UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

SURFACE WATER SUPPLY

OF EASTERN AND CENTRAL NORTH CAROLINA

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Division of Water Resources, Inlets and Coastal Waterways,
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INTRODUCTION

None of the many factors that influence the economic growth of eastern and central North Carolina plays a more important role than water. Adequate water supply for municipal, rural domestic, industrial, and agricultural uses, is a basic need of any region.

Purpose and Scope

This report summarizes part of the information on surface waters obtained at stream-gaging stations in the general area of the Piedmont and Coastal Plain of North Carolina. This information will be useful in planning the development, control, and utilization of surface water.

The present and potential users of surface waters require ample supplies of suitable quality. The increases in population, number of water-using household appliances, irrigation, and industrial activity have caused an upsurge in water requirements. Information on the availability of surface waters is essential in appraising the supplies and their adequacy to meet requirements.

This report presents streamflow information for an area of North Carolina east of the Blue Ridge Mountains and that of New River, which is the headwaters of the Kanawha River. This area is in the Coastal Plain, the Piedmont province, and a part of the Blue Ridge province.

Information is presented herein for 88 of the stream-gaging stations that the Geological Survey was operating in the area as of September 30, 1955. Records began as early as 1896 on Roanoke River at Neal, Tar River at Tarboro, and Catawba River at Catawba. Since that time, many additional stream-gaging stations have been added.

Acknowledgments

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directed by Edward B. Rice, District Engineer. The North Carolina Department of Conservation and Development is under the administration of W. P. Saunders, Director, with B. C. Snow, Chief Engineer of Division of Water Resources, Inlets and Coastal Waterways.

The streamflow data summarized in this report were collected by the U. S. Geological Survey in cooperation with the North Carolina Department of Conservation and Development, the Corps of Engineers, Department of the Army, and the cities of Burlington, Durham and Gastonia.

Definition of Terms

The streamflow terms 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.

Million gallons is used to express an actual quantity of water. As an absolute quantity, it is used in the measurement of storage capacities of reservoirs.

Million gallons a day (mgd) indicates a rate of flow, 1,000,000 gallons being taken as the unit of quantity and 24 hours as the unit of time.

Convenient equivalents for the above rates of discharge are:

1 cfs = 0.646 mgd
1 mgd = 1.55 cfs

In the table of contents, gaging-station records are listed in downstream order. Each indention in the listing represents one rank in the system of tributaries to the main stem. This downstream order and method of indention show which gaging stations are on tributaries entering between any two stations on a main stem, and the rank of the tributary on which each gaging station is situated.

Explanation of Data

A stream-gaging station is a site where a record of stage (gage height) of the stream is obtained, measurements of flow are made, and for which daily discharge is computed. Records of stage at stream-gaging stations are obtained from a water-stage recorder, which produces a continuous record, or from direct readings of a nonrecording gage. Measurements of flow at stream-gaging stations are made with a current meter by methods described in Water-Supply Paper 888 of the Geological Survey. Records of daily discharge at stream-gaging stations are published annually by water years (October 1 to September 30) as Water-Supply Papers of the Geological Survey in the series entitled "Surface Water

Supply of the United States."

The data presented for each gaging station in this report generally consist of a description of the station, a flow summary, and remarks. The description of each station gives the location, gage datum, drainage area, and records available. The "Records available" paragraph gives the periods for which records of the site, or records equivalent to those at the present site have been published.

The flow summary presents data for the period that records are available, except in those instances where records are fragmentary or are otherwise not suitable for this report. Rate of flow is expressed in terms generally used in local practices. For example, flood flows are expressed in cubic feet per second whereas municipal water requirements are generally given in million gallons a day.

The "Remarks" paragraph for each gaging station gives information on conditions that affect the natural flow at the gaging station.

QUANTITY OF WATER AVAILABLE

Average discharge is one of the most important single indications of available flow in that it represents the upper limit of streamflow development. In the flow summary for each station, average discharge is given for the number of years indicated. Although the large streams have the highest average discharge, streams adjacent to the boundary between the Piedmont and Blue Ridge provinces have the highest average discharge per square mile (more than 2.0 cfs per square mile). The lowest average discharge per square mile (about 0.7 cfs per square mile) is found in the smaller streams near Wadesboro and some coastal areas.

Flood discharges and stages are of interest to all users of a stream and its adjacent lands. In the flow summaries, only the maximum instantaneous discharge during the period of record, and occasionally the discharge for a second outstanding flood, are shown. For detailed information on floods the reader is referred to the report "Floods in North Carolina, Magnitude and Frequency" by H. C. Riggs.

The minimum flows of an unregulated stream observed during the period of record are an indication of the minimum sustained yields that may be expected under similar drought conditions in the future, provided flow is not diverted and used upstream. The table of minimum discharge presented for each gaging station shows the average discharge for the number of consecutive days or months indicated. The minimum flow for 1 day will be of interest on some streams, but the 7-day flow would be a more suitable criterion on a stream subject to slight fluctuations as might be caused by the operation of a mill. Information for longer periods of minimum flows might be required by planners when considering streams subject to greater amounts of regulation and where more storage is to be provided.

