.825	2.45	4.23	2.09	2.57	2.32	1.53	1.19	0.766	0.539	0.300
In.	0.88	0.92	2.82	4.88	2.18	2.96	2.59	1.76	1.33	0.88	0.62	0.33

Calendar year 1953: Max 19,600 Min 455 Mean 1,879 Cfsm 1.83 In. 24.85
Water year 1953-54: Max 19,600 Min 215 Mean 1,675 Cfsm 1.63 In. 22.15

Peak discharge (base, 13,000 cfs).--Jan. 17 (9 a.m.) 20,800 cfs (12.53 ft); Jan. 23 (7:45 p.m.) 23,600 cfs (13.26 ft).
* Discharge measurement made on this day.

Savannah River near Iva, S. C.

Location.--Lat 34°15', long. 82°45', on left bank at downstream side of bridge on State Highway 184, half a mile upstream from Little Generostee Creek, 5.8 miles southwest of Iva, Anderson County, and at mile 281.5 upstream from Savannah, Ga.

Drainage area.--2,231 sq mi.

Records available.--May 1950 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 432.255 ft above mean sea level (levels by Corps of Engineers).

Extremes.--Maximum discharge during year, 44,200 cfs Jan. 16 (gage height, 11.28 ft); minimum, 488 cfs Sept. 21; minimum daily, 591 cfs Sept. 7.
1950-54: Maximum discharge, 54,400 cfs Mar. 12, 1952 (gage height, 12.74 ft); minimum, that of Sept. 21, 1954; minimum daily, that of Sept. 7, 1954.

Remarks.--Records good. Some regulation by Burton and Mathis Reservoirs (see p. 248 for monthly change in contents) and powerplants above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 17-22, Apr. 2 to July 10)

Oct. 1 to Jan. 21				Jan. 22 to Sept. 30			
2.4	940	5.0	6,710	1.9	569	4.0	4,350
2.5	1,040	7.0	15,200	2.1	724	5.0	7,850
3.0	1,690	9.0	27,200	2.5	1,140	7.0	16,600
4.0	3,740	11.0	41,200	3.0	1,910	9.0	27,600
				3.5	2,970	11.0	41,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,330	1,520	1,840	4,280	3,910	4,310	15,100	4,860	2,920	2,200	1,240	1,490
2	2,370	1,300	2,380	3,000	5,070	5,450	8,950	3,410	6,050	2,450	1,140	1,300
3	2,160	1,870	*2,250	2,880	4,950	5,420	7,410	2,750	3,870	1,950	1,620	945
4	1,670	2,540	4,320	2,390	4,830	5,180	5,980	6,050	4,120	2,030	*1,320	1,470
5	1,360	2,490	8,400	3,710	4,650	4,520	3,770	4,480	4,940	1,540	1,510	1,100
6	1,750	2,820	4,830	3,280	5,370	4,560	5,290	4,000	2,300	1,830	1,800	712
7	1,680	2,420	6,480	3,270	3,230	4,080	6,660	3,570	1,950	1,880	1,990	591
8	1,860	1,570	6,320	2,960	3,600	2,840	6,490	5,080	2,760	1,640	1,280	1,330
9	2,140	1,300	4,990	2,890	3,820	4,430	7,070	2,780	3,130	2,100	1,010	1,770
10	2,160	1,280	9,010	2,160	4,220	*4,230	6,210	2,360	3,260	2,580	1,570	1,450
11	1,640	1,390	8,480	2,020	4,040	4,250	4,200	2,400	3,500	1,650	1,660	1,410
12	982	1,780	10,400	3,640	4,380	4,150	3,490	4,040	3,730	1,290	1,370	1,050
13	1,210	2,030	13,500	3,520	4,060	4,750	5,260	3,730	2,360	1,760	1,560	692
14	2,030	1,740	10,700	3,050	2,830	4,610	5,050	4,470	1,840	2,160	1,550	706
15	2,570	1,440	10,600	3,280	2,950	5,640	5,020	5,820	*3,950	2,340	1,170	1,580
16	*3,690	1,580	7,280	25,600	4,000	5,490	4,660	3,220	3,730	2,020	805	1,590
17	2,530	1,400	5,660	35,200	4,740	4,660	6,510	2,400	2,660	2,510	1,470	1,860
18	1,740	1,540	4,880	13,000	4,440	4,620	3,810	3,300	3,130	1,430	1,680	1,930
19	1,330	1,920	4,620	*7,360	3,760	5,070	3,150	3,430	4,060	1,440	1,800	1,150
20	2,010	2,120	4,270	6,100	4,400	8,780	4,480	3,760	1,930	2,310	1,670	601
21	2,570	2,250	3,140	8,380	11,200	5,490	4,340	3,450	1,720	2,050	1,700	1,430
22	3,180	2,610	5,260	21,300	8,380	3,910	4,530	3,490	2,620	1,680	1,260	*1,270
23	2,130	2,460	4,830	32,800	6,060	5,360	5,240	2,290	2,270	2,320	1,410	1,050
24	1,730	4,560	4,580	23,900	5,580	5,580	4,600	2,070	2,610	1,950	1,700	896
25	1,560	3,530	4,070	10,900	5,120	8,280	3,200	3,100	2,790	1,340	1,790	866
26	1,260	2,620	3,050	10,000	4,900	7,390	3,200	3,300	2,270	998	1,610	721
27	1,950	1,870	2,470	8,690	4,720	6,930	5,330	3,550	1,690	1,750	1,830	682
28	2,500	2,320	2,310	6,780	4,710	15,600	*4,930	3,030	1,320	1,800	1,870	742
29	2,360	1,720	4,720	5,630	-	7,940	4,500	3,100	3,190	1,520	1,420	1,520
30	2,370	1,480	4,950	6,240	-	7,920	4,990	2,340	2,680	1,910	1,070	1,580
31	2,020	-	4,450	4,350	-	7,540	-	2,000	-	1,920	1,520	-
Total	62,842	61,470	175,040	272,560	133,920	178,980	163,420	107,630	89,350	58,348	46,395	35,484
Mean	2,027	2,049	5,646	8,792	4,783	5,774	5,447	3,472	2,978	1,882	1,497	1,183
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 33,400 Min 982 Mean 4,197 Cfsm 1.88 In. 25.54
Water year 1953-54: Max 35,200 Min 591 Mean 3,796 Cfsm 1.70 In. 23.08

Peak discharge (base, 22,000 cfs).--Jan. 16 (11:30 p.m.) 44,200 cfs (11.28 ft); Jan. 23 (5:30 p.m.) 36,800 cfs (10.36 ft).

* Discharge measurement made on this day.

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Rocky River near Calhoun Falls, S. C.

Location.--Lat 34°08', long. 82°38', on right bank 2,000 ft upstream from Swanigan Mill bridge on county road, 3¼ miles northwest of Calhoun Falls, Abbeville County, and 3¾ miles upstream from mouth.

Drainage area.--267 sq mi.

Records available.--February 1950 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 403.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Extremes.--Maximum discharge during year, 2,880 cfs Jan. 23 (gage height, 5.09 ft); minimum, 8 cfs Sept. 22, 23; minimum daily, 9 cfs Sept. 21, 22.
1950-54: Maximum discharge, 9,450 cfs Mar. 25, 1952 (gage height, 9.44 ft), from rating curve extended above 3,300 cfs by velocity-area studies and logarithmic plotting; minimum, that of Sept. 22, 23, 1954; minimum daily, that of Sept. 21, 22, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Lake Secession (usable capacity, about 1,742,000,000 cu ft).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, 2, Jan. 18)

0.6	7	1.6	183
.7	11	2.0	354
.8	18	3.0	925
.9	28	4.0	1,700
1.0	41	5.0	2,760
1.3	98		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	323	40	169	322	377	245	688	288	157	136	94	102
2	318	102	170	316	381	352	372	145	215	138	72	103
3	278	165	171	157	384	342	331	281	155	133	135	105
4	50	166	253	214	390	342	275	490	151	106	131	95
5	106	170	172	313	385	337	246	303	144	44	134	49
6	162	165	235	309	380	336	308	292	102	87	*144	18
7	164	159	286	295	275	229	312	281	91	139	142	42
8	162	41	198	*308	294	222	297	287	135	136	90	81
9	159	106	189	356	375	330	302	141	135	141	110	83
10	160	169	246	231	376	*329	290	211	237	133	125	91
11	51	172	197	217	374	336	159	279	154	95	106	89
12	96	a170	1,060	363	370	332	214	282	133	99	106	33
13	163	a170	476	368	371	326	299	290	131	131	108	45
14	166	a140	658	352	242	269	300	283	103	139	99	60
15	176	a44	360	358	214	215	297	284	136	137	72	11
16	175	107	340	1,990	363	272	293	157	145	134	78	12
17	163	165	315	1,050	380	268	294	197	*207	137	102	13
18	44	167	308	*1,540	326	266	159	280	270	93	101	12
19	102	*161	306	*898	340	448	204	279	157	75	100	17
20	164	a120	185	654	344	401	275	280	104	132	100	16
21	170	a140	214	625	304	182	290	281	91	133	100	9
22	167	a44	302	1,290	249	214	290	278	135	132	66	*9
23	172	a120	343	1,920	350	291	294	146	136	135	78	27
24	144	165	316	1,010	348	285	281	186	140	164	106	49
25	39	173	252	651	335	283	166	258	139	95	106	46
26	100	92	223	570	340	284	192	254	135	158	107	20
27	169	111	172	559	338	291	290	242	95	286	103	22
28	171	151	214	554	225	185	*275	235	81	140	100	47
29	165	38	327	542	-	212	220	162	133	136	95	47
30	172	102	344	542	-	299	324	115	135	133	62	46
31	159	-	327	323	-	352	-	115	-	144	102	-
Total	4,810	3,835	9,328	19,197	9,430	9,075	8,537	7,602	4,282	4,021	3,174	1,399
Mean	155	128	301	619	337	293	285	245	143	130	102	46.6
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 1,560 Min 38 Mean 255 Cfsm - In. -
Water year 1953-54: Max 1,990 Min 9 Mean 232 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 of powerplant operation at Lake Secession.

South Beaverdam Creek at Dewy Rose, Ga.

Location.--Lat 34°11', long. 82°57', on left bank 50 ft upstream from highway bridge, 1 mile northeast of Dewy Rose, Elbert County, and 3 miles upstream from confluence with North Beaverdam Creek.

Drainage area.--36.6 sq mi.

Records available.--October 1942 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 581.07 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to Nov. 20, 1952, staff gage at same site and datum.

Average discharge.--12 years, 52.1 cfs.

Extremes.--Maximum discharge during year, 900 cfs Jan. 17 (gage height, 7.2 ft); minimum, 0.80 cfs Sept. 22.
1942-54: Maximum discharge, 2,600 cfs Jan. 18, 1943 (gage height, 13.4 ft, from graph based on gage readings); minimum, that of Sept. 22, 1954.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	0.8	2.0	80
.9	3.0	3.0	192
1.0	6.4	4.0	332
1.1	11	5.3	540
1.5	35		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*21	17	19	38	40	37	138	39	26	9.3	8.5	3.3
2	19	17	19	37	39	33	66	33	75	9.3	7.7	*3.0
3	19	17	19	37	39	33	53	40	34	19	6.8	3.0
4	17	17	68	36	38	32	46	47	29	34	6.1	2.5
5	17	18	41	35	37	32	43	*32	24	15	5.4	2.0
6	17	19	52	34	36	31	42	29	22	12	4.7	1.8
7	16	19	*58	33	35	30	46	27	21	12	5.4	1.8
8	16	19	36	32	*34	30	43	27	20	11	5.0	1.6
9	16	19	32	32	34	30	64	25	19	10	5.0	1.4
10	16	19	47	32	34	30	42	25	18	11	11	1.6
11	16	19	36	34	34	29	41	24	17	12	6.4	1.8
12	16	19	181	32	34	29	39	23	19	10	4.7	2.0
13	16	19	217	31	33	30	37	26	16	9.3	4.7	1.4
14	16	19	241	30	32	43	37	34	16	9.3	4.4	1.2
15	38	19	94	33	32	34	36	29	*16	14	3.7	1.6
16	28	19	60	448	33	31	34	27	21	11	3.7	2.3
17	20	19	49	539	41	30	35	25	21	11	3.0	4.0
18	19	19	45	96	35	30	33	23	25	10	*3.3	4.4
19	18	19	41	69	34	46	32	23	19	10	4.7	3.0
20	18	19	39	*60	34	97	31	22	17	*8.5	4.7	2.0
21	18	23	41	66	78	49	31	22	16	8.1	5.7	1.2
22	17	22	45	103	44	41	30	21	15	11	6.1	1.0
23	17	22	49	123	38	*39	30	20	14	11	5.0	1.0
24	17	21	41	71	36	40	29	20	13	8.9	4.7	1.4
25	17	21	40	60	36	40	29	20	13	9.3	*4.7	1.4
26	*16	20	38	54	34	41	28	19	12	9.8	4.0	1.8
27	17	19	37	51	33	41	27	19	12	8.5	2.8	2.5
28	19	19	36	46	34	56	27	19	11	7.7	7.2	2.3
29	19	19	41	44	-	44	32	23	9.8	6.8	11	*2.0
30	18	19	46	42	-	45	94	32	9.3	6.8	5.7	1.8
31	17	-	41	41	-	62	-	21	-	9.8	4.7	-
Total	571	576	1,849	2,419	1,041	1,215	1,295	816	600.1	345.4	170.5	62.1
Mean	18.4	19.2	59.6	78.0	37.2	39.2	43.2	26.3	20.0	11.1	5.50	2.07
Cfsm	0.503	0.524	1.63	2.13	1.02	1.07	1.18	0.718	0.546	0.303	0.150	0.057
In.	0.58	0.58	1.88	2.46	1.06	1.23	1.32	0.83	0.61	0.35	0.17	0.06

Calendar year 1953: Max 648 Min 9.0 Mean 45.9 Cfsm 1.25 In. 17.05
Water year 1953-54: Max 539 Min 1.0 Mean 30.0 Cfsm 0.820 In. 11.13

Peak discharge (base, 700 cfs).--Jan. 17 (4 a.m.) 900 cfs (7.2 ft).
* Discharge measurement made on this day.

Savannah River near Calhoun Falls, S. C.

Location.--Lat 34°04', long. 82°38', on left bank 150 ft upstream from bridge on State Highway 72, 1 mile downstream from Seaboard Air Line Railroad bridge, 1½ miles downstream from Rocky River, 3 miles southwest of Calhoun Falls, Abbeville County, and at mile 264.7 upstream from Savannah, Ga.

Drainage area.--2,876 sq mi.

Records available.--August 1896 to December 1900 (fragmentary), January to December 1903, March 1930 to July 1932, April 1938 to September 1954. Gage-height records collected at original site 1 mile upstream during 1899-1928 and at present site since 1928 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 363.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to March 1930, chain gage at railroad bridge 1 mile upstream at different datum.

Average discharge.--18 years (1896-97, 1930-31, 1938-54), 4,967 cfs.

Extremes.--Maximum discharge during year, 44,600 cfs Jan. 17 (gage height, 7.44 ft); minimum, 492 cfs Sept. 21; minimum daily, 695 cfs Sept. 27.
1896-1900, 1903, 1930-32, 1938-54: Maximum discharge, 96,500 cfs Aug. 13, 1940 (gage height, 11.52 ft), from rating curve extended above 50,000 cfs by velocity-area studies and logarithmic plotting; minimum, that of Sept. 21, 1954; minimum daily, that of Sept. 27, 1954.
Maximum stage known, 28.2 ft Aug. 25, 1908, original site and datum, from records of U. S. Weather Bureau.

Remarks.--Records good. Some regulation by Burton and Mathis Reservoirs (see p.248 for monthly change in contents) and powerplants above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 16				Jan. 17 to Sept. 30			
1.0	1,160	4.0	13,400	0.5	624	3.0	7,550
1.5	2,090	5.0	20,700	1.0	1,260	4.0	13,000
2.0	3,490	6.0	29,400	1.5	2,100	5.0	20,500
3.0	7,600			2.0	3,490	7.0	40,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2,360	1,720	1,700	4,690	4,800	4,900	17,100	5,760	2,990	2,500	1,710	1,670
2	2,900	1,370	2,300	3,510	5,560	6,200	10,700	4,290	6,720	2,730	1,340	1,460
3	2,320	1,560	2,370	3,200	5,510	6,120	8,460	3,730	4,770	1,980	1,480	1,350
4	2,100	2,440	3,780	2,950	5,570	5,900	6,900	6,730	4,680	2,680	1,600	1,120
5	1,500	2,480	9,810	3,870	5,230	5,210	4,650	5,870	5,110	1,840	*1,460	1,640
6	1,550	2,940	6,260	3,720	5,840	5,210	5,800	4,850	3,320	1,960	1,750	900
7	2,060	2,590	7,300	*3,780	4,010	4,630	6,980	4,350	2,340	1,880	1,970	718
8	1,870	1,770	7,660	3,540	4,230	3,590	7,320	5,620	2,920	2,160	1,770	783
9	2,200	1,400	5,560	3,340	4,310	4,800	7,720	3,740	3,350	2,080	1,310	1,720
10	2,180	1,400	9,150	2,890	4,820	4,920	7,000	3,140	3,940	2,670	1,410	1,460
11	2,200	1,470	10,300	2,410	4,710	*4,880	5,030	3,110	3,840	2,180	1,790	1,470
12	1,400	1,620	13,800	3,800	5,040	4,790	4,340	4,470	4,090	1,580	1,630	1,460
13	1,160	2,080	17,800	4,150	4,680	5,350	5,810	4,610	2,960	1,590	1,600	880
14	1,710	1,840	13,700	3,640	3,700	5,180	5,810	5,220	2,370	2,360	1,480	730
15	2,660	1,730	13,000	3,720	3,330	6,650	5,800	6,600	3,850	2,510	1,600	1,110
16	3,870	1,440	8,700	23,700	4,360	6,070	5,370	4,380	*4,220	2,270	1,130	1,560
17	3,010	1,620	6,430	38,400	5,360	5,350	6,840	3,140	3,250	2,580	1,170	1,580
18	2,070	1,650	5,580	17,200	5,190	5,270	5,030	3,640	3,970	1,920	1,750	1,860
19	1,550	*1,650	5,010	8,850	4,540	6,090	3,800	4,130	4,690	1,410	1,930	1,670
20	1,760	2,230	4,720	6,810	4,910	9,290	4,990	4,480	2,730	2,220	1,790	780
21	2,620	2,300	3,580	7,410	10,100	6,830	5,060	4,200	2,080	2,320	1,700	738
22	3,370	2,810	5,560	21,000	9,810	4,800	5,200	4,310	2,480	1,870	1,720	1,510
23	2,340	2,210	6,100	34,400	6,860	5,870	5,800	3,080	2,860	2,040	1,380	*1,220
24	1,940	4,800	5,210	27,700	6,200	6,210	5,410	2,790	3,020	2,510	1,650	957
25	1,670	3,750	4,690	12,300	5,980	8,380	4,160	3,460	2,960	1,900	1,830	1,110
26	1,350	2,810	3,630	10,100	5,380	7,960	4,010	3,910	2,710	1,430	1,650	841
27	1,540	2,120	2,990	9,330	5,340	7,550	5,820	4,320	2,220	2,160	1,920	695
28	2,460	2,140	2,620	8,140	5,350	15,500	5,770	3,840	1,760	2,040	1,860	828
29	2,430	2,100	4,880	6,380	-	9,110	*5,630	3,840	2,690	1,920	2,010	1,120
30	2,400	1,600	5,790	6,940	-	8,490	6,180	3,180	2,170	1,600	1,240	1,540
31	2,430	-	5,040	5,030	-	7,790	-	2,700	-	2,410	1,310	-
Total	66,980	63,640	204,820	296,900	150,740	198,890	188,490	131,290	102,060	65,300	49,940	36,480
Mean	2,161	2,121	6,607	9,577	5,384	6,416	6,283	4,235	3,402	2,106	1,611	1,216
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 36,300 Min 1,160 Mean 4,789 Cfsm 1.67 In. 22.61
Water year 1953-54: Max 38,400 Min 695 Mean 4,262 Cfsm 1.48 In. 20.11

Peak discharge (base, 25,000 cfs).--Jan. 17 (3:30 a.m.) 44,600 cfs (7.44 ft); Jan. 23 (8 p.m.) 38,100 cfs (6.72 ft).
* Discharge measurement made on this day.

North Fork Broad River near Carnesville, Ga.

Location.--Lat 34°19', long. 83°11', at bridge on State Highway 51, 1 mile downstream from Unawatti Creek, 3 miles upstream from confluence with Middle Fork Broad River, and 4¼ miles southeast of Carnesville, Franklin County.

Drainage area.--119 sq mi.

Records available.--October 1942 to December 1944, April to September 1954.

Gage.--Water-stage recorder. Datum of gage is 600.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Oct, 1, 1942, to Dec. 31, 1944, wire-weight gage at same site and datum.

Extremes.--Maximum discharge during period, 815 cfs June 14 (gage height, 4.51 ft); minimum, 18 cfs Sept. 28, 29, 30.

1942-44, 1954: Maximum discharge, 2,690 cfs Jan. 18, 1943, Mar. 29, 1944 (gage height, 6.80 ft, from graph based on gage readings), from rating curve extended above 840 cfs by logarithmic plotting; minimum, that of Sept. 28, 29, 30, 1954.

Remarks.--Records good.

Rating table, Apr. 29 to Sept. 30 (gage height, in feet, and discharge, in cubic feet per second)

1.9	17	2.6	111
2.0	23	3.0	205
2.2	43	3.6	410
2.4	73		

Discharge, in cubic feet per second, April to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	144	171	56	53	31
2							-	130	390	71	41	30
3							-	155	410	56	37	*28
4							-	192	180	117	33	28
5							-	*137	117	62	31	26
6							-	115	103	56	31	25
7							-	109	95	*56	36	23
8							-	107	87	*50	32	22
9							-	101	82	54	36	22
10							-	97	78	63	37	24
11							-	95	78	57	29	29
12							-	95	82	51	27	24
13							-	99	77	47	31	22
14							-	130	160	60	29	22
15							-	126	137	82	27	21
16							-	111	*105	57	*30	25
17							-	101	95	54	26	28
18							-	99	95	50	25	26
19							-	99	84	57	65	22
20							-	93	77	49	46	20
21							-	*91	71	*43	84	19
22							-	87	68	73	43	20
23							-	86	67	50	38	*19
24							-	84	65	51	38	19
25							-	82	62	46	35	18
26							-	80	60	42	31	20
27							-	80	57	41	31	20
28							-	78	54	39	33	18
29							126	97	51	38	89	18
30							180	97	51	36	44	19
31							-	80	-	50	36	-
Total							-	3,277	3,309	1,714	1,204	688
Mean							-	106	110	55.3	38.8	22.9
Cfsm							-	0.891	0.924	0.465	0.326	0.192
In.							-	1.03	1.03	0.54	0.38	0.21

Calendar year	: Max	Min	Mean	Cfsm	In.
Water year	: Max	Min	Mean	Cfsm	In.

* Discharge measurement made on this day.

Broad River near Bell, Ga.

Location.--Lat 33°58', long. 82°46', at downstream side of main channel pier of bridge on State Highway 17, half a mile downstream from Long Creek, 1 mile south of Bell's crossroads, and 12 miles southeast of Elberton, Elbert County.

Drainage area.--1,420 sq mi.

Records available.--November 1926 to July 1932, August 1937 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 357.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to October 1928, staff gage at railroad bridge about 1 mile downstream at datum 1.12 ft lower. October 1928 to July 1932 and August 1937 to January 1939, staff gage at present site and datum.

Average discharge.--20 years (1928-31, 1937-54), 1,724 cfs.

Extremes.--Maximum discharge during year, 14,700 cfs Jan. 18 (gage height, 18.0 ft); minimum, 116 cfs Sept. 30.
1926-32, 1937-54: Maximum discharge, 79,400 cfs Oct. 2, 1929 (gage height, 34.8 ft), from rating curve extended above 27,000 cfs on basis of slope-conveyance studies; minimum, that of Sept. 30, 1954.

Remarks.--Records good Moderate diurnal fluctuation at low flow caused by small powerplants above station.

Revisions (water years).--WSP 1172: 1928-30.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-14, Jan. 20 to Mar. 27)

2.2	113	9.0	4,240
2.5	195	12.0	7,150
3.0	370	16.0	11,800
4.0	790	17.7	14,200
6.0	1,940		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*745	530	632	1,720	1,400	1,310	3,480	1,370	722	366	362	264
2	700	*530	632	1,430	1,370	1,620	3,890	1,120	915	362	358	224
3	655	530	632	1,310	1,310	1,310	2,430	1,060	1,230	386	298	198
4	610	530	1,000	1,280	1,310	1,200	1,880	1,750	1,230	458	295	192
5	570	550	3,640	1,260	1,230	1,150	1,650	*1,550	915	768	270	183
6	570	570	3,330	1,180	1,200	1,090	1,550	1,120	745	610	260	168
7	570	570	3,810	1,120	1,180	1,060	1,680	990	678	442	244	160
8	550	570	*2,580	1,060	*1,150	1,040	1,940	940	632	378	247	152
9	530	570	1,620	1,040	1,120	1,040	1,940	915	610	394	247	143
10	530	570	1,550	1,040	1,090	1,020	1,750	890	570	483	302	138
11	530	570	2,010	1,090	1,090	1,020	1,550	865	610	722	346	146
12	530	570	3,870	1,150	1,120	990	1,460	865	610	490	298	157
13	530	570	8,310	1,040	1,060	990	1,370	890	570	406	240	177
14	522	570	8,970	990	1,040	1,550	1,750	1,310	550	410	227	152
15	590	590	7,870	990	1,040	2,350	1,940	1,430	*655	632	230	136
16	790	590	3,810	6,600	1,040	1,550	1,460	1,180	790	722	217	143
17	655	590	2,210	13,200	1,150	1,260	1,370	990	655	570	211	160
18	570	570	1,750	14,200	1,280	1,150	1,340	915	940	478	*198	186
19	530	590	1,490	8,250	1,120	1,370	1,200	890	1,090	458	292	201
20	526	590	1,370	*2,650	1,060	3,400	1,150	890	745	402	288	186
21	526	610	1,340	2,140	1,810	2,730	1,090	840	610	*366	398	157
22	522	965	1,620	3,700	2,430	*1,810	1,060	815	570	334	414	138
23	522	840	1,940	6,550	1,580	1,490	1,090	790	530	494	323	126
24	526	865	1,750	6,150	1,340	1,430	1,060	768	490	490	326	120
25	526	768	1,490	3,720	1,280	1,400	1,020	745	482	382	*284	123
26	502	700	1,490	2,430	1,230	1,400	1,090	722	458	370	253	123
27	510	678	1,340	2,070	1,150	1,520	1,040	722	442	632	224	126
28	530	655	1,260	1,880	1,120	2,280	965	700	426	550	208	130
29	570	655	1,280	1,680	-	3,890	1,040	700	402	406	378	*128
30	570	632	2,070	1,550	-	2,800	2,140	940	378	330	458	118
31	550	-	2,140	1,490	-	2,140	-	815	-	298	338	-
Total	17,657	18,688	78,806	95,960	35,300	50,360	48,375	30,487	20,250	14,589	9,034	4,755
Mean	570	623	2,542	3,095	1,261	1,624	1,612	983	675	471	291	158
Cfsm	0.401	0.439	1.79	2.18	0.888	1.14	1.14	0.692	0.475	0.332	0.205	0.111
In.	0.46	0.49	2.06	2.51	0.93	1.31	1.27	0.80	0.53	0.38	0.24	0.12

Calendar year 1953: Max 11,700 Min 361 Mean 1,606 Cfsm 1.13 In. 15.33
Water year 1953-54: Max 14,200 Min 118 Mean 1,162 Cfsm 0.818 In. 11.10

Peak discharge (base, 14,000 cfs).--Jan. 18 (7 a.m.) 14,700 cfs (18.0 ft).
* Discharge measurement made on this day.

Little River near Mount Carmel, S. C.

Location.--Lat 34°04', long. 82°30', on right bank 480 ft downstream from Island Ford Bridge, 2.8 miles upstream from Calhoun Creek, and 4.5 miles north of Mount Carmel, McCormick County.

Drainage area.--217 sq mi.

Records available.--December 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 353.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Average discharge.--14 years (1940-54), 211 cfs.

Extremes.--Maximum discharge during year, 3,490 cfs Jan. 17 (gage height, 13.93 ft); minimum, 2.0 cfs Sept. 30.
1939-54: Maximum discharge, 20,800 cfs Aug. 14, 1940 (gage height, 29.60 ft, from high-water mark), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, that of Sept. 30, 1954.

Remarks.--Records good. Records of chemical analyses for the water year 1954 are given in WSP 1350.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	40	45	190	192	319	1,300	186	74	33	23	14
2	47	40	45	164	182	242	1,210	117	293	32	24	12
3	45	41	45	154	178	178	490	145	442	30	20	10
4	42	41	95	158	168	158	361	711	164	32	18	9.1
5	39	41	234	142	158	140	298	340	107	34	*17	8.2
6	39	41	306	130	148	134	260	178	81	59	16	7.8
7	37	41	734	*119	142	128	252	138	74	72	18	7.3
8	36	42	342	114	134	123	228	121	67	40	17	6.8
9	36	41	138	110	132	119	212	108	64	33	17	6.0
10	36	41	289	108	125	117	194	100	101	32	34	*5.1
11	36	42	262	146	123	*114	188	96	108	73	30	4.7
12	36	42	1,590	166	121	112	190	91	57	46	19	3.9
13	34	42	2,140	136	110	110	166	96	53	34	17	3.2
14	34	42	2,040	112	107	517	196	138	72	34	16	3.2
15	41	42	1,180	110	107	457	194	146	57	56	16	3.2
16	51	43	468	2,310	107	222	162	119	*52	46	14	5.9
17	47	43	319	3,210	152	174	156	102	64	42	14	7.3
18	41	*43	238	1,520	154	156	138	91	186	36	13	6.4
19	39	43	198	512	117	455	126	88	105	32	25	6.4
20	39	43	178	392	112	1,150	117	85	70	30	24	6.0
21	38	50	182	372	529	523	114	81	58	27	16	5.5
22	37	68	254	1,030	414	319	114	75	53	31	14	4.7
23	36	61	350	1,340	222	258	144	72	50	37	13	5.5
24	44	51	248	982	178	238	119	70	56	65	12	3.6
25	41	48	206	446	164	240	108	67	47	42	12	2.8
26	41	46	238	361	*146	230	100	66	43	31	12	2.4
27	42	45	194	308	130	238	96	64	42	219	12	2.4
28	40	44	166	277	130	330	91	63	39	48	10	2.8
29	*41	44	200	244	-	298	*102	74	35	30	12	2.8
30	41	43	319	226	-	277	269	82	34	24	35	2.4
31	40	-	248	208	-	405	-	105	-	24	19	-
Total	1,243	1,334	13,491	15,797	4,682	8,481	7,695	4,015	2,748	1,404	559	171.4
Mean	40.1	44.5	435	510	167	274	256	130	91.6	45.3	18.0	5.71
Cfsm	0.185	0.205	2.00	2.35	0.770	1.26	1.18	0.599	0.422	0.208	0.083	0.026
In.	0.21	0.23	2.31	2.71	0.80	1.45	1.32	0.69	0.47	0.24	0.10	0.03

Calendar year 1953: Max 2,140 Min 17 Mean 217 Cfsm 1.00 In. 13.58
Water year 1953-54: Max 3,210 Min 2.4 Mean 169 Cfsm 0.779 In. 10.56

Peak discharge (base, 2,500 cfs).--Dec. 12 (5:15 p.m.) 2,740 cfs (11.99 ft); Jan. 17 (5:30 p.m.) 3,490 cfs (13.93 ft).
* Discharge measurement made on this day.

Little River near Washington, Ga.

Location.--Lat 33°36'40", long. 82°44'40", near left bank on downstream side of highway bridge pier, 700 ft downstream from Reedy Creek, 4 miles downstream from Georgia Railroad bridge, 6 miles upstream from Williams Creek, and 9 miles south of Washington, Wilkes County.

Drainage area.--292 sq mi.

Records available.--October 1949 to September 1954.

Average discharge.--5 years, 195 cfs.

Gage.--Water-stage recorder. Altitude of gage is 360 ft (by barometer).

Extremes.--Maximum discharge during year, 1,300 cfs Feb. 21 (gage height, 10.0 ft); minimum, 0.41 cfs Sept. 29.
1949-54: Maximum discharge, 13,100 cfs Mar. 4, 1952 (gage height, 27.6 ft); minimum, that of Sept. 29, 1954.

Remarks.--Records good.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 22 to Feb. 21)

Oct. 1 to Feb. 21		Feb. 22 to Sept. 30			
2.6	29	1.57	0.46	2.5	32
3.2	69	1.6	.6	3.0	71
3.7	118	1.7	1.4	3.5	120
4.5	218	1.8	2.8	4.0	173
5.5	370	1.9	5.0	5.0	298
8.0	850	2.0	7.8	5.5	370
9.0	1,060	2.2	16		

Note.--Same as preceding table above 5.5 ft.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	31	38	388	162	191	215	355	46	*13	9.3	5.8
2	50	31	*38	246	156	167	173	197	46	12	8.2	5.0
3	48	31	38	197	156	145	150	117	67	12	7.8	3.7
4	43	31	63	169	149	135	145	156	78	16	6.1	2.8
5	39	33	122	148	144	130	140	156	59	34	5.3	2.5
6	37	36	146	137	137	128	*135	120	48	27	4.1	2.1
7	35	36	290	126	132	123	140	96	43	20	3.7	1.7
8	33	36	204	119	129	118	135	84	42	14	3.2	1.4
9	32	36	115	114	127	118	135	76	39	13	3.5	1.4
10	32	36	101	112	125	120	135	70	36	61	3.7	1.3
11	32	39	94	118	123	120	135	66	34	37	3.2	1.3
12	31	36	350	123	123	121	135	62	56	18	2.4	1.2
13	31	35	770	115	122	123	123	144	53	14	2.4	*1.0
14	30	36	1,060	*102	116	258	135	460	67	14	2.3	1.0
15	31	36	850	95	112	173	167	570	58	18	1.9	1.2
16	34	37	451	448	112	140	130	284	38	23	*1.9	1.7
17	35	37	218	610	126	128	128	161	33	49	2.0	2.0
18	33	36	156	346	150	124	113	111	38	96	4.5	2.0
19	32	36	134	218	138	185	103	90	36	62	62	2.4
20	31	36	123	183	140	610	96	*80	33	27	48	2.4
21	*31	40	125	169	844	348	91	76	30	19	29	1.6
22	30	42	150	591	313	215	85	69	28	15	23	1.2
23	30	43	267	810	221	173	85	66	25	13	10	.95
24	30	43	232	550	203	161	80	62	24	45	8.2	.70
25	30	41	162	322	*185	156	76	60	23	38	9.3	.70
26	30	39	169	246	161	150	73	57	20	20	6.4	.62
27	29	38	156	211	145	167	68	56	19	16	5.3	.57
28	30	38	134	197	140	341	66	54	18	14	6.1	.51
29	31	38	242	183	-	305	65	54	16	12	31	.46
30	31	38	690	176	-	*320	146	57	14	11	11	.46
31	31	-	710	169	-	264	-	50	-	10	5.8	-
Total	1,053	1,101	8,398	7,738	4,891	5,957	3,603	4,116	1,167	793	330.6	51.67
Mean	34.0	36.7	271	250	175	192	120	133	38.9	25.6	10.7	1.72
Cfsm	0.116	0.126	0.928	0.856	0.599	0.658	0.411	0.455	0.133	0.088	0.037	0.0059
In.	0.13	0.14	1.07	0.99	0.62	0.76	0.46	0.52	0.15	0.10	0.04	0.007

Calendar year 1953: Max 8,700 Min 14 Mean 247 Cfsm 0.846 In. 11.50
Water year 1953-54: Max 1,060 Min 0.46 Mean 107 Cfsm 0.366 In. 4.99

Peak discharge (base, 3,000 cfs).--No peak above base.
* Discharge measurement made on this day.