The table showing duration of daily flows reveals the extent of the variation in runoff at each gaging station. This table shows the percentage of time during which indicated flows were equaled or exceeded during the period of record. The data presented herein were taken from flow-duration curves. For most stations the discharges tabulated in the duration table range from near the minimum flow to the average discharge. The range of discharges is an indication of the natural storage in a basin. At stations where the range in discharge is manyfold the yields are not well-sustained. At stations where the highest discharge shown is only a few times the lowest discharge, the low flows are rather well-sustained. In the area covered by this report, stations in western Piedmont and Blue Ridge provinces generally show the smaller range in flow and the better sustained base flows.

During dry periods streamflow may be inadequate to meet the minimum requirements for many uses without the aid of a storage reservoir. Storage of streamflow is often provided for municipal and industrial water supplies, power generation, irrigation, flood control, and other uses. The amount of storage that would have been required to maintain the indicated flows during the period of record as shown for each stream-gaging station was taken from draft-storage curves. The table shows the additional net storage that would have been required to maintain specific minimum outflow rates during the period of record. No allowance was made for quantities of water necessary to provide for dead storage, evaporation, and leakage. During dry periods much of the available low flow of many streams in the State, particularly of the smaller ones, is already utilized. On these streams an increase in usage at low flow cannot be obtained from the stream in its natural flow regimen. Thus, future planning of stream usage must carefully appraise the supply and provide operations to suit existing conditions, or must provide for supplementing low flows by the use of storage reservoirs.

CHOWAN RIVER BASIN

Ahoskie Creek at Ahoskie

Station No. 1

Location.—Lat 36°17', long. 77°00', at 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. Altitude of gage is 22 ft.

Drainage area.—64.3 sq mi.

Records available.—January 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years), 48.7 cfs.
Maximum discharge, 1,420 cfs Sept. 22, 1955 (gage height, 8.77 ft).
Flood of August 1940 reached a stage of 11.1 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Aug. 11, 1950
7-day	0	Aug. 11-17, 1950
10-day	0	Aug. 11-20, 1950
20-day	0	Sept. 2-21, 1953
30-day	.02	June 28-July 27, 1954
60-day	.03	Sept. 6-Nov. 4, 1954
90-day	.16	Sept. 1-Nov. 29, 1954
120-day	.17	June 28-Oct. 25, 1954
183-day	.28	June 7-Dec. 6, 1954
12 month	12.4	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	42.0
30	20.0
50	5.8
70	.6
80	.09
86	.05

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.01	0.2
.025	.5
.05	1.9
.10	6.6
.30	33
.50	64
1.0	150
3.0	570
5.0	1,000
8.0	1,750

Dan River near Francisco

Station No. 2

Location.—Lat 36°30'54", long. 80°18'12", 200 ft upstream from bridge on State Highway 704, an eight of a mile downstream from Georges Mill, 3 miles east of Francisco, Stokes County, and 7.9 miles downstream from Little Dan River. Altitude of gage is 830 ft.

Drainage area.—124 sq mi.

Records available.—August 1924 to September 1955.

Flow summary.—1924-55:

Average discharge (31 years), 186 cfs.

Maximum discharge, 12,400 cfs Oct. 19, 1937 (gage height, 12.45 ft).

Flood of 1916 reached a stage about 3 ft higher than that of Oct. 19, 1937.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	30	Sept. 18, 1932
7-day	32.9	Aug. 31-Sept. 6, 1930
10-day	34.8	Sept. 13-22, 1932
20-day	39.2	Aug. 24-Sept. 12, 1930
30-day	42.6	Aug. 24-Sept. 22, 1932
60-day	47.2	Aug. 16-Oct. 14, 1930
90-day	50.0	July 17-Oct. 14, 1930
120-day	53.1	July 7-Nov. 3, 1930
183-day	67.1	June 6-Dec. 5, 1930
12-month	92.9	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	150
30	130
50	100
70	79
80	68
90	52
95	41
98	34
99	29
99.5	27
99.8	24
99.9	23

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
23	10
25	26
30	125
35	350
40	750
43	1,000
47	1,500
50	2,050
55	3,000
60	4,100

Mayo River near Price

Station No. 3

Location.—Lat 36°32'00", long. 79°59'30", 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. Datum of gage is 689.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—260 sq mi.

Records available.—July 1929 to September 1955.

Flow summary.—1929-55:

Average discharge (26 years), 321 cfs.