Clark Hill Reservoir near Clarks Hill, S. C.

Location.--Lat 33°39'40", long. 82°12'00", in left spillway elevator tower of dam on Savannah River, 1.6 miles west of Clarks Hill, McCormick County, 3.7 miles upstream from Kiokee Creek, and at mile 222.3 upstream from Savannah, Ga.

Drainage area.--6,150 sq mi, approximately.

Records available.--October 1951 to September 1952 (elevations and contents at end of month), October 1952 to September 1954.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers). Prior to Oct. 1, 1952, staff gage at same site and datum.

Extremes.--Maximum elevation during year, 330.88 ft Mar. 29; minimum, 313.37 ft Dec. 4, 1952-54: Maximum elevation, 333.20 ft May 7, 1953; minimum, 300.73 ft Nov. 19, 1952.

Remarks.--Lake is formed by concrete dam with earth dam at each end; dam completed in 1952. Storage began in December 1951. Usable capacity, 75,360,000,000 cu ft between elevations 305.0 ft (limit of drawdown) and 335.0 ft (top of spillway gates). Dead storage, 50,960,000,000 cu ft. Figures given herein represent usable contents. Elevation of spillway crest, 300.0 ft. Water is used for flood control, generation of power, and navigation.

Cooperation.--Capacity table furnished by Corps of Engineers.

Elevation at 12 p.m., in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22.49	17.84	13.72	20.37	29.18	30.00	30.45	29.55	28.65	26.91	23.80	19.78
2	22.42	17.64	13.58	20.44	29.20	29.90	30.45	29.61	28.77	26.80	23.69	19.63
3	22.36	17.46	13.40	20.55	29.25	29.90	30.43	29.63	28.76	26.70	23.52	19.43
4	22.31	17.31	13.49	20.51	29.24	29.85	30.40	29.69	28.74	26.73	23.36	19.25
5	22.11	17.17	13.87	20.46	29.25	29.84	30.14	29.73	28.77	26.63	23.21	19.20
6	21.91	17.00	14.42	20.38	29.32	29.85	30.00	29.66	28.76	26.49	23.06	19.05
7	21.71	16.95	14.57	20.30	29.38	29.92	30.00	29.60	28.67	26.35	22.93	18.84
8	21.52	16.91	14.73	20.22	29.40	29.85	30.06	29.63	28.60	26.14	22.90	18.65
9	21.33	16.70	14.77	20.22	29.28	29.85	30.08	29.68	28.54	26.06	22.76	18.48
10	21.26	16.49	14.92	20.30	29.25	29.83	30.25	29.58	28.49	25.94	22.62	18.25
11	21.25	16.27	15.18	20.25	29.25	29.80	30.27	29.48	28.47	25.92	22.45	18.10
12	21.01	16.07	16.01	20.13	29.20	29.78	30.17	29.42	28.38	25.78	22.32	18.02
13	20.79	15.89	17.24	20.04	29.25	29.89	30.08	29.51	28.37	25.80	22.16	17.84
14	20.57	15.81	18.18	19.95	29.31	30.10	30.16	29.51	28.29	25.57	22.02	17.64
15	20.40	15.76	18.81	19.86	29.25	30.10	30.12	29.60	28.23	25.41	22.02	17.51
16	20.26	15.58	19.15	21.18	29.23	30.01	30.16	29.66	28.19	25.39	21.85	17.37
17	20.23	15.38	19.22	23.19	29.27	29.93	30.19	29.59	28.14	25.36	21.68	17.18
18	20.20	15.21	19.23	24.21	29.25	29.80	30.20	29.52	28.12	25.34	21.55	17.08
19	19.98	15.00	19.33	24.64	29.20	29.90	30.07	29.49	28.11	25.14	21.39	17.01
20	19.77	14.86	19.48	24.75	29.30	30.15	29.93	29.41	28.07	25.02	21.27	16.82
21	19.58	14.83	19.48	24.94	29.78	30.25	29.78	29.35	27.97	24.94	21.16	16.62
22	19.41	14.80	19.56	25.72	30.00	30.13	29.67	29.34	27.87	24.76	21.17	16.45
23	19.21	14.67	19.67	26.94	30.00	30.08	29.58	29.26	27.77	24.63	21.01	16.24
24	19.15	14.63	19.73	28.02	30.00	30.05	29.62	29.06	27.68	24.57	20.85	16.01
25	19.09	14.50	19.83	28.38	29.95	30.07	29.63	28.90	27.60	24.56	20.68	15.86
26	18.85	14.38	19.88	28.55	29.90	30.10	29.46	28.78	27.54	24.47	20.50	15.79
27	18.62	14.20	20.00	28.75	29.90	30.30	29.35	28.70	27.47	24.36	20.31	15.56
28	18.45	14.12	19.93	28.86	30.05	30.75	29.34	28.64	27.33	24.28	20.35	15.34
29	18.20	14.10	20.04	28.90	-	30.75	29.40	28.73	27.15	24.14	20.31	15.12
30	17.98	13.90	20.24	29.06	-	30.54	29.49	28.75	27.04	23.94	20.14	14.93
31	17.88	-	20.32	29.18	-	30.36	-	28.65	-	23.84	19.96	-

Note.--Add 300 ft to obtain elevation above mean sea level. Elevation for periods Oct. 1-10, Nov. 2, 8-9, 22, 23, Dec. 15 obtained from powerplant log.

Monthly elevation and usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (billions of cubic feet)	Change in contents during month (equivalent in cubic feet per second)
Sept.30	322.57	36.77	-
Oct. 31	317.88	25.25	-4,301
Nov. 30	313.90	16.58	-3,345
Dec. 31	320.32	30.89	+5,343
Calendar year 1953	-	-	+1,101
Jan. 31	329.18	55.87	+9,326
Feb. 28	330.05	58.54	+1,104
Mar. 31	330.36	59.59	+392
Apr. 30	329.49	56.82	-1,069
May 31	328.65	54.25	-960
June 30	327.04	49.34	-1,894
July 31	323.84	40.09	-3,454
Aug. 31	319.96	29.97	-3,778
Sept.30	314.93	18.59	-4,390
Water year 1953-54	-	-	-576

† Elevation at 12 p.m.

Stevens Creek near Modoc, S. C.

Location.--Lat 33°43'45", long. 82°10'55", on left bank at bridge on State Highway 23, 1.4 miles east of Modoc, McCormick County, and 3.2 miles downstream from Turkey Creek.

Drainage area.--545 sq mi.

Records available.--February 1940 to September 1954 in reports of Geological Survey. October 1929 to September 1931 in House Document 64, 74th Congress, 1st session.

Gage.--Water-stage recorder. Datum of gage is 197.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Power Administration).

Average discharge.--14 years, 364 cfs.

Extremes.--Maximum discharge during year, 4,410 cfs Dec. 13; maximum gage height, 15.19 ft Dec. 13; no flow Sept. 14, 15, 24-30.
1940-54: Maximum discharge, 35,100 cfs Aug. 14, 1940; maximum gage height, 41.08 ft Aug. 14, 1940; minimum discharge, that of Sept. 14, 15, 24-30, 1954.

Remarks.--Records good except those for period of doubtful gage-height record, which are poor. Slight diurnal fluctuation during low flow caused by small mills above station.

Revisions.--WSP 1032: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.9	40
.1	1.0	1.2	88
.2	2.2	1.5	161
.3	4.0	2.0	290
.4	6.6	4.0	815
.5	10	6.0	1,360
.7	21	9.0	2,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	7.3	17	433	141	174	761	156	50	11	12	1.2
2	35	6.1	16	256	131	259	498	114	230	7.4	10	3.5
3	19	5.0	14	194	126	184	272	88	*241	30	8.6	4.8
4	14	8.4	28	164	124	156	207	90	154	5.7	6.6	5.3
5	14	21	202	144	116	136	171	124	128	1.4	5.6	4.5
6	16	11	234	*131	109	124	156	93	74	.9	4.5	4.0
7	17	13	656	111	104	116	148	69	49	1.1	4.8	*3.1
8	14	7.8	273	104	95	109	138	56	37	1.4	3.6	1.4
9	7.7	5.3	131	93	90	111	134	55	32	61	3.5	.8
10	10	6.9	86	97	88	121	955	43	24	126	101	*.6
11	8.3	16	77	135	84	131	485	38	25	34	73	d.4
12	6.5	6.1	595	238	88	141	339	34	27	26	37	d.2
13	13	5.6	1,750	199	86	151	238	41	34	20	24	.1
14	16	5.3	2,130	138	82	247	*904	71	161	15	14	d0
15	12	5.3	755	116	73	299	1,000	126	80	10	12	d0
16	5.7	5.3	295	2,170	78	178	407	107	43	595	11	d.1
17	8.6	17	178	1,930	100	114	563	73	30	319	12	d.2
18	5.3	*23	134	842	136	100	420	61	186	149	33	d.2
19	4.5	20	104	329	116	117	243	58	143	58	27	d.2
20	6.4	11	95	259	108	923	189	43	60	37	21	d.3
21	14	15	90	230	1,210	568	158	39	35	*25	42	d.3
22	13	11	155	507	923	269	141	36	26	17	34	d.2
23	6.7	9.3	407	1,890	303	186	136	39	22	13	16	d.1
24	11	7.3	332	654	204	161	121	33	12	13	8.0	d0
25	8.0	7.4	199	355	*181	156	114	29	30	10	5.6	d0
26	5.0	18	199	272	176	148	106	25	23	12	3.8	d0
27	4.6	18	217	238	148	154	88	20	14	134	2.9	d0
28	17	8.6	164	217	131	215	80	28	14	94	2.8	d0
29	10	13	347	186	-	280	69	21	11	37	2.4	d0
30	6.0	17	977	166	-	326	172	57	15	19	2.0	d0
31	9.0	-	815	154	-	332	-	63	-	14	1.2	-
Total	374.3	331.0	11,672	12,952	5,351	6,677	9,413	1,930	2,010	1,896.9	544.7	31.5
Mean	12.1	11.0	377	418	191	215	314	62.3	67.0	61.2	17.6	1.05
Cfsm	0.022	0.020	0.692	0.767	0.350	0.394	0.576	0.114	0.123	0.112	0.032	0.0019
In.	0.03	0.02	0.80	0.88	0.36	0.45	0.64	0.13	0.14	0.13	0.04	0.002

Calendar year 1953: Max 5,590 Min 1.6 Mean 315 Cfsm 0.578 In. 7.86
Water year 1953-54: Max 2,170 Min 0 Mean 146 Cfsm 0.268 In. 3.62

Peak discharge (base, 6,000 cfs).--No peak above base.
* Discharge measurement made on this day.
d Doubtful gage-height record; discharge estimated on basis of partial record, weather records, and records for Little River near Mount Carmel.

Augusta Canal near Augusta, Ga.

Location.--Lat 33°30'50", long. 82°00'15", on left bank 2.7 miles northwest of Thirteenth Street Bridge in Augusta, Richmond County, and 4.6 miles downstream from Stevens Creek power dam.

Records available.--November 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 46.58 ft above city of Augusta datum or 148.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Auxiliary water-stage recorder 3.4 miles upstream from base gage.

Average discharge.--23 years (1931-54), 2,739 cfs.

Extremes.--Maximum daily discharge during year, 3,800 cfs Oct. 27, 28; minimum daily, 500 cfs Jan. 24.
1930-54: Maximum daily discharge, 4,380 cfs Jan. 2, 28, 1948; no flow Apr. 8 to May 10, 1936.

Remarks.--Records good except those for periods of fragmentary gage-height record, which are fair. Canal diverts water from Savannah River at dam 1 mile downstream from Stevens Creek Dam for power and municipal supply. Waste water from powerhouses returned to river by three channels above Thirteenth Street Bridge. Water is pumped from canal for municipal supply of Augusta, and a small amount entering Beaverdam ditch is discharged into river about.13 miles below Augusta.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,480	f1,800	3,530	3,240	2,740	2,570	3,220	1,540	3,270	1,980	1,340	2,980
2	3,420	f3,200	3,500	2,130	3,260	2,840	3,200	1,430	*3,080	1,780	3,140	3,100
3	2,620	f3,600	3,630	1,740	3,220	3,050	2,120	2,400	3,110	1,640	3,410	3,200
4	2,140	f3,600	3,610	2,840	3,170	3,180	1,660	2,720	3,120	1,530	3,410	2,090
5	3,340	f3,600	2,340	*3,330	3,190	2,980	2,470	2,980	2,060	1,500	3,400	1,710
6	3,670	f3,600	1,980	3,290	1,990	1,620	2,730	2,900	1,750	2,330	3,370	1,420
7	3,640	f2,400	3,120	3,090	1,590	1,280	2,870	2,780	2,790	2,330	1,970	2,680
8	3,580	f1,900	3,600	2,920	2,820	2,660	3,000	1,700	3,040	2,370	1,730	*3,180
9	3,520	f3,200	3,580	2,020	3,140	3,050	3,130	1,430	3,080	2,310	3,180	3,140
10	2,230	3,580	3,570	1,710	3,080	3,100	1,700	2,490	3,230	1,920	3,260	3,060
11	1,780	3,620	3,510	2,900	3,140	3,060	1,320	2,840	3,130	1,700	3,320	1,990
12	3,170	3,650	2,470	3,240	3,100	3,030	2,430	2,990	2,050	2,900	3,360	1,680
13	3,590	3,620	2,070	3,180	1,990	1,850	*2,940	3,090	1,910	3,240	3,240	2,840
14	3,690	2,270	3,470	3,060	1,410	1,380	3,020	2,660	2,960	3,200	2,010	3,130
15	3,710	f1,800	3,720	3,030	2,610	2,400	3,030	1,590	3,270	3,130	1,840	3,040
16	3,740	f3,000	3,540	1,980	3,030	2,710	2,580	1,460	3,240	3,040	3,120	3,000
17	2,220	*3,620	3,530	1,640	3,180	2,780	1,590	2,760	3,070	1,880	3,450	2,830
18	2,000	3,670	3,450	2,850	3,090	3,070	1,430	3,120	2,890	1,510	3,460	1,890
19	3,200	3,690	2,060	3,160	2,950	3,190	2,660	2,960	2,130	2,640	3,450	1,620
20	3,620	3,850	2,010	3,080	1,750	1,910	3,020	3,120	1,560	*3,010	3,330	2,640
21	3,710	2,300	2,050	2,860	1,480	1,510	3,030	2,950	2,810	3,140	2,170	3,050
22	3,730	2,080	1,930	3,130	2,530	2,660	3,000	1,670	2,980	3,120	1,450	3,110
23	3,720	3,120	2,110	f950	2,810	2,940	2,840	1,560	3,070	3,100	2,870	3,140
24	2,460	3,570	2,050	f500	*3,070	3,030	1,580	2,680	3,070	2,020	3,260	3,070
25	2,130	3,610	1,950	f2,800	3,180	3,110	1,430	2,910	2,870	1,590	3,310	1,730
26	3,320	3,490	1,880	3,210	3,180	3,110	2,600	3,160	1,800	3,060	3,260	1,400
27	f3,800	3,570	1,960	3,180	1,750	2,040	3,160	3,290	1,630	3,440	3,210	2,810
28	f3,800	2,180	3,080	2,970	1,490	1,680	3,070	2,700	1,650	3,290	2,190	3,220
29	f3,400	1,900	3,290	3,030	-	2,690	2,990	1,740	1,780	3,090	1,540	3,220
30	f3,600	3,220	3,380	1,950	-	3,150	2,810	1,700	1,760	3,300	2,960	3,160
31	f2,400	-	3,290	1,640	-	3,100	-	3,000	-	1,500	3,020	-
Total	98,430	92,110	89,260	80,650	73,940	80,730	76,630	76,300	78,160	76,590	88,030	79,110
Mean	3,175	3,070	2,879	2,602	2,641	2,604	2,554	2,461	2,605	2,471	2,840	2,637
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 3,910 Min 240 Mean 3,070 Cfsm - In. -
Water year 1953-54: Max 3,800 Min 500 Mean 2,712 Cfsm - In. -

* Discharge measurement made on this day.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Savannah River at Augusta, Ga.

Location.--Lat 33°22'25", long. 81°56'35", at New Savannah Bluff lock and dam, 0.2 mile upstream from Butler Creek, 12 miles downstream from Augusta, Richmond County, and at mile 188.2 upstream from Savannah, Ga.

Drainage area.--7,508 sq mi, including that of Butler Creek.

Records available.--January 1884 to December 1891, January 1898 to December 1906, June 1927 to July 1932, and October 1938 to September 1954 in reports of Geological Survey. January 1925 to June 1933 in House Document 64, 74th Congress, 1st session. January 1884 to December 1891, January 1898 to December 1906, and January 1925 to September 1946 in report of South Carolina Research, Planning and Development Board. Gage-height records collected at site of Fifth Street gage since 1875 and at New Savannah Bluff lock and dam sites since 1937 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 97.00 ft above mean sea level (Corps of Engineers benchmark). January 1884 to December 1891, January 1898 to December 1906, and June 1927 to July 1932, staff gage or water-stage recorder at Fifth Street Bridge at datum 102.06 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Southeastern Engineering Co.). Oct. 1, 1938, to Nov. 10, 1948, water-stage recorder at site 0.2 mile downstream at present datum.

Average discharge.--28 years (1898-1906, 1927-31, 1938-54), 10,420 cfs.

Extremes.--Maximum discharge during year, 25,500 cfs Mar. 30 (gage height, 17.39 ft); minimum, 5,170 cfs Aug. 8; minimum daily, 5,460 cfs Aug. 8, Sept. 28, 29.

1884-91, 1898-1906, 1925-54: Maximum discharge, 350,000 cfs Oct. 3, 1929; maximum gage height, 46.3 ft Sept. 27, 1929 (at site and datum then in use); minimum, 648 cfs Sept. 24, 1939, from rating curve extended below 1,400 cfs; minimum daily, 1,040 cfs Oct. 2, 1927.

Maximum flood known occurred in 1796, discharge 360,000 cfs (gage height, 40 ft, marked by local residents, at site and datum of Fifth Street gage) by conveyance-slope study.

Remarks.--Records good. Flow regulated by Clark Hill Reservoir (see p.259 for monthly change in contents), Stevens Creek powerplant, and New Savannah Bluff lock and dam above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,700	5,930	5,840	8,360	5,840	7,150	20,400	7,040	6,230	6,830	5,740	5,640
2	6,130	5,640	6,030	7,150	5,740	10,100	20,400	6,530	*7,040	6,130	5,740	5,640
3	5,840	6,030	6,530	5,930	6,930	11,100	18,200	6,730	8,360	5,930	5,740	5,640
4	5,740	6,930	7,810	5,840	7,810	11,900	12,900	7,370	7,590	5,930	5,740	5,550
5	5,740	8,030	6,930	*6,530	7,370	9,310	11,900	7,370	6,530	5,930	5,640	5,640
6	6,830	7,040	5,840	7,920	6,430	6,130	18,000	7,810	6,330	5,930	5,550	5,640
7	8,250	6,130	6,230	7,810	5,740	5,930	11,600	7,590	6,330	5,930	5,640	5,640
8	7,700	5,550	6,930	7,810	5,740	5,930	9,150	6,930	6,430	7,040	5,460	5,640
9	7,700	5,640	7,700	7,040	6,630	6,130	10,400	6,330	6,330	7,150	g5,740	5,550
10	6,630	*6,530	7,480	5,840	7,700	7,260	8,250	6,230	6,230	6,430	g5,740	5,640
11	5,640	7,590	6,930	5,740	7,810	7,370	7,920	6,230	6,130	6,430	g5,930	6,030
12	5,740	6,930	6,130	7,150	7,810	6,930	9,030	6,630	6,130	5,930	g6,030	5,550
13	6,810	7,920	6,920	8,250	6,730	6,330	*9,270	8,030	6,130	5,840	g5,740	5,550
14	8,690	5,930	g9,990	8,800	5,640	5,930	11,100	8,580	6,230	6,530	5,640	*5,550
15	8,250	5,550	g10,700	8,360	5,740	6,430	13,900	7,040	6,330	6,930	5,640	5,550
16	8,360	5,550	9,270	7,810	5,740	8,910	13,800	6,530	6,730	7,480	5,550	5,550
17	7,200	5,930	7,810	7,370	7,480	10,000	10,900	6,430	6,930	7,150	5,640	5,550
18	5,550	7,480	7,810	7,480	8,250	10,700	6,730	6,830	6,630	6,030	5,640	5,550
19	5,740	7,920	6,730	8,030	7,920	10,800	7,950	7,920	6,630	5,930	5,640	5,550
20	7,150	7,260	5,740	7,810	6,730	10,800	11,000	7,590	6,330	*7,040	5,640	5,550
21	8,580	6,230	5,740	7,700	5,740	9,630	13,600	6,530	6,130	6,730	5,640	5,550
22	8,360	5,740	6,130	7,370	6,430	9,630	14,000	6,830	6,130	5,930	5,640	5,550
23	8,800	5,740	7,370	6,930	8,910	10,500	12,400	7,370	6,430	5,740	5,640	5,550
24	7,350	6,530	7,260	6,330	*10,700	10,700	8,320	9,270	6,830	5,840	5,550	5,550
25	5,740	7,700	6,630	6,230	*10,500	10,700	6,430	9,390	6,330	5,740	5,550	5,550
26	5,640	6,830	6,530	7,700	10,200	10,500	8,230	9,270	6,230	5,840	5,550	5,550
27	6,700	6,830	6,030	8,360	9,150	7,770	11,200	8,910	6,130	5,840	5,640	5,550
28	8,690	6,630	5,840	7,810	6,130	6,430	11,100	7,700	6,130	5,740	5,840	5,460
29	8,800	5,550	5,930	6,830	-	7,820	7,920	6,930	6,830	5,740	5,740	5,460
30	8,800	5,640	8,470	6,430	-	20,700	7,700	6,330	8,470	5,740	5,740	5,550
31	7,480	-	9,270	5,930	-	22,300	-	6,230	-	5,740	5,640	-
Total	222,330	194,930	220,550	224,650	203,540	292,020	343,700	226,500	197,240	193,140	175,990	167,520
Mean	7,172	6,498	7,115	7,247	7,269	9,420	11,460	7,308	6,575	6,230	5,677	5,584
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 34,800 Min 3,410 Mean 7,372 Cfsm - In. -
Water year 1953-54: Max 22,300 Min 5,460 Mean 7,293 Cfsm - In. -

* Discharge measurement made on this day.
g Computed from graph based on several gage readings daily at lock.

Savannah River at Burtons Ferry Bridge, near Millhaven, Ga.

Location.--Lat 32°56'20", long. 81°30'10", on downstream side of left pier of drawspan of bridge on U. S. Highway 301, 2 miles downstream from Rocky Creek, 9 miles east of Millhaven, Screven County, and at mile 114.5 upstream from Savannah.

Drainage area.--8,650 sq mi, approximately.

Records available.--October 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 52.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1936 (levels by Corps of Engineers).

Average discharge.--15 years, 10,380 cfs.

Extremes.--Maximum discharge during year, 17,600 cfs Apr. 6 (gage height, 14.40 ft); minimum daily, 5,500 cfs Sept. 30.
1939-54: Maximum discharge, 141,000 cfs Aug. 18, 1940 (gage height, 27.0 ft); minimum daily, 2,120 cfs Sept. 9, 1951.
Flood in October 1929 reached a stage of 30.8 ft, from information by Corps of Engineers.

Remarks.--Records good. Considerable regulation by Clark Hill Reservoir (see p.259 for monthly change in contents), Stevens Creek powerplant, and New Savannah Bluff lock and dam above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 28 to Mar. 4)

5.3	5,500	9.0	9,260
5.5	5,680	11.0	11,600
6.0	6,160	13.0	14,600
7.0	7,140	15.0	19,200

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10,200	8,820	*6,440	10,500	7,140	*8,490	12,900	8,710	*6,640	7,340	5,780	5,880
2	9,700	7,540	6,440	10,400	*6,840	7,740	13,900	8,050	6,740	7,140	5,780	5,780
3	8,490	6,640	6,740	9,480	6,740	9,480	15,000	7,440	7,140	6,640	5,880	5,680
4	7,540	6,440	7,140	8,160	7,140	10,700	16,000	7,140	8,270	6,160	5,880	5,590
5	6,940	6,940	8,600	7,540	8,160	11,600	16,800	7,340	8,380	6,060	5,780	5,590
6	6,740	8,050	9,260	7,540	8,270	11,100	17,600	7,540	7,440	6,060	5,780	5,680
7	6,940	8,270	8,490	8,490	7,740	8,820	17,400	7,740	6,840	5,970	5,680	5,780
8	8,050	7,540	8,050	8,930	6,940	7,340	17,100	7,840	6,540	5,970	5,680	5,780
9	8,380	6,740	8,050	8,820	6,640	6,940	16,400	7,440	6,440	6,540	5,680	5,780
10	8,380	6,440	8,710	8,600	6,840	6,940	15,200	6,740	6,440	7,340	5,780	5,780
11	7,940	6,640	8,710	7,640	7,840	7,540	13,400	6,440	6,350	6,940	5,970	5,780
12	6,940	7,740	8,380	7,240	8,490	8,050	11,300	6,350	6,260	6,740	6,160	5,970
13	6,440	7,640	7,740	7,640	8,600	7,940	10,800	6,840	6,160	6,440	6,160	5,780
14	6,740	8,160	8,270	8,710	8,160	7,540	10,700	8,490	6,260	6,160	6,160	5,780
15	8,270	7,540	10,500	9,730	7,040	7,140	11,200	9,810	6,260	6,260	5,970	5,780
16	8,820	6,640	11,600	9,480	6,640	7,240	12,100	9,260	6,350	6,840	5,970	5,880
17	8,820	6,350	11,600	9,260	6,740	8,490	12,600	8,050	6,540	7,140	5,880	5,970
18	8,490	6,350	10,500	8,930	7,440	9,920	12,800	7,240	6,740	6,640	5,780	5,970
19	7,140	7,140	9,700	8,600	8,600	10,600	11,000	7,040	6,540	6,840	5,780	5,880
20	6,440	8,160	8,820	9,040	8,820	11,200	9,370	7,540	6,540	6,350	5,680	5,780
21	6,840	8,160	7,640	9,040	8,380	11,400	10,400	7,940	6,350	6,640	5,680	5,780
22	8,270	7,540	7,140	8,930	7,340	11,200	11,400	7,240	6,160	6,840	5,780	5,680
23	8,600	6,840	7,240	8,710	7,140	10,800	12,200	7,040	6,060	6,350	5,780	5,680
24	8,930	6,640	8,050	8,270	8,640	10,800	12,500	7,140	6,260	6,060	5,780	5,590
25	8,710	6,940	8,380	7,740	10,200	11,100	11,600	8,380	6,840	5,970	5,780	5,590
26	7,240	7,840	8,270	7,340	10,800	11,200	9,260	9,040	6,540	5,970	5,680	5,590
27	*6,440	7,940	8,160	7,940	10,800	11,100	8,380	9,150	6,260	*5,970	5,680	5,680
28	6,640	7,540	7,840	9,040	10,200	10,500	*9,920	9,150	6,160	5,970	5,680	*5,680
29	8,160	7,640	*7,540	9,040	-	9,040	10,800	8,380	*6,060	5,970	5,780	5,590
30	8,820	6,740	7,740	8,270	-	*8,820	9,920	7,740	6,160	5,880	*6,160	5,500
31	9,150	-	9,040	7,840	-	11,400	-	7,140	-	5,880	6,160	-
Total	245,200	219,600	260,780	266,890	224,320	292,170	379,950	241,380	197,720	199,070	181,150	172,250
Mean	7,910	7,320	8,412	8,609	8,011	9,425	12,660	7,786	6,591	6,422	5,844	5,742
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953 : Max 31,800 Min 4,840 Mean 8,622 Cfsm - In. -
Water year 1953-54 : Max 17,600 Min 5,500 Mean 7,892 Cfsm - In. -

* Discharge measurement made on this day.

Brier Creek at Millhaven, Ga.

Location.--Lat 32°56'00", long. 81°39'05", near right bank on downstream side of pier of highway bridge on post road at Millhaven, Screven County, 8½ miles upstream from Beaver Dam Creek.

Drainage area.--666 sq mi.

Records available.--April 1937 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 95.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 7, 1950, staff gage at site 200 ft downstream at same datum. June 7, 1950, to Apr. 30, 1951, wire-weight gage at present site and datum.

Average discharge.--17 years, 634 cfs.

Extremes.--Maximum discharge during year, 1,560 cfs Dec. 20 (gage height, 7.4 ft); minimum daily, 64 cfs Sept. 5-11.
1937-54: Maximum discharge, 25,400 cfs Aug. 16, 1940 (gage height, 17.4 ft, from graph based on gage readings); minimum daily, that of Sept. 5-11, 1954.
Maximum stage known, 25.1 ft in September or October 1929, from information by Georgia State Highway Department.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Slight diurnal fluctuation at low flow caused by gristmills above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 1		Mar. 2 to Sept. 30	
2.1	239	0.0	64
4.0	491	1.0	143
6.0	997	3.0	363
7.3	1,510	5.3	789

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	789	244	355	1,060	685	685	667	338	234	126	130	68
2	997	250	355	1,060	637	712	689	326	284	126	130	68
3	1,060	250	342	1,060	591	646	712	314	350	126	126	66
4	1,030	250	395	1,030	569	626	762	302	363	126	120	66
5	933	250	569	1,140	569	626	789	290	376	126	110	64
6	762	261	591	1,180	548	626	689	278	390	126	105	64
7	*591	278	614	1,100	528	588	626	267	338	130	105	64
8	473	283	637	997	548	588	588	262	338	126	100	64
9	409	283	637	873	548	588	552	262	256	126	96	64
10	381	288	685	817	528	570	516	250	240	148	96	64
11	355	300	817	789	*509	534	499	245	212	202	96	64
12	318	306	956	789	509	516	482	234	207	187	98	66
13	288	306	1,060	736	491	482	482	290	192	172	105	70
14	278	306	1,180	685	491	499	499	516	182	152	122	83
15	272	306	1,180	661	491	552	570	516	177	138	110	96
16	272	306	1,100	661	474	552	626	482	172	134	100	*115
17	278	*306	1,030	685	491	*552	607	450	167	138	96	138
18	272	300	997	685	491	534	570	434	162	182	92	152
19	266	300	1,100	685	474	570	499	450	162	202	90	148
20	261	300	1,510	710	491	667	482	482	157	218	88	152
21	261	300	1,460	710	528	689	482	499	157	*234	84	162
22	261	306	*1,250	685	569	646	534	450	148	256	82	167
23	261	318	1,060	710	569	607	607	350	143	256	80	152
24	261	318	933	762	569	588	570	284	*157	228	78	134
25	256	342	845	817	614	588	534	250	202	177	76	126
26	250	355	903	789	637	607	482	234	234	162	74	126
27	250	342	873	762	591	626	419	223	192	162	72	118
28	250	342	903	736	591	736	*376	218	152	152	72	110
29	250	355	997	736	-	736	350	250	138	167	70	114
30	244	355	1,100	736	-	689	338	296	130	157	70	110
31	244	-	1,100	710	-	689	-	262	-	*143	68	-
Total	13,073	9,006	27,543	25,556	15,331	18,914	16,598	10,304	6,612	5,105	2,941	3,055
Mean	422	300	888	824	548	610	553	332	220	165	94.9	102
Cfsm	0.643	0.457	1.35	1.26	0.835	0.930	0.843	0.506	0.335	0.252	0.145	0.155
In.	0.74	0.51	1.56	1.45	0.87	1.07	0.94	0.58	0.37	0.29	0.17	0.17

Calendar year 1953: Max 3,060 Min 154 Mean 612 Cfsm 0.933 In. 12.65
Water year 1953-54: Max 1,510 Min 64 Mean 422 Cfsm 0.643 In. 8.72

Peak discharge (base, 2,000 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--No gage-height record Aug. 4-13, Aug. 15 to Sept. 16; discharge estimated on basis of 1 discharge measurement, weather records, and records for stations on nearby streams.

Savannah River near Clyo, Ga.

Location.--Lat 32°31'30", long. 81°15'45", on downstream side of center pier of drawspan of bridge on Seaboard Air Line Railroad, 3 miles north of Clyo, Effingham County, and at mile 50.1 upstream from Savannah.

Drainage area.--9,850 sq mi, approximately.

Records available.--October 1937 to September 1954 in reports of Geological Survey. April 1930 to June 1933 (below 12,000 cfs only) in House Document 64, 74th Congress, 1st session. Gage-height records collected at same site 1921-43 by U. S. Weather Bureau (unpublished prior to 1933).

Gage.--Water-stage recorder. Datum of gage is 13.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1936. Prior to June 12, 1945, staff gage at same site and datum.

Average discharge.--17 years, 11,300 cfs.

Extremes.--Maximum discharge during year, 18,800 cfs Apr. 12 (gage height, 12.49 ft); minimum daily, 5,760 cfs for several days in August and September.
1937-54: Maximum discharge observed, 128,000 cfs Aug. 21, 22, 1940 (gage height, 23.6 ft); minimum daily, 2,830 cfs Oct. 19, 25-28, 1941.
1921-54: Maximum gage height, 29.7 ft Oct. 6, 1929; minimum, 1.21 ft Sept. 11, 1951.

Remarks.--Records good. Considerable regulation by Clark Hill Reservoir (see p. 259 for change in monthly contents), Stevens Creek powerplant, and New Savannah Bluff lock and dam above station.