Maximum discharge, 30,000 cfs Oct. 19, 1937 (gage height, 14.00 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	35	Oct. 8, 1954
7-day	45.3	Sept. 13-19, 1954
10-day	47.3	Sept. 10-19, 1954
20-day	54.2	Sept. 25-Oct. 14, 1954
30-day	57.0	Sept. 10-Oct. 9, 1954
60-day	74.8	Aug. 16-Oct. 14, 1954
90-day	86.9	July 18-Oct. 15, 1930
120-day	90.8	July 7-Nov. 3, 1930
183-day	112	June 22-Dec. 21, 1930
12-month	165	April 1930 to March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	250
30	210
50	150
70	120
80	100
90	81
95	68
98	56
99	45
99.5	38
99.8	32
99.9	30

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
28	5
30	10
40	130
50	580
60	1,200
70	1,900
80	2,800
90	3,800
100	5,500
110	7,300

Remarks.—Slight infrequent diurnal fluctuations at low flow caused by small mills above station.

Dan River near Wentworth

Station No. 4

Location.—Lat 36°25', long. 79°50', 600 ft downstream from Settles Bridge, 3-1/2 miles northwest of Wentworth, Rockingham County, and 7-1/2 miles downstream from Mayo River. Altitude of gage is 518 ft.

Drainage area.—1,050 sq mi. (Approximately)

Records available.—November 1939 to September 1955.

Flow summary.—1939-55:
Average discharge (16 years), 1,161 cfs.
Maximum discharge, 56,800 cfs Sept. 18, 1945 (gage height, 27.78 ft). . :
Flood of 1908 reached a stage about 7 ft higher than that of Sept. 18, 1945.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	107	Oct. 2, 1954
7-day	126	Oct. 6-12, 1954
10-day	132	Oct. 5-14, 1954
20-day	140	Sept. 25-Oct. 14, 1954
30-day	147	Sept. 15-Oct. 14, 1954
60-day	230	Aug. 16-Oct. 14, 1954
90-day	268	Sept. 9-Dec. 6, 1953
120-day	292	Aug. 8-Dec. 5, 1953
183-day	394	July 12, 1953-Jan. 10, 1954
12-month	748	October 1953-September 1954

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	890
30	730
50	540
70	400
80	340
90	270
95	220
98	160
99	136
99.5	110
99.8	88
99.9	79

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
75	5
90	62
100	200
120	800
150	2,200
200	5,200
250	9,200
300	14,000
400	32,000
480	60,000

Remarks.—Slight diurnal fluctuations and regulation at low flow caused by power plants above station.

Smith River at Spray

Station No. 5

Location.—Lat 36°31'45", long. 79°46'10", 0.9 mile south of Virginia-North Carolina State line, 1 mile downstream from Stuart Creek, and 1 mile north of Spray, Rockingham County. Datum of gage is 539.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—538 sq mi.

Records available.—October 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 618 cfs, adjusted for storage since August 1950.

Maximum discharge, 45,600 cfs Aug. 15, 1940 (gage height, 19.28 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	66.0	Sept. 10, 1944
7-day	119	Sept. 5-11, 1944
10-day	126	Sept. 2-11, 1944
20-day	149	Aug. 24-Sept. 12, 1944
30-day	156	Aug. 14-Sept. 12, 1944
60-day	180	Sept. 17-Nov. 15, 1941
90-day	191	Sept. 6-Dec. 4, 1941
120-day	217	Aug. 7-Dec. 4, 1941
183-day	281	June 1-Nov. 30, 1953
12-month	371	October 1952-September 1953

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	460
30	380
50	290
70	220
80	190
90	150
95	130
98	110
99	94
99.5	84
99.8	70
99.9	62

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
45	2.5
50	7.0
60	18
70	27
80	40
90	72
100	190
150	2,600
200	9,000
240	16,000

Remarks.—Flow regulated since August 1950 by Philpott Reservoir (usable capacity, 145,200 acre-feet). Some additional regulation by powerplant at Martinsville, Va.

Roanoke River at Roanoke Rapids

Station No. 6

Location.—Lat 36°28', long. 77°38', 1-1/4 miles downstream from bridge on State Highway 48 at Roanoke Rapids Halifax County, 2-1/2 miles upstream from Chocyott Creek, and at mile 133.6. Datum of gage is 43.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—8,410 sq mi.

Records available.—December 1911 to September 1955.

Flow summary.—1911-55:

Average discharge (44 years), 8,364 cfs, adjusted for storage since August 1950.

Maximum discharge, 261,000 cfs Aug. 18, 1940 (gage height, 39.0 ft).

Flood of November 1877 reached a stage about 2 ft lower than that of August 1940.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	472	Sept. 21, 1932
7-day	521	Sept. 19-25, 1932
10-day	551	Sept. 17-26, 1932
20-day	765	Sept. 12-Oct. 1, 1932
30-day	887	Sept. 29-Oct. 28, 1930
60-day	979	Aug. [illegible]-Oct. 27, 1930
90-day	1,108	Aug. [illegible]-Oct. 30, 1930
120-day	1,305	July [illegible]-Nov. 4, 1930
183-day	1,790	June 28-Dec. 27, 1930
12-month	3,324	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd) 1931-49	Discharge (mgd) 1950-55
20	7,100	6,100
30	5,500	4,900
50	3,600	3,500
70	2,500	2,600
80	2,000	1,900
90	1,500	1,300
95	1,200	1,000
98	870	840
99	710	740
99.5	550	600
99.8	440	500
99.9	390	460

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons) 1931-49
370	400
390	600
450	1,100
560	2,000
660	4,000
700	7,000
800	15,000
1,000	28,000
2,000	150,000
3,000	420,000

Remarks.—Flow regulated since August 1950 by Phillpot Reservoir on Smith River (usable capacity, 145,200 acre-ft) and by John H. Kerr Reservoir (usable capacity, 2,324,000 acre-ft) and since June 1955 by Roanoke Rapids Reservoir (usable capacity 79,600 acre-ft).

Roanoke River near Scotland Neck

Station No. 7

Location.—Lat 36°12', long. 77°23', just upstream from bridge on U. S. Highway 258, 1 mile downstream from tributary on right, 3 miles downstream from Bridgers Creek, 5-3/4 miles north of Scotland Neck, Halifax County, and at mile 102.5. Datum of gage is 5.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—8,700 sq mi.

Records available.—July 1896 to May 1903, August 1940 to September 1955.

Flow summary.—1940-55:

Average discharge 1896-1902; 1940-55 (21 years) 8,862 cfs (adjusted for storage).

Maximum discharge, 260,000 cfs Aug. 19, 1940 (gage height, 41.98 ft).

Stage of known floods outside period of record: 1877 about 37.8 ft; March 1912, 36.8 ft; 1919, 34.9 ft; 1924, 32.9 ft.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	750	Nov. 10, 1952
7-day	853	Nov. 9-15, 1952
10-day	969	Nov. 7-16, 1952
20-day	1,160	Nov. 1-20, 1952
30-day	1,300	Oct. 22-Nov. 20, 1952
60-day	1,590	Sept. 18-Nov. 16, 1941
90-day	1,820	Sept. 10-Dec. 8, 1941
120-day	2,130	Aug. 10-Dec. 7, 1941
183-day	2,700	Aug. 10, 1941-Feb. 8, 1942
12-month	4,770	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	7,700
30	5,800
50	3,900
70	2,800
80	2,300
90	1,700
95	1,300
98	1,000
99	970
99.5	860
99.8	740
99.9	610

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
540	56
600	360
700	1,100
800	2,100
1,000	5,800
1,500	30,000
2,000	78,000
2,500	150,000
3,000	230,000
3,100	250,000

Remarks.—Flow regulated since August 1950 by Philpott and John H. Kerr Reservoirs (combined usable capacity of 2,469,500 acre feet), and since June 1955 by Roanoke Rapids Reservoir (usable capacity, 79,600 acre-ft).

Tar River near Tar River

Station No. 8

Location.—Lat 36°12', long. 78°34', 50 ft downstream from bridge on State Highway 96, 1-1/4 miles upstream from Fishing Creek, 2-1/2 miles east of town of Tar River, Granville County, and 8 miles south of Oxford. Datum of gage is 287.04 ft above mean sea level, datum of 1929.

Drainage area.—161 sq mi.

Records available.—November 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 154 cfs.
Maximum discharge, 13,100 cfs Aug. 18, 1955 (gage height, 18.07 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.10	Oct. 14, 1954
7-day	.15	Oct. 8-14, 1954
10-day	.17	Oct. 5-14, 1954
20-day	.23	Nov. 4-23, 1941
30-day	.28	Nov. 1-30, 1941
60-day	.38	Oct. 5-Dec. 3, 1941
90-day	.95	Sept. 27-Dec. 25, 1943
120-day	1.70	Aug. 7-Dec. 4, 1953
183-day	5.24	Aug. 8, 1941-Feb. 6, 1942
12-month	41.8	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	102
30	64
50	30
70	13
80	7.3
90	2.9
95	.81
98	.36
99	.24
99.5	.19
99.8	.14

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.20	1.2
.40	9.5
.50	16
1.0	52
2.0	140
5.0	510
10	1,300
15	2,200
20	3,200
27	4,600

Remarks.—Recent diversions by town of Oxford for municipal water supply amount to about 0.5 cfs.

Tar River near Nashville

Station No. 9

Location.—Lat 35°51'00", long. 77°55'50", 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. Datum of gage is 110.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—701 sq mi.

Records available.—October 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years), 747 cfs.
Maximum discharge, 16,900 cfs Dec. 3, 1934 (gage height, 20.8 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	11	Sept. 20, 1932
7-day	18.7	Sept. 17-23, 1932
10-day	18.3	Sept. 13-22, 1932
20-day	22.4	Sept. 9-28, 1932
30-day	23.0	Aug. 30-Sept. 28, 1932
60-day	36.4	Aug. 14-Oct. 12, 1932
90-day	51.9	July 11-Oct. 8, 1932
120-day	69.1	Sept. 15, 1933-Jan. 12, 1934
183-day	91.7	Aug. 13, 1933-Feb. 11, 1934
12-month	314	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	600
30	430
50	260
70	160
80	120
90	77
95	52
98	29
99	19
99.5	14
99.8	12
99.9	11

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
8.0	0.8
10	3.7
15	35
20	150
30	540
50	2,300
100	10,000
150	20,000
200	32,000

Remarks.—Considerable diurnal fluctuation and some regulation at low flow caused by small mills upstream.