Revisions (water years).--WSP 1112: 1940.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 27, 28)

Oct. 1 to Dec. 23, Mar. 1 to Sept. 30				Dec. 24 to Feb. 28	
4.5	5,670	9.0	10,900	6.5	7,350
5.0	6,160	11.0	14,500	7.0	7,900
6.0	7,160	13.0	20,800	8.0	9,000
7.0	8,260			9.0	10,200
				10.0	11,500

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,900	9,220	7,820	9,960	9,240	12,200	*11,500	11,400	8,150	6,360	5,960	*6,160
2	12,900	9,220	*7,270	10,600	*8,670	*12,200	12,000	10,900	7,710	6,960	5,960	6,060
3	12,900	8,740	7,060	11,100	8,120	11,500	12,700	10,000	*7,380	7,270	6,060	5,960
4	12,700	7,710	7,270	11,400	7,790	11,200	13,300	9,100	7,820	6,960	6,060	5,760
5	11,700	7,160	7,820	11,100	7,900	11,400	13,900	8,260	8,380	6,560	5,960	5,760
6	10,500	7,270	8,620	10,300	8,340	11,900	14,500	8,040	8,860	6,360	5,960	5,760
7	9,480	7,930	9,480	9,600	8,780	12,200	15,200	8,040	8,500	6,160	5,860	5,760
8	8,980	8,380	9,760	9,600	8,670	12,200	15,800	8,150	7,930	6,260	5,860	5,760
9	9,100	8,260	9,480	9,960	8,120	10,900	16,800	8,260	7,380	6,360	5,860	5,860
10	9,480	7,710	9,220	10,100	7,680	9,340	17,700	8,040	7,060	6,460	5,960	5,860
11	9,480	7,160	9,340	10,100	7,460	8,400	18,400	7,600	6,960	7,060	5,960	5,860
12	9,220	7,160	9,760	9,720	8,010	8,400	18,800	7,160	6,860	7,160	6,160	5,760
13	8,500	7,710	9,760	9,000	8,560	8,860	18,400	7,380	6,660	7,060	6,260	5,960
14	7,710	8,040	9,760	8,780	8,890	8,980	17,100	8,620	6,560	6,760	6,360	5,960
15	7,490	8,260	9,900	9,120	8,890	8,740	16,000	9,900	6,560	6,460	6,260	5,960
16	8,150	8,260	10,700	9,720	8,230	8,380	14,500	10,700	6,560	6,360	6,060	5,960
17	8,980	7,600	11,700	9,960	7,570	8,150	13,700	11,200	6,560	6,760	5,960	5,960
18	9,220	7,060	12,300	10,100	7,350	8,740	13,300	10,600	6,760	7,160	5,860	6,060
19	9,220	6,960	12,900	10,100	7,680	9,620	13,300	9,620	6,960	7,600	5,860	6,160
20	8,500	7,270	12,900	9,840	8,340	10,600	13,500	8,740	6,860	7,380	5,760	6,060
21	7,490	8,040	12,500	9,720	8,890	11,200	13,300	8,500	6,860	6,860	5,760	5,960
22	7,380	8,500	11,500	9,840	8,890	11,700	12,500	8,620	6,760	6,760	5,860	5,960
23	8,150	8,380	10,600	9,840	8,450	12,000	12,200	8,380	6,560	6,980	5,960	5,860
24	8,740	7,820	9,360	9,840	8,010	12,300	12,300	8,040	6,460	6,760	5,960	5,860
25	9,100	7,380	9,480	9,600	8,450	12,300	12,700	7,930	6,460	6,460	5,960	5,760
26	9,220	7,380	9,840	9,240	9,360	12,300	12,900	8,260	6,760	6,260	5,860	5,760
27	8,500	7,820	9,960	8,780	10,300	12,300	12,900	8,980	6,860	6,160	5,760	5,860
28	7,600	8,260	9,960	8,780	10,900	12,500	11,900	9,340	6,660	6,160	5,760	5,860
29	*7,160	8,150	9,840	9,240	-	12,500	*11,200	9,480	6,460	*6,160	5,760	5,760
30	7,930	8,150	*9,600	9,600	-	12,300	11,200	9,340	*6,360	6,060	5,960	*5,760
31	8,740	-	9,600	9,600	-	11,700	-	8,860	-	5,960	6,160	-
Total	287,120	236,960	305,060	304,240	237,540	337,210	423,500	277,440	212,670	206,030	184,760	176,800
Mean	9,262	7,899	9,841	9,814	8,484	10,880	14,120	8,950	7,089	6,646	5,960	5,893
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 35,800 Min 5,580 Mean 9,743 Cfsm - In. -
Water year 1953-54: Max 18,800 Min 5,760 Mean 8,738 Cfsm - In. -

* Discharge measurement made on this day.

JAMES RIVER BASIN

Smith Creek near Clifton Forge, Va.

Location.--Lat 37°51', long. 79°51', 125 ft downstream from old water-supply dam, 3 miles northwest of Clifton Forge, Alleghany County, and 3½ miles upstream from mouth.
Drainage area.--12.5 sq mi (revised).
Records available.--July 1944 to April 1947 (discontinued).
Gage.--Staff gage. Altitude of gage is 1,380 ft.
Extremes.--1944-47: Maximum discharge, 340 cfs (revised) Jan. 7, 1946 (gage height, 1.80 ft, from graph based on gage readings), from rating curve extended above 47 cfs by logarithmic plotting; minimum daily observed, 1.1 cfs Sept. 18, 1946; minimum gage observed, 0.28 ft June 2, 1946, occurred during filling of reservoir just above dam.
Revisions.--Figures of maximum discharge for the water years 1945 and 1946 have been revised to 149 cfs Jan. 1, 1945 (gage height, 1.46 ft, from graph based on gage readings) and 340 cfs Jan. 7, 1946 (gage height, 1.80 ft, from graph based on gage readings), superseding figures published in WSP 1032 and 1052, respectively.
Remarks.--City of Clifton Forge diverts about 4 cfs from reservoir just above station. Records not equivalent to later records above old dam, due to diversion and inflow from spring between stations.
Revisions.--WSP 1303: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1945-46 and the period in 1947, superseding those published in WSP 1032, 1052, and 1082, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1944		1945-Con.		1945-Con.		1946-Con.		1946-Con.	
Nov. 28	23	Feb. 28	34	Apr. 17	21	Jan. 5	21	Apr. 26	52
29	20	Mar. 1	35	18	39	6	84	27	46
Dec. 25	38	2	40	19	39	7	201	28	38
26	59	3	58	20	35	8	264	May 3	137
27	40	4	58	21	31	9	145	4	206
28	28	5	63	22	26	10	118	5	122
29	20	6	108	23	22	11	84	6	74
		7	86	24	22	12	95	7	50
1945		8	59	25	21	13	87	8	36
Jan. 1	92	9	46	26	20	14	63		
2	95	10	37	May 17	21	15	48	1947	
3	56	11	32	18	76	16	34	Jan. 3	141
4	39	12	25	19	52	Feb. 1	56	4	112
5	29	14	20	20	32	2	46	5	52
7	20	22	20	21	28	3	36	6	40
22	22	23	25	22	23	10	39	15	52
23	28	24	27	28	22	11	52	16	129
24	29	25	27	29	20	12	50	17	74
25	26	26	25	June 20	20	13	48	18	54
Feb. 14	32	27	33	Nov. 28	33	14	56	19	44
15	31	28	35	29	32	15	50	20	141
16	29	29	34	30	23	16	40	21	157
17	37	30	33	Dec. 8	23	Mar. 15	133	22	92
18	37	31	29	9	23	16	108	23	63
19	37	Apr. 1	25	10	25	17	74	24	46
20	33	2	23	12	20	18	56	25	36
21	33	3	25	31	44	19	61	26	45
22	38	4	26			20	65	Feb. 1	38
23	56	5	26	1946		21	82	Mar. 13	48
24	51	6	23	Jan. 1	44	22	74	14	201
25	42	7	22	2	33	23	61		
26	38	8	21	3	26	24	45		
27	34	16	14	4	22	25	38		

Month	Cfs-days	Maximum	Minimum	Mean
November 1944	176.3	23	3.8	5.88
December	430.6	59	6.9	13.9
January 1945	789	95	13	25.5
February	696.1	56	8.1	24.9
March	1,085	108	13	35.0
April	659	39	14	22.0
May	610	76	10	19.7
June	272.0	20	4.0	9.07
Water year 1944-45	5,307.1	108	1.8	14.5
November 1945	249.1	33	2.9	8.30
December	486.1	44	6.9	15.7
Calendar year 1945	5,368.2	108	1.8	14.7
January 1946	1,609.6	264	9.6	51.9
February	951	56	20	34.0
March	1,224	133	13	39.5
April	652	52	12	21.7
May	1,091.3	206	9.3	35.2
Water year 1945-46	6,799.7	264	1.1	18.6
Calendar year 1946	6,238.8	264	1.1	17.1
January 1947	1,566.4	157	6.4	50.5
February	337.6	38	5.8	12.1
March	1,341.9	220	5.8	‡43.3

‡ Partly estimated on basis of records for Jackson River at Falling Spring.

JAMES RIVER BASIN

Calfpasture River at Goshen, Va.

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

Drainage area.--190 sq mi.

Records available.--March 1925 to December 1938 (discontinued). Prior to October 1934, published as North River at Goshen.

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

Average discharge.--13 years, 212 cfs.

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

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. The supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)†
622	1926	Jan. 19, 1926	5,980	8.2
642	1927	Nov. 16, 1926	11,600	10.0
662	1928	Oct. 13, 1927	4,380	7.3
682	1929	Apr. 16, 1929	6,930	8.6
697	1930	Nov. 18, 1929	7,500	8.8
712	1931	Mar. 29, 1931	2,190	5.3
727	1932	Feb. 4, 1932	6,670	8.5
742	1933	Oct. 17, 1932	11,600	10.0
782	1935	Jan. 23, 1935	11,200	9.9
822	1937	Apr. 26, 1937	5,570	8.0
852	1938	Oct. 19, 1937	10,900	9.8

† From graph based on gage readings.

Revisions (water years).--W 972: 1936(M). Revised figures of discharge, in cubic feet per second, for high-water periods in 1930 and 1933, superseding those published in WSP 697 and 742, are given herewith:

Nov. 18, 1929..... 4,200
Oct. 18, 1932..... 3,820

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
November 1929.....	12,320	4,200	107	411	2.16	2.41
Calendar year 1929.....	105,684	4,750	14	290	1.53	20.71
Water year 1930.....	53,913	4,200	8	148	.779	10.55
October 1932.....	10,099	3,820	8	326	1.72	1.98
Calendar year 1932.....	86,035	3,820	8	235	1.24	16.84
Water year 1933.....	115,444	4,200	8	316	1.66	22.59

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ROANOKE RIVER BASIN

Otter River near Altavista, Va.

Location.--Lat 37°11'05", long. 79°16'45", on left bank 1.2 miles below Flat Creek and 5 miles (revised) north of Altavista, Campbell County.

Drainage area.--372 sq mi.

Records available.--September 1929 to October 1936 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 540 ft (from topographic map). Prior to Aug. 23, 1930, staff gage at same site and datum.

Average discharge.--7 years, 339 cfs (revised).

Extremes.--1929-36: Maximum discharge, 15,500 cfs (revised) Mar. 17, 1936 (gage height, 21.70 ft), from rating curve extended above 1,900 cfs by logarithmic plotting and conveyance-slope study; minimum, 9 cfs Sept. 1, 1932 (gage height, 1.71 ft).
Flood of Oct. 19, 1937, reached a stage of 26.8 ft (discharge, about 28,000 cfs).
Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
697	1930	Oct. 2, 1929	14,500	†21.20
712	1931	Aug 23, 1931	7,800	16.98
727	1932	Mar. 6, 1932	10,500	18.90
742	1933	Oct. 17, 1932	13,900	‡20.88
757	1934	Mar. 28, 1934	3,420	11.91
782	1935	Sept. 6, 1935	14,100	††21.00
802	1936	Mar 17, 1936	15,500	21.70

† From graph based on gage readings
‡ Corrected.
†† Estimated from partial recorder graph.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1930, 1933, 1935-36, superseding those published in WSP 697, 742, 782, and 802, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1929		1934		1936	
Oct. 2	10,500	Nov. 29	2,570	Jan. 3	9,810
3	5,690	30	3,590	4	4,460
		Dec. 1	8,690	19	8,090
1930		2	3,980	20	5,270
Mar. 8	8,010			Feb. 14	6,070
		1935		15	5,820
1932		Sept. 5	2,660	Mar. 17	4,630
Oct. 17	6,340	6	10,000	18	7,940
18	5,960	7	2,250	19	2,770
Dec. 28	3,110			Aug. 17	3,530
29	3,560				

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
October 1929	31,680	10,500	250	1,022	2.75	3.17
March 1930	21,500	8,010	212	694	1.87	2.16
Water year 1929-30	135,184	10,500	34	370	.995	13.54
Calendar year 1930	87,584	8,010	34	240	.645	8.77
October 1932	17,028	6,340	24	549	1.48	1.71
December	16,323	3,560	109	527	1.42	1.64
Calendar year 1932	110,466	6,340	10	302	.812	11.05
Water year 1932-33	143,613	6,340	24	393	1.06	14.39
November 1934	10,179	3,590	104	339	.911	1.02
December	23,729	8,690	191	765	2.06	2.38
Calendar year 1934	115,479	8,690	56	316	.849	11.56
September 1935	21,549	10,000	98	715	1.93	2.22
Water year 1934-35	179,201	10,000	98	491	1.32	17.97
Calendar year 1935	162,071	10,000	98	444	1.19	16.25
January 1936	55,032	9,810	392	1,775	4.77	5.50
February	28,610	6,070	317	987	2.65	2.86
March	34,879	7,940	306	1,125	3.02	3.48
August	6,945	3,530	32	224	.602	.69
Water year 1935-36	188,887	9,810	32	516	1.39	18.86

Measurements of streamflow in the South Atlantic slope basins, James River to Savannah River made at points other than regular gaging 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. For many sites measurements have been made in other years.

Determinations of peak flow at points other than regular gaging stations are given in a separate table on page 309.

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954

James River basin, Va.

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Oct. 5	Mackay Spring.....	Jackson River.....	2.2 miles south of Vanderpool on U. S. Highway 220.	-	2.44
July 7	....do.....	....do.....	....do.....		3.78
Sept.27	....do.....	....do.....	....do.....		2.85
July 7	Jackson River.....	James River.....	At bridge on U. S. Highway 220, 10 miles north of Warm Springs.	-	37.3
Sept.27	....do.....	....do.....	....do.....		28.2
Oct. 6	Falling Springs Creek.	Jackson River.....	On U. S. Highway 220, near Falling Spring.	-	4.92
Nov. 17	....do.....	....do.....	....do.....		4.92
Dec. 8	....do.....	....do.....	....do.....		6.44
Jan. 5	....do.....	....do.....	....do.....		5.74
Feb. 16	....do.....	....do.....	....do.....		6.06
Mar. 2	....do.....	....do.....	....do.....		90.5
Apr. 14	....do.....	....do.....	....do.....		16.4
May 4	....do.....	....do.....	....do.....		17.1
June 9	....do.....	....do.....	....do.....		6.99
July 13	....do.....	....do.....	....do.....		5.91
Aug. 11	....do.....	....do.....	....do.....		5.64
Sept.15	....do.....	....do.....	....do.....		4.66
July 7	Horse Mountain Run	....do.....	200 ft above Covington Reservoir and 2.7 miles southeast of Covington.	-	1.19
Sept.28	....do.....	....do.....	....do.....		1.09
July 7	Pounding Mill Creek.	....do.....	At bridge on U. S. Highway 60, 1 mile east of Covington.	-	.188
Sept.28	....do.....	....do.....	....do.....		.162
July 7	Wilson Creek.....	....do.....	At bridge above Douthat Lake on State Highway 629, 4.5 miles north of Clifton Forge.	-	2.54
Sept.28	....do.....	....do.....	....do.....		.628
July 6	Cowpasture River..	James River.....	250 ft above Bullpasture River at Williamsville.	-	.83
Sept.27	....do.....	....do.....	....do.....		.075
July 6	Bullpasture River.	Cowpasture River..	300 ft above mouth at Williamsville.	-	53.7
Sept.27	....do.....	....do.....	....do.....		28.2
July 6	Stuart Run.....	....do.....	400 ft above bridge on State Highway 39, at Millboro Springs.		23.5
Sept.27	....do.....	....do.....	....do.....		.358
July 7	Sinking Creek.....	James River.....	300 ft above bridge on U. S. Highway 220, at Gala.	-	.040
Sept.28	....do.....	....do.....	....do.....		.279
July 7	Mill Creek.....	....do.....	At upper bridge from U. S. Highway 220 bridge, at Gala.	-	3.59
Sept.28	....do.....	....do.....	....do.....		4.25
July 8	Meadow Creek.....	Craig Creek.....	At bridge on State Highway 624, 6 miles southeast of Newcastle.	3.7	.462
Sept.29	....do.....	....do.....	....do.....		.328
July 7	Roaring Run.....	....do.....	At bridge 100 ft from State Highway 621 and 3.4 miles (along road) from mouth.	-	5.05
Sept.28	....do.....	....do.....	....do.....		3.67
July 7	Patterson Creek...	....do.....	100 ft above ford on State Highway 825 and 1.5 miles west of Eagle Rock.	-	.420
Sept.28	....do.....	....do.....	....do.....		1.04
July 9	Looney Mill Creek.	James River.....	At bridge on State Highway 636, 5 miles southwest of Buchanan.	29.6	7.44
Sept.29	....do.....	....do.....	....do.....		6.71
July 9	Back Creek.....	Looney Mill Creek.	40 ft from State Highway 640, 70 ft below old bridge and 1 mile east of Lithia.	-	3.42
Sept.29	....do.....	....do.....	....do.....		3.06
Oct. 1	Purgatory Creek...	James River.....	At bridge on U. S. Highway 11, 1.6 miles north of Buchanan.	-	3.38
July 9	....do.....	....do.....	....do.....		2.87
Sept.29	....do.....	....do.....	....do.....		2.16
Oct. 1	Cedar Creek.....	....do.....	60 ft below bridge on State Highway 609 and about 1.5 miles upstream from Natural Bridge.	-	2.56
July 9	....do.....	....do.....	....do.....		2.94
Sept.29	....do.....	....do.....	....do.....		1.60
27	Calfpasture River.	Maury River.....	At bridge on U. S. Highway 250, 1.5 miles east of West Augusta.	-	.08

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

James River basin, Va.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 6	Calfpasture River.	Maury River.....	400 ft above bridge on State Highway 687 and 4.5 miles southwest of Craigsville.	-	18.2
Sept.30	....do.....	....do.....	....do.....		4.32
July 6	Little Calfpasture River.	Calfpasture River.	500 ft above bridge on State Highway 685 and 0.4 mile east of Craigsville.	-	3.09
Sept.30	....do.....	....do.....	....do.....		.114
Oct. 1	Hays Creek.....	....do.....	At bridge on State Highway 39, at Rockbridge Baths.	-	20.8
July 7	....do.....	....do.....	....do.....		22.4
Sept.28	....do.....	....do.....	....do.....		15.6
Oct. 1	Mill Creek.....	Maury River.....	At bridge on State Highway 639, ½ mile east of East Lexington.	-	1.79
July 7	....do.....	....do.....	....do.....		1.75
Sept.27	....do.....	....do.....	....do.....		1.09
Oct. 2	St. Marys River...	South River.....	300 ft above forester's cabin, 1 mile upstream from crest gage at State Highway 608 and 3.2 miles northeast of Vesuvius.	15.7	.534
July 8	....do.....	....do.....	....do.....		1.18
Sept.27	....do.....	....do.....	....do.....		0
Oct. 2	Indian Gap Run....	Maury River.....	50 ft above reservoir and 1½ miles east of Buena Vista.	-	.016
July 7	....do.....	....do.....	....do.....		.034
Sept.28	....do.....	....do.....	....do.....		.015
Oct. 2	Noel's Run.....	Indian Gap Run....	2½ miles east of Buena Vista, at reservoir.	-	.076
July 7	....do.....	....do.....	....do.....		.105
Sept.28	....do.....	....do.....	....do.....		.043
Oct. 2	Moore Creek.....	Buffalo Creek.....	3.5 miles southwest of Collierstown, below dam.	-	1.49
July 9	....do.....	....do.....	....do.....		.860
Sept.30	....do.....	....do.....	....do.....		.244
Oct. 1	Buffalo Creek.....	Maury River.....	On U. S. Highway 11, 5 miles south of Lexington.	-	26.8
July 7	....do.....	....do.....	....do.....		26.7
Sept.28	....do.....	....do.....	....do.....		19.2
July 6	Pedlar River.....	James River.....	At bridge on U. S. Highway 60, 1.5 miles west of Oranoco.	-	7.36
Sept.28	....do.....	....do.....	....do.....		2.20
July 7	Harris Creek.....	....do.....	1,000 ft northwest of Southern Ry. station at Monroe.	-	6.29
Sept.28	....do.....	....do.....	....do.....		2.25
July 8	Wreck Island Creek	....do.....	On State Highway 613, 5.5 miles northwest of Appomattox.	-	6.42
Sept.28	....do.....	....do.....	....do.....		3.66
July 6	Bent Creek.....	....do.....	At bridge on State Highway 26, at Bent Creek.	-	14.1
Sept.29	....do.....	....do.....	....do.....		5.68
July 6	West Fork Buffalo River.	Buffalo River.....	100 ft above confluence of North Fork Buffalo River at Forks of Buffalo, and 11.2 miles west of Amherst.	-	.947
Sept.28	....do.....	....do.....	....do.....		.150
July 6	Buffalo River.....	James River.....	At U. S. Highway 60, at Forks of Buffalo, 11.2 miles west of Amherst.	-	3.78
Sept.28	....do.....	....do.....	....do.....		.74
July 6	....do.....	....do.....	0.3 mile above U. S. Highway 29 bridge and 1.7 miles northwest of Amherst.	-	31.6
Sept.29	....do.....	....do.....	....do.....		1.59
July 6	Spring Reservoir..	Rucker Run.....	¼ mile east of Lovington.....	-	0
Sept.30	....do.....	....do.....	....do.....		.005
July 6	Davis Creek.....	Rockfish River....	At Wood's Mill, 0.4 mile above mouth.	-	6.71
Sept.29	....do.....	....do.....	....do.....		1.60
July 6	Cove Creek.....	....do.....	At bridge on U. S. Highway 29, 1.5 miles southwest of Covesville.	4.0	1.03
Sept.29	....do.....	....do.....	....do.....		.38
July 6	Ivy Creek.....	....do.....	At bridge on State Highway 800, at Schuyler.	-	.82
Sept.29	....do.....	....do.....	....do.....		.12
July 6	North Fork Hardware River.	Hardware River....	At bridge on U. S. Highway 29, 0.5 mile west of Red Hill.	11	3.87
Sept.29	....do.....	....do.....	....do.....		1.54
July 6	South Branch Hardware River.	North Fork Hardware River.	At bridge on U. S. Highway 29, 0.1 mile northwest of Crossroads.	6.6	1.99
Sept.29	....do.....	....do.....	....do.....		.69
July 8	Slate River.....	James River.....	At bridge on U. S. Highway 60, 0.5 mile west of Buckingham.	-	15.3
Sept.28	....do.....	....do.....	....do.....		2.95
July 6	Muddy Creek.....	Slate River.....	At State Highway 20, 4.5 miles south of Centenary.	-	2.05
Sept.28	....do.....	....do.....	....do.....		.554
July 6	North Fork Muddy Creek.	Muddy Creek.....	At State Highway 20, 4.1 miles south of Centenary.	-	.62
Sept.28	....do.....	....do.....	....do.....		.125
July 6	Sharp Creek.....	Slate River.....	At State Highway 20, 1.5 miles south of Centenary.	-	.032

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

James River basin, Va.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.28	Sharp Creek.....	Slate River.....	At State Highway 20, 1.5 miles south of Centenary.	-	0.003
Oct. 1	South Fork Moormans River.	Moormans River....	1,000 ft above Charlottesville Reservoir and 4.6 miles west of Whitehall.	-	.042
Nov. 16	....do.....	....do.....	....do.....		.215
July 22	....do.....	....do.....	....do.....		.485
Aug. 20	....do.....	....do.....	....do.....		.095
Sept. 8	....do.....	....do.....	....do.....		.033
July 8	Stocton Creek.....	Mechum River.....	At bridge on State Highway 635, 2½ miles south of Crozet.	-	2.10
Aug. 2	....do.....	....do.....	....do.....		.306
Sept.14	....do.....	....do.....	....do.....		.15
27	....do.....	....do.....	....do.....		.61
Oct. 13	Mechum River.....	South Fork Rivanna River.	At bridge on State Highway 614, 3.3 miles north of Ivy.	97	9.79
July 8	....do.....	....do.....	....do.....		17.4
Sept. 8	....do.....	....do.....	....do.....		2.27
27	....do.....	....do.....	....do.....		3.71
Oct. 13	Unnamed creek.....	Ivy Creek.....	1.5 miles north of Ivy, on J. Baker's farm.	-	.036
13	....do.....	....do.....	In flow at Blue Ridge Pool, 1.5 miles north of Ivy.	-	.033
1	South Fork Rivanna River.	Rivanna River.....	At bridge on U. S. Highway 29, 4.8 miles north of Charlottesville.	-	15.2
1	North Fork Rivanna River.	....do.....	At bridge on U. S. Highway 29, 9 miles northeast of Charlottesville.	-	4.42
July 8	....do.....	....do.....	....do.....		18.8
Sept.27	....do.....	....do.....	....do.....		1.60
July 8	Mechunk Creek.....	....do.....	At bridge on U. S. Highway 250, 5 miles west of Zion Crossroads.	-	6.31
Sept.27	....do.....	....do.....	....do.....		.046
July 7	Buck Island Creek.	....do.....	At bridge on State Highway 56, 5 miles east of Monticello.	-	1.96
Sept.27	....do.....	....do.....	....do.....		0
July 7	Byrd Creek.....	James River.....	At bridge on State Highway 6, 1.8 miles southwest of Georges Tavern.	-	10.9
Sept.27	....do.....	....do.....	....do.....		1.74
July 8	Whispering Creek..	Willis River.....	At bridge on U. S. Highway 60, 4.2 miles east of Sprouses Corner.	-	4.19
Sept.28	....do.....	....do.....	....do.....	-	1.71
July 8	Little Willis River.	....do.....	At culvert on U. S. Highway 15, 0.4 mile southwest of Cardsville.	7.1	1.47
Sept.28	....do.....	....do.....	....do.....		.614
July 7	Lickinghole Creek.	James River.....	At bridge on State Highway 600, 4 miles west of Goochland.	70	7.14
Sept.27	....do.....	....do.....	....do.....		.936
July 7	Beaver Dam Creek..	....do.....	1 mile above bridge on State Highway 6, at State Farm.	42	3.06
Sept.27	....do.....	....do.....	....do.....		1.85
July 7	Falling Creek.....	....do.....	At bridge on State Highway 653, near Midlothian.	20	.47
Sept.27	....do.....	....do.....	....do.....		.008
July 8	North Branch Appomattox River.	Appomattox River..	At bridge on State Highway 24, 3 miles northeast of Appomattox.	6	1.98
Sept.28	....do.....	....do.....	....do.....		1.16
July 7	Bush River.....	....do.....	At bridge on U. S. Highway 460, 2.2 miles southeast of Farmville.	-	3.76
Sept.28	....do.....	....do.....	....do.....		.136
July 7	Briery Creek.....	Bush River.....	At bridge on U. S. Highway 460, 1.5 miles southeast of Farmville.	-	3.46
Sept.28	....do.....	....do.....	....do.....		1.28
July 7	Sandy River.....	....do.....	At bridge on U. S. Highway 460, 4 miles southeast of Farmville.	-	2.87
7	Flat Creek.....	Appomattox River..	At bridge on State Highway 38, .6 miles northwest of Amelia.	73	4.54
Sept.28	....do.....	....do.....	....do.....		.983
July 7	Buckskin Creek....	West Creek.....	At bridge on State Highway 640, 3.8 miles southeast of Jetersville.	-	.84
Sept.28	....do.....	....do.....	....do.....		.565
July 7	Swift Creek.....	Appomattox River..	At bridge on State Highway 631, 4.3 miles southwest of Chester.	143	5.18
Sept.27	....do.....	....do.....	....do.....		5.14
July 7	Unnamed stream....	Glebe Creek.....	At culvert on State Highway 155, 2 miles north of Charles City.	.7	0
Sept.29	....do.....	....do.....	....do.....		.290
July 7	Chickahominy River	James River.....	At Grapevine Bridge on State Highway 156.	-	8.60

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

James River basin, Va.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.29	Chickahominy River	James River.....	At Grapevine Bridge on State Highway 156.	-	6.84
July 7	Collins Run.....	Chickahominy River	At bridge on State Highway 155, 2½ miles south of Providence Forge.	25	.65
Sept.29	....do.....	....do.....	....do.....		0

Chowan River basin

July 8	Little Nottoway River.	Nottoway River....	At bridge on State Highway 40, 2.6 miles south of Blackstone, Nottoway County, Va.	-	8.33
Sept.29	....do.....	....do.....	....do.....		.802
July 8	Wagua Creek.....	....do.....	At bridge on U. S. Highway 1, 3.3 miles north of Alberta, Brunswick County, Va.	-	2.57
Sept.27	....do.....	....do.....	....do.....		.134
July 8	Beaverpond Creek..	....do.....	At bridge on State Highway 612, 2½ miles north of Rawlings, Brunswick County, Va.	-	.240
Sept.29	....do.....	....do.....	....do.....		.159
July 8	Sturgeon Creek....	....do.....	At bridge on U. S. Highway 1, 1.8 miles north of Alberta, Brunswick County, Va.	-	.471
Sept.27	....do.....	....do.....	....do.....		0
July 7	Sappony Creek.....	Stony Creek.....	At bridge on State Highway 40, 2.5 miles west of Stony Creek, Sussex County, Va.	-	3.52
Sept.28	....do.....	....do.....	....do.....		0
July 7	Stony Creek.....	Nottoway River....	At bridge on U. S. Highway 301, at Stony Creek, Sussex County, Va.	-	20.1
Sept.28	....do.....	....do.....	....do.....		.490
July 8	Rowanty Creek.....	....do.....	At bridge on U. S. Highway 301, 3.2 miles north of Stony Creek, Sussex County, Va.	-	2.55
Sept.28	....do.....	....do.....	....do.....		0
July 7	Raccoon Creek.....	....do.....	At bridge on State Highway 608, 5¼ miles west of Sebrell, Southampton County, Va.	-	0
Sept.28	....do.....	....do.....	....do.....		0
July 8	Three Creek.....	....do.....	At bridge on U. S. Highway 301, 2.4 miles north of Emporia, Greensville County, Va.	-	5.61
Sept.28	....do.....	....do.....	....do.....		.638
July 7	....do.....	....do.....	At bridge on State Highway 609, 1 mile west of State Highway 653, and 3¼ miles southwest of Sebrell, Southampton County, Va.	-	21.5
Sept.28	....do.....	....do.....	....do.....		0
July 7	Assamoosick Swamp.	....do.....	At bridge on State Highway 35, 1½ miles east of Sebrell, Southampton County, Va.	-	0
Sept.28	....do.....	....do.....	....do.....		0
July 6	Middle Meherrin River.	Meherrin River....	At bridge on State Highway 49, 8 miles southwest of Lunenburg, Lunenburg, County, Va.	-	1.51
Sept.27	....do.....	....do.....	....do.....		.216
July 6	South Meherrin River.	....do.....	At bridge on State Highway 49, 11 miles southwest of Lunenburg, Lunenburg County, Va.	-	2.68
Sept.27	....do.....	....do.....	....do.....		.281
July 6	Meherrin River....	Chowan River.....	At bridge on State Highway 635, 8¼ miles northwest of South Hill, Mecklenburg County, Va.	-	11.3
Sept.27	....do.....	....do.....	....do.....		2.13
July 6	Flat Rock Creek...	Meherrin River....	At bridge on State Highway 647, 4 miles south of Kenbridge, Lunenburg County, Va.	-	.084
Sept.27	....do.....	....do.....	....do.....		.033
July 6	Great Creek.....	....do.....	At bridge on U. S. Highway 58, at Lawrenceville, Brunswick County, Va.	-	4.69
Sept.27	....do.....	....do.....	....do.....		.057
Apr. 7	Meherrin River....	Chowan River.....	Lat 36°32'20", long. 77°11' 17", at bridge on State Highway 35, 1¼ miles above Tarrara Creek and 1½ miles north of Severn, Northhampton County, N. C.	1,120	952
Sept.30	....do.....	....do.....	....do.....		21.1

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Chowan River basin--Continued					
Feb. 11	Potecasi Creek....	Meherrin River....	Lat 36°22', long. 77°14', at bridge on State Highway 35, ¾ mile north of Potecasi, Northampton County, N. C. and 2¾ miles above Urahaw Swamp.	53.2	53.5
Apr. 7	....do.....	....do.....	....do.....		87.1
July 14	....do.....	....do.....	....do.....		0
Feb. 11	Urahaw Swamp.....	Potecasi Creek....	Lat 36°18', long. 77°19', at bridge on State Highway 305, 2½ miles downstream from Quarter Swamp, and 2½ miles northwest of Rich Square, Northampton County, N. C.	20.4	4.68
11	....do.....	....do.....	Lat 36°21', long. 77°13', at bridge on State Highway 35, 1 mile northwest of Woodland, Northampton County, N. C. and 2 miles above mouth.	51.9	18.5
July 14	....do.....	....do.....	....do.....		0
Dec. 29	Potecasi Creek....	Meherrin River....	Lat 36°22'15", long. 77°01'40", at highway bridge 2¾ miles north of Union, Hertford County, N. C. and 3½ miles upstream from Bells Branch.	191	92.8
Feb. 12	Duke Swamp.....	Bennetts Creek....	Lat 36°28'10", long. 76°38'10", at highway bridge 1½ miles below Middle Swamp and 2½ miles northwest of Sunbury, Gates County, N. C.	36.8	9.31
Apr. 8	....do.....	....do.....	....do.....		19.9
Cashie River basin, N. C.					
Feb. 12	Roquist Creek.....	Cashie River.....	Lat 35°57', long. 76°56', 3½ miles above mouth and 3¾ miles south of Windsor, Bertie County.	62.2	30.6
Apr. 8	....do.....	....do.....	....do.....		104
July 14	....do.....	....do.....	....do.....		0
Roanoke River basin					
Sept.28	North Fork Roanoke River.	Roanoke River.....	On State Highway 723, 2½ miles north of Ellett and 3½ miles northwest of Fagg, Montgomery County, Va.	-	4.99
July 7	South Fork Roanoke River.	....do.....	At U. S. Highway 11, 1¼ miles east of Shawsville, Montgomery County, Va.	-	19.2
Sept.28	....do.....	....do.....	....do.....		18.8
27	Mason Creek.....	....do.....	On State Highway 116, 1 mile northeast of Salem, Roanoke County, Va.	-	.11
July 7	....do.....	....do.....	On U. S. Highway 460, 1¾ miles east of Salem, Roanoke County, Va.	-	.592
Sept.27	....do.....	....do.....	....do.....		.25
July 7	Tinker Creek.....	....do.....	On State Highway 115, 2 miles south of Hollins Station and 1¾ miles north of Roanoke, Roanoke County, Va.	-	8.76
Sept.27	....do.....	....do.....	....do.....		3.47
July 7	Carvin Creek.....	Tinker Creek.....	On State Highway 115, 2¼ miles south of Hollins Station and 1½ miles north of Roanoke County, Va.	-	1.26
Sept.27	....do.....	....do.....	....do.....		1.90
July 7	Back Creek.....	Roanoke River.....	On U. S. Highway 220, 6¾ miles south of Roanoke, Roanoke County, Va.	-	3.61
Sept.29	....do.....	....do.....	....do.....		1.67
29	Blackwater River..	....do.....	At bridge on U. S. Highway 220, 4 miles north of Rocky Mount, Franklin County, Va.	-	11.1
29	Maggotty Creek....	Blackwater River..	At bridge on U. S. Highway 220, 2 miles north of Boones Mill, Franklin County, Va.	-	.67
27	Gills Creek.....	....do.....	At bridge on State Highway 122, 10¾ miles northeast of Rocky Mount, Franklin County, Va.	-	2.51
27	Pigg River.....	Roanoke River.....	At bridge on U. S. Highway 220, 1 mile south of Rocky Mount, Franklin County, Va.	-	14.1
July 8	Snow Creek.....	Pigg River.....	Lat 36°53'51", long. 79°39'05", ¾ mile northwest of Sago, Franklin County, Va.	60	20.3
Sept.28	....do.....	....do.....	....do.....		2.84
July 8	Turkeycock Creek..	Snow Creek.....	At bridge on State Highway 969, 2½ miles east of Sago, Pittsylvania County, Va.	-	2.37
Sept.28	....do.....	....do.....	....do.....		.873