Sapony Creek near Nashville

Station No. 10

Location.—Lat 35°53'05", long. 77°54'45", at highway bridge, 1 mile upstream from mouth and 6-1/2 miles southeast of Nashville, Nash County. Altitude of gage is 100 ft.

Drainage area.—64.8 sq mi.

Records available.—April 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years), 57.0 cfs.
Maximum discharge, 2,200 cfs Jan. 24, 1954 (gage height, 14.34 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.02	Sept. 3, 1954
7-day	.03	Sept. 2-8, 1954
10-day	.03	Aug. 31-Sept. 9, 1954
20-day	.04	Aug. 31-Sept. 19, 1954
30-day	.04	Aug. 31-Sept. 29, 1954
60-day	.04	Aug. 31-Oct. 29, 1954
90-day	.05	Aug. 19-Nov. 16, 1954
120-day	.19	July 24-Nov. 20, 1954
183-day	1.13	June 22-Dec. 21,1954
12-month	26.6	January-December 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	44
30	29
50	11
70	3.1
80	1.3
90	.24
95	.046
98	.034
99	.028

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.07	3.2
.10	6.0
.25	20
.50	46
1.0	110
2.5	340
5.0	790
10	1,800
15	3,000
17	3,500

Fishing Creek near Enfield

Station No. 11

Location.—Lat 36°09', long. 77°42', just 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, 4-3/4 miles downstream from Rocky Creek, and at mile 27.7. Datum of gage is 76.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—521 sq mi.

Records available.—October 1923 to September 1955.

Flow summary.—1923-55:

Average discharge (32 years), 496 cfs.

Maximum discharge, 12,600 cfs Dec. 2, 1934 and Aug. 18, 1940 (gage height, 17.72 ft).

Flood of Apr. 19, 1910 reached a stage of 20.1 ft at site 2,000 ft upstream, and flood of July 24, 1919 reached a stage of 19.6 ft (discharge, 20,300 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	10	Sept. 21, 1954
7-day	11.4	Oct. 16-22, 1933
10-day	11.8	Oct. 16-25, 1933
20-day	12.6	Oct. 11-30, 1933
30-day	13.5	Oct. 4-Nov. 2, 1933
60-day	18.2	Sept. 22-Nov. 20, 1933
90-day	25.7	Sept. 15-Dec. 13, 1933
120-day	32.3	Sept. 15, 1933-Jan. 12, 1934
183-day	45.7	Aug. 5, 1933-Feb. 3, 1934
12-month	194	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mdg)
20	400
30	290
50	180
70	110
80	75
90	44
95	32
98	19
99	12
99.5	10
99.8	8.8
99.9	8.3

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
8.0	3.8
10	33
12	100
15	230
20	500
30	1,300
50	3,900
70	7,600
100	15,000
130	25,000

Remarks.—Slight diurnal fluctuation and some regulation at low flow caused by mills upstream.

Tar River at Tarboro

Station No. 12

Location.—Lat 35°53'40", long. 77°32'00", at bridge on U. S. Highway 64 in Tarboro, Edgecombe County, 6-1/2 miles downstream from Fishing Creek. Datum of gage is 10.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—2,140 sq mi (approximately).

Records available.—July 1896 to December 1900, October 1931 to September 1955.

Flow summary.—1931-55:
Average discharge, 1896-1900; 1931-55 (28 years), 2,233 cfs.
Maximum discharge, 37,200 cfs Aug. 20, 1940 (gage height, 31.77 ft)
Maximum stage known 34.0 ft, July 27, 1919 (discharge 52,800 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	36	Oct. 17, 1933
7-day	40.1	Sept. 26-Oct. 2, 1932
10-day	42.4	Sept. 23-Oct. 2, 1932
20-day	48.9	Oct. 9-28, 1933
30-day	54.9	Oct. 3-Nov. 1, 1933
60-day	80.0	Sept. 23-Nov. 21, 1933
90-day	105	Sept. 18-Dec. 16, 1933
120-day	136	Sept. 18, 1933-Jan. 15, 1934
183-day	188	Aug. 14, 1933-Feb. 12, 1934
12 month	914	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,100
30	1,400
50	810
70	450
80	340
90	210
95	140
98	81
99	60
99.5	43
99.8	30
99.9	26

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
35	0
40	190
50	490
70	1,400
100	3,300
200	16,000
300	35,000
400	60,000
500	86,000
600	115,000

Remarks.—Some diurnal fluctuations at low flow caused by mills upstream. Recent diversions for municipal water supply averaged 2.3 cfs by town of Henderson, and 1 cfs by Town of Tarboro.