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Roanoke River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 6	Pigg River.....	Roanoke River.....	At bridge on State Highway 40, 3 miles west of Toshes, Pittsylvania County, Va.	-	0.873
Sept.27	....do.....	....do.....	....do.....		59.4
July 7	Goose Creek.....	....do.....	At bridge on U. S. Highway 460, 4.7 miles west of Thaxton, Bedford County, Va.	-	7.55
Sept.27	....do.....	....do.....	....do.....		8.25
July 6	Sycamore Creek....	....do.....	At bridge on U. S. Highway 29, 4¼ miles south of Altavista, Pittsylvania County, Va.	-	4.13
Sept.27	....do.....	....do.....	....do.....		2.88
July 7	Little Stony Creek	Stony Creek.....	At bridge on State Highway 43, 6 miles north of Bedford, Bedford County, Va.	-	1.94
Sept.27	....do.....	....do.....	....do.....		.21
27	Elk Creek.....	Otter River.....	At bridge on U. S. Highway 460, 9 miles west of Lynchburg, Bedford County, Va.	-	2.37
July 6	Little Otter River	....do.....	At bridge on State Highway 122, 2 miles northeast of Bedford, Bedford County, Va.	-	5.06
Sept.27	....do.....	....do.....	....do.....		4.86
July 7	Nininger Creek....	Machine Creek.....	At bridge on State Highway 43, 4 miles south of Bedford, Bedford County, Va.	-	1.30
Sept.27	....do.....	....do.....	....do.....		1.31
July 6	Reedy Creek.....	East Fork Falling River.	At bridge on State Highway 679, 2½ miles north of Spring Mills, Appomattox County, Va.	-	2.68
Sept.27	....do.....	....do.....	....do.....		2.12
July 6	North Fork Falling River.	Falling River.....	At bridge on State Highway 606, 6 miles east of Rustburg, Campbell County, Va.	-	6.64
6	Cub Creek.....	Roanoke River.....	At bridge on State Highway 615, 1.6 miles east of Rolling Hill, Charlotte County, Va.	-	31.8
Sept.27	....do.....	....do.....	....do.....		11.1
July 6	Roanoke Creek.....	....do.....	At bridge on State Highway 40, 2.2 miles east of Charlotte Courthouse, Charlotte County, Va.	-	11.3
Sept.24	....do.....	....do.....	....do.....		3.24
29	Dan River.....	....do.....	On State Highway 745, 1.3 miles northeast of Meadows of the Dan Patrick County, Va.	-	1.35
Oct. 7	Town Fork Creek...	Dan River.....	Lat 36°17', long. 80°09', at bridge on U. S. Highway 311, at Walnut Cove, Stokes County, N. C., 4 miles from mouth.	114	17.6
21	....do.....	....do.....	....do.....		16.8
Nov. 19	....do.....	....do.....	....do.....		20.3
Mar. 10	....do.....	....do.....	....do.....		55.1
Sept. 8	....do.....	....do.....	....do.....		13.6
22	....do.....	....do.....	....do.....		9.12
Oct. 7	Belews Creek.....	....do.....	Lat 36°19', long. 80°02', at highway bridge, 1½ miles above mouth and 1½ miles east of Pine Hall, Stokes County, N. C.	79.3	12.6
21	....do.....	....do.....	....do.....		13.1
Nov. 19	....do.....	....do.....	....do.....		15.1
Mar. 10	....do.....	....do.....	....do.....		46.0
Sept.14	....do.....	....do.....	....do.....		2.82
Oct. 7	Beaver Island Creek.	....do.....	Lat 36°23', long. 79°59', at bridge on U. S. Highway 311, ¾ mile above mouth and 1 mile southwest of Madison, Rockingham County, N. C.	23.7	1.92
20	....do.....	....do.....	....do.....		* 2.28
Nov. 18	....do.....	....do.....	....do.....		4.28
Sept.14	....do.....	....do.....	....do.....		.56
29	North Fork South Mayo River.	South Mayo River..	On U. S. Highway 58, 0.6 mile west of Stuart, Patrick County, Va.	-	3.57
29	South Mayo River..	Mayo River.....	On U. S. Highway 58, at Stuart, Patrick County, Va.	-	10.4
29	North Mayo River..	....do.....	On U. S. Highway 58, 1.9 miles west of Spencer, Henry County, Va.	-	15.4
Nov. 18	Boaz Creek.....	....do.....	Lat 36°28', long. 79°55' at highway bridge, 1 mile west of Stoneville, Rockingham County, N. C. and 1 mile upstream from mouth.	2.36	.38
Feb. 3	....do.....	....do.....	....do.....		.97
Mar. 4	....do.....	....do.....	....do.....		2.13
Oct. 7	Mayo River.....	Dan River.....	Lat 36°26'20", long. 79°56'20", at bridge on U. S. Highway 220, 2½ miles northeast of Mayodan, Rockingham County, N. C. and 2¾ miles southwest of Stoneville.	305	77.4

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Roanoke River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Oct. 21	Mayo River.....	Dan River.....	Lat 36°26'20", long. 79°56' 20", at bridge on U. S. Highway 220, 2½ miles northeast of Mayodan, Rockingham County, N. C. and 2¾ miles southwest of Stoneville.	305	77.0
Nov. 19	....do.....	....do.....	....do.....		94.8
Feb. 3	Unnamed Creek.....	Mayo River.....	Lat 36°26'30", long. 79°55', 50", at highway bridge, ½ mile above mouth and 3 miles northeast of Mayodan, Rockingham County, N. C.	4.1	2.06
Mar. 3	....do.....	....do.....	....do.....		5.69
Oct. 6	Hogan Creek.....	Dan River.....	Lat 36°23'00", long. 79°54' 40", at highway bridge, ½ mile above mouth and 3½ miles east of Madison, Rockingham County, N. C.	23.0	3.51
20	....do.....	....do.....	....do.....		3.37
Nov. 18	....do.....	....do.....	....do.....		4.59
Sept.15	....do.....	....do.....	....do.....		.57
23	Jacobs Creek.....	....do.....	Lat 36°22'40", long. 79°52' 50", at bridge on State Highway 704, 1 mile above mouth and 5¼ miles east of Madison, Rockingham County, N. C.	36.0	.92
Nov. 18	Buffalo Creek.....	....do.....	Lat 36°28'20", long. 79°49' 10", at bridge on State Highway 770, 2 miles above mouth and 3½ miles southwest of Leaksville, Rockingham County, N. C.	16.6	2.12
Feb. 3	....do.....	....do.....	....do.....		9.31
Mar. 4	....do.....	....do.....	....do.....		16.0
Sept.19	....do.....	....do.....	Lat 36°28'20", long. 79°48' 30", at first bridge above mouth, 3 miles southwest of Leaksville, Rockingham County, N. C.	21.5	1.31
19	Matrimony Creek...	....do.....	Lat 36°29'00", long. 79°47' 10", at bridge on State Highway 770, at Leaksville, Rockingham County, N. C.	25.3	.63
27	Nicklas Creek.....	Smith River.....	At bridge on State Highway 605, 5 miles southwest of Ferrum, Franklin County, Va.	-	2.65
27	Towne Creek.....	....do.....	At bridge on State Highway 674, at Philpott, Henry County, Va.	-	5.02
29	Beaver Creek.....	....do.....	At bridge on State Highway 108, 2 miles north of Martinsville, Henry County, Va.	-	2.18
29	Leatherwood Creek.	....do.....	At bridge on State Highway 650, 6 miles southeast of Martinsville, Henry County, Va.	-	5.87
19	Town Creek.....	Dan River.....	Lat 36°28'40", long. 79°42' 20", at first bridge above mouth, 3 miles east of Leaksville, Rockingham County, N. C.	12.5	.22
Feb. 3	Wolf Island Creek.	....do.....	Lat 36°22'20", long. 79°41' 10", at highway bridge, 1½ miles northwest of intersection of U. S. Highways 29 and 158 in Reidsville, Rockingham County, N. C.	3.8	2.14
Mar. 4	....do.....	....do.....	....do.....		2.34
11	....do.....	....do.....	....do.....		1.83
Nov. 20	....do.....	....do.....	Lat 36°23'30", long. 79°40' 10", at bridge on State Highway 14, 2 miles north of intersection of U. S. Highways 29 and 158 in Reidsville, Rockingham County, N. C.	7.4	2.17
Mar. 11	....do.....	....do.....	....do.....		3.80
Oct. 6	....do.....	....do.....	Lat 36°31'54", long. 79°30' 07", at bridge on State Highway 700, ½ mile upstream from mouth and 2½ miles northwest of Pelham, Caswell County, N. C.	68.7	8.15
20	....do.....	....do.....	....do.....		9.34
Nov. 18	....do.....	....do.....	....do.....		12.6
Feb. 2	....do.....	....do.....	....do.....		36.7
Sept.15	....do.....	....do.....	....do.....		.44
19	....do.....	....do.....	....do.....		.16
July 7	Sandy Creek.....	....do.....	At bridge on State Highway 732, 2½ miles northwest of Danville, Pittsylvania County, Va.	-	3.86
Sept.28	....do.....	....do.....	....do.....		2.09
July 7	Pumpkin Creek.....	....do.....	At bridge on State Highway 86, at south edge of Danville, Pittsylvania County, Va.	-	.936

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Roanoke River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.28	Pumpkin Creek.....	Dan River.....	At bridge on State Highway 86, at south edge of Danville, Pittsylvania County, Va.	-	0.576
Feb. 3	Jones Creek.....	Hogan Creek.....	Lat 36°21'10", long. 79°36' 30", at highway bridge, 3 miles east of Reidsville, Rockingham County, N. C. and 4 miles upstream from mouth.	5.6	2.59
Mar. 4	....do.....	....do.....	....do.....		3.93
Oct. 6	Hogan Creek.....	Dan River.....	Lat 36°30'54", long. 79°22' 56", at bridge on State Highway 86, 1 mile northwest of Providence, 3½ miles upstream from mouth, and 8 miles northwest of Yanceyville, Caswell County, N. C.	96.1	5.30
20	....do.....	....do.....	....do.....		5.31
Nov. 18	....do.....	....do.....	....do.....		11.2
Feb. 2	....do.....	....do.....	....do.....		65.3
Sept.19	....do.....	....do.....	....do.....		0
Oct. 6	Moon Creek.....	....do.....	Lat 36°29'20", long. 79°22' 00", at bridge on State Highway 86, 1 mile southeast of Providence, 2 miles downstream from East Prong Creek and 6 miles northwest of Yanceyville, Caswell County, N. C.	37.8	2.78
20	....do.....	....do.....	....do.....		3.19
Nov. 18	....do.....	....do.....	....do.....		6.31
Mar. 12	....do.....	....do.....	....do.....		17.2
Sept.19	....do.....	....do.....	....do.....		0
19	Rattlesnake Creek.	....do.....	Lat 36°30'20", long. 79°17' 30", at highway bridge at Blanch, Caswell County, N. C., ½ mile above mouth.	-	0
Nov. 24	Dan River.....	Roanoke River.....	Lat 36°32'20", long. 79°13' 00", at bridge on State Highway 62, at Milton, Caswell County, N. C., ½ mile upstream from Countryline Creek.	2,322	682
Feb. 2	....do.....	....do.....	....do.....		1,390
Nov. 24	Countryline Creek.	Dan River.....	Lat 36°23'20", long. 79°20' 10", at highway bridge, 1 mile south of Yanceyville, Caswell County, N. C., 1½ miles upstream from South Countryline Creek.	47.8	8.78
Feb. 2	....do.....	....do.....	....do.....		23.6
Mar. 5	....do.....	....do.....	....do.....		39.0
Sept.19	....do.....	....do.....	Lat 36°29'40", long. 79°12' 30", at highway bridge at Yarbro, 4 miles west of Semora, Caswell County, N. C.	123	0
July 7	Birch Creek.....	....do.....	At bridge on State Highway 659, 4 miles northeast of Paces, Halifax County, Va.	-	9.28
Sept.28	....do.....	....do.....	....do.....		2.76
July 7	Lawsons Creek.....	....do.....	At bridge on State Highway 658, ½ mile southeast of Turbeville, Halifax County, Va.	-	1.50
Sept.28	....do.....	....do.....	....do.....		0
July 8	Bearskin Creek....	Banister River....	At bridge on State Highway 612, 4½ miles west of Chatham, Pittsylvania County, Va.	-	3.05
Sept.27	....do.....	....do.....	....do.....		7.19
July 8	Banister River....	Dan River.....	At bridge on U. S. Highway 29, 3¾ miles south of Chatham, Pittsylvania County, Va.	-	18.4
Sept.27	....do.....	....do.....	....do.....		12.5
July 8	Cherrystone Creek.	Banister River....	At bridge on State Highway 802, 2¼ miles northwest of Chatham, Pittsylvania County, Va.	-	1.66
Sept.27	....do.....	....do.....	....do.....		1.49
July 6	Georges Creek.....	....do.....	At bridge on U. S. Highway 29, at Gretna, Pittsylvania County, Va.	-	1.00
Sept.27	....do.....	....do.....	....do.....		.916
July 6	Stinking River....	....do.....	At bridge on State Highway 40, 2½ miles west of Mount Airy, Pittsylvania County, Va.		4.87
Sept.28	....do.....	....do.....	....do.....		2.25
July 6	Banister River....	Dan River.....	At bridge on State Highway 640, 3 miles south of Mount Airy, Pittsylvania County, Va.	-	46.0
7	Sandy Creek.....	Banister River....	At bridge on State Highway 57, 9 miles northwest of Halifax, Halifax County, Va.	-	6.51
Sept.28	....do.....	....do.....	....do.....		2.82

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Roanoke River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.19	Hyco River.....	Dan River.....	Lat 36°28', long. 79°07', at bridge on State Highway 57, 1 mile upstream from South Hyco Creek, 2½ miles southeast of Semora, and 9 miles northwest of Roxboro, Person County, N. C.	78.0	0
Mar. 12	South Hyco River..	Hyco River.....	Lat 36°28', long. 79°06', at bridge on State Highway 57, 1 mile above mouth, 2.0 (revised) miles northwest of Concord, and 5 miles south of Cunningham, Person County, N. C.	76.5	26.7
Sept.19	....do.....	....do.....	....do.....		0
Mar. 12	Hyco River.....	Dan River.....	Lat 36°29'30", long. 79°05' 00", at highway bridge, 1 mile downstream from South Hyco Creek, 3½ miles above McGees Mill, and 8 miles northwest of Roxboro, Person County, N. C.	173	57.6
July 9	....do.....	....do.....	....do.....		1.43
9	....do.....	....do.....	Lat 36°31'00", long. 79°02' 00", at highway bridge, at McGees Mill, 4½ miles downstream from South Hyco Creek and 9 miles northwest of Roxboro, Person County, N. C.	191	2.26
Nov. 18	Marlowe Creek.....	Hyco River.....	Lat 36°25'28", long. 78°58' 05", at U. S. Highway 501, at Longhurst, 2 miles north of Roxboro, Person County, N. C.	6.3	.38
24	....do.....	....do.....	....do.....		.63
18	....do.....	....do.....	Lat 36°26'33", long. 78°58' 42", at highway bridge, 1½ miles north of Longhurst and 3½ miles north of Roxboro, Person County, N. C.	11.2	2.60
25	....do.....	....do.....	....do.....		2.92
18	....do.....	....do.....	Lat 36°29'04", long. 78°58' 46", at highway bridge, 1½ miles west of Woodsdale and 6 miles north of Roxboro, Person County, N. C.	19.6	2.67
24	....do.....	....do.....	....do.....		4.08
18	Hyco River.....	Dan River.....	Lat 36°32'40", long. 78°58' 00", at highway bridge at Virginia-North Carolina State line, 4 miles north of Woodsdale, Person County, N. C.	257	6.52
24	....do.....	....do.....	....do.....		10.7
25	Nutbush Creek.....	Roanoke River.....	Lat 36°20'30", long. 78°25' 10", at bridge on State Highway 39, at Henderson, Vance County, N. C.	2.05	2.42
Aug. 18	....do.....	....do.....	....do.....		.66
Sept.10	....do.....	....do.....	....do.....		.13
Nov. 25	....do.....	....do.....	Lat 36°21'20", long. 78°24' 40", at highway bridge, 3 miles north of Henderson, Vance County, N. C.	3.94	2.11
Aug. 18	....do.....	....do.....	....do.....		3.06
Sept.10	....do.....	....do.....	....do.....		1.85
July 6	Jolly Hollow Creek	Allens Creek.....	At bridge on State Highway 92, 0.5 mile north of Boydton, Mechlenburg County, Va.	-	.302
Sept.27	....do.....	....do.....	....do.....		.016
July 6	Allens Creek.....	Roanoke River.....	At bridge on road to John H. Kerr Dam, 2 miles north of Buggs Island gage, Mechlenburg County, Va.	-	5.36
Sept.27	....do.....	....do.....	....do.....		.127
July 6	Miles Creek.....	....do.....	At bridge on U. S. Highway 58, 7 miles southwest of South Hill, Mechlenburg County, Va.	-	1.44
Sept.24	....do.....	....do.....	....do.....		0
29	Smith Creek.....	....do.....	Lat 36°31'30", long. 78°14' 30", at highway bridge, 0.2 mile downstream from Ellington Creek, 5 miles west of Paschall, and 6 miles northwest of Norlina, Warren County, N. C.	30.7	.58
29	Hawtree Creek.....	....do.....	Lat 36°32'30", long. 78°07' 40", at highway bridge at Virginia-North Carolina State line, 1½ miles east of Paschall, Warren County, N. C.	26.7	1.02

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Roanoke River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.29	Six Pound Creek...	Roanoke River.....	Lat 36°31'50", long. 78°04' 30", at highway bridge, 2½ miles northeast of Oakville, Warren County, N. C.	11.6	1.80
29	Quankey Creek.....	....do.....	Lat 36°19'00", long. 77°35' 10", at U. S. Highway 301, at Halifax, Halifax County, N. C.	33.1	2.64
Dec. 29	Bridgers Creek....	....do.....	Lat 36°15'30", long. 77°20' 10", at highway bridge, 3 miles above mouth and 3 miles southwest of Rich Square, Northampton County, N. C.	5.0	2.58
Apr. 13	Steptoe Run.....	Kehukee Swamp.....	Lat 36°06'30", long. 77°22' 20", at highway bridge, 1 mile above mouth and 3 miles southeast of Scotland Neck, Halifax County, N. C.	5.52	4.54
Dec. 29	Canal Creek.....	Deep Creek.....	Lat 36°07'50", long. 77°25' 50", at bridge on State Highway 125, ½ mile west of U. S. Highway 258 at Scotland Neck, Halifax County, N. C.	1.34	.17
Feb. 11	....do.....	....do.....	....do.....		.48
July 15	....do.....	....do.....	....do.....		0
Feb. 10	Deep Creek.....	Etheridge Creek...	Lat 36°03'20", long. 77°26' 30", at highway bridge, 3 miles above mouth and 3 miles northwest of Hobgood, Halifax County, N. C.	44.9	28.5
July 14	....do.....	....do.....	....do.....		0
Feb. 18	Ready Branch.....	Sweetwater Creek..	Lat 35°47'21", long. 77°03' 36", at bridge on U. S. Highway 17, just below Dog Branch, 4½ miles south of Williamston, Martin County, N. C.	15.5	9.37
Apr. 8	....do.....	....do.....	....do.....		18.8
July 14	....do.....	....do.....	....do.....		1.17
Sept.30	....do.....	....do.....	....do.....		1.06
		Pamlico River basin, N. C.			
Sept.23	Shelton Creek.....	Tar River.....	Lat 36°18'47", long. 78°43' 15", at bridge on U. S. Highway 158, 1½ miles above mouth and 7½ miles west of Oxford, Granville County.	22.6	0.03
23	North Fork Tar River.	....do.....	Lat 36°18'00", long. 78°42' 00", at highway bridge, ¾ mile upstream from mouth, 7 miles west of Oxford, Granville County.	21.3	.17
23	Fishing Creek.....	....do.....	Lat 36°16'05", long. 78°34' 05", at highway bridge, 1 mile west of Dickerson and 3 miles south of Oxford, Granville County.	24.9	.58
23	Hachers Run.....	Fishing Creek.....	Lat 36°15'45", long. 78°35' 10", at bridge on State Highway 96, 3½ miles south of Oxford, Granville County.	12.6	.38
17	Fishing Creek.....	Tar River.....	Lat 36°11'30", long. 78°34' 10", at mouth, 4 miles east of town of Tar River, Granville County.	46.7	1.23
28	Gibbs Creek.....	....do.....	Lat 36°11'30", long. 78°30' 50", at highway bridge, ½ mile upstream from mouth and 2¼ miles south of Fairport, Granville County.	7.84	.77
28	Middle Creek.....	....do.....	Lat 36°10'20", long. 78°29' 20", at highway bridge, ½ mile upstream from mouth and 5 miles north of Franklinton, Franklin County.	8.84	.83
28	McGee Creek.....	Taylors Creek.....	Lat 36°08'50", long. 78°28' 50", at first bridge above mouth, 3½ miles northwest of Franklinton, Franklin County.	1.69	.21
July 14	Tabbs Creek.....	Tar River.....	Lat 36°11', long. 78°27', at bridge on first road above U. S. Highway 1, 1¼ miles from mouth, 2¾ miles south of Kittrell, Vance County, and 4 miles downstream from Ruin Creek.	69.8	3.64
Sept.17	....do.....	....do.....	....do.....		.78

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pamlico River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Apr. 13	Lynch Creek.....	Tar River.....	Lat 36°08'50", long. 78°20' 30", at highway bridge, just below Tooles Creek, 1 mile above mouth and 4 miles northwest of Louisburg, Franklin County.	34.7	21.9
Sept.28	Buffalo Creek.....	....do.....	Lat 36°07'10", long. 78°20' 40", at highway bridge, 1 mile upstream from mouth, 3 miles east of Mitchners Crossroads and 3 miles northwest of Louisburg, Franklin County.	9.64	.43
24	Fox Creek.....	....do.....	Lat 36°05'50", long. 78°17' 20", at bridge on State Highway 56, ½ mile east of Louisburg, Franklin County.	9.79	.73
28	Cedar Creek.....	....do.....	Lat 36°04'30", long. 78°27' 20", at highway bridge, 1½ miles above mouth and 1½ miles south of Franklinton, Franklin County.	11.7	1.57
July 14	....do.....	....do.....	....do.....		8.99
Sept.16	....do.....	....do.....	....do.....		5.63
24	Big Branch.....	Cedar Creek.....	Lat 36°01'30", long. 78°17' 30", at bridge on State Highway 39, ½ mile upstream from mouth and 5 miles south of Louisburg, Franklin County.	4.27	.42
24	Crooked Creek.....	Tar River.....	Lat 35°56'10", long. 78°15' 10", at bridge on State Highway 39, ½ mile upstream from Norris Creek and 1½ miles south of Bunn, Franklin County.	30.6	2.07
24	Norris Creek.....	Crooked Creek.....	Lat 35°55'30", long. 78°15' 40", at bridge on State Highway 39, ½ mile upstream from Crooked Creek and 2½ miles south of Bunn, Franklin County.	14.4	.45
Nov. 5	Cypress Creek.....	Tar River.....	Lat 35°56'30', long. 78°11' 20", at highway bridge, ¼ mile upstream from mouth and 4 miles southeast of Bunn, Franklin County.	30.2	5.26
Apr. 13	....do.....	....do.....	....do.....		40.6
July 14	....do.....	....do.....	....do.....		2.39
Sept.16	....do.....	....do.....	....do.....		.15
24	Maple Creek.....	....do.....	Lat 35°56'40", long. 77°50' 10", at highway bridge, ½ mile upstream from mouth and 1½ miles west of intersection of U. S. Highways 64 and 301 at Rocky Mount, Nash County.	-	0
17	Pig Basket Creek..	Stony Creek.....	Lat 36°00'10", long. 77°55' 30", at highway bridge, 2½ miles south of Red Oak and 3 miles northeast of Nashville, Nash County.	-	0
24	Stony Creek.....	Tar River.....	Lat 35°59'20", long. 77°51' 50", at highway bridge, 1½ miles south of Dortches, 5 miles northwest of intersection of U. S. Highways 64 and 301 at Rocky Mount, Nash County.	109	.89
28	Sandy Creek.....	Swift Creek.....	Lat 36°12'40", long. 78°13' 40", at highway bridge, 1½ miles south of Alert and 9 miles north of Louisburg, Franklin County.	53.7	2.06
24	Devils Creek.....	Sandy Creek.....	Lat 36°12'00", long. 78°14' 20", at highway bridge, 1½ miles upstream from mouth, 2 miles south of Alert and 8 miles north of Louisburg, Franklin County.	12.8	.78
24	Sandy Creek.....	Swift Creek.....	Lat 36°07'40", long. 78°01' 20", at highway bridge, ¼ mile upstream from Red Bud Swamp and 3½ miles northeast of Castalia, Nash County.	119	10.4
24	Red Bud Swamp.....	Sandy Creek.....	Lat 36°07'00", long. 78°01' 00", at highway bridge, ½ mile upstream from mouth, and 3 miles northeast of Castalia, Nash County.	-	0
July 14	Swift Creek.....	Tar River.....	Lat 36°04', long. 77°52', at highway bridge, 3 miles downstream from Sandy Creek and 3 miles northeast of Red Oak, Nash County.	180	26.1

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pamlico River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.17	Swift Creek.....	Tar River.....	Lat 36°04', long. 77°52', at highway bridge, 3 miles downstream from Sandy Creek and 3 miles northeast of Red Oak, Nash County.	180	8.76
24	....do.....	....do.....	Lat 35°58'00", long. 77°35' 10", at highway bridge, 1½ miles upstream from mouth and 1½ miles south of Legett, Edgecombe County.	266	5.68
Apr. 13	Fishing Creek.....	....do.....	Lat 36°23', long. 78°11', at bridge on first road above State Highway 59, ½ mile downstream from Phoebes Creek and 2 miles southwest of Warrenton, Warren County.	44.7	32.3
July 14	....do.....	....do.....	....do.....		5.30
Sept.17	....do.....	....do.....	....do.....		2.23
29	Shocco Creek.....	Fishing Creek.....	Lat 36°17'30", long. 78°13' 40", at bridge on State Highway 59, 1½ miles south of Elberon and 9 miles southwest of Warrenton, Warren County.	15.7	1.25
16	....do.....	....do.....	Lat 36°12'20", long. 78°06' 20", at bridge on State Highway 58, 1½ miles north of Centerville, Franklin County.	55.9	2.10
16	Little Fishing Creek.	....do.....	Lat 36°16'50", long. 77°53' 50", at bridge on State Highway 561, 3½ miles west of Brinkleyville, Halifax County.	99.7	.04
16	Jacket Swamp.....	Beech Swamp.....	Lat 36°12', long. 77°39', at bridge on U. S. Highway 301, 1 mile northeast of Enfield, Halifax County.	-	0
16	Marsh Swamp.....	....do.....	Lat 36°12', long. 77°39', at bridge on U. S. Highway 301, 1½ miles northeast of Enfield, Halifax County.	81.9	.10
24	Deep Creek.....	Fishing Creek.....	Lat 35°57'20", long. 77°30' 10", at bridge on U. S. Highway 258, 1 mile upstream from mouth and 4 miles northeast of Tarboro, Edgecombe County.	93.7	.89
23	Town Creek.....	Tar River.....	Lat 35°52'50", long. 77°46' 30", at bridge on State Highway 43, 2 miles west of Wiggins Crossroads and 2½ miles northwest of Pinetops, Edgecombe County.	91.8	.29
23	Bynum Mill Creek..	Town Creek.....	Lat 35°47'10", long. 77°37' 00", at bridge on State Highway 42, 1 mile southeast of Pinetops, Edgecombe County, and ½ mile upstream from mouth.	-	0
Feb. 10	Town Creek.....	Tar River.....	Lat 35°48'00", long. 77°35' 22", at bridge on U. S. Highway 258, ½ mile downstream from Bynum Mill Creek and 2½ miles east of Pinetops, Edgecombe County.	192	162
Apr. 7	....do.....	....do.....	....do.....		240
Sept.17	....do.....	....do.....	....do.....		.26
24	Otter Creek.....	....do.....	Lat 35°43'15", long. 77°31' 50", at bridge on State Highway 43, 2 miles upstream from mouth and 2 miles northwest of Falkland, Pitt County.	47.4	.12
24	Conetoe Creek.....	....do.....	Lat 35°42'55", long. 77°28' 40", at highway bridge, 1½ miles upstream from mouth and 2½ miles northeast of Falkland, Pitt County.	99.1	5.08
30	....do.....	....do.....	....do.....		4.24
30	Tar River.....	Atlantic Ocean....	Lat 35°41'35", long. 77°29' 15", at highway bridge just downstream from Conetoe Creek, 1½ miles east of Falkland, Pitt County.	2,588	126
Apr. 8	Grindle Creek.....	Tar River.....	Lat 35°39'21", long. 77°16' 15", at bridge on county road, 1.7 miles upstream from Hunting Run and 3½ miles northeast of Pactolus, Pitt County.	54.7	63.9
Sept. 9	....do.....	....do.....	....do.....		1.14

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pamlico River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.17	Grindle Creek.....	Tar River.....	Lat 35°39'21", long. 77°16' 15", at bridge on county road, 1.7 miles upstream from Hunting Run and 3½ miles northeast of Pactolus, Pitt County.	54.7	0.78
Feb. 18	....do.....	....do.....	Lat 35°37'25", long. 77°13' 20", at bridge on State Highway 30, at Pactolus, Pitt County, 2 miles downstream from Hunting Run, and 5¾ miles upstream from mouth.	72.4	33.7
18	Durham Creek.....	Pamlico River.....	Lat 35°19', long. 76°52', at bridge on State Highway 33, at Edward, Beaufort County.	21.2	11.8
Apr. 9	....do.....	....do.....	....do.....		34.8

Neuse River basin, N. C.

Aug. 9	Eno River (head of Neuse River)	Neuse River.....	Lat 36°06'10", long. 79°08' 40", at highway bridge, ½ mile upstream from McGowan Creek and 4½ miles southeast of Cedar Grove, Orange County.	33.0	0.95
25	....do.....	....do.....	....do.....		.62
Sept.18	....do.....	....do.....	....do.....		.06
Aug. 9	McGowan Creek.....	Eno River.....	Lat 36°05'20", long. 79°09' 30", at highway bridge, ½ mile north of Efland, Orange County and 1½ miles upstream from mouth.	5.24	.08
25	....do.....	....do.....	....do.....		.03
Sept.18	....do.....	....do.....	....do.....		.001
July 28	Sevenmile Creek...	....do.....	Lat 36°04'00", long. 79°08' 10", ¼ mile upstream from mouth at Hillsboro, Orange County.	16.7	.20
28	Eno River.....	Neuse River.....	Lat 36°04'10", long. 79°07' 50", at highway bridge at city water supply intake, 2 miles southwest of center of Hillsboro, Orange County.	59.3	2.47
Aug. 25	....do.....	....do.....	....do.....		.78
Sept.18	....do.....	....do.....	....do.....		.16
July 28	....do.....	....do.....	Lat 36°04'00", long. 79°07' 00", at highway bridge at Eno Cotton Mill dam, 1½ miles southwest of center of Hillsboro, Orange County.	61.3	1.92
July 28	....do.....	....do.....	Lat 36°04'00", long. 79°06' 40", at unnamed tributary, above Belvue Cotton Mill outfall, 1 mile south of center of Hillsboro, Orange County.	61.4	1.92
Aug. 7	....do.....	....do.....	....do.....		1.37
Sept.18	....do.....	....do.....	....do.....		.02
Aug. 7	....do.....	....do.....	Lat 36°04'20", long. 79°06' 20", above sewer outfall, 2,000 ft upstream from State Highway 86, at Hillsboro, Orange County.	62.8	1.50
25	....do.....	....do.....	....do.....		.63
Sept.18	....do.....	....do.....	....do.....		.05
Aug. 7	Cates Creek.....	Eno River.....	Lat 36°04'00", long. 79°05' 10", at bridge on U. S. Highway 70A, 1½ miles southeast of center of Hillsboro, Orange County.	4.65	.05
25	....do.....	....do.....	....do.....		.03
Sept.18	....do.....	....do.....	....do.....		.01
Jan. 22	Unnamed creek.....	North Fork Little River.	Lat 79°01', long. 36°12', at culvert on State Highway 57, 5 miles west of Rougemont, Durham County.	1.43	52.1
Oct. 6	Little River.....	Eno River.....	Lat 36°08'20", long. 78°54' 24", at bridge on U. S. Highway 501, 1 mile upstream from Mountain Creek and 1½ miles northwest of Orange Factory, Durham County.	81.6	1.75
20	....do.....	....do.....	....do.....		1.26
July 15	....do.....	....do.....	....do.....		2.21
Aug. 19	....do.....	....do.....	....do.....		13.0
Sept. 9	....do.....	....do.....	....do.....		.16
18	....do.....	....do.....	....do.....		.03

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept. 8	Eno River.....	Neuse River.....	Lat 36°04'40", long. 79°00' 40", at ford, 2 miles upstream from Stony Creek, 5 miles east of Hillsboro, Orange County, and 6 miles southeast of Schley.	97.8	0.64
Aug. 12	....do.....	....do.....	Lat 36°02'40", long. 79°00' 40", at highway bridge, ½ mile downstream from Stony Creek and 2 miles northeast of University, Orange County.	113	1.68
Sept. 8	....do.....	....do.....	....do.....		.45
8	....do.....	....do.....	Lat 36°04'18", long. 78°56' 06", at Guess Road, 1½ miles upstream from Crooked Creek, 1¾ miles downstream from Sevenmile Creek, and 3½ miles northwest of Braggtown, Durham County.	130	.43
8	....do.....	....do.....	Lat 36°04'19", long. 78°54' 32", at bridge on U. S. Highway 501, 4 miles north of Braggtown, Durham County.	141	.50
19	....do.....	....do.....	....do.....		.15
Aug. 13	....do.....	....do.....	Lat 36°04'20", long. 78°51' 46", at highway bridge, 1½ miles northeast of Weaver and 3 miles northeast of Braggtown, Durham County.	148	1.40
Sept. 9	....do.....	....do.....	....do.....		.60
Aug. 6	Unnamed creek.....	South Fork Little River.	Lat 36°08'10", long. 79°06' 30", at highway bridge, 3¾ miles southeast of Cedar Grove and 3¾ miles north of Hillsboro, Orange County.	.62	.002
12	....do.....	....do.....	Lat 36°08'20", long. 79°05' 10", at highway bridge, 0.8 mile upstream from State Highway 57 and 1½ miles southwest of Schley, Orange County.	2.74	0
27	....do.....	....do.....	....do.....		.008
12	....do.....	....do.....	Lat 36°08'20", long. 79°01' 40", at highway bridge, 1.3 miles upstream from mouth, 2 miles southeast of Schley, and 5½ miles northeast of Hillsboro, Orange County.	9.36	.004
27	....do.....	....do.....	....do.....		.02
9	Little River.....	Eno River.....	Lat 36°04'57", long. 78°51' 25", at highway bridge, 2.5 miles northeast of Weaver and 4 miles northeast of Braggtown, Durham County.	105	19.8
Sept. 9	....do.....	....do.....	....do.....		1.70
Aug. 19	Eno River.....	Neuse River.....	Lat 36°05'30", long. 78°49' 30", at highway bridge, ¾ mile upstream from Flat River and 4 miles southeast of Willardville, Durham County.	260	23.3
Sept. 9	....do.....	....do.....	....do.....		2.00
July 26	Flat River.....	....do.....	Lat 36°13'33", long. 78°53' 25", at highway bridge, ½ mile downstream from Deep Creek and 2 miles east of Rougemont, Durham County.	141	13.3
Aug. 26	....do.....	....do.....	....do.....		3.20
Sept. 3	Neuse River.....	Atlantic Ocean....	Lat 36°05'13", long. 78°48' 25", at Fairntosh, ¼ mile upstream from Knap of Reeds Creek, ¾ mile downstream from Flat River, and 3 miles west of Northside, Durham County.	485	13.0
30	....do.....	....do.....	....do.....		10.7
Aug. 19	Knap of Reeds Creek.	Neuse River.....	Lat 36°09'20", long. 78°46' 26", above Camp Butner, 3 miles west of Lyons and 5 miles northwest of Creedmoore, Granville County.	29.5	1.89
Sept. 2	....do.....	....do.....	....do.....		.09
29	....do.....	....do.....	....do.....		.05
Aug. 20	....do.....	....do.....	Lat 36°08'36", long. 78°47' 09", at Camp Butner, 4 miles west of Lyons, 4 miles upstream from mouth, and 5½ miles west of Creedmoore, Granville County.	38.2	1.38
Sept. 2	....do.....	....do.....	....do.....		.05
29	....do.....	....do.....	....do.....		.37

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Aug. 20	Knap of Reeds Creek.	Neuse River.....	Lat 36°07'38", long. 78°47'56", 200 ft downstream from unnamed creek, at Camp Butner, 2½ miles upstream from mouth and 6 miles west of Creedmoore, Granville County.	42.0	2.70
Sept. 2	....do.....	....do.....	....do.....		1.80
29	....do.....	....do.....	....do.....		1.10
Aug. 17	....do.....	....do.....	Lat 36°05'33", long. 78°47'56", ½ mile upstream from mouth, and 6½ miles northeast of Braggtown, Durham County.	47.1	1.36
Sept. 2	....do.....	....do.....	....do.....		1.17
30	....do.....	....do.....	....do.....		2.85
Aug. 12	Ellerbe Creek.....	....do.....	Lat 36°01'19", long. 78°56'11", at Hillandale Road, at Durham, Durham County.	2.88	.62
26	....do.....	....do.....	....do.....		.67
Sept. 3	....do.....	....do.....	....do.....		.65
9	....do.....	....do.....	....do.....		.41
Aug. 12	....do.....	....do.....	Lat 36°02'03", long. 78°54'37", at Guess Road, at Durham, Durham County.	4.67	.63
27	....do.....	....do.....	....do.....		.62
Sept.30	....do.....	....do.....	....do.....		.70
Aug. 17	Goose Creek.....	Ellerbe Creek.....	Lat 36°01'28", long. 78°51'39", at highway bridge on Trinity Ave., Durham, Durham County.	6.55	.13
Sept.30	....do.....	....do.....	....do.....		.05
Aug. 17	Ellerbe Creek.....	Neuse River.....	Lat 36°01'42", long. 78°51'54", at bridge on Club Blvd., in Durham, Durham County.	17.1	3.31
26	....do.....	....do.....	....do.....		1.45
Sept. 9	....do.....	....do.....	....do.....		1.17
30	....do.....	....do.....	....do.....		3.26
Aug. 17	....do.....	....do.....	Lat 36°04'12", long. 78°47'22", ¼ mile upstream from Neuse River and 3 miles northeast of Gorman, near Durham, Durham County.	21.7	5.08
Sept. 3	....do.....	....do.....	....do.....		1.94
30	....do.....	....do.....	....do.....		10.1
Nov. 5	Ledge Creek.....	....do.....	Lat 36°06'10", long. 78°42'30", at highway bridge, ½ mile upstream from Seaboard Air Line RR. and 2 miles southwest of Creedmore, Granville County.	-	0
Apr. 6	....do.....	....do.....	Lat 36°03'20", long. 78°43'10", at highway bridge, 2 miles above mouth and 5 miles southwest of Creedmoore, Granville, County.	31.3	19.6
Sept. 2	....do.....	....do.....	....do.....		0
Jan. 16	Lick Creek.....	....do.....	Lat 35°58'20", long. 78°44'40", at culvert on State Highway 98, 7.2 miles east of intersection of State Highway 98 and U. S. High-70, east of Durham, Orange County.	13.6	714
Aug. 24	Robertson Creek...	Beaverdam Creek...	Lat 36°07'20", long. 78°39'40", at bridge on State Highway 56, 1½ miles east of Creedmoore, Granville County.	9.38	0
Sept. 2	....do.....	....do.....	....do.....		0
2	....do.....	....do.....	Lat 36°06'10", long. 78°39'30", at highway bridge, 2 miles southeast of Creedmoore, Granville County.	12.2	0
Nov. 5	Beaverdam Creek...	Neuse River.....	Lat 36°03'20", long. 78°40'40", at highway bridge, 2½ miles upstream from mouth, and 4½ miles south of Creedmoore, Granville, County.	44.1	.80
Mar. 23	....do.....	....do.....	....do.....		28.8
Apr. 6	....do.....	....do.....	....do.....		36.4
July 19	....do.....	....do.....	....do.....		0
Sept. 2	....do.....	....do.....	....do.....		0
10	Newlight Creek....	....do.....	Lat 36°00'30", long. 78°37'50", at highway bridge, 1 mile upstream from mouth and 4½ miles west of Purnell, Wake County.	19.2	1.89
18	....do.....	....do.....	....do.....		1.70
Apr. 8	Upper Barton Creek.	....do.....	Lat 35°58'20", long. 78°39'20", at highway bridge, 1 mile upstream from mouth and 2 miles northwest of Bayleaf, Wake County.	12.2	8.17

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 13	Upper Barton Creek.	Neuse River.....	Lat 35°58'20", long. 78°39' 20", at highway bridge, 1 mile upstream from mouth and 2 miles northwest of Bayleaf, Wake County.	12.2	1.40
Sept. 2	....do.....	....do.....	....do.....		.89
24	....do.....	....do.....	....do.....		.41
Apr. 8	Lower Barton Creek	....do.....	Lat 35°58', long. 78°38', at highway bridge, 1 mile upstream from mouth, and 1 mile north of Bayleaf, Wake County.	13.2	11.9
July 13	....do.....	....do.....	....do.....		2.12
Sept. 2	....do.....	....do.....	....do.....		2.06
24	....do.....	....do.....	....do.....		1.05
July 13	Horse Creek.....	....do.....	Lat 35°58'10", long. 78°35' 30", at bridge on U. S. Highway 264, 1 mile upstream from mouth and 4½ miles west of Wake Forest, Wake County.	21.0	.46
Sept. 2	....do.....	....do.....	....do.....		5.18
Aug. 31	Richland Creek....	....do.....	Lat 35°59'45", long. 78°30' 40", at highway bridge, ¾ mile north of Wake Forest, Wake County.	6.28	2.08
Sept.22	....do.....	....do.....	....do.....		2.08
Aug. 31	....do.....	....do.....	Lat 35°58'41", long. 78°31' 30", at bridge on State Highway 98, 0.7 mile west of Wake Forest, Wake County.	8.04	2.49
Sept.22	....do.....	....do.....	....do.....		2.64
1	....do.....	....do.....	Lat 35°57'45", long. 78°32' 30", at bridge on U. S. Highway 1, 2 miles southwest of Wake Forest, Wake County.	10.0	3.25
22	....do.....	....do.....	....do.....		2.75
Aug. 31	Neuse River.....	Atlantic Ocean....	Lat 35°54'40", long. 78°33' 30", 500 ft upstream from Seaboard Air Line RR. bridge, 1½ miles northeast of Neuse, Wake County.	790	49.5
Sept.23	....do.....	....do.....	....do.....		43.8
Aug. 31	Smith Creek.....	Neuse River.....	Lat 35°57'20", long. 78°30' 10", just downstream from Austin Creek, 1¾ miles south of Wake Forest, Wake County.	12.4	1.45
Sept.22	....do.....	....do.....	....do.....		.79
1	....do.....	....do.....	Lat 35°57'00", long. 78°30' 30", at highway bridge, 1 mile downstream from Austin Creek and 1 mile southeast of Forestville, Wake County.	12.9	2.99
22	....do.....	....do.....	....do.....		2.12
1	....do.....	....do.....	Lat 35°55'10", long. 78°32' 05", at highway bridge, ¾ mile upstream from mouth, and 4½ miles west of Rolesville, Wake County.	22.8	6.71
24	....do.....	....do.....	....do.....		4.94
10	Peeples Creek.....	....do.....	Lat 35°51'50", long. 78°30' 55", at highway bridge, ¾ mile upstream from Hodges Creek and 1¼ miles south of Wake Crossroads, Wake County.	9.86	1.49
24	....do.....	....do.....	....do.....		1.71
1	Neuse River.....	Atlantic Ocean....	Lat 35°48'00", long. 78°32' 20", at dam ½ mile above U. S. Highway 64 at Millburnie and 3 miles west of Knightdale, Wake County.	876	76.8
3	....do.....	....do.....	....do.....		55.1
July 13	Mine Creek.....	Crabtree Creek....	Lat 35°51'19", long. 78°39' 43", at highway bridge, 1¼ miles above mouth and 3¼ miles west of Millbrook, Wake County.	8.75	2.40
Sept. 9	....do.....	....do.....	....do.....		1.89
July 13	Big Branch.....	....do.....	Lat 35°51'05", long. 78°37' 23", at highway bridge, 1 mile west of Millbrook, Wake County and 2½ miles above mouth.	1.29	1.14
Sept. 9	....do.....	....do.....	....do.....		.90
25	....do.....	Walnut Creek.....	Lat 35°44'30", long. 78°34' 10", at highway bridge, 1 mile above mouth, and 3 miles northeast of Garner, Wake County.	12.1	1.03

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.25	Unnamed creek.....	Neuse River.....	Lat 35°45'20", long. 78°30' 30", at highway bridge on Poole Road, 3 miles southwest of Knightdale, Wake County.	2.29	0.14
25	Poplar Creek.....	....do.....	Lat 35°44'00", long. 78°28' 30", ½ mile above mouth, 2 miles west of Shotwell, and 4 miles south of Knightdale, Wake County.	8.67	1.57
24	Marks Creek.....	....do.....	Lat 35°42'20", long. 78°25' 50", at highway bridge, 1 mile above mouth, 3½ miles west of Archers Lodge, and 4 miles northeast of Clayton, Johnston County.	25.7	3.10
21	Poplar Branch.....	....do.....	Lat 35°32'40", long. 78°21' 00", at highway bridge, 2 miles north of Smithfield, Johnston County.	-	0
Jan. 22	Swift Creek.....	....do.....	Lat 35°43', long. 78°45', at highway bridge, 2 miles southwest of Macedonia, and 5.6 miles east of Apex, Wake County.	19.5	881
Feb. 21	....do.....	....do.....	....do.....		1,630
Sept. 9	....do.....	....do.....	....do.....		.08
9	....do.....	....do.....	Lat 35°41', long. 78°41', at highway bridge on U. S. Highway 15A, 1½ miles upstream from Yates Pond Creek and 2 miles north of McCullers, Wake County.	39.9	.18
21	Little Creek.....	Swift Creek.....	Lat 35°34'30", long. 78°26' 40", at highway bridge, 1½ miles above mouth, and 5 miles west of Wilson Mills, Johnston County.	17.9	.01
Jan. 16	Middle Creek.....	Neuse River.....	Lat 35°40', long. 78°48', at highway culvert, 1.8 miles northeast of Holly Springs, Wake County.	8.23	353
Feb. 21	....do.....	....do.....	....do.....		677
July 15	....do.....	....do.....	Lat 35°30', long. 78°24', at bridge on State Highway 210, 1½ miles above mouth, 2 miles below Steep Hill Branch, and 3 miles west of Smithfield, Johnston County.	124	4.82
Aug. 27	....do.....	....do.....	....do.....		4.60
27	Black Creek.....	....do.....	Lat 35°28'08", long. 78°27' 25", at highway bridge, 2½ miles northwest of Four Oaks, Johnston County, and 5 miles from mouth.	79.0	0
Sept.21	Bawdy Creek.....	....do.....	Lat 35°24'20", long. 78°12' 50", at highway bridge, 2 miles above mouth, and 5 miles southwest of Princeton, Johnston County.	-	0
22	Raccoon Swamp.....	....do.....	Lat 35°22'10", long. 78°10' 10", at highway bridge, 1½ miles above mouth, and 6 miles south of Princeton, Johnson County.	-	0
22	Mill Creek.....	....do.....	Lat 35°20'40", long. 78°11' 20", at highway bridge, ¼ mile above mouth, 2½ miles east of Cox Mill and 6 miles east of Bentonville, Johnston County.	187	2.40
Feb. 19	Buck Swamp.....	Thoroughfare Swamp	Lat 35°16', long. 78°05', at highway bridge, 1½ miles above mouth and 2½ miles west of Dudley, Wayne County.	17.0	7.93
Mar. 25	....do.....	....do.....	....do.....		6.95
July 13	....do.....	....do.....	....do.....		1.34
Aug. 27	....do.....	....do.....	....do.....		0
Sept.21	Buffalo Creek.....	Little River.....	Lat 35°43'30", long. 78°21' 30", at highway bridge just downstream from Lake Wendell, 2 miles northeast of Archers Lodge, Johnston County.	26.6	1.36
21	....do.....	....do.....	Lat 35°35'20", long. 78°12' 40", at highway bridge, 1 mile upstream from mouth and 2½ miles northwest of Bagley, Johnston County.	-	0
22	Unnamed creek.....	Neuse River.....	Lat 35°19'33", long. 78°01' 20", at highway bridge, ½ mile east of Genoa and 4½ miles southwest of Goldsboro, Wayne County.	4.67	1.77

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Feb. 19	Stony Creek.....	Neuse River.....	Lat 35°23', long. 77°58', at bridge on U. S. Highway 70, 2 miles east of Goldsboro, Wayne County, and 3½ miles upstream from mouth.	21.0	10.8
July 13	....do.....	....do.....	....do.....		2.65
Sept.22	Sleepy Creek.....	....do.....	Lat 35°15'00", long. 77°57' 10", at highway bridge, 1½ miles above mouth and 5 miles east of Dudley, Wayne County.	9.79	6.86
22	Walnut Creek.....	....do.....	Lat 35°16'50", long. 77°52' 00", at highway bridge, 1½ miles above mouth and 4 miles north of Seven Springs, Wayne County.	19.5	4.69
23	Dailys Creek.....	....do.....	Lat 35°12'40", long. 77°48' 10", at bridge on State Highway 55, 2 miles above mouth and 2½ miles north of Liddell, Lenoir County.	4.35	.80
23	Bear Creek.....	....do.....	Lat 35°18'50", long. 77°49' 00", at bridge on U. S. Highway 70, 1½ miles northwest of La Grange, Lenoir County.	52.2	7.16
23	....do.....	....do.....	Lat 35°15'00", long. 77°47' 00", at highway bridge, 1½ miles above mouth, 2 miles south of Mayo's store, and 4 miles south of La Grange, Lenoir County.	64.1	12.3
Feb. 19	Falling Creek.....	....do.....	Lat 35°15'40", long. 77°41' 30", at bridge on U. S. Highway 70, at Falling Falling Creek, Lenoir County, 4 miles above mouth and 6¼ miles west of Kinston.	45.4	20.4
July 14	....do.....	....do.....	....do.....		3.92
Feb. 19	Deep Run.....	Southwest Creek...	Lat 35°08', long. 77°42', at highway bridge, ½ mile upstream from mouth, 0.7 mile east of Deep Run, Lenoir County, and 11½ miles southwest of Kinston.	6.1	4.86
July 14	....do.....	....do.....	....do.....		1.40
Sept.23	Southwest Creek...	Neuse River.....	Lat 35°13'20", long. 77°34' 30", at bridge on State Highway 12, 3½ miles south of intersection of U. S. Highways 70 and 258 in Kinston, Lenoir County.	50.7	.2
23	Stonyton Creek....	....do.....	Lat 35°19'05", long. 77°29' 45", at highway bridge, ½ mile east of Grangers, Lenoir County, and 1 mile above mouth.	36.1	.05
23	Mosely Creek.....	....do.....	Lat 35°19'50", long. 77°25' 40", at highway bridge, 1 mile above mouth, and 3 miles southeast of Grifton, Pitt County.	45.7	.27
Feb. 10	Moccasin Creek....	Contentnea Creek..	Lat 35°49', long. 78°15', at bridge on U. S. Highway 264, 3½ miles northwest of Middlesex, Nash County, and 9 miles upstream from Turkey Creek.	28.2	22.6
Apr. 8	....do.....	....do.....	....do.....		30.0
Sept.17	....do.....	....do.....	....do.....		0
24	Toisnot Swamp.....	....do.....	Lat 35°49'20", long. 77°59' 50", at highway bridge, ¼ mile downstream from little swamp, 3 miles northwest of New Hope and 7½ miles northeast of Bailey, Nash County.	29.6	2.30
July 27	Nahunta Swamp.....	....do.....	Lat 35°29'20", long. 77°48' 20", at highway bridge, 3 miles upstream from Appletree Run, 3½ miles north of Shine, and 8 miles northwest of Snow Hill, Greene County.	77.6	13.7
Aug. 5	....do.....	....do.....	....do.....		6.59
17	....dc.....	....do.....	....do.....		3.45
Sept. 8	....do.....	....do.....	....do.....		1.55
28	....do.....	....do.....	....do.....		2.05
24	Appletree Swamp...	Nahunta Swamp.....	Lat 35°30'45", long. 77°48' 00", at highway bridge, 1 mile above mouth and 2½ miles west of Contentnea, Greene County.	8.45	.08

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Neuse River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Feb. 17	Nahunta Swamp.....	Contentnea Creek..	Lat 35°30'30", long. 77°44' 35", at bridge on State Highway 58, $\frac{7}{8}$ mile above mouth and $5\frac{3}{4}$ miles northwest of Snow Hill, Greene County.	97.1	61.4
July 13	....do.....	....do.....	....do.....		9.53
Sept.24	Fort Run.....	....do.....	Lat 35°29'50", long. 77°43' 30", at highway bridge, $\frac{1}{2}$ mile above mouth and $\frac{3}{4}$ mile south of Contentnea, Greene County.	10.5	.14
24	Rainbow Creek.....	....do.....	Lat 35°25'30", long. 77°35' 40", at highway bridge, $\frac{1}{4}$ mile above mouth, at Hookerton, Greene County.	15.3	2.75
24	Mussel Run.....	....do.....	Lat 35°26'25", long. 77°34' 05", at highway bridge, 1 mile above mouth, and 2 miles northeast of Hookerton, Greene County.	11.2	.15
24	Polecat Branch....	....do.....	Lat 35°26'00", long. 77°32' 40", at highway bridge, 1 mile above mouth, and 3 miles east of Hookerton, Greene County.	3.25	.15
9	Little Contentnea Creek.	....do.....	Lat 35°32'35", long. 77°30' 55", at bridge on U. S. Highway 264, $1\frac{1}{2}$ miles upstream from Middle Swamp and $5\frac{1}{2}$ miles southeast of Farmville, Pitt County.	93.3	.02
24	Middle Swamp.....	Little Contentnea Creek.	Lat 35°32'30", long. 77°34' 05", at highway bridge, 1 mile upstream from Sandy Run, and 4 miles northeast of Lizzie, Greene County.	-	0
24	Sandy Run.....	Middle Swamp.....	Lat 35°31'55", long. 77°33' 25", at highway bridge, $\frac{1}{4}$ mile above mouth, and 4 miles northeast of Lizzie, Greene County.	-	0
23	Eagle Swamp.....	Contentnea Creek..	Lat 35°21'40", long. 77°26' 30", at highway bridge, 1 mile above mouth, and 1 mile south of Grifton, Pitt County.	9.68	.2
Feb. 18	Core Creek.....	Neuse River.....	Lat 35°15'10", long. 77°17' 10", at bridge on State Highway 55, $3\frac{3}{4}$ miles southeast of Fort Barnwell, Craven County, and about 7 miles upstream from mouth.	59.2	35.4
Sept.23	....do.....	....do.....	....do.....		.85
23	Tuckahoe Swamp....	Trent River.....	Lat 34°59'40", long. 77°40' 00", at highway bridge, 2 miles southwest of Hargett store and 18 miles southwest of Trenton, Jones County.	-	0
23	Mussel Shell Creek	....do.....	Lat 35°05'00", long. 77°21' 10", at highway bridge, $\frac{1}{2}$ mile above mouth and 1 mile north of Trenton, Jones County.	9.69	.71
23	Mill Run.....	....do.....	Lat 35°00'30", long. 77°16' 50", at bridge on State Highway 12, $\frac{1}{2}$ mile upstream from mouth and $5\frac{1}{2}$ miles west of Pollocksville, Jones County.	21	3.64
Feb. 18	Upper Broad Creek.	Neuse River.....	Lat 35°11', long. 76°58', at highway bridge, $1\frac{1}{2}$ miles southeast of Springhope, and 3 miles north of Olympia, Pamlico County.	22.0	9.40

Newport River basin, N. C.

Sept.29	Southwest Prong Newport River...	Newport River.....	Lat 34°46'45", long. 76°56' 00", at bridge on "Nine Foot" county road, 1.6 miles above mouth and 4.3 miles west of Newport, Carteret County.	16.4	2.15
Dec. 9	Northwest Prong Newport River..	....do.....	Lat 34°47'50", long. 76°54' 50", at bridge on "Nine Foot" county road, 0.4 mile above mouth, and 3.2 miles northwest of Newport, Carteret County.	11.3	16.2
Sept.30	....do.....	....do.....	....do.....		1.29

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Newport River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Dec. 8	Shoe Branch.....	Newport River.....	Lat 34°47'35", long. 76°53' 30", at bridge on "Nine Foot" county road, ½ mile above mouth and 1.8 miles west of Newport, Carteret County.	1.11	4.82
Sept.29	....do.....	....do.....	....do.....		1.56

Whiteoak River basin, N. C.

Oct. 1	Whiteoak River....	Atlantic Ocean....	Lat 34°53'30", long. 77°14' 00", at bridge on U. S. Highway 17, at Jones-Onslow County line, 1 mile south of Maysville, Jones County.	53.3	49.8
Sept.29	....do.....	....do.....	....do.....		.81
Dec. 9	Hunter Creek.....	Whiteoak Creek....	Lat 34°47'35", long. 77°07' 40", at highway bridge, at Carteret-Jones County line, 2.0 miles northeast of Stella, Carteret County.	77.2	43.3
Sept.28	....do.....	....do.....	....do.....		2.62

Queen Creek basin, N. C.

Aug. 31	Unnamed creek.....	Queen Creek.....	Lat 34°42'30", long. 77°12' 30", at culvert on State Highway 172, 1.8 miles south of Hubert, Onslow County.	2.47	11.7

New River basin, N. C.

Dec. 11	Southwest Creek...	New River.....	Lat 34°43'10", long. 77°31' 20", at bridge on county road, 1 mile downstream from Harris Creek and 6 miles southwest of Jacksonville, Onslow County.	35.2	22.8
Sept.29	....do.....	....do.....	....do.....		.51
Dec. 10	Northeast Creek...	....do.....	Lat 34°46'25", long. 77°21' 40", at bridge on county road, 1.6 miles downstream from Wolf Swamp and 2.1 miles south of Kellum, Onslow County.	28.3	17.9
Sept.29	....do.....	....do.....	....do.....		1.28

Cape Fear River basin, N. C.

Sept. 8	Haw River.....	Cape Fear River...	Lat 36°14', long. 79°55', at bridge on U. S. Highway 220, 2½ miles north of Summerfield, Guilford County.	20.2	0.84
23	....do.....	....do.....	....do.....		.79
May 6	....do.....	....do.....	Lat 36°16', long. 79°39', at bridge on U. S. Highway 29, 2 miles south of Foushee and 2 miles northeast of Benaja, Rockingham County.	77.6	50.3
26	....do.....	....do.....	....do.....		28.7
July 7	....do.....	....do.....	....do.....		4.84
Sept.22	Troublesome Creek.	....do.....	Lat 36°18', long. 79°43', at bridge on U. S.Highway 158, 1½ miles northeast of Monroeton and 5 miles southwest of intersection of U. S. Highways 158 and 29 in Reidsville, Rockingham County.	44.2	.98
Mar. 11	....do.....	Haw River.....	Lat 36°16', long. 79°39', at bridge on U. S. Highway 29, 1¼ miles upstream from mouth, 5½ miles south of intersection of U. S. Highways 29 and 158 in Reidsville, Rockingham County.	55.0	27.7
June 4	....do.....	....do.....	....do.....		13.4
July 7	....do.....	....do.....	....do.....		1.65
Aug. 10	....do.....	....do.....	....do.....		2.66
Sept.19	....do.....	....do.....	....do.....		0
June 4	Little Troublesome Creek.	....do.....	Lat 36°20', long. 79°40', at bridge on U. S. Highway 29, 2 miles south of intersection of U. S. Highways 29 and 158 in Reidsville, Rockingham County.	3.74	1.81
July 7	...,do.....	....do.....	....do.....		.28

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
June 4	Little Troublesome Creek.	Haw River.....	Lat 36°19', long. 79°39' ⅛ mile downstream from unnamed tributary, 1 mile below U. S. Highway 29, 2½ miles south of intersection of U. S. Highways 29 and 158 in Reidsville, Rockingham County.	5.45	1.96
July 8	....do.....	....do.....	....do.....		1.81
June 4	....do.....	....do.....	Lat 36°17', long. 79°37', at highway bridge, 1 mile above mouth, 1 mile west of Thompsonville, Rockingham County.	12.6	3.46
July 8	....do.....	....do.....	....do.....		2.02
June 3	Horsepen Creek....	Reedy Fork.....	Lat 36°07'20", long. 79°53' 02", at highway bridge, 1 mile upstream from unnamed tributary, 3½ miles north of Guilford College RR. station and 6½ miles northwest of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	9.10	2.58
July 7	....do.....	....do.....	....do.....		1.20
Aug. 11	....do.....	....do.....	....do.....		1.79
June 3	Unnamed creek.....	Horsepen Creek....	Lat 36°07'08", long. 79°52' 10", at highway bridge, 1 mile above mouth, 3½ miles northeast of Guilford College RR. station and 5 miles northwest of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	3.05	.60
July 7	....do.....	....do.....	....do.....		.18
Aug. 11	....do.....	....do.....	....do.....		.35
May 6	South Buffalo Creek.	Buffalo Creek.....	Lat 36°02'59", long. 79°51' 22", at highway bridge, 1½ miles above unnamed tributary, 1½ miles south of Pomona, 3 miles southeast of Guilford College RR. station, 4 miles southwest of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	7.33	2.41
26	....do.....	....do.....	....do.....		.31
July 21	....do.....	....do.....	....do.....		1.72
Sept.15	....do.....	....do.....	....do.....		.33
May 6	....do.....	....do.....	Lat 36°02'43", long. 79°45' 43", at bridge on Willow Road, 2½ miles southeast of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	29.6	10.7
26	....do.....	....do.....	....do.....		5.87
July 22	....do.....	....do.....	....do.....		3.78
Aug. 27	....do.....	....do.....	....do.....		1.19
Sept.15	....do.....	....do.....	....do.....		.68
June 3	....do.....	....do.....	Lat 36°05'22", long. 79°41' 19", at bridge on U. S. Highway 70, 2 miles east of Bessemer, 6 miles east of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	39.1	8.36
4	....do.....	....do.....	Lat 36°06'45", long. 79°40' 20", at highway bridge, 0.8 mile northwest of McLeansville, Guilford County.	43.2	8.40
8	....do.....	....do.....	....do.....		17.2
4	....do.....	....do.....	Lat 36°07'35", long. 79°39' 45", at old bridge site, 1½ miles north of McLeansville, Guilford County.	44.7	9.80
Aug. 12	....do.....	....do.....	....do.....		7.30
Sept.15	....do.....	....do.....	....do.....		5.30
May 6	North Buffalo Creek.	....do.....	Lat 36°04'46", long. 79°48' 29", at Garland Drive, 1,700 ft above Southern RR. track, 1 mile northwest of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	10.9	3.16
26	....do.....	....do.....	....do.....		2.34
July 22	....do.....	....do.....	....do.....		1.29
Sept. 8	....do.....	....do.....	....do.....		.45
Aug. 27	....do.....	....do.....	Lat 36°05'52", long. 79°46' 58", at Church St., 300 ft upstream from unnamed tributary, 600 ft above Southern RR. tracks, 1.8 miles north of intersection of U. S. Highways 70 and 220, in Greensboro, Guilford County.	14.2	1.95

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept. 8	North Buffalo Creek.	Buffalo Creek.....	Lat 36°05'52", long. 79°46' 58", at Church St., 300 ft upstream from unnamed tributary, 600 ft above Southern RR. tracks, 1.8 miles north of intersection of U. S. Highways 70 and 220, in Greensboro, Guilford County.	14.2	1.50
15	....do.....	....do.....	....do.....		1.03
May 6	....do.....	....do.....	Lat 36°06'18", long. 79°45' 53", at Summitt Ave., 2.7 miles northeast of intersection of U. S. Highways 70 and 220 in Greensboro, Guilford County.	21.7	12.9
June 18	....do.....	....do.....	....do.....		11.4
Aug. 11	....do.....	....do.....	....do.....		8.51
27	....do.....	....do.....	....do.....		8.27
Sept. 9	....do.....	....do.....	....do.....		7.58
11	....do.....	....do.....	....do.....		5.83
29	....do.....	....do.....	....do.....		6.18
June 4	Muddy Creek.....	North Buffalo Creek.	Lat 36°06'27", long. 79°44' 36", 0.2 mile above mouth, 3.6 miles northeast of intersection of U. S.Highways 70 and 220 in Greensboro, Guilford County.	3.98	.52
18	....do.....	....do.....	....do.....		.68
Aug. 11	....do.....	....do.....	....do.....		.05
June 4	North Buffalo Creek.	Buffalo Creek.....	Lat 36°07'47", long. 79°39' 48", at bridge, ¼ mile above mouth, 1½ miles north of Mcleansville, Guilford County.	43.7	17.3
May 6	Buffalo Creek.....	Reedy Fork.....	Lat 36°09'40", long. 79°36' 10", at highway bridge, 1 mile above mouth, 5 miles northwest of Gibsonville, Guilford County.	99.7	55.1
26	....do.....	....do.....	....do.....		45.2
Sept.14	....do.....	....do.....	....do.....		20.2
July 26	Travis Creek.....	Haw River.....	Lat 36°07'10", long. 79°32' 30", at highway bridge, ¾ mile north of Gibsonville, Guilford County.	1.40	.06
Aug. 9	....do.....	....do.....	....do.....		.11
Sept.22	....do.....	....do.....	....do.....		.01
May 12	....do.....	....do.....	Lat 36°07'40", long. 79°31' 30", at highway bridge, 1.6 miles northeast of Gibsonville, Guilford County.	1.82	.36
26	....do.....	....do.....	....do.....		.35
June 7	....do.....	....do.....	....do.....		.92
July 26	....do.....	....do.....	....do.....		.06
Aug. 9	....do.....	....do.....	....do.....		.16
Sept.22	....do.....	....do.....	....do.....		.03
July 26	....do.....	....do.....	Lat 36°07'40", long. 79°30' 30", at highway bridge, 1.6 miles north of Elon College, Alamance County.	4.70	.01
Aug. 9	....do.....	....do.....	....do.....		.08
Sept.22	....do.....	....do.....	....do.....		.06
May 26	....do.....	....do.....	Lat 36°08'20", long. 79°28' 50", at highway bridge, ¼ mile above mouth and 2.1 miles northwest of Glen Raven, Alamance County.	16.1	3.06
July 26	....do.....	....do.....	....do.....		.02
Aug. 26	....do.....	....do.....	....do.....		.04
Sept.22	....do.....	....do.....	....do.....		0
Dec. 22	Buttermilk Creek..	....do.....	Lat 36°11', long. 79°26', at highway bridge, 1.6 miles upstream from Stony Creek, 2 miles southwest of Union Ridge, and 7½ miles northwest of Burlington, Alamance County.	15.3	1.71
Feb. 16	....do.....	....do.....	....do.....		2.66
June 24	....do.....	....do.....	....do.....		.26
July 14	....do.....	....do.....	....do.....		0
Oct. 9	Jordan Creek.....	Stony Creek (revised).	Lat 36°11', long. 79°24' at highway bridge on first road above mouth, 1 mile south of Union Ridge, Alamance County, 2 miles above mouth and 7 miles north of Burlington, Alamance County.	21.6	0
Dec. 22	....do.....	....do.....	....do.....		4.56
Feb. 16	....do.....	....do.....	....do.....		5.47
June 24	....do.....	....do.....	....do.....		.08
July 14	....do.....	....do.....	....do.....		0