Herring Run near Washington

Station No. 13

Location.—Lat 35°34'03", long. 77°01'09", downstream from bridge on county road, one mile upstream from bridge on U. S. Highway 264, 1-1/4 miles upstream from mouth, and 2-3/4 miles northeast of Washington, Beaufort County. Altitude of gage is 2 ft.

Drainage area.—About 15 sq mi.

Records available.—January 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years), 6.49 cfs.
Maximum discharge, 548 cfs Sept. 19, 1955 (gage height, 14.77 ft).
Flood of 1946 reached a stage of 17 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.7	Nov. 18, 1950
7-day	.70	Nov. 12-18, 1954
10-day	.70	Nov. 22-Dec. 1, 1954
20-day	.72	Nov. 12-Dec. 1, 1954
30-day	.73	Nov. 6-Dec. 5, 1954
60-day	.82	Oct. 7-Dec. 5, 1954
90-day	.85	Sept. 7-Dec. 5, 1954
120-day	.87	Aug. 2-Dec. 31, 1954
183-day	.94	Aug. 3, 1954-Feb. 1, 1955
12 month	1.10	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	4.20
30	2.56
50	1.10
70	.69
80	.59
90	.55
95	.52
98	.49

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.50	1.0
.54	2.0
.56	3.0
.58	4.0
.60	5.5
.65	10
.68	11
.70	17
.75	27
.80	40

Remarks.—Natural runoff affected by ditches and canals above station.

Eno River at Hillsboro

Station No. 14

Location.—Lat 36°04', long. 79°06', 1,000 ft downstream from bridge on State Highway 86, at Hillsboro, Orange County, and 2 miles downstream from Seven-mile Creek. Datum of gage is 487.44 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—66.5 sq mi.

Records available.—November 1927 to September 1955 (fragmentary prior to April 1930)

Flow summary.—1928-55:
Average discharge 1930-55 (25 years), 63.7 cfs.
Maximum discharge, 11,000 cfs Sept. 18, 1945 (gage height, 20.01 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.1	Oct. 6, 1954
7-day	.10	Oct. 6-12, 1954
10-day	.11	Oct. 5-14, 1954
20-day	.24	Sept. 25-Oct. 14, 1954
30-day	.26	Sept. 15-Oct. 14, 1954
60-day	.60	Aug. 16-Oct. 14, 1954
90-day	1.06	Sept. 14-Dec. 12, 1941
120-day	1.82	Aug. 27-Dec. 24, 1941
183-day	2.99	Aug. 2, 1941-Jan. 31, 1942
12 month	18.1	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	45
30	32
50	18
70	10
80	7.1
90	3.6
95	2.3
98	1.1
99	.39
99.5	.24
99.8	.14
99.9	.12

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.6	18
.8	30
1.0	43
2.0	140
3.0	260
5.0	550
7.0	920
8.0	1,100
10	1,600
12	2,000

Remarks.—Recent diversion of about 0.25 cfs for Hillsboro water supply is partly returned as sewage upstream.

Flat River at Bahama

Station No. 15

Location.—Lat 36°11'00", long. 78°52'45", half a mile upstream from Lake Michie, 1-1/4 miles upstream from highway bridge, 1-1/4 miles north of Bahama, Durham County, and 1-1/2 miles upstream from Dial Creek. Altitude of gage is 356 ft.

Drainage area.—150 sq mi.

Records available.—July 1925 to September 1955.

Flow summary.—1925-55:
Average discharge (30 years), 143 cfs.
Maximum discharge, about 20,000 cfs July 26, 1938 (gage height not determined)
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.37	Sept. 27, 1932
7-day	.42	Sept. 22-28, 1932
10-day	.44	Sept. 19-28, 1932
20-day	.57	Sept. 10-29, 1932
30-day	.67	Oct. 25-Nov. 23, 1933
60-day	.82	Oct. 21-Dec. 19, 1933
90-day	1.21	Sept. 27-Dec. 25, 1933
120-day	1.89	Sept. 22, 1933-Jan. 19, 1934
183-day	5.95	Aug. 26, 1933-Feb. 24, 1934
12-month	30.6	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	93
30	61
50	34
70	16
80	11
90	4.4
95	2.3
98	.91
99	.56
99.5	.45
99.8	.35
99.82	.34

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1	27
2	110
3	220
5	480
7	800
10	1,300
13	1,900
15	2,400
20	3,500
30	6,000

Remarks.—Some diurnal fluctuation and infrequent regulation at low flow caused by small mill 5 miles upstream.

Dial Creek near Bahama

Station No. 16

Location.—Lat 36°10'35", long. 78°51'20", three-eights of a mile upstream from mouth and Lake Michie, and 1-1/2 miles northeast of Bahama, Durham County. Altitude of gage is 356 ft.

Drainage area.—4.9 sq mi.

Records available.—October 1925 to September 1955.