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 2	Back (Stagg) Creek.	Haw River.....	Lat 36°06', long. 76°20', at bridge on U. S. Highway 70, 1¼ miles downstream from Quaker Creek and 2 miles east of Haw River, Alamance County.	71.0	1.51
Aug. 2	....do.....	....do.....	....do.....		2.36
July 2	Moadams Creek.....	Back Creek.....	Lat 36°05'40", long. 79°16' 30", above sewer outfall at Mebane, Alamance County.	1.07	.01
Aug. 2	....do.....	....do.....	....do.....		.005
9	....do.....	....do.....	....do.....		0
July 2	....do.....	....do.....	Lat 36°05'40", long. 79°16' 50", below sewer outfall at Mebane, Alamance County.	-	.42
Aug. 2	....do.....	....do.....	....do.....		.49
9	....do.....	....do.....	....do.....		.26
July 2	....do.....	....do.....	Lat 36°05'20", long. 79°18' 00", at highway bridge, 1¼ miles above mouth and 2½ miles west of Mebane, Alamance County.	3.38	.43
Aug. 2	....do.....	....do.....	....do.....		.28
9	....do.....	....do.....	....do.....		.05
Aug. 3	Back Creek.....	Haw River.....	Lat 36°03'00", long. 79°20' 50", at highway bridge, 1 mile above mouth and 3 miles southeast of Graham, Alamance County.	78.5	9.39
Sept.21	....do.....	....do.....	....do.....		.02
2	Little Alamance Creek.	....do.....	Lat 36°03'15", long. 79°38' 14", at highway bridge, 4½ miles west of Whitsett, Guilford County, and 8⅔ miles east of Greensboro.	38.4	2.68
22	....do.....	....do.....	....do.....		.71
May 26	Little Creek.....	Alamance Creek....	Lat 36°04'50", long. 79°33' 00", at U. S. Highway 70, 40 ft upstream from Cedar Creek and 1¾ miles south of Gibsonville, Guilford County.	3.44	.59
June 17	....do.....	....do.....	....do.....		1.23
Sept.22	....do.....	....do.....	....do.....		0
May 26	Cedar Creek.....	Little Creek.....	Lat 36°05'00", long. 79°32' 50", at U. S. Highway 70, 50 ft upstream from Little Creek and 1¾ miles south of Gibsonville, Guilford County.	1.74	.42
June 17	....do.....	....do.....	....do.....		.78
Aug. 18	....do.....	....do.....	....do.....		.45
Sept. 2	Little Creek.....	Alamance Creek....	Lat 36°03'00", long. 79°31' 00", at highway bridge, 2 miles northwest of Alamance, Alamance County.	10.7	.54
23	....do.....	....do.....	....do.....		.31
May 26	Alamance Creek....	Haw River.....	Lat 36°02', long. 79°29', at bridge on State Highway 62, at Alamance, 0.7 mile downstream from Little Alamance Creek and 4 miles south of Burlington, Alamance County.	144	32.4
Sept. 2	....do.....	....do.....	....do.....		6.39
28	....do.....	....do.....	....do.....		.45
June 17	Gun Branch.....	Alamance Creek....	Lat 36°03'00", long. 79°28' 40", at bridge on State Highway 62, 1¼ miles northeast of Alamance, Alamance County, and 1½ miles above mouth.	5.02	5.87
July 21	....do.....	....do.....	....do.....		.04
Aug. 18	....do.....	....do.....	....do.....		.25
May 27	Alamance Creek....	Haw River.....	Lat 36°01'40", long. 79°29' 10", at bridge on State Highway 49, ½ mile northeast of Belmont, 1½ miles upstream from Stinking Creek, and 3 miles east of Alamance, Alamance County.	157	33.7
July 21	....do.....	....do.....	....do.....		14.6
June 3	....do.....	....do.....	Lat 36°01'00", long. 79°24' 50", at highway bridge, ¾ mile upstream from Little Alamance Creek and 1¾ miles east of Belmont, Alamance County.	247	34.8
16	....do.....	....do.....	....do.....		121
July 21	....do.....	....do.....	....do.....		25.8
Sept.28	....do.....	....do.....	....do.....		.29
May 27	Little Alamance Creek.	Alamance Creek....	Lat 36°02'50", long. 79°24' 40", at highway bridge, 2 miles above mouth and 2 miles southwest of Graham, Alamance County.	13.2	3.28
June 3	....do.....	....do.....	....do.....		1.49

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 21	Little Alamance Creek.	Alamance Creek....	Lat 36°02'50", long. 79°24' 40", at highway bridge, 2 miles above mouth and 2 miles southwest of Graham, Alamance County.	13.2	7.67
Aug. 3	....do.....	....do.....	....do.....		4.67
17	....do.....	....do.....	....do.....		1.39
Sept. 1	....do.....	....do.....	....do.....		.46
9	....do.....	....do.....	....do.....		.64
May 25	....do.....	....do.....	Lat 36°02'00", long. 79°24' 00", 150 ft downstream from highway bridge, 1 mile above mouth and 2 miles east of Belmont, Alamance County.	14.7	6.77
June 4	....do.....	....do.....	....do.....		4.50
16	....do.....	....do.....	....do.....		3.74
July 21	....do.....	....do.....	....do.....		13.0
Apr. 7	Cane Creek.....	Haw River.....	Lat 35°55'00", long. 79°15' 00", at highway bridge, 1 mile above mouth, 3 miles southwest of Teer, and 10 miles west of Carrboro, Orange County.	35.8	24.9
Aug. 12	....do.....	....do.....	....do.....		1.02
Sept. 1	....do.....	....do.....	....do.....		1.05
21	....do.....	....do.....	....do.....		.76
July 1	Robeson Creek.....	....do.....	Lat 35°43'00", long. 79°10' 40", above sewer outfall at Pittsboro, Chatham County.	8.93	.12
Aug. 4	....do.....	....do.....	....do.....		.37
18	....do.....	....do.....	....do.....		.04
Sept. 3	....do.....	....do.....	....do.....		.12
May 25	....do.....	....do.....	Lat 35°42'50", long. 79°10' 20", at Seabord Air Line RR., at Pittsboro, Chatham County.	9.19	2.25
July 1	....do.....	....do.....	....do.....		.21
Sept. 3	....do.....	....do.....	....do.....		.12
24	....do.....	....do.....	....do.....		.06
July 1	Turkey Creek.....	Robeson Creek.....	Lat 35°42'10", long. 79°10' 30", 150 ft upstream from highway bridge, 1¼ miles south of Pittsboro, Chatham County.	3.80	0
Aug. 4	....do.....	....do.....	....do.....		.02
18	....do.....	....do.....	....do.....		.002
Sept. 3	....do.....	....do.....	....do.....		0
July 1	....do.....	....do.....	Lat 35°42'20", long. 79°10' 30", 250 ft downstream from highway bridge, ½ mile above mouth and 1¼ miles south of Pittsboro, Chatham County.	-	.04
Aug. 4	....do.....	....do.....	....do.....		.07
18	....do.....	....do.....	....do.....		.10
Sept. 3	....do.....	....do.....	....do.....		.002
24	....do.....	....do.....	....do.....		.01
July 1	Robeson Creek.....	Haw River.....	Lat 35°42'20", long. 79°09' 10", at Gould Farm, ½ mile downstream from Turkey Creek and 1½ miles southeast of Pittsboro, Chatham County.	18.6	0
Aug. 4	....do.....	....do.....	....do.....		.68
18	....do.....	....do.....	....do.....		.03
Sept. 2	....do.....	....do.....	....do.....		.24
24	....do.....	....do.....	....do.....		.02
May 25	....do.....	....do.....	Lat 35°42'10", long. 79°05' 40", at highway bridge, ½ mile above mouth, 4½ miles southwest of Seaforth and 5 miles east of Pittsboro, Chatham County.	27.2	7.12
July 2	....do.....	....do.....	....do.....		.15
Sept.24	....do.....	....do.....	....do.....		.02
Aug. 9	New Hope River....	....do.....	Lat 35°57'34", long. 78°58' 55", at bridge on U. S. Highways 15 and 501, 2½ miles southwest of intersection of State Highway 751 and U. S. Highways 15 and 501 in Durham, Durham County.	36.4	.25
Sept.10	....do.....	....do.....	....do.....		0
July 1	Sandy Creek.....	New Hope River....	Lat 35°58'06", long. 78°58' 08", at bridge on U. S. Highways 15 and 501, 1 mile above mouth, near Durham, Durham County.	6.21	0
Aug. 5	....do.....	....do.....	....do.....		0
Sept.10	....do.....	....do.....	....do.....		.002
June 30	New Hope River....	Haw River.....	Lat 35°56'33", long. 78°58' 32", at bridge on Jefferson-Davis road, ½ mile downstream from Sandy Creek, near Durham, Durham County.	52.2	2.77
Aug. 9	....do.....	....do.....	....do.....		2.00

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Apr. 7	New Hope River....	Haw River.....	Lat 35°55'00", long. 78°58' 13", at bridge on State Highway 54, 1 mile upstream from Third Fork Creek, 4¼ miles east of Chapel Hill, and 5½ miles southwest of Durham, Durham County.	57.1	30.4
June 30	....do.....	....do.....	....do.....		1.66
Aug. 9	....do.....	....do.....	....do.....		1.38
Sept. 9	....do.....	....do.....	....do.....		.93
July 1	Third Fork Creek..	New Hope River....	Lat 35°57'40", long. 78°54' 56", at bridge on Cornwallis Road, in Durham, Durham County.	7.51	.17
Aug. 5	....do.....	....do.....	....do.....		.46
Sept.10	....do.....	....do.....	....do.....		.23
July 1	New Hope River....	Haw River.....	Lat 35°53'05", long. 78°57' 40", at highway bridge, ½ mile southwest of Bland, Durham County, and 2 miles downstream from Third Fork Creek.	76.3	4.26
Sept.10	....do.....	....do.....	....do.....		3.48
June 30	Bolin Creek.....	Little Creek.....	Lat 35°55'40", long. 79°02' 08", at bridge on U. S. Highways 15A and 501A, 1½ miles northeast of Chapel Hill, Orange County.	10.6	.66
Aug. 5	....do.....	....do.....	....do.....		.55
June 30	....do.....	....do.....	Lat 35°55'29", long. 79°01' 34", at bridge on U. S. Highways 15 and 501, 1½ miles northeast of Chapel Hill, Orange County.	-	1.94
Aug. 4	....do.....	....do.....	....do.....		1.43
June 30	Little Creek.....	New Hope River....	Lat 35°53'14", long. 78°59' 05", at highway bridge, 1½ miles above mouth and 1½ miles west of Bland, Durham County.	23.7	.91
Sept. 1	....do.....	....do.....	....do.....		.59
14	....do.....	....do.....	....do.....		.23
July 1	Morgan Creek.....	....do.....	Lat 35°53'54", long. 79°04' 25", at highway bridge, 1.2 miles south of intersection of State Highways 54 and 86 in Carrboro, Orange County.	31.7	.13
Aug. 5	....do.....	....do.....	....do.....		.24
Sept. 1	....do.....	....do.....	....do.....		.05
14	....do.....	....do.....	....do.....		.02
July 1	....do.....	....do.....	Lat 35°53'54", long. 79°04' 25", 50 ft below highway bridge, 1.2 miles south of intersection of State Highways 54 and 86 in Carrboro, Orange County.	-	.54
Aug. 5	....do.....	....do.....	....do.....		.38
Sept. 1	....do.....	....do.....	....do.....		.54
14	....do.....	....do.....	....do.....		.24
28	....do.....	....do.....	....do.....		6.88
June 30	....do.....	....do.....	Lat 35°53'31", long. 79°02' 17", above sewage treatment plant at Chapel Hill, Orange County.	37.4	.95
July 26	....do.....	....do.....	....do.....		1.07
Sept.17	....do.....	....do.....	....do.....		.31
July 26	....do.....	....do.....	Lat 35°53'38", long. 79°01' 46", 150 ft below sewage treatment plant at Chapel Hill, Orange County.	-	2.37
1	....do.....	....do.....	Lat 35°51'38", long. 79°00' 35", at highway bridge, at Durham-Chatham County line, 4 miles north of Farrington, Chatham County.	45.6	1.72
Aug. 9	....do.....	....do.....	....do.....		1.27
July 2	New Hope River....	Haw River.....	Lat 35°47'44", long. 79°00' 32", at highway bridge, ½ mile south of Farrington, Chatham County, ½ mile upstream from Bush Creek.	230	6.74
Sept. 3	....do.....	....do.....	....do.....		3.28
Jan. 16	Whiteoak Creek....	New Hope River....	Lat 35°45', long. 79°00", at highway bridge, 1½ miles northeast of Seaforth, Chatham County.	23.6	1,030
Sept. 2	Beaver Creek.....	....do.....	Lat 35°43'30", long. 78°53' 40", at highway bridge, 2 miles west of Apex, Wake County, and 2 miles north of Friendship.	6.53	0

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
June 3	Bull Run.....	Deep River.....	Lat 35°58'48", long. 79°55' 37", at highway bridge, at Oakdale, 0.1 mile above mouth and 1 mile southeast of Jamestown, Guilford County.	7.75	0.82
July 9	....do.....	....do.....	....do.....		.001
Sept. 9	....do.....	....do.....	....do.....		.01
June 3	Richland Creek....	....do.....	Lat 35°56'28", long. 79°55' 56", at highway bridge, 2.3 miles above mouth, 3 miles northeast of Archdale, 4 miles southeast of railroad station in High Point, Guilford County.	12.7	2.12
July 9	....do.....	....do.....	....do.....		1.14
Sept.16	....do.....	....do.....	....do.....		1.04
Apr. 14	Polecat Creek.....	....do.....	Lat 35°53', long. 79°46', at highway bridge, ¼ mile downstream from unnamed tributary, 2 miles east of Level Cross, and 4 miles southwest of Climax, Guilford County.	28.1	19.7
June 15	....do.....	....do.....	....do.....		2.40
Aug. 25	....do.....	....do.....	....do.....		.35
Sept.17	....do.....	....do.....	....do.....		.13
June 15	....do.....	....do.....	Lat 35°49', long. 79°47', at highway bridge, ⅞ mile above mouth and 1½ miles southeast of Randleman, Randolph County.	52.0	6.83
July 9	....do.....	....do.....	....do.....		.8
Aug. 26	....do.....	....do.....	....do.....		1.58
June 16	Haskett Creek.....	....do.....	Lat 35°45', long. 79°48', 300 ft upstream from Penwood Branch, 1½ miles north of intersection of State Highway 49A and U. S. Highway 220 in Asheboro, Randolph County.	14.3	.86
July 9	....do.....	....do.....	....do.....		.14
Aug. 26	....do.....	....do.....	....do.....		.02
Sept.22	Penwood Branch....	Haskett Creek.....	Lat 35°43', long. 79°48', 1.1 miles downstream from East Salisbury St. in Asheboro, Randolph County.	1.53	.14
July 9	....do.....	....do.....	Lat 35°45', long. 79°48', 200 ft above Haskett Creek, 1½ miles north of intersection of State Highway 49A and U. S. Highway 220 in Asheboro, Ranfolph County.	4.26	.38
Aug. 26	....do.....	....do.....	....do.....		.21
June 29	Sandy Creek.....	Deep River.....	Lat 35°52', long. 79°39', at highway bridge, 1½ miles north of Melancton, Randolph County, and 2¾ miles southeast of Red Cross.	8.74	.74
Aug. 4	....do.....	....do.....	....do.....		2.00
June 29	Unnamed creek.....	Sandy Creek.....	Lat 35°53', long. 79°37', at highway bridge, 1.8 miles northwest of intersection of State Highway 49 and U. S. Highway 421 in Liberty, Randolph County, and 3.5 miles northeast of Melancton.	.90	.18
Aug. 4	....do.....	....do.....	....do.....		.11
Sept. 2	....do.....	....do.....	....do.....		.06
June 29	Sandy Creek.....	Deep River.....	Lat 35°51', long. 79°38', at bridge on State Highway 49A, 4½ miles west of Liberty, Randolph County.	23.4	2.10
Aug. 4	....do.....	....do.....	....do.....		8.68
July 1	....do.....	....do.....	Lat 35°46', long. 79°40', at highway bridge, ¼ mile below Pleasant Creek, 1¼ miles southwest of Whites Chapel, and 2½ miles north of Ramseur, Randolph County.	53.1	2.80
Aug. 5	....do.....	....do.....	....do.....		9.79
July 15	Richland Creek....	....do.....	Lat 35°38', long. 79°43', at highway bridge, 3½ miles upstream from Bachelors Creek and 8 miles southeast of Asheboro, Randolph County.	34.0	1.58
Sept. 9	....do.....	....do.....	....do.....		.16
Aug. 5	....do.....	....do.....	Lat 35°37', long. 79°37', at highway bridge, ¼ mile above mouth and 2 miles south of Coleridge, Randolph County.	59.6	8.83
Sept. 9	....do.....	....do.....	....do.....		1.19

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Apr. 14	Brush Creek.....	Deep River.....	Lat 35°36', long. 79°35', at bridge on State Highways 22 and 902, at Cheeks, 3 miles southeast of Coleridge, Randolph County.	67.0	33.2
July 15	....do.....	....do.....	....do.....		1.37
Aug. 27	....do.....	....do.....	....do.....		.46
Sept. 9	....do.....	....do.....	....do.....		1.01
Nov. 13	Unnamed creek.....	Fork Creek.....	Lat 35°32', long. 79°39', at highway bridge, 500 ft above mouth, 7½ miles east of Seagrove, and 8 miles south of Coleridge, Randolph County.	.38	.12
Apr. 14	....do.....	....do.....	....do.....		3.82
July 15	Fork Creek.....	Deep River.....	Lat 35°32', long. 79°39', at highway bridge, 3 miles above mouth, 7½ miles east of Seagrove, and 8 miles south of Coleridge, Randolph County.	36.5	1.14
Aug. 27	....do.....	....do.....	....do.....		.66
Sept. 9	....do.....	....do.....	....do.....		.35
July 8	Bear Creek.....	....do.....	Lat 35°32', long. 79°46', at highway bridge, at Whynot, 1.3 miles southeast of Seagrove, Randolph County.	1.35	.02
Aug. 10	....do.....	....do.....	....do.....		.06
July 14	....do.....	....do.....	Lat 35°26'40", long. 79°38' 30", at highway bridge, 2½ miles northeast of Spies, 3 miles upstream from Cabin Creek, and 4 miles northwest of Robbins, Moore County.	44.0	1.26
28	....do.....	....do.....	....do.....		1.58
Aug. 10	....do.....	....do.....	....do.....		.95
Sept. 9	....do.....	....do.....	....do.....		.08
14	....do.....	....do.....	....do.....		.06
24	....do.....	....do.....	....do.....		.09
July 21	....do.....	....do.....	Lat 35°26'10", long. 79°35' 10", 100 ft downstream from bridge on State Highway 705, at Robbins, Moore County.	135	13.4
Aug. 10	....do.....	....do.....	....do.....		3.89
Sept.14	....do.....	....do.....	....do.....		.34
Apr. 13	McLendons Creek...	....do.....	Lat 35°23', long. 79°27', at bridge on State Highways 22 and 27, 3 miles northwest of Carthage, Moore County, and 3½ miles downstream from Juniper Creek.	43.1	48.2
July 14	....do.....	....do.....	....do.....		.82
21	....do.....	....do.....	....do.....		4.85
Aug. 10	....do.....	....do.....	....do.....		.02
Sept.10	....do.....	....do.....	....do.....		0
July 21	Killett Creek.....	McLendon Creek....	Lat 35°21'10", long. 79°27' 20", at highway bridge, 1½ miles above mouth and 2½ miles west of Carthage, Moore County.	8.74	.65
Aug. 10	....do.....	....do.....	....do.....		0
July 21	McLendons Creek...	Deep River.....	Lat 35°24'00", long. 79°25' 50", at highway bridge, 2½ miles upstream from Richland Creek, 3½ miles southeast of Hallison, and 4 miles north of Carthage, Moore County.	61.5	4.63
Aug. 10	....do.....	....do.....	....do.....		.02
Sept.10	....do.....	....do.....	....do.....		0
July 27	....do.....	....do.....	Lat 35°27'20", long. 79°24' 20", at highway bridge, 1 mile above mouth, 2 miles south of Glendon and 7½ miles north of Carthage, Moore County.	99.0	3.04
Aug. 26	....do.....	....do.....	....do.....		.46
Sept.16	....do.....	....do.....	....do.....		.02
July 29	Big Buffalo Creek.	....do.....	Lat 35°29'20", long. 79°12' 10", at first highway bridge above U. S. Highway 421, 1.3 miles northwest of intersection of U. S. Highways 421 and 15-501 in Sanford, Lee County.	9.73	.15
Aug. 12	....do.....	....do.....	....do.....		0
26	....do.....	....do.....	....do.....		8.26
Sept.23	....do.....	....do.....	....do.....		0

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Aug. 12	Big Buffalo Creek.	Deep River.....	Lat 35°30'00", long. 79°12' 10", at bridge on U. S. Highway 421, ¼ mile above Atlantic and Yadkin Ry., and 1.8 miles northwest of intersection of U. S. Highways 421 and 15-501 in Sanford, Lee County.	10.7	0.90
July 29	....do.....	....do.....	Lat 35°32'40", long. 79°13' 20", at highway bridge, 1 mile above mouth and 1 mile southeast of Cumnock, Lee County.	19.6	.98
Aug. 11	....do.....	....do.....	....do.....		.72
26	....do.....	....do.....	....do.....		1.37
30	....do.....	....do.....	....do.....		1.73
Sept. 8	....do.....	....do.....	....do.....		.54
23	....do.....	....do.....	....do.....		.61
30	....do.....	....do.....	....do.....		.48
July 29	Little Buffalo Creek.	....do.....	Lat 35°33'50", long. 79°11' 20", 1¼ miles above mouth and 1½ miles southeast of Coalglen, Chatham County.	6.88	.48
Aug. 12	....do.....	....do.....	....do.....		.38
30	....do.....	....do.....	....do.....		.90
Sept. 16	....do.....	....do.....	....do.....		.52
23	....do.....	....do.....	....do.....		.42
July 27	Rocky River.....	....do.....	Lat 35°50', long. 79°35', at bridge on State Highway 49, 2 miles south of Liberty, Randolph County.	1.81	.08
Aug. 4	....do.....	....do.....	....do.....		.37
Sept. 8	....do.....	....do.....	....do.....		0
July 20	Unnamed creek.....	Rocky River.....	Lat 35°50', long. 79°34', at Atlantic and Yadkin Ry. bridge, ½ mile above mouth and 1½ miles south of Liberty, Randolph County.	.28	.03
Aug. 4	....do.....	....do.....	....do.....		.12
Sept. 2	....do.....	....do.....	....do.....		.08
8	....do.....	....do.....	....do.....		.06
22	....do.....	....do.....	....do.....		.05
July 20	Rocky River.....	Deep River.....	Lat 35°45', long. 79°33', at bridge on U. S. Highway 421, 2 miles south of Liberty, Randolph County.	4.74	.28
25	....do.....	....do.....	....do.....		.26
Sept. 2	....do.....	....do.....	....do.....		.15
8	....do.....	....do.....	....do.....		.002
July 27	....do.....	....do.....	Lat 35°48'10", long. 79°29' 40", at highway bridge, ½ mile upstream from North Branch Rocky River, and 3½ miles east of Staley, Randolph County.	14.6	.53
Aug. 25	....do.....	....do.....	....do.....		.29
Sept. 22	....do.....	....do.....	....do.....		0
July 20	North Branch Rocky River.	Rocky River.....	Lat 35°51'50", long. 79°32' 40", at bridge on State Highway 49, at Randolph-Alamance County line, 1½ miles northeast of Liberty, Randolph County.	2.65	.33
Aug. 4	....do.....	....do.....	....do.....		.47
Sept. 17	....do.....	....do.....	....do.....		.08
Oct. 22	....do.....	....do.....	Lat 35°49'20", long. 79°30' 50", at highway bridge, 2 miles upstream from Rocky River and 2½ miles northeast of Staley, Randolph County.	9.62	.42
Apr. 14	....do.....	....do.....	....do.....		6.08
July 20	....do.....	....do.....	....do.....		.99
27	Rocky River.....	Deep River.....	Lat 35°44'10", long. 79°25' 30", at bridge on U. S. Highway 64, ½ mile upstream from Love Creek, 2½ miles east of intersection of U. S. Highways 64 and 421 in Siler City, Chatham County.	68.7	2.21
Aug. 10	....do.....	....do.....	....do.....		2.12
Sept. 6	....do.....	....do.....	....do.....		.84
July 27	Love Creek.....	Rocky River.....	Lat 35°43'50", long. 79°26' 10", 200 ft upstream from sewage plant, 1½ miles upstream from mouth, and 1½ miles east of intersection of U. S. Highways 64 and 421 in Siler City, Chatham County.	7.74	.03

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 27	Love Creek.....	Rocky River.....	Lat 35°43'50", long. 79°25' 53", 400 ft downstream from sewage plant, 1½ miles upstream from mouth, 1¾ miles east of intersection of U. S. Highways 64 and 421 in Siler City, Chatham County.	-	0.73
27	Tick Creek.....	....do.....	Lat 35°40'30", long. 79°22' 00", at highway bridge, 1½ miles above mouth, 3½ miles northeast of Bonlee and 3½ miles east of Mount Vernon Springs, Chatham County.	19.3	.19
Aug. 10	....do.....	....do.....	....do.....		.20
Sept. 8	....do.....	....do.....	....do.....		.003
July 28	Rocky River.....	Deep River.....	Lat 35°41'00", long. 79°20' 00", ½ mile downstream from Tick Creek, 5 miles east of Mount Vernon Springs, Chatham County and 5 miles northeast of Bonlee.	93.2	2.76
Aug. 10	....do.....	....do.....	....do.....		2.94
Sept.16	....do.....	....do.....	....do.....		.93
29	....do.....	....do.....	....do.....		.86
Aug. 27	Bear Creek.....	Rocky River.....	Lat 35°38', long. 79°18', at highway bridge, 3 miles northeast of Goldston, Chatham County, 4½ miles below Atlantic and Yadkin Ry., and 6½ miles from mouth.	43.2	0
July 29	Rocky River.....	Deep River.....	Lat 35°37'20", long. 79°11' 20", at bridge on State Highway 87, 3 miles above mouth and 4 miles northeast of Coalglen, Chatham County.	237	5.76
Aug. 12	....do.....	....do.....	....do.....		5.63
July 26	Shaddox Creek....	Cape Fear River...	Lat 35°36'58", long. 79°02' 30", at bridge on U. S. Highway 1, 500 ft above Seaboard Air Line RR. and 2¼ miles east of Moncure, Chatham County.	5.59	.001
Sept. 8	Buckhorn Creek...	....do.....	Lat 35°34'20", long. 78°58' 10", at highway bridge, ¼ mile downstream from Whiteoak Creek, ¼ mile above Norfolk Southern Ry., and 2 miles east of Corinth, Chatham County.	74.2	0
Nov. 13	Neals Creek.....	....do.....	Lat 35°25'40", long. 78°49' 20", at bridge on U. S. Highway 15A, ½ mile above mouth and 2 miles north of Lillington, Harnett County.	37.6	2.24
Apr. 3	....do.....	....do.....	....do.....		45.2
July 15	....do.....	....do.....	....do.....		.83
Sept.10	....do.....	....do.....	....do.....		0
17	Upper Little River	....do.....	Lat 35°24'00", long. 79°06' 40", at bridge on State Highway 87, ¼ mile downstream from Atlantic Coastline RR., ½ mile downstream from Juniper Creek, and 1¼ miles north of Swann, Lee County.	43.0	.41
Apr. 13	....do.....	....do.....	Lat 35°21', long. 78°51', at bridge on State Highway 210, 3 miles southwest of Lillington, Harnett County, and about 9 miles from mouth.	180	453
Sept.17	....do.....	....do.....	....do.....		.30
21	Little River.....	....do.....	Lat 35°16'10", long. 79°26' 20", at bridge on U. S. Highway 15-501, 1 mile upstream from Wads Creek, 1 mile north of Eastwood and 6½ miles south of Carthage, Moore County.	15.6	2.98
21	Nicks Creek.....	Little River.....	Lat 35°14'20", long. 79°26' 40", at bridge on U. S. Highway 15-501, 1 mile south of Eastwood and 3½ miles north of Pinehurst, Moore County.	20.5	6.42
Feb. 21	Crane Creek.....	....do.....	Lat 35°17', long. 79°16', at bridge on U. S. Highway 1, 1¼ miles downstream from Herds Creek, and 2 miles northeast of Vass, Moore County.	32.4	1,590
Apr. 13	....do.....	....do.....	....do.....		16.8

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Cape Fear River basin, N. C.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Mar. 25	Rockfish Creek....	Cape Fear River...	Lat 35°00', long. 79°13', at highway bridge, 1 mile downstream from Nicholsons Creek and 1 mile north of Raeford, Hoke County.	90.7	102
July 15	....do.....	....do.....	....do.....		41.7
Sept.16	....do.....	....do.....	....do.....		41.8
Mar. 25	Turnbull Creek....	....do.....	Lat 34°42', long. 78°54', at highway bridge, 1⅞ miles above Jones Lake Outlet, 4½ miles northeast of Elizabethtown, Bladen County, and 6 miles from mouth.	64.9	42.9
Sept.16	....do.....	....do.....	....do.....		.008
Mar. 26	Livingstone Creek.	....do.....	Lat 34°19', long. 78°14', at bridge on U. S. Highways 74 and 76, 1¼ miles southwest of Delco and 1⅝ miles west of Acme, Columbus County.	104	84.6
Aug. 26	....do.....	....do.....	....do.....		.38
Sept.16	....do.....	....do.....	....do.....		0
Mar. 26	Hood Creek.....	....do.....	Lat 34°17', long. 78°08', at bridge on U. S. Highways 74 and 76, 1 mile southeast of Maco, and 4⅝ miles northeast of Leland, Brunswick County.	22.9	19.6
Aug. 26	....do.....	....do.....	....do.....		.01
Sept.16	....do.....	....do.....	....do.....		.07
Mar. 25	Six Runs Creek....	Black River.....	Lat 34°59', long. 78°14', at bridge on State Highway 24, 1/8 mile above Atlantic Coastline RR., ¼ mile below Turkey Creek, and 5 miles east of Clinton, Sampson County.	110	72.6
Sept.15	....do.....	....do.....	....do.....		0
8	Rock Fish Creek...	Northeast Cape Fear River.	Lat 34°44'17", long. 78°03'15", at highway bridge, 0.2 mile upstream from Doctors Creek and 2⅝ miles west of Wallace, Duplin County.	63.8	.04

Lockwoods Folly basin, N. C.

Mar. 26	Pinch Gut Creek...	Lockwoods Folly...	Lat 34°02'50", long. 78°10'45", at bridge on U. S. Highway 17, 1¼ miles above mouth and 2 miles southwest of Bolivia, Brunswick County.	20.3	14.5
Aug. 26	....do.....	....do.....	....do.....		.73
Sept.16	....do.....	....do.....	....do.....		1.00

Waccamaw River basin, S. C.