Flow summary.—1925-55:
Average discharge (30 years), 4.31 cfs.
Maximum gage height, 7.60 ft May 24, 1940 (discharge not determined).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	July 9, 1932
7-day	0	July 9-15, 1932
10-day	0	July 9-18, 1932
20-day	0	July 9-28, 1932
30-day	0	July 9-Aug. 7, 1932
60-day	0	July 9-Sept. 6, 1932
90-day	.0003	July 7-Oct. 4, 1932
120-day	.06	June 7-Oct. 4, 1932
183-day	.19	May 26-Nov. 25, 1926
12-month	1.17	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	3.1
30	2.2
50	1.2
70	.65
80	.37
90	.12
95	.016

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.02	1.8
.05	4.6
.10	9.2
.20	19
.30	34
.40	50
.50	70
.60	88
.70	110
.80	130

Neuse River near Northside

Station No. 17

Location.—Lat 36°02'07", long. 78°44'59", just upstream from Fish Dam bridge, 1-1/2 miles downstream from Rocky Creek, and 2-1/2 miles downstream from Seaboard Airline Railway bridge, and 2-1/2 miles south of Northside, Granville County. Datum of gage 226.32 ft above mean sea level.

Drainage area.—526 sq mi.

Records available.—July 1927 to September 1955.

Flow summary.—1927-55:

Average discharge (28 years), 530 cfs.

Maximum discharge, 36,600 cfs Sept. 18, 1945; (maximum gage height, 31.02 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	3.1	Sept. 20, 1932
7-day	3.70	Sept. 18-24, 1932
10-day	3.83	Sept. 13-22, 1932
20-day	4.86	Sept. 6-25, 1932
30-day	6.82	Sept. 6-Oct. 5, 1932
60-day	8.02	Oct. 3-Dec. 1, 1941
90-day	9.92	Sept. 7-Dec. 5, 1941
120-day	11.2	Aug. 8-Dec. 5, 1941
183-day	15.6	Aug. 3, 1941-Feb. 1, 1942
12-month	117	May 1941-April 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	410
30	300
50	140
70	76
80	49
90	22
95	12
98	7.1
99	5.4
99.5	4.5
99.8	3.4
99.9	2.8

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.6	1.5
3.0	5.0
5.0	40
10	350
20	1,900
30	3,800
40	6,000
50	8,200
65	11,500
76	14,000

Remarks.—Moderate diurnal fluctuation caused by power plant upstream. Flow regulated by Durham municipal dam. Of the recent diversion averaging 13 cfs for City of Durham municipal water supply, about 6-1/2 cfs was returned as sewage 3 miles upstream from Northside gage.

Neuse River near Clayton

Station No. 18

Location.—Lat 35°39', long. 78°25', just downstream from bridge on State Highway 42, 1.8 miles upstream from Mill Creek and 3 miles east of Clayton, Johnston County. Datum of gage is 128.12 feet above mean sea level.

Drainage area.—1,140 sq mi.

Records available.—July 1927 to September 1955.

Flow summary.—1927-55:

Average discharge (28 years), 1,207 cfs.

Maximum discharge, 22,900 cfs, Sept. 19, 1945 (gage height, 22.12 ft). Flood of July 23, 1919 reached a stage of 21.15 ft at site 1,100 ft upstream (discharge, 21,200 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	45	Sept. 11, 1932
7-day	52.1	Oct. 5-11, 1933
10-day	53.8	Oct. 6-15, 1933
20-day	61.6	Sept. 2-21, 1932
30-day	67.2	Aug. 29-Sept. 27, 1932
60-day	92.1	Sept. 21-Nov. 19, 1933
90-day	99.2	Sept. 20-Dec. 18, 1933
120-day	107	Sept. 21, 1933-Jan. 18, 1934
183-day	130	Aug. 27, 1933-Feb. 25, 1934
12-month	443	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	970
30	680
50	410
70	250
80	180
90	120
95	84
98	61
99	50
99.5	42
99.8	38
99.9	35

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
35	10
40	45
50	220
70	1,100
100	4,000
150	12,000
175	17,000
200	23,000
250	35,000
300	49,000

Middle Creek near Clayton

Station No. 19

Location.—Lat 35°34'10", long. 78°35'30", 300 ft downstream from bridge on State Highway 50, a quarter of a mile upstream from Buffalo Branch, 3-1/4 miles downstream from county line, and 9-1/4 miles southwest of Clayton, Johnston County. Altitude of gage is 177 ft.

Drainage area.—80.7 sq mi.

Records available.—November 1939 to September 1955.