Aug. 5	Crab Tree Swamp...	Kingston Lake.....	At bridge on U. S. Highway 501, 2¼ miles above mouth, near Conway.		0

Pee Dee River basin

Sept.16	Yadkin River.....	Pee Dee River.....	Lat 36°00'30", long. 81°30'30", just below Buffalo Creek, ½ mile below bridge on State Highway 268 and 4 miles northeast of Patterson, Caldwell County, N. C.	72.4	18.7
Nov. 30	Elk Creek.....	Yadkin River.....	Lat 36°04'20", long. 81°24'15", at bridge on State Highway 268, at Elkville, Wilkes County, N. C., 0.4 mile above mouth.	50	20.6
Mar. 9	....do.....	....do.....	....do.....		71.7
Aug. 9	....do.....	....do.....	....do.....		12.2
Sept.16	Stony Fork Creek..	....do.....	Lat 36°06'50", long. 81°20'55", at highway bridge, 1 mile above mouth, 1½ miles north of Ferguson, 3½ miles northeast of Elkville, Wilkes County, N. C.	35.1	12.5
16	South Prong Lewis Fork.	....do.....	Lat 36°09'10", long. 81°18'20", at highway bridge, ¼ mile upstream from North Prong, 0.6 mile east of Champion, Wilkes County, N. C.	31.2	12.5
16	North Prong Lewis Fork.	....do.....	Lat 36°09'20", long. 81°18'10", at highway bridge, ¼ mile upstream from South Prong, and 1 mile east of Champion, Wilkes County, N. C.	33.6	10.0

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pee Dee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Mar. 9	Middle Fork Reddies River.	Reddies River.....	Lat 36°15'50", long. 81°17' 55", at highway bridge, 1 mile east of Wilbar, Wilkes County, N. C. and 2¼ miles above mouth.	13.9	23.4
July 2	....do.....	....do.....	....do.....		11.4
Oct. 19	Mulberry Creek....	Yadkin River.....	Lat 36°12', long. 81°07', 300 ft above bridge on State Highway 268, at North Wilkesboro City limits, Wilkes County, N. C., and 1½ miles above mouth.	43.0	22.6
July 2	....do.....	....do.....	....do.....		19.8
Mar. 9	Roaring River.....	....do.....	Lat 36°15'20", long. 81°02' 30", at highway bridge, 3½ miles northwest of Roaring River, Wilkes County, N. C., and 4 miles above mouth.	122	147
Aug. 12	....do.....	....do.....	....do.....		33.2
Sept.17	Bugaboo Creek.....	....do.....	Lat 36°13'25", long. 80°57' 15", at bridge on State Highway 268, ¼ mile above mouth, 1 mile west of Rhonda, and 2½ miles east of Roaring River, Wilkes County, N. C.	17.8	6.68
Mar. 9	Mitchell River....	....do.....	Lat 36°25'10", long. 80°52' 0", at highway bridge, 1¼ miles downstream from North Fork and 3 miles north of Mountain Park, Surry County, N. C.	32.8	41.4
9	....do.....	....do.....	Lat 36°19'00", long. 80°48' 40", at highway bridge, 3½ miles above mouth and 4½ miles northeast of Elkin, Surry County, N. C.	80.4	98.9
Aug. 12	....do.....	....do.....	....do.....		28.1
Mar. 11	Ararat River.....	....do.....	Lat 36°30'00", long. 80°35' 40", at bridge on State Highway 103, at Mount Airy, Surry County, N. C.	66.6	56.9
Aug. 13	....do.....	....do.....	....do.....		12.3
Mar. 11	Stewarts Creek....	Ararat River.....	Lat 36°27'45", long. 80°37' 30", at bridge on U. S. Highway 601, 2 miles above mouth and 3 miles southwest of Mount Airy, Surry County, N. C.	89.2	93.3
Aug. 13	....do.....	....do.....	....do.....		24.0
Mar. 11	Toms Creek.....	....do.....	Lat 36°23'50", long. 80°29' 20", at bridge on U. S. Highway 52, 0.7 mile northwest of Pilot Mountain, Surry County, N. C.	29.9	18.8
Aug. 13	....do.....	....do.....	....do.....		7.33
Sept.17	North Deep Creek..	Yadkin River.....	Lat 36°08'00", long. 80°36' 50", at bridge on U. S. Highway 421, 1½ miles east of Yadkinville, Yadkin County, N. C.	34.8	2.96
Mar. 10	South Deep Creek..	....do.....	Lat 36°06'20", long. 80°34' 40", at highway bridge, 1 mile south of Shacktown, Yadkin County, 1 mile upstream from Harmon Creek and 4 miles southeast of Yadkinville, N. C.	65.9	56.0
Aug. 13	....do.....	....do.....	....do.....		9.47
Sept.30	Muddy Creek.....	....do.....	Lat 36°10'30", long. 80°20' 50", at bridge on State Highway 67, 1 mile southwest of Bethania, 2 miles southeast of Seward, 8 miles northwest of intersection of U. S. Highways 52 and 421 in Winston Salem, Forsyth County, N. C.	25.0	5.56
Oct. 19	....do.....	....do.....	Lat 36°01'28", long. 80°21' 16", at bridge on U. S. Highway 158, 1½ miles east of Clemmons, Forsyth County, N. C., and 2 miles upstream from Salem Creek.	111	24.3
July 28	....do.....	....do.....	....do.....		26.0
Oct. 5	Fifth Creek.....	....do.....	Lat 35°51', long. 80°44', at highway bridge, 0.8 mile west of U. S. Highway 64, 1.1 miles west of Cool Springs, Iredell County, N. C., and 1¾ miles above mouth.	27.0	10.6
May 13	....do.....	....do.....	....do.....		17.9
Aug. 13	....do.....	....do.....	....do.....		9.42

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pee Dee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Oct. 19	Bear Creek.....	South Yadkin River	Lat 35°52', long. 80°35', at highway bridge, 1 mile southwest of Mocksville, Davie County, N. C.	23.3	2.64
May 12	....do.....	....do.....	....do.....		10.3
Oct. 5	Second Creek.....	....do.....	Lat 35°43'00", long. 80°35' 45", at bridge on U. S. Highway 70, 1 mile downstream from Whiterow Creek and 2½ miles east of Barber, Rowan County, N. C.	119	28.1
May 12	....do.....	....do.....	....do.....		57.8
Aug. 13	....do.....	....do.....	....do.....		19.2
Oct. 5	Grants Creek.....	Yadkin River.....	Lat 35°40'00", long. 80°30' 30", at bridge on State Highway 150, 1¼ miles west of intersection of State Highway 150 and U. S. Highways 29-601 in Salisbury, Rowan County, N. C.	38.8	6.40
July 2	....do.....	....do.....	....do.....		8.74
Aug. 13	....do.....	....do.....	....do.....		5.61
Oct. 5	Swearing Creek....	....do.....	Lat 35°45'19", long. 80°18' 22", at highway bridge, 0.6 mile east of Linwood, Davidson County, N. C.	34.9	6.74
July 2	....do.....	....do.....	....do.....		5.31
Aug. 13	....do.....	....do.....	....do.....		4.07
Oct. 19	Abbotts Creek.....	....do.....	Lat 35°54'05", long. 80°11' 20", just above Thomasville water supply intake, 400 ft downstream from Brushy Fork Creek, and 5½ miles west of Thomasville, Davidson County, N. C.	65.9	11.2
July 2	....do.....	....do.....	....do.....		10.0
Aug. 13	....do.....	....do.....	....do.....		15.7
Oct. 9	Rich Fork.....	Abbotts Creek.....	Lat 35°51'15", long. 80°10' 57", at highway bridge, ¼ mile south of U. S. Highways 29 and 70, and 3 miles east of Lexington, Davidson County, N. C.	47.3	1.86
July 2	....do.....	....do.....	....do.....		2.19
Aug. 13	....do.....	....do.....	....do.....		4.64
Sept.19	Clarke Creek.....	Rocky River.....	Lat 35°24'50", long. 80°45' 08", at highway bridge, 2½ miles above mouth, 5 miles east of Huntersville, and 8½ miles northwest of Harrisburg, Cabarrus County, N. C.	21.8	.92
3	Rocky River.....	Pee Dee River.....	Lat 35°21'35", long. 80°40' 31", at bridge on U. S. Highway 29, 2 miles upstream from Mallard Creek, and 6½ miles southwest of Concord, Cabarrus County, N. C.	87.9	9.09
19	....do.....	....do.....	....do.....		4.73
29	Mallard Creek.....	Rocky River.....	Lat 35°19'12", long. 80°43' 54", at highway bridge, ¼ mile downstream from Toby Creek and 9 miles northeast of intersection of State Highways 16 and 49 in Charlotte, Mecklenburg County, N. C.	26.4	.36
3	Coddle Creek.....	....do.....	Lat 35°24'29", long. 80°40' 29", at highway bridge, just below Afton Run, 2¼ miles below State Highway 73 and 5 miles west of Concord, Cabarrus County, N. C.	56.6	7.56
19	....do.....	....do.....	....do.....		4.78
Sept. 3	Rocky River.....	Pee Dee River.....	Lat 35°19'27", long. 81°33' 40", at highway bridge, 1½ miles upstream from Coldwater Creek, 2½ miles northeast of Town of Rocky River and 6 miles south of center of Concord, Cabarrus County, N. C.	276	19.8
19	....do.....	....do.....	....do.....		12.9
3	Coldwater Creek...	Rocky River.....	Lat 35°20'41", long. 80°31' 41", 500 ft above bridge on U. S. Highway 601, 1 mile upstream from Irish Buffalo Creek, and 5¼ miles southeast of Concord, Cabarrus County, N. C.	63.1	2.83

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pee Dee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept. 3	Irish Buffalo Creek.	Coldwater Creek...	Lat 35°20'50", long. 80°32' 52", at highway bridge, 1 mile south of Faggarts Crossroads, 1 mile upstream from mouth, and 4½ miles southeast of Concord, Cabarrus County, N. C.	44.7	23.8
2	Rocky River.....	Pee Dee River.....	Lat 35°19', long. 80°29', at highway bridge, ½ mile above Dutch Buffalo Creek and 9 miles southeast of Concord, Cabarrus County, N. C.	490	43.8
18	Dutch Buffalo Creek.	Rocky River.....	Lat 35°23'20", long. 80°26' 20", at bridge, 0.8 mile upstream from Adam Creek and 1 mile southeast of Mount Pleasant, Cabarrus County, N. C.	64.2	.16
Oct. 2	Big Bear Creek....	Long Creek.....	Lat 35°16'45", long. 80°18' 10", at bridge on State Highway 27, 2½ miles upstream from Stony Run and 8 miles southwest of Albemarle, Stanly County, N. C.	71.6	16.2
Dec. 3	....do.....	....do.....	....do.....		1.86
29	....do.....	....do.....	....do.....		25.9
Feb. 10	....do.....	....do.....	....do.....		31.1
June 9	....do.....	....do.....	....do.....		2.47
Sept.19	Richardson Creek..	Rocky River.....	Lat 35°02'00", long. 80°28' 20", at bridge on county road, ½ mile upstream from Stuarts Creek, and 3½ miles north of Wingate, Union County, N. C.	98.2	1.10
Aug. 26	Cartledge Creek...	Pee Dee River.....	Lat 34°58'35", long. 79°51' 30", at highway bridge, ½ mile from mouth, 1½ miles southeast of Blewett Falls dam, and 5½ miles northwest of Rockingham, Richmond County, N. C.	31.4	0
Sept.18	Falling Creek.....	....do.....	Lat 34°57'40", long. 79°42' 15", at highway bridge, 1 mile south of U. S. Highway 1, 4 miles east of Rockingham, Richmond County, N. C.	6.0	2.05
Feb. 21	South Fork Jones Creek.	Jones Creek.....	Lat 34°51'40", long. 80°05' 30", at bridge on State Highway 742, 1 mile north of Cason Old Field and 5.3 miles west of Morven, Anson County, N. C.	17.3	303
Aug. 26	....do.....	....do.....	Lat 34°53'15", long. 80°01' 30", at bridge on U. S. Highway 52, 1½ miles above mouth and 2 miles north of Morven, Anson County, N. C.	33.7	0
25	Marks Creek.....	Pee Dee River.....	Lat 34°49'40", long. 79°48' 00", at bridge on county road, 2½ miles northwest of Osborne, Richmond County, N. C., and 7½ miles southwest of Hamlet.	29.2	4.91
Sept.18	....do.....	....do.....	....do.....		5.72
9	Thompson Creek....	....do.....	At county highway bridge, ¼ mile below Seaboard Air Line RR. bridge, and 3.5 miles southwest of Cheraw, S. C.	266	1.00
Oct. 29	Cedar Creek.....	....do.....	At bridge on U. S. Highway 52, at Society Hill, S. C.	55	23.3
Apr. 29	....do.....	....do.....	....do.....		67.8
Sept. 3	....do.....	....do.....	....do.....		18.9
Oct. 29	Pee Dee River.....	Atlantic Ocean....	At bridge on U. S. Highway 15, near Society Hill, S. C.	7,980	1,820
Nov. 30	....do.....	....do.....	....do.....		706
Dec. 28	....do.....	....do.....	....do.....		7,800
Feb. 1	....do.....	....do.....	....do.....		12,100
26	....do.....	....do.....	....do.....		7,480
Mar. 30	....do.....	....do.....	....do.....		13,500
Apr. 29	....do.....	....do.....	....do.....		7,560
May 27	....do.....	....do.....	....do.....		5,880
June 28	....do.....	....do.....	....do.....		1,260
July 29	....do.....	....do.....	....do.....		1,870
Sept. 1	....do.....	....do.....	....do.....		2,440
30	....do.....	....do.....	....do.....		1,580
Oct. 30	Jefferies Creek...	Pee Dee River.....	At bridge on State Highway 327, 1½ miles upstream from Middle Branch, near Claussen, S. C.	-	6.77
Sept. 9	....do.....	....do.....	....do.....		.93

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pee Dee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Aug. 5	Catfish Creek.....	Pee Dee River.....	At bridge on U. S. Highway 76, at Marion, S. C., 5½ miles upstream from Collins Creek.	-	0
Oct. 29	Lynches River.....	....do.....	At bridge on U. S. Highway 1, 2.5 miles downstream from Cedar Creek near Bethune, S. C.	380	111
Apr. 26	....do.....	....do.....	....do.....		11.6
Sept. 2	....do.....	....do.....	....do.....		27.4
Oct. 29	Little Lynches River.	Lynches River.....	At bridge on U. S. Highway 1, near Bethune, S. C.	163	71.3
Apr. 26	....do.....	....do.....	....do.....		53.5
Sept. 2	....do.....	....do.....	....do.....		11.1
July 15	Gum Swamp Creek..	Little Pee Dee River.	Lat 34°51'15", long. 79°31' 30", at highway bridge, 1½ miles above Richmond Pond, 4 miles above Seaboard Air Line RR., and 6½ miles northwest of Laurinburg, Scotland County, N. C.	41.1	20.8
Aug. 25	....do.....	....do.....	....do.....		19.2
Sept.22	Jordan Creek.....	Shoeheel Creek....	Lat 34°49'01", long. 79°25' 27", at bridge on U. S. Highway 15A, ½ mile above Juniper Creek and 4 miles northeast of Laurinburg, Scotland County, N. C.	18.7	1.95
Oct. 13	....do.....	....do.....	Lat 34°48'28", long. 79°24' 32", below city waterworks intake, 2 miles above mouth, 3.9 miles northeast of Laurinburg, Scotland County, N. C.	51.7	22.0
July 15	Shoeheel Creek....	Little Pee Dee River.	Lat 34°45', long. 79°23', at bridge on U. S. Highway 74, ¼ mile below Seaboard Air Line RR., 2½ miles downstream from Jordans Creek, and 4½ miles southeast of Laurinburg, Scotland County, N. C.	84.5	14.8
Aug. 25	....do.....	....do.....	....do.....		5.87
Sept.22	....do.....	....do.....	....do.....		7.84
June 23	Little Pee Dee River.	Pee Dee River.....	At bridge on State Road 17-23, 0.9 mile northeast of Little Rock, S. C.	-	134
29	....do.....	....do.....	....do.....		73.0
July 15	Drowning Creek....	Little Pee Dee River.	Lat 35°11'35", long. 79°38' 50", at bridge on State Highway 73, 2 miles southwest of Jackson Springs, Moore County, N. C.	30.5	7.32
Aug. 26	....do.....	....do.....	....do.....		8.21
Sept.18	....do.....	....do.....	....do.....		5.77
22	....do.....	....do.....	....do.....		6.24
21	Jackson Creek.....	Drowning Creek....	Lat 35°13'20", long. 79°37' 10", at highway bridge, 1¼ miles north of Jackson Springs, Moore County, N. C.	6.10	.95
22	Naked Creek.....	....do.....	Lat 35°02'25", long. 79°32' 45", at highway bridge, ¾ mile above mouth and 4 miles northwest of Hoffman, Richmond County, N. C.	38.2	11.3
22	Horse Creek.....	Deep Creek.....	Lat 35°07'55", long. 79°29' 33", at highway bridge, 1 mile east of Roseland, 3 miles above mouth and 3½ miles west of Aberdeen, Moore County, N. C.	10.5	7.07
22	Aberdeen Creek....	Drowning Creek....	Lat 35°04'53", long. 79°27' 45", at highway bridge at Addor, 2 miles above mouth and 4 miles southwest of Aberdeen, Moore County, N. C.	32.6	22.0
22	Mountain Creek....	Lumber River.....	Lat 35°00'51", long. 79°23' 26", at highway bridge, 1½ miles above mouth and 4 miles southwest of Montrose, Hoke County, N. C.	9.96	3.09
Sept.22	Buffalo Creek.....	....do.....	Lat 34°58'31", long. 79°21' 31", at highway bridge, 1¼ miles above mouth and 4 miles southwest of Timberland, Hoke County, N. C.	10.5	3.25
July 15	Lumber River.....	Little Pee Dee River.	Lat 34°42', long. 79°15', at highway bridge, ¾ mile above U. S. Highway 74, 3½ miles west of Pembroke, Robeson County, N. C.	421	189
Aug. 20	....do.....	....do.....	....do.....		119
Sept.17	....do.....	....do.....	....do.....		99

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Pee Dee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Aug. 20	Big Raft Swamp....	Lumber River.....	Lat 34°43', long. 79°05', at bridge on State Highway 211, 1¾ miles above Richland Swamp and 6 miles northwest of Lumberton, Robeson County, N. C.	107	0
Sept.16	Lumber River.....	Little Pee Dee River.	Lat 34°38', long. 79°01', at McMillans Beach, at Lumberton, Robeson County, N. C.	673	87.4
July 15	Big Swamp.....	Lumber River.....	Lat 34°43', long. 78°50', at highway bridge, ½ mile south of Robeson-Bladen County line, 2½ miles above Goodman Swamp, and 2¾ miles southwest of Tarheel, Bladen County, N. C.	225	4.70
Aug. 20	....do.....	....do.....	....do.....		.0006
Sept.16	....do.....	....do.....	....do.....		0
Aug. 5	Spring Swamp.....	Brunson Swamp.....	At bridge on U. S. Highway 501, 5 miles above mouth, near Aynor, S. C.	-	0
May 18	Pocotaligo River..	Black River.....	At bridge on State Road 14-50, near Manning, S. C., 1.3 miles above mouth.		185
July 6	....do.....	....do.....	....do.....		38.1
Aug. 26	....do.....	....do.....	....do.....		0
Sept.14	Kingstree Swamp Canal.	....do.....	At bridge on State Road 45-44, 1.9 miles upstream from mouth and 2 miles north of Kingstree, S. C.	57	.01

Santee River basin

Nov. 4	Catawba River.....	Wateree River.....	Lat 35°37'30", long. 82°10'30", at highway bridge, ½ mile south of Old Fort, McDowell County, N. C., and ½ mile upstream from Mill Creek.	14.0	4.03
Dec. 2	....do.....	....do.....	....do.....		5.25
Feb. 3	....do.....	....do.....	....do.....		11.8
June 14	....do.....	....do.....	....do.....		10.1
Aug. 5	....do.....	....do.....	....do.....		4.97
Sept. 7	....do.....	....do.....	....do.....		2.57
Dec. 2	Curtis Creek.....	Catawba River.....	Lat 35°38'35", long. 82°09'30", at bridge on U. S. Highway 70, 2 miles northeast of Old Fort, McDowell County, N. C.	17.3	6.27
Feb. 3	....do.....	....do.....	....do.....		25.5
June 14	....do.....	....do.....	....do.....		12.9
Aug. 5	....do.....	....do.....	....do.....		5.57
Sept. 7	....do.....	....do.....	....do.....		3.18
Feb. 2	North Fork Catawba River.	....do.....	Lat 35°50'00", long. 82°00'05", at highway bridge, at Pitts, McDowell County, N. C., and 3½ miles northeast of Woodlawn.	33.0	28.2
June 14	....do.....	....do.....	....do.....		16.8
Aug. 4	....do.....	....do.....	....do.....		5.23
Sept. 7	....do.....	....do.....	....do.....		3.26
Oct. 20	Muddy Creek.....	....do.....	Lat 35°42'50", long. 81°51'35", at bridge on U. S. Highways 64 and 70, ¾ mile south of Bridgewater, Burke County, N. C.	97.3	58.7
May 12	....do.....	....do.....	....do.....		105
Aug. 11	....do.....	....do.....	....do.....		47.4
Oct. 20	Silver Creek.....	....do.....	Lat 35°41'55", long. 81°45'45", at highway bridge, just above Clear Creek, 2½ miles southeast of Glen Alpine, Burke County, N. C.	25.9	15.1
May 27	....do.....	....do.....	....do.....		25.7
Aug. 11	....do.....	....do.....	....do.....		9.88
Sept.17	Warrior Fork.....	....do.....	Lat 35°47'50", long. 81°43'00", at highway bridge, 2.7 miles south of Worry Crossroad, 2.7 miles northeast of Oak Hill, and 4 miles northwest of Morganton, Burke County, N. C.	104	16.6
Oct. 20	Johns River.....	....do.....	Lat 35°55'25", long. 81°40'40", at highway bridge, at Colletsville, Caldwell County, N. C., ¼ mile upstream from Mulberry Creek.	69	20.0
May 27	....do.....	....do.....	....do.....		74.4
Aug. 11	....do.....	....do.....	....do.....		8.84
Sept.17	Wilson Creek.....	Johns River.....	Lat 35°55'10", long. 81°44'00", at old gaging station site above Brown Mountain Beach, 2 miles upstream from highway bridge and 2.5 miles northwest of Adako, Caldwell County, N. C.	66	19.7

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Santee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Mar. 11	Lower Creek.....	Catawba River.....	Lat 35°35'54", long. 81°31' 35", at bridge on U. S. Highway 321, at Lenoir, Caldwell County, N. C., 0.2 mile above Cane Creek.	13.8	11.9
July 30	....do.....	....do.....	....do.....		4.29
Nov. 10	Lyle Creek.....	....do.....	Lat 35°42'40", long. 81°04' 50", at bridge on State Highway 10, at Catawba, Catawba County, N. C., 1 mile above mouth.	70.7	26.6
Mar. 12	Davidson Creek....	....do.....	Lat 35°29'22", long. 80°56' 04", at bridge on State Highway 73, 0.7 mile above mouth and 4½ miles west of Cornelius, Mecklenburg County, N. C.	37.6	23.0
Aug. 7	....do.....	....do.....	....do.....		6.03
Mar. 12	Dutchmans Creek...	....do.....	Lat 35°22'00", long. 81°01' 55", at highway bridge, 1.2 miles downstream from Killian and Leepers Creeks and 3 miles east of Stanly, Gaston County, N. C.	112	76.4
Aug. 7	....do.....	....do.....	....do.....		12.3
Oct. 6	Jacob Fork.....	South Fork Catawba River.	Lat 35°38'25", long. 81°19' 25", at highway bridge, 0.7 mile above confluence with Henry Fork and 3 miles west of Startown, Catawba County, N. C.	100	68.7
May 27	....do.....	....do.....	....do.....		108
Nov. 29	Clark Creek.....	....do.....	Lat 35°28'30", long. 81°16' 05", at bridge on North Grove St., Lincolnton, Lincoln County, N. C., ¼ mile above mouth.	92.2	30.0
Mar. 12	....do.....	....do.....	....do.....		74.6
Oct. 5	Crowders Creek....	Catawba River.....	Lat 35°10'09", long. 81°12' 44", at bridge on U. S. Highway 321, ½ mile downstream from South Crowders Creek and 6 miles south of Gastonia, Gaston County, N. C.	70.1	18.2
Mar. 12	....do.....	....do.....	....do.....		58.8
July 8	Unnamed branch....	....do.....	At bridge on county road, 0.5 mile above mouth, at Rock Hill, S. C.	-	.25
22	....do.....	....do.....	.....do.....		6.96
Aug. 25	Catawba River.....	Wateree River.....	50 ft above mouth of Burgis Creek, near Lesslie, S. C.	-	1,050
26	....do.....	....do.....	....do.....		1,040
26	....do.....	....do.....	....do.....		991
26	....do.....	....do.....	....do.....		982
Jan. 6	McAlpine Creek....	Sugar Creek.....	Lat 35°03'35", long. 80°52' 35", at bridge on U. S. Highway 521, 1 mile downstream from McMullen Creek, and 2 miles south of Pineville, Mecklenburg County, N. C.	91.7	18.0
Aug. 7	....do.....	....do.....	....do.....		2.12
July 8	Steel Creek.....	....do.....	At bridge on county road, 1 mile above Sugar Creek, near Fort Mill, S. C.	-	1.65
26	....do.....	....do.....	....do.....		3.66
8	Sugar Creek.....	Catawba River.....	At bridge on State Highway 160, ½ mile downstream from Steel Creek, near Fort Mill, S. C.		41.1
26	....do.....	....do.....	....do.....		46.6
Aug. 9	....do.....	....do.....	....do.....		30.8
Jan. 6	Twelvemile Creek..	....do.....	Lat 34°57'05", long. 80°45' 20", at bridge on State Highway 16, 0.1 mile downstream from West Fork Twelvemile Creek, and 2½ miles north of Waxhaw, Union County, N. C.	72.4	12.4
Aug. 7	....do.....	....do.....	....do.....		1.02
Sept.16	Fishing Creek.....	....do.....	At bridge on State Highway 9, near Fort Lawn, S. C., 2¾ miles downstream from Tinkers Creek.	-	3.85
July 12	Little Wateree Creek.	Wateree Creek.....	At bridge on U. S. Highway 21, near Ridgeway, S. C., 2½ miles downstream from Horse Branch.	-	0
12	Dutchmans Creek...	....do.....	At bridge on U. S. Highway 21, 4½ miles north of Ridgeway, S. C.	-	0
May 5	Wateree River.....	Santee River.....	At bridge on U. S. Highway 76, near Eastover, S. C.	5,540	6,410

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Santee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Nov. 4	Cove Creek.....	Broad River.....	Lat 35°25'30", long. 82°06' 35", at bridge on U. S. Highways 64 and 70, 1 mile above mouth and 5 miles east of Lake Lure, Rutherford County, N. C.	77.0	37.4
Dec. 3	....do.....	....do.....	....do.....		40.5
Jan. 5	....do.....	....do.....	....do.....		50.5
23	....do.....	....do.....	....do.....		666
Feb. 3	....do.....	....do.....	....do.....		80.1
Mar. 2	Mountain Creek....	....do.....	Lat 35°20'45", long. 82°00' 40", at bridge on State Highway 108, 3 miles southwest of Rutherfordton, Rutherford County, N. C.	40.6	62.2
July 9	....do.....	....do.....	....do.....		26.2
Aug. 6	....do.....	....do.....	....do.....		20.0
Sept. 8	....do.....	....do.....	....do.....		14.0
Nov. 29	Second Broad River	....do.....	Lat 35°21, long. 81°51', 1 mile southwest of Bostic, Rutherford County, N. C., and 2 miles north of Forest City.	170	83.3
Aug. 5	....do.....	....do.....	....do.....		49.3
Nov. 29	First Broad River.	....do.....	Lat 35°29', long. 81°40', at highway bridge, 2 miles upstream from Duncan and Ward Creeks, and 3½ miles southwest of Casar, Cleveland County, N. C.	63.2	31.1
Aug. 5	....do.....	....do.....	....do.....		19.1
Oct. 5	Buffalo Creek.....	....do.....	Lat 35°20'55", long. 81°28' 45", at highway bridge, 2½ miles southwest of Waco, Cleveland County, N.C., and 5 miles northeast of Shelby.	43.5	18.2
Aug. 5	....do.....	....do.....	....do.....		4.59
Oct. 14	....do.....	....do.....	At bridge on State Highway 5, near Blacksburg, S. C., 1.5 miles above mouth.	176	64.1
Mar. 26	....do.....	....do.....	....do.....		435
Aug. 18	....do.....	....do.....	....do.....		20.3
Sept.16	....do.....	....do.....	....do.....		14.7
Oct. 14	Kings Creek.....	....do.....	At bridge on State Highway 5, at Kingstree Creek, S. C.	47.6	10.5
Sept. 8	....do.....	....do.....	....do.....		2.26
Oct. 14	Thicketty Creek...	....do.....	At bridge on U. S. Highway 29, at Thicketty, S. C., 2 miles upstream from Livingston Creek.	39	21.0
Sept.14	....do.....	....do.....	....do.....		5.51
Oct. 2	Bullock Creek.....	....do.....	At bridge on State Highway 211, near Sharon, S. C., 0.7 mile downstream from Clarks Creek.	84	10.5
Mar. 17	....do.....	....do.....	....do.....		74.3
June 24	....do.....	....do.....	....do.....		16.0
Sept. 8	....do.....	....do.....	....do.....		0
Nov. 13	Lawson Fork Creek.	Pacolet River.....	At bridge on State Road 42-31, at Spartanburg, S. C., 0.1 mile downstream from mouth of Chinquapin Creek.	70	29.1
June 23	....do.....	....do.....	....do.....		46.2
Sept. 8	....do.....	....do.....	....do.....		12.9
14	Turkey Creek.....	Broad River.....	At bridge on State Highway 9, 1.7 miles southeast of Lockhart, S. C., and 1.8 miles above mouth.	-	0
Oct. 13	Sandy River.....	....do.....	At bridge on State Highway 72, near Leeds, S. C.	104	4.64
Sept. 7	....do.....	....do.....	....do.....		0
Nov. 18	South Tyger River.	Tyger River.....	At bridge on State Highway 14, near Greer, S. C., 1 mile downstream from Clear Creek.	-	36.7
May 20	Fairforest Creek..	....do.....	At bridge on State Highway 56, near Pauline, S. C.	-	49.6
25	....do.....	....do.....	....do.....		35.4
June 11	....do.....	....do.....	....do.....		28.3
May 25	Shoal Creek.....	Fairforest Creek..	At bridge on State Road 44-76, near Union, S. C., 2.8 miles above mouth.	-	4.54
27	....do.....	....do.....	....do.....		4.01
June 7	....do.....	....do.....	....do.....		4.00
7	....do.....	....do.....	At bridge on State Highway 92, near Union, S. C., 2 miles above mouth.	-	7.20
11	....do.....	....do.....	....do.....		6.16
Oct. 13	Tyger River.....	Broad River.....	At bridge on State Highway 72, near Delta, S. C., 0.3 mile downstream from Padgets Creek.	759	177
Sept.15	....do.....	....do.....	....do.....		60.0

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Santee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Mar. 26	Little Mountain Creek.	Mountain Creek....	At bridge on county road, near Greenville, S. C., ½ mile above mouth.	-	8.20
Apr. 6	....do.....	....do.....	....do.....		5.41
19	....do.....	....do.....	....do.....		3.93
Mar. 26	Mountain Creek....	Enoree River.....	At bridge on county road, near Taylors, S. C., 0.3 mile above mouth.	-	25.1
Apr. 6	....do.....	....do.....	....do.....		19.6
19	....do.....	....do.....	....do.....		14.3
Mar. 26	Enoree River.....	Broad River.....	At bridge on county road, at Taylors, S. C., 0.6 mile downstream from Mountain Creek.	-	177
Apr. 6	....do.....	....do.....	....do.....		87.2
Oct. 13	Warrior Creek.....	Enoree River.....	At bridge on U. S. Highway 221, at Lanford, S. C., 4½ miles above mouth.	23.0	6.34
June 23	....do.....	....do.....	....do.....		7.79
Aug. 25	....do.....	....do.....	....do.....		1.62
Sept.15	....do.....	....do.....	....do.....		.36
15	Duncan Creek.....	....do.....	At bridge on U. S. Highway 176, 1.5 miles southeast of Whitmire, S. C., and 1.2 miles above mouth.	-	1.84
15	Indian Creek.....	....do.....	At bridge on U. S. Highway 176, 7.8 miles south of Whitmire, S. C., and 0.7 mile downstream from Gilders Creek.	-	0
14	Little River.....	Broad River.....	Lat 34°12', long. 81°10', at bridge on State Highway 215, 1¼ miles northeast of Richtex, S. C., and 1½ miles above mouth.	237	1.72
14	Cedar Creek.....	....do.....	At bridge on State Highway 215, 2 miles southeast of Richtex, S. C., and 3.2 miles above mouth.	-	.06
7	Crane Creek.....	....do.....	At bridge on State Highway 215, near Eau Claire, S. C., 2 miles above mouth.	-	0
2	Smith Branch.....	....do.....	At bridge on Clement Road, at Eau Claire, S. C., 0.6 mile above mouth.	-	1.38
21	....do.....	....do.....	....do.....		1.49
29	....do.....	....do.....	....do.....		1.51
Oct. 14	Wilson Creek.....	Saluda River.....	At bridge on State Highway 34, near Ninety Six, S. C., 3 miles above mouth.	76	7.31
Apr. 21	....do.....	....do.....	....do.....		29.1
June 8	....do.....	....do.....	....do.....		12.1
Sept. 7	....do.....	....do.....	....do.....		.65
15	....do.....	....do.....	....do.....		.16
12	Ninety Six Creek..	Wilson Creek.....	At bridge on State Highway 248, near Ninety Six, S. C., 0.4 mile upstream from Tolbert Branch.	-	0
12	Tolbert Branch....	Ninety Six Creek..	At bridge on State Highway 248, near Ninety Six, S.C., 0.35 mile above mouth.	-	0
7	Halfway Swamp Creek.	Saluda River.....	At bridge on State Highway 702, near Chappells, S. C., 2 miles above mouth.	-	0
May 25	Little River.....	....do.....	At bridge on U. S. Highway 76, at Laurens, S. C.	-	9.61
Oct. 9	....do.....	....do.....	At bridge on State Highway 34, near Silverstreet, S. C., 1.25 miles above Southern Ry. bridge.	230	37.6
14	....do.....	....do.....	....do.....		36.7
Apr. 21	....do.....	....do.....	....do.....		105
May 20	....do.....	....do.....	....do.....		70.8
June 11	....do.....	....do.....	....do.....		42.7
Sept. 7	....do.....	....do.....	....do.....		7.01
7	Bush River.....	....do.....	At bridge on State Highways 19 and 34, near Newberry, S. C., 5 miles upstream from Timothy Creek.	-	1.23
Oct. 14	Little Saluda River.	....do.....	At bridge on U. S. Highway 378, at Saluda, S. C.	90	.58
Sept. 7	....do.....	....do.....	....do.....		.12
7	Richland Creek....	Little Saluda River.	At bridge on U. S. Highway 378, near Saluda, S. C., 0.8 mile above mouth.	-	0
15	Clouds Creek.....	Saluda River.....	At bridge on U. S. Highway 378, near Batesburg, S. C., 3½ miles downstream from West Creek.	-	0
May 12	Congaree Creek....	Congaree River....	At bridge on U. S. Highway 21, near Cayce, S. C., 2 miles upstream from Six-mile Creek.	136	136

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Santee River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Sept.10	Congaree Creek....	Congaree River....	At bridge on U. S. Highway 21, near Cayce, S. C., 2 miles upstream from Six-mile Creek.	-	85.2
3	Gills Creek.....	....do.....	At bridge on State Highway 760, at Columbia, S. C., 0.5 mile downstream from South Fork Creek.	-	9.95
27	....do.....	....do.....	....do.....		5.74
May 4	....do.....	....do.....	At bridge on State Highway 48, near Columbia, S. C.	65.7	55.1
June 21	....do.....	....do.....	....do.....		18.2
Sept.10	....do.....	....do.....	....do.....		4.27
Nov. 24	Little River.....	Santee River.....	Just below Lake Marion Dam, near Pineville, S. C.	-	23.6
Feb. 26	....do.....	....do.....	....do.....		28.8
Apr. 15	....do.....	....do.....	....do.....		29.4
July 23	....do.....	....do.....	....do.....		19.9

Ashley River basin, S. C.

July 21	Ashley River.....	Atlantic Ocean....	At bridge on U. S. Highway 17A, near Summerville, ½ mile below Nigger Lake.	-	0

Edisto River basin, S. C.

Nov. 4	Shaw Creek.....	South Fork Edisto River.	At bridge on State Highway 191, at Eureka.	38	20.1
July 30	....do.....	....do.....	....do.....		17.1
Sept.28	....do.....	....do.....	....do.....		10.8
Nov. 16	....do.....	....do.....	At county highway bridge, 3.7 miles southeast of Eureka.	50	29.6
July 30	....do.....	....do.....	....do.....		22.1
Sept.10	....do.....	....do.....	....do.....		19.8
Nov. 4	....do.....	....do.....	At bridge on State Highway 215, near Montmorenci.	103	61.4
July 30	....do.....	....do.....	....do.....		42.9
Sept.10	....do.....	....do.....	....do.....		27.2
Nov. 5	North Fork Edisto River.	Edisto River.....	At bridge on U. S. Highway 321, near North.	396	375
Aug. 30	....do.....	....do.....	....do.....		240
15	Horse Range Swamp.	Four Hole Swamp...	At bridge on U. S. Highway 15, at mouth of Kettle Branch, near Wells.	-	0
Sept.16	Four Hole Swamp...	Edisto River.....	At Harleys Bridge near Givhans, 1 mile above mouth.	-	0

Combahee River basin, S. C.

Nov. 5	Salkehatchie River.	Combahee River....	At bridge on State Highway 64, near Barnwell, 3¼ miles upstream from Turkey Creek.	64.6	25.9
Aug. 30	....do.....	....do.....	....do.....		22.1

Savannah River basin

Nov. 5	Cane Creek.....	Little River.....	At bridge on county road, 3 miles southeast of West Union, S. C., 2.6 miles downstream from Little King Creek.	35	25.8
Aug. 3	....do.....	....do.....	....do.....		19.9
Sept.17	....do.....	....do.....	....do.....		13.3
Aug. 13	Town Creek.....	Twelvemile Creek..	At bridge on State Highway 183, at Pickens, S. C.	12.4	4.16
Sept. 9	....do.....	....do.....	....do.....		4.63
May 25	Rice Creek.....	....do.....	At bridge on county road, near Liberty, S. C., 1.1 miles above mouth.	-	13.1
Aug. 5	....do.....	....do.....	....do.....		7.42
Sept. 9	....do.....	....do.....	....do.....		3.88
May 25	Golden Creek.....	....do.....	At bridge on State Road 158, near Liberty, S. C., 2½ miles above mouth.	-	10.2
Aug. 5	....do.....	....do.....	....do.....		3.94
Sept. 9	....do.....	....do.....	....do.....		2.92
Nov. 6	Seneca River.....	Savannah River....	At bridge on U. S. Highway 123, at Clemson, S. C.	-	458
Sept. 1	....do.....	....do.....	....do.....		284
1	Coneross Creek....	Seneca River.....	At bridge on U. S. Highway 76, at Richland, S. C.	40.6	20.2
May 25	Eighteenmile Creek	....do.....	At bridge on U. S. Highway 178, 1 mile southeast of Liberty, S. C., 19.5 miles above mouth.	20.6	9.68
Sept.17	....do.....	....do.....	....do.....		4.71
17	Three and Twenty Creek.	Deep Creek.....	At bridge on State Highway 88, near Liberty, S. C., 1¼ miles downstream from Pickens Creek.	-	7.00
Nov. 4	Dye Branch.....	Whitner Creek.....	At Whitner St., Anderson, S. C., 700 ft above mouth.	-	.29
20	....do.....	....do.....	....do.....		.39

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Savannah River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Dec. 4	Dye Branch.....	Whitner Creek.....	At Whitner St., Anderson, S. C., 700 ft above mouth.	-	0.98
Nov. 4	Whitner Creek.....	Big Generostee Creek.	0.03 mile above mouth, near Anderson, S. C.	-	5.42
20	....do.....	....do.....	....do.....		4.94
Dec. 4	....do.....	....do.....	....do.....		34.6
Nov. 5	Big Generostee Creek.	Savannah River....	300 ft above mouth, near Starr, S. C.	83	31.9
Sept. 1	....do.....	....do.....	....do.....		17.9
Oct. 30	Rocky River.....	....do.....	At bridge on U. S. Highway 76, at Anderson, S. C., 0.7 mile downstream from Cox Creek.	-	15.7
Nov. 6	....do.....	....do.....	....do.....		16.7
Oct. 30	Cemetery Creek....	Rocky River.....	At Anderson, S. C., 300 ft upstream from Belton St. and 1.1 miles above Piedmont and Northern RR.	-	.09
Nov. 6	....do.....	....do.....	....do.....		.12
30	....do.....	....do.....	....do.....		.10
Jan. 7	Betsey Branch.....	Beaver Creek.....	At culvert on county road, near Anderson, S. C., 0.8 mile above mouth.	-	.61
Apr. 14	North Fork Broad River.	Broad River.....	Lat 34°31', long. 83°22', at State Highway, 13, 3 miles southwest of Toccoa, Ga.	7.71	15.6
June 1	....do.....	....do.....	....do.....		16.0
14	....do.....	....do.....	....do.....		53.0
Apr. 14	....do.....	....do.....	Lat 34°30', long. 83°18', at county road, 5½ miles south of Toccoa, Ga.	24.7	42.8
15	....do.....	....do.....	Lat 34°28', long. 83°14', at county road, 5¼ miles west of Martin, Ga.	34.7	63.5
15	....do.....	....do.....	Lat 34°27', long. 83°17', at county road, 2½ miles southwest of Martin, Ga.	56.3	84.8
14	Broad River.....	Savannah River....	Lat 34°04', long. 83°00' at State Highway 72, 2¾ miles northeast of Carlton, Ga.	760	995
May 5	....do.....	....do.....	....do.....		710
June 14	....do.....	....do.....	....do.....		453
July 20	....do.....	....do.....	....do.....		312
Sept. 3	....do.....	....do.....	....do.....		179
29	....do.....	....do.....	....do.....		112
22	Calhoun Creek.....	Little River.....	At bridge on State Highway 28, near Abbeville, S. C., 0.5 mile upstream from Reid Creek.	-	0
Aug. 16	White Creek.....	Calhoun Creek.....	At bridge on State Highway 823, near Mount Carmel, S. C., 0.15 mile upstream from Bowie Branch.	-	0
6	Long Cane Creek...	Little River.....	At bridge on State Highway 72, near Abbeville, S. C., 3 miles above McCord Creek.	68.6	4.45
Sept. 10	....do.....	....do.....	....do.....		3.61
23	....do.....	....do.....	....do.....		1.74
15	Hard Labor Creek..	Stevens Creek.....	At bridge on U. S. Highway 378, near McCormick, S. C., 1¾ miles above Cuffytown Creek.	-	.21
Aug. 28	Cuffytown Creek...	Hard Labor Creek..	At bridge on U. S. Highway 25, near Kirksey, S. C., 3.1 miles above Horsepen Creek.	-	0
Sept. 13	....do.....	....do.....	At bridge on U. S. Highway 378, near McCormick, S. C., 3½ miles above Hard Labor Creek.	-	0
13	Rocky Creek.....	Stevens Creek.....	At bridge on U. S. Highway 378, near McCormick, S. C., 3.5 miles above mouth.	-	0
13	Mountain Creek....	Turkey Creek.....	At bridge on U. S. Highway 378, near Pleasant Lane, S. C., 3.3 miles above mouth.	-	0
Nov. 4	Little Horse Creek.	Horse Creek.....	At bridge on county road, near Vaucluse, S. C., 0.8 mile above mouth.	10.5	11.3
4	....do.....	....do.....	At bridge on State Road 2-67, near Clearwater, S. C., 1¼ miles above mouth.	41	25.8
5	Holley Creek.....	Savannah River....	At bridge on State Highway 125, near Kathwood, S. C., 1 mile below Town Creek.	87	63.4
July 20	McBean Creek.....	....do.....	Lat 33°14', long. 81°57', at State Highway 56, at McBean, Ga.	70	40.9
20	Beaverdam Creek...	....do.....	Lat 33°08', long. 81°44', at county road, 6 miles north of Girard, Ga.	23.3	13.1
21	Brier Creek.....	....do.....	Lat 33°17', long. 82°18', at State Highway 4, 5½ miles east of Blythe, Ga.	171	16.6

Miscellaneous discharge measurements in the South Atlantic slope basins, James River to Savannah River, during water year October 1953 to September 1954--Continued

Savannah River basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
July 21	Brushy Creek.....	Brier Creek.....	Lat 33°14', long. 82°27', at State Highway 16, 2 miles northeast of Stapleton, Ga.	1.38	0
13	....do.....	....do.....	Lat 33°12', long. 82°24', at State Highway 4, 0.8 mile southwest of Wrens, Ga.	9.40	0
21	....do.....	....do.....	....do.....		3.10
21	....do.....	....do.....	Lat 33°11', long. 82°16', at Middle Ground Road, 3½ miles southeast of Matthews, Ga.	40.7	15.2
20	Brier Creek.....	Savannah River....	Lat 33°07', long. 81°58', at State Highway 56, 3¾ miles northwest of Waynesboro, Ga.	473	310
20	McIntosh Creek....	Brier Creek.....	Lat 33°05', long. 82°01', at State Highway 21, 0.7 mile southwest of Waynesboro, Ga.	6.80	.873
30	Brier Creek.....	Savannah River....	Lat 32°52', long. 81°37', at State Highway 73, 3 miles southeast of Hilltonia, Ga.	-	182
29	Beaverdam Creek...	Brier Creek.....	Lat 32°52', long. 81°40' at county road, 1¼ miles southwest of Hilltonia, Ga.	-	1.25
20	....do.....	....do.....	Lat 32°49', long. 81°38', at State Highway 24, 5 miles north of Sylvania, Ga.	-	13.1
29	....do.....	....do.....	Lat 32°50', long. 81°36', below outflow from Blue Springs, Screven County, Ga.	-	26.7
27	Black Creek.....	Savannah River....	Lat 32°13', long. 81°12', at State Highway 21, 11 miles north of Savannah, Ga.	-	0

The following table contains determinations of peak discharge made at crest stage by indirect methods at points other than regular gaging stations in the area covered by this report.

Miscellaneous determinations of peak discharge during water year October 1953 to September 1954

Date	Stream	Tributary to or diverting from--	Locality	Drainage area (sq mi)	Discharge (cfs)
Mar. 1	Calfpasture River.	Maury River.....	At bridge on U. S. Highway 250, 1.5 miles east of West Augusta, Va.	-	1,840
Jan. 22	Unnamed tributary.	Lee Swamp.....	Lat 35°38'20", long. 78°01' 38", at culvert on U. S. Highway 301, 1 mile west of Lucama, Wilson County, N. C.	2.62	236
Feb. 21	Sugar Creek.....	Pocket Creek.....	Lat 35°25', long. 79°15', at highway culvert, 2 miles southwest of Tramway, Lee County, N. C.	.85	327
July 7	....do.....	....do.....	....do.....		98.2
Feb. 21	Dunhams Creek	Crane Creek.....	Lat 35°19', long. 79°23', at highway culvert, 3½ miles southeast of Carthage, Moore County, N. C.	2.19	206

	Page
Abbotts Creek at Lexington, N. C.	174
Accuracy of field data and computed results	7
Acre-foot, definition of	2
Agencies other than the Geological Survey, records collected by	11
Ahoskie Creek at Ahoskie, N. C.	73
All Healing Springs, N. C., Lower Little River near	193-194
Altavista, Va., Otter River near	268
Roanoke River at	82
Anderson, S. C., Seneca River near	250
Anderson Branch at Sussex, Va.	63
Appomattox River, at Farmville, Va.	52
at Mattoax, Va.	54
near Petersburg, Va.	56
Arvonia, Va., Slate River near	12, 42
Ashley River basin, S. C., discharge measurements in	307
Augusta, Ga., Augusta Canal near	261
Savannah River at	262
Augusta Canal near Augusta, Ga.	261
Back Creek near Mountain Grove, Va.	14
Bahama, N. C., Dial Creek near	119
Flat River at	118
Flat River near	120-121
Banister River at Halifax, Va.	104
Bassett, Va., Smith River at	96
Battle Ground, N. C., Horsepen Creek at	138
Bear Creek at Robbins, N. C.	150
Bedford, Va., Otter River near	83
Bell, Ga., Broad River near	256
Benaja, N. C., Haw River near	137
Bent Creek, Va., James River at	34
Bessemer City, N. C., Long Creek near	198
Big Spring at Kerrs Creek, Va.	29
Big Springs at Elliston, Va.	73
Bishopville, S. C., Lynches River near	183
Black River (Cape Fear River basin) near Tomahawk, N. C.	157
Black River (Pee Dee River basin), at Kingstree, S. C.	190
near Gable, S. C.	189
Blackwater River (Chowan River basin), at Zuni, Va.	67
near Dendron, Va.	66
near Franklin, Va.	68
Blackwater River (Roanoke River basin) near Union Hall, Va.	78
Boardman, N. C., Lumber River at	187
Boiling Springs, N. C., Broad River near	207
Bolar Spring at Bolar, Va.	13
Branch, N. C., Linville River at	192
Branchville, S. C., Edisto River near	241
Brier Creek at Millhaven, Ga.	264
Brink, Va., Fontaine Creek near	72
Broad River (Santee River basin), at Richtex, S. C.	223
near Boiling Springs, N. C.	207
near Carlisle, S. C.	204
near Chimney Rock, N. C.	204
near Gaffney, S. C.	209
Broad River (Savannah River basin), near Bell, Ga.	256
North Fork, near Carnesville, Ga.	255
Brookneal, Va., Roanoke River at	85
Brown Creek near Polkton, N. C.	178
Buchanan, Va., James River at	25
Karnes Spring near	26
Buena Vista, Va., Maury River near	31
Buffalo Creek near Hampden Sydney, Va.	53
Buffalo River near Norwood, Va.	37
Buggs Island, Va., Roanoke River at	106
Burlington, N. C., Stony Creek near	142
Calfpasture River above Mill Creek, at Goshen, Va.	26
Calfpasture River at Goshen, Va.	267
Calhoun Falls, S. C., Rocky River near	252
Savannah River near	254
Camden, S. C., Wateree River near	203
Cape Fear River, at Lillington, N. C.	152
at lock 3, near Tarheel, N. C.	155
Cape Fear River basin, N. C., discharge measurements in	288-298
gaging-station records in	137-160
Carlisle, S. C., Broad River near	214
Carnesville, Ga., North Fork Broad River near	255
Cartersville, Va., James River at	47
Cashie River basin, N. C., discharge measurements in	273
Catawba Creek near Catawba, Va.	23-24
Catawba River, at Catawba, N. C.	195
near Marion, N. C.	191
near Rock Hill, S. C.	200
South Fork, at Lowell, N. C.	199
Cfs-day, definition of	2
Chappells, S. C., Lake Greenwood near	229
Saluda River at	230
Charlotte, N. C., Little Sugar Creek near	201
Chattooga River near Clayton, Ga.	246
Cheraw, S. C., Juniper Creek near	181
Chickahominy River near Providence Forge, Va.	57
Chimney Rock, N. C., Broad River near	204
Chinquapin, N. C., Northeast Cape Fear River near	160
Chowan River basin, N. C.-Va., discharge measurements in	273
gaging-station records in	60-73
Clark Hill Reservoir near Clarks Hill, S. C.	259
Clayton, Ga., Chattooga River near	246
Clayton, N. C., Middle Creek near	125
Neuse River near	12, 124
Cleveland, N. C., Third Creek at	173
Cliffside, N. C., Second Broad River at	206
Clifton, S. C., Pacolet River near	213
Clifton Forge, Va., Cowpasture River near	19
Smith Creek near	18, 266
Clyo, Ga., Savannah River near	265
Colly Creek near Kelly, N. C.	159
Columbia, S. C., Lake Murray near	232
Saluda River near	233
Combahee River near Yemassee, S. C.	244
Combahee River basin, S. C., discharge measurements in	307
gaging-station records in	243-244
Contentnea Creek, at Hookerton, N. C.	130-133
near Wilson, N. C.	129
Contents, definition of	2
Control, definition of	2
Cooleemee, N. C., South Yadkin River at	172
Cooperation, record of	1
Coosawhatchie River near Hampton, S. C.	245
Copeland, N. C., Fisher River near	166
Covington, Va., Dunlap Creek near	16
Potts Creek near	17
Cowpasture River near Clifton Forge, Va.	19
Craig Creek at Parr, Va.	22
Cub Creek at Phenix, Va.	87
Cubic feet per second per square mile, definition of	2
Cubic foot per second, definition of	2
Cypress Chapel, Va., Cypress Swamp at	58
Cypress Swamp at Cypress Chapel, Va.	58
Dan River, at Danville, Va.	100
at Paces, Va.	101
near Francisco, N. C.	90
near Wentworth, N. C.	93
Danville, Va., Dan River at	100
Sandy River near	99

	Page
Data, accuracy of	7-8
explanation of	3-7
Deep Creek near Mannboro, Va.	55
Deep River, at Moncure, N. C.	151
at Ramseur, N. C.	149
East Fork, near High Point, N. C.	147
near Randleman, N. C.	148
West Fork, near High Point, N. C.	146
Dendron, Va., Blackwater River near	66
Denmark, S. C., South Fork Edisto River near	239
Denniston, Va., Hyco River near	105
Dewy Rose, Ga., South Beaverdam Creek at	253
Dial Creek near Bahama, N. C.	119
Dillon, S. C., Little Pee Dee River near	185
Dinwiddie, Va., Stony Creek near	62
Dismal Swamp, Va., Lake Drummond in	59
Dismal Swamp basin, Va., discharge measurements in	58-59
Drainage area, definition of	3
Drewrys Bluff, Va., Falling Creek near	51
Drowning Creek near Hoffman, N. C.	186
Dunlap Creek near Covington, Va.	16
Earlysville, Va., South Fork Rivanna River near	44
Edisto River, near Branchville, S. C.	241
near Givhans, S. C.	242
North Fork at Orangeburg, S. C.	240
South Fork near Denmark, S. C.	239
near Montmorenci, S. C.	239
Edisto River basin, S. C., discharge measurements in	307
gaging-station records in	239-242
Effingham, S. C., Lynches River at	12, 184
Eldorado, N. C., Uwharrie River near	176
Elliston, Va., Big Springs at	73
Emporia, Va., Meherrin River at	71
Enfield, N. C., Fishing Creek near	112-113
Eno River at Hillsboro, N. C.	116-117
Enoree River near Enoree, S. C.	222
Evington, Va., Otter River near	84
Fairforest Creek near Union, S. C.	221
Fairmont, S. C., North Tyger River near	215
Falling Creek near Drewrys Bluff, Va.	51
Falling River near Naruna, Va.	86
Falling Spring, Va., Jackson River at	15
Farmville, Va., Appomattox River at	52
Fine Creek at Fine Creek Mills, Va.	48
Fingerville, S. C., North Pacolet River at	210
Pacolet River near	212
South Pacolet River Reservoir near	211
First Broad River near Lawndale, N. C.	208
Fisher River near Copeland, N. C.	166
Fishing Creek near Enfield, N. C.	112-113
Flanagan Mills, Va., Willis River at	46
Flat River, at Bahama, N. C.	118
at dam, near Bahama, N. C.	120-121
Floods, special reports on	11
Fontaine Creek near Brink, Va.	72
Forbush Creek near Yadkinville, N. C.	167
Francisco, N. C., Dan River near	90
Franklin, Va., Blackwater River near	68
Freeland, N. C., Waccamaw River at	161
Gable, S. C., Black River near	189
Gaffney, S. C., Broad River near	209
Galivants Ferry, S. C., Little Pee Dee River at	188
Georges Creek near Gretna, Va.	102-103
Gibsonville, N. C., Reedy Fork near	139
Givhans, S. C., Edisto River near	242
Goldsboro, N. C., Neuse River near	127
Goose Creek near Huddleston, Va.	81
Goshen, Va., Calfpasture River at	26, 267
Great Falls, S. C., Rocky Creek at	202
Green River near Mill Spring, N. C.	205
Greenfield, Va., Rockfish River near	38
Greensboro, N. C., North Buffalo Creek near	141
South Buffalo Creek near	140
Greenville, S. C., Reedy River near	227
Saluda River near	224
Gretna, Va., Georges Creek near	102-103
Gum Branch, N. C., New River near	136
Halifax, Va., Banister River at	104
Hampden Sydney, Va., Buffalo Creek near	53
Hampton, S. C., Coosawhatchie River near	245
Hardware River below Briery Run, near Scottsville, Va.	40-41
Harmony, N. C., Hunting Creek near	171
Hartwell, Ga., Tugaloo River near	248
Haw River, at Haw River, N. C.	143
near Benaja, N. C.	137
near Pittsboro, N. C.	144
Henry Fork near Henry River, N. C.	196
Henry River, N. C., Henry Fork near	196
Herring Run near Washington, N. C.	115
High Point, N. C., East Fork Deep River near	147
West Fork Deep River near	146
High Rock, N. C., Yadkin River at	175
Hillsboro, N. C., Eno River at	116-117
Hoffman, N. C., Drowning Creek near	186
Holcombs Rock, Va., James River at	38
Hookerton, N. C., Contentnea Creek at	130-133
Hope Mills, N. C., Rockfish Creek near	154
Horsepen Creek at Battle Ground, N. C.	138
Huddleston, Va., Goose Creek near	81
Hunting Creek near Harmony, N. C.	171
Hyco River near Denniston, Va.	105
Hydrologic conditions	11
diagram of	12
Indian Creek near Laboratory, N. C.	197
Iva, S. C., Savannah River near	251
Jackson River at Falling Spring, Va.	15
James River, at Bent Creek, Va.	34
at Buchanan, Va.	25
at Cartersville, Va.	47
at Holcombs Rock, Va.	33
at Lick Run, Va.	20
at Scottsville, Va.	4, 39
near Richmond, Va.	50
James River & Kanawha Canal near Richmond, Va.	49
James River basin, Va., discharge measurements in	269-272
gaging-station records in	13-57
Johns Creek at Newcastle, Va.	21
Juniper Creek near Cheraw, S. C.	181
Karnes Spring near Buchanan, Va.	26
Kelly, N. C., Colly Creek near	159
Keowee River near Newry, S. C.	249
Kerrs Creek, Va., Big Spring at	29
Kerrs Creek near Lexington, Va.	28
Kingstree, S. C., Black River at	190
Kinston, N. C., Neuse River at	128
Laboratory, N. C., Indian Creek near	197
Lafayette, Va., Roanoke River at	74-75
Lake Drummond in Dismal Swamp, Va.	59
Lake Greenwood near Chappels, S. C.	229
Lake Marion near Pineville, S. C.	235
Lake Moultrie near Pinopolis, S. C.	237
Lake Murray near Columbia, S. C.	232
Lakes Marion-Moultrie diversion canal near Pineville, S. C.	234
Lawndale, N. C., First Broad River near	208
Lawrenceville, Va., Meherrin River near	70
Lexington, N. C., Abbotts Creek at	174
Lexington, Va., Kerrs Creek near	28
Maury River near	29
Lick Run, Va., James River at	20
Lillington, N. C., Cape Fear River at	152
Linden, N. C., Little River at	153
Linville River at Branch, N. C.	192
Little Coharie Creek near Roseboro, N. C.	156
Little Pee Dee River, at Galivants Ferry, S. C.	188
near Dillon, S. C.	185
Little River (Cape Fear River basin) at Linden, N. C.	153
Little River (Neuse River basin) near Princeton, N. C.	126
Little River (Pee Dee River basin) near Star, N. C.	179
Little River (Savannah River basin), near Mount Carmel, S. C.	257
near Washington, Ga.	258
Little Sugar Creek near Charlotte, N. C.	201
Lockwoods Folly basin, N. C., discharge measurements in	298

Page

Long Creek near Bessemer City, N. C... 198
Longs, S. C., Waccamaw River near..... 162
Lovingston, Va., Tye River near..... 35
Lowell, N. C., South Fork Catawba River at..... 199
Lower Little River near All Healing Springs, N. C.....193-194
Lumber River at Boardman, N. C..... 187
Lunenburg, Va., North Meherrin River near..... 69
Lyman, S. C., Middle Tyger River at... 216
Lynches River, at Effingham, S. C....12, 184
near Bishopville, S. C..... 183

McDowell, Va., Stuart Spring near..... 20
Mannboro, Va., Deep Creek near..... 55
Map of the United States..... 9
Marion, N. C., Catawba River near..... 191
Martinsville, Va., Smith River at..... 97
Mattoax, Va., Appomattox River at..... 54
Maury River, at Rockbridge Baths, Va.. 27
near Buena Vista, Va..... 31
near Lexington, Va..... 29
Mayo River near Price, N. C..... 92
Meherrin River, at Emporia, Va..... 71
near Lawrenceville, Va..... 70
Middle Creek near Clayton, N. C..... 125
Middle Tyger River at Lyman, S. C..... 216
Miley, S. C., Salkehatchie River near.. 243
Mill Spring, N. C., Green River near.. 205
Millhaven, Ga., Brier Creek at..... 264
Savannah River near..... 263
Miscellaneous discharge measurements:
Ashley River basin..... 307
Cape Fear River basin.....288-298
Cashie River basin..... 273
Chowan River basin..... 273
Combahee River basin..... 307
Edisto River basin..... 307
James River basin.....269-272
Lockwoods Folly basin..... 298
Neuse River basin.....281-287
New River basin..... 288
Newport River basin.....287-288
Pamlico River basin.....278-281
Peak discharges..... 309
Pee Dee River basin.....298-303
Queen Creek basin..... 288
Roanoke River basin.....273-278
Santee River basin.....303-307
Savannah River basin.....307-309
Waccamaw River basin..... 298
Whiteoak River basin..... 288
Note.--Streams for which only miscellaneous measurements are available are not entered by name in this index. General entries covering such discharge measurements are made as usual under the names of the respective river basins.
Mocksville, N. C., South Yadkin River near..... 170
Modoc, S. C., Stevens Creek near..... 260
Moncure, N. C., Deep River at..... 151
Montmorenci, S. C., South Fork Edisto River near..... 238
Moore, S. C., North Tyger River near.. 217
Moormans River, North Fork, near Whitehall, Va..... 43
Mount Carmel, S. C., Little River near 257
Mountain Grove, Va., Back Creek near.. 14
Muddy Run Spring near Warm Springs, Va..... 13

Naruna, Va., Falling River near..... 86
Nashville, N. C., Sapony Creek near... 111
Tar River near..... 110
Neuse River, at Kinston, N. C..... 128
near Clayton, N. C.....12, 124
near Goldsboro, N. C..... 127
near Northside, N. C.....122-123
Neuse River basin, N. C., discharge measurements in.....281-287
gaging-station records in.....116-135
Newcastle, Va., Johns Creek at..... 21
New Hope River near Pittsboro, N. C... 145
New River near Gum Branch, N. C..... 136
New River basin, N. C., discharge measurements in..... 288
Newport River basin, N. C., discharge measurements in.....287-288

Page

Newry, S. C., Keowee River near..... 249
Niagara, Va., Roanoke River at..... 4, 77
North Buffalo Creek near Greensboro, N. C..... 141
North Mayo River near Spencer, Va..... 91
North Meherrin River near Lunenburg, Va..... 69
North Pacolet River at Fingerville, S. C..... 210
North Tyger River, near Fairmont, S. C. 215
near Moore, S. C..... 217
North Wilkesboro, N. C., Reddies River at..... 164
Northeast Cape Fear River near Chinquapin, N. C..... 160
Northside, N. C., Neuse River near....122-123
Norwood, N. C., Rocky River near..... 177
Norwood, Va., Buffalo River near..... 37
Nottoway River, near Rawlings, Va..... 60
near Sebrell, Va..... 64-65
near Stony Creek, Va..... 61

Orangeburg, S. C., North Fork Edisto River at..... 240
Order, downstream, of listing gaging stations..... 3
Otter River, near Altavista, Va..... 268
near Bedford, Va..... 83
near Evington, Va..... 84

Paces, Va., Dan River at..... 101
Pacolet River, near Clifton, S. C..... 213
near Fingerville, S. C..... 212
Palmyra, Va., Rivanna River at..... 45
Pamlico River basin, N. C., discharge measurements in.....278-281
gaging-station records in.....109-115
Panther Creek near Toccoa, Ga..... 247
Parkersburg, N. C., South River near... 158
Parr, Va., Craig Creek at..... 22
Patterson, N. C., Yadkin River at..... 163
Peak discharge, miscellaneous determinations of..... 309
Pedlar Mills, Va., Pedlar River near... 32
Pedlar River near Pedlar Mills, Va..... 32
Pee Dee River, at Peedee, S. C..... 182
near Rockingham, N. C..... 180
Pee Dee River basin, N. C.-S. C., discharge measurements in.....298-303
gaging-station records in.....163-190
Pelzer, S. C., Saluda River near..... 225
Petersburg, Va., Appomattox River near. 56
Phenix, Va., Cub Creek at..... 87
Philpott, Va., Smith River near..... 94-95
Pigg River near Toshes, Va..... 80
Pineville, S. C., Lake Marion near..... 235
Lakes Marion-Moultrie diversion canal near..... 234
Santee River near..... 236
Piney River at Piney River, Va..... 36
Pinopolis, S. C., Lake Moultrie near... 237
Pittsboro, N. C., Haw River near..... 144
New Hope River near..... 145
Polkton, N. C., Brown Creek near..... 178
Potts Creek near Covington, Va..... 17
Price, N. C., Mayo River near..... 92
Princeton, N. C., Little River near.... 126
Providence Forge, Va., Chickahominy River near..... 57
Publications, on streamflow by Geological Survey..... 8-11
by State agencies..... 11

Queen Creek basin, N. C., discharge measurements in..... 288

Ramseur, N. C., Deep River at..... 149
Randleman, N. C., Deep River near..... 148
Randolph, Va., Roanoke River at..... 88
Rawlings, Va., Nottoway River near..... 60
Reddies River at North Wilkesboro, N. C..... 164
Reedy Fork near Gibsonville, N. C..... 139
Reedy River, near Greenville, S. C..... 227
near Ware Shoals, S. C..... 228
Reidville, S. C., South Tyger River near..... 218
Richmond, Va., James River & Kanawha Canal near..... 49
James River near..... 50
Richtex, S. C., Broad River at..... 223

	Page
Rivanna River, at Palmyra, Va.	45
South Fork, near Earlysville, Va.	44
Riverside, Va., South River near	30
Roanoke Creek at Saxe, Va.	89
Roanoke Rapids, N. C., Roanoke River at	107
Roanoke River, at Altavista, Va.	82
at Brookneal, Va.	85
at Buggs Island, Va.	106
at Lafayette, Va.	74-75
at Niagara, Va.	4, 77
at Randolph, Va.	88
at Roanoke, Va.	76
at Roanoke Rapids, N. C.	107
near Scotland Neck, N. C.	108
near Toshes, Va.	79
Roanoke River basin, N. C.-Va., discharge measurements in	273-278
gaging-station records in	73-108
Robbins, N. C., Bear Creek at	150
Rock Hill, S. C., Catawba River near	200
Rockbridge Baths, Va., Maury River at	27
Rockfish Creek near Hope Mills, N. C.	154
Rockfish River near Greenfield, Va.	38
Rockingham, N. C., Pee Dee River near	180
Rocky Creek at Great Falls, S. C.	202
Rocky River (Pee Dee River basin), at Turnersburg, N. C.	169
near Norwood, N. C.	177
Rocky River (Savannah River basin) near Calhoun Falls, S. C.	252
Roseboro, N. C., Little Coharie Creek near	156
Runoff in inches, definition of	2
Salkehatchie River near Miley, S. C.	243
Saluda River, at Chappels, S. C.	230
near Columbia, S. C.	233
near Greenville, S. C.	224
near Pelzer, S. C.	225
near Silverstreet, S. C.	231
near Ware Shoals, S. C.	226
Sandy River near Danville, Va.	99
Santee River near Pineville, S. C.	236
Santee River basin, N. C.-S. C., discharge measurements in	303-307
gaging-station records in	191-236
Sapony Creek near Nashville, N. C.	111
Savannah River, at Augusta, Ga.	262
at Burtons Ferry Bridge, near Millhaven, Ga.	263
near Calhoun Falls, S. C.	254
near Clyo, Ga.	265
near Iva, S. C.	251
Savannah River basin, Ga.-S. C., discharge measurements in	307-309
gaging-station records in	246-265
Saxe, Va., Roanoke Creek at	89
Scotland Neck, N. C., Roanoke River near	108
Scottsville, Va., Hardware River below James River at	40-41, 4, 39
Sebrell, Va., Nottoway River near	64-65
Second Broad River at Cliffside, N. C.	206
Seneca River near Anderson, S. C.	250
Silverstreet, S. C., Saluda River near	231
Slate River near Arvonia, Va.	18, 42
Smith Creek, above old dam, near Clifton Forge, Va.	18
near Clifton Forge, Va.	266
Smith River, at Bassett, Va.	96
at Martinsville, Va.	97
at Spray, N. C.	98
near Philpott, Va.	94-95
South Beaverdam Creek at Dewy Rose, Ga.	253
South Buffalo Creek near Greensboro, N. C.	140
South Pacolet River Reservoir near Fingerville, S. C.	211
South River (Cape Fear River basin) near Parkersburg, N. C.	158
South River (James River basin) near Riverside, Va.	30
South Tyger River, near Reidville, S. C.	218
near Woodruff, S. C.	219
South Yadkin River, at Cooleemee, N. C.	172
near Mocksville, N. C.	170
Spencer, Va., North Mayo River near	91
Spray, N. C., Smith River at	98
Stage-discharge relation, definition of	2
Star, N. C., Little River near	179
Stevens Creek near Modoc, S. C.	260
Stony Creek, Va., Nottoway River near	61
Stony Creek (Cape Fear River basin) near Burlington, N. C.	142
Stony Creek (Chowan River basin) near Dinwiddie, Va.	62
Stuart Spring near McDowell, Va.	20
Sussex, Va., Anderson Branch at	63
Swift Creek near Vanceboro, N. C.	134
Tar River, at Tarboro, N. C.	114
near Nashville, N. C.	110
near Tar River, N. C.	109
Tarboro, N. C., Tar River at	114
Tarheel, N. C., Cape Fear River at lock 3, near	155
Terms and abbreviations, definition of	2
Third Creek at Cleveland, N. C.	173
Toccoa, Ga., Panther Creek near	247
Tomahawk, N. C., Black River near	157
Toshes, Va., Pigg River near	80
Roanoke River near	79
Trent River near Trenton, N. C.	135
Trenton, N. C., Trent River near	135
Tugaloo River near Hartwell, Ga.	248
Turnersburg, N. C., Rocky River at	169
Tye River near Lovingston, Va.	35
Tyger River near Woodruff, S. C.	220
Union, S. C., Fairforest Creek near	221
Union Hall, Va., Blackwater River near	78
Uwharrie River near Eldorado, N. C.	176
Vanceboro, N. C., Swift Creek near	134
Waccamaw River, at Freeland, N. C.	161
near Longs, S. C.	162
Waccamaw River basin, N. C.-S. C., gaging-station records in	161-162
Ware Shoals, S. C., Reedy River near	228
Saluda River near	226
Warm Springs, Va., Muddy Run Spring near	13
Washington, Ga., Little River near	258
Washington, N. C., Herring Run near	115
Wateree River near Camden, S. C.	203
Wentworth, N. C., Dan River near	93
Whitehall, Va., North Fork Moormans River near	43
Whiteoak River basin, N. C., discharge measurements in	288
Wilkesboro, N. C., Yadkin River at	165
Willis River at Flanagan Mills, Va.	46
Wilson, N. C., Contentnea Creek near	129
Woodruff, S. C., South Tyger River near Tyger River near	219, 220
Work, division of	2
scope of	1
WSP, definition of	3
Yadkin College, N. C., Yadkin River at	168
Yadkin River, at High Rock, N. C.	175
at Patterson, N. C.	163
at Wilkesboro, N. C.	165
at Yadkin College, N. C.	168
Yadkinville, N. C., Forbush Creek near	167
Yemassee, S. C., Combahee River near	244
Zuni, Va., Blackwater River at	67

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