Flow summary.—1939-55:
Average discharge (16 years), 87.9 cfs.
Maximum discharge, 5,400 cfs Sept. 4, 1955 (gage height, 13.14 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Oct. 11, 1954
7-day	.06	Oct. 7-13, 1954
10-day	.07	Oct. 4-13, 1954
20-day	.09	Sept. 25-Oct. 14, 1954
30-day	.17	Sept. 15-Oct. 14, 1954
60-day	1.31	Aug. 16-Oct. 14, 1954
90-day	4.21	Aug. 27-Nov. 24, 1951
120-day	5.36	Aug. 7-Dec. 4, 1951
183-day	8.15	June 2-Dec. 1, 1951
12-month	29.4	February 1951-January 1952

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	74
30	52
50	28
70	15
80	9.0
90	4.9
95	2.9
98	1.7
99	.78
99.5	.21

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.1	1.1
.2	3.1
.5	12
1.0	33
2.0	88
5.0	340
7.0	520
10	920
15	1,800
19	2,800

Little River near Princeton

Station No. 20

Location.—Lat. 35°30'20", long. 78°09'30", 400 ft downstream from highway bridge, three-quarters of a mile upstream from Little Creek, and 3 miles north of Princeton, Johnston County. Altitude of gage is 108 ft.

Drainage area.—229 sq mi.

Records available.—February 1930 to September 1955.

Flow summary.—1930–55:
Average discharge (25 years), 238 cfs.
Maximum discharge, 4,770 cfs Jan. 24, 1954 (gage height, 12.79 ft).
Flood of July 1919 reached a stage 14.57 ft; September 1924, 14.90 ft; September 1928, 13.3 ft; October 1929, 13.47 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.0	Sept. 19, 1932
7-day	1.23	Sept. 18–24, 1932
10-day	1.30	Sept. 18–27, 1932
20-day	1.46	Sept. 16–Oct. 5, 1932
30-day	2.22	Sept. 6–Oct. 5, 1932
60-day	5.95	Aug. 18–Oct. 16, 1932
90-day	11.7	Aug. 21–Nov. 18, 1954
120-day	18.4	July 27–Nov. 23, 1953
183-day	30.2	June 6–Dec. 5, 1954
12-month	75.0	July 1954–June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	210
30	140
50	75
70	43
80	28
90	17
95	11
98	6.1
99	3.6
99.5	2.3
99.8	1.2
99.9	.87

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.0	3.6
2.0	20
3.0	46
5.0	120
10	450
20	1,500
30	3,100
35	4,000
40	5,000
50	7,400

Remarks.—Slight diurnal fluctuation and occasionally some regulation for short periods caused by mills upstream.

Neuse River near Goldsboro

Station No. 21

Location.—Lat 35°20', long. 78°00', just 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. Datum of gage 42.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—2,390 sq mi.

Records available.—February 1930 to September 1955.

Flow summary.—1930-55:
Average discharge (25 years), 2,415 cfs.
Maximum discharge, 30,700 cfs Sept. 23, 1945 (gage height, 25.01, at site 2.3 miles upstream.
Maximum discharge known, 38,600 cfs Oct. 5, 1929 (gage height, 27.3 ft, at site 1.3 miles upstream)

Period	Discharge (cfs)	Dates
1-day	90	Sept. 14, 1932
7-day	97.6	Oct. 8-14, 1954
10-day	101	Oct. 5-14, 1954
20-day	109	Sept. 12-Oct. 1, 1932
30-day	112	Sept. 15-Oct. 14, 1954
60-day	158	Aug. 18-Oct. 17, 1932
90-day	196	Sept. 8-Dec. 6, 1941
120-day	225	Sept. 27, 1933-Jan. 24, 1934
183-day	384	Aug. 29, 1933-Feb. 27, 1934
12-month	999	August 1941-July 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,500
30	7,600
50	880
70	510
80	350
90	210
95	150
98	110
99	85
99.5	78
99.8	70

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
90	560
120	1,800
150	3,500
200	7,500
300	20,000
400	36,000
450	46,000
500	58,000
600	84,000
650	100,000

Neuse River at Kinston

Station No. 22

Location.—Lat 35°15'30", long. 77°35'10", at Kinston, Lenoir County, 600 ft downstream from bridge on State Highway 11, and at mile 90. Datum of gage is 10.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—2,690 sq mi.

Records available.—February 1930 to September 1955.

Flow summary.—1930-55:

Average discharge (25 years), 2,768 cfs.

Maximum discharge, 25,900 cfs Sept. 27, 1945 (gage height, 22.44 ft.)

Maximum stage known, 25.0 ft, present datum, July 1919 (discharge, about 39,000 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	126	Sept. 26, 1932
7-day	143	Sept. 20-26, 1932
10-day	147	Sept. 17-26, 1932
20-day	153	Sept. 8-27, 1932
30-day	160	Sept. 4-Oct. 3, 1932
60-day	227	Aug. 18-Oct. 16, 1932
90-day	260	Oct. 7, 1933-Jan. 4, 1934
120-day	285	Sept. 28, 1933-Jan. 25, 1934
183-day	500	June 7-Dec. 6, 1954
12-month	1,110	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,800
30	2,000
50	1,100
70	650
80	480
90	300
95	230
98	60
99	130
99.5	120
99.8	100

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
100	95
150	1,500
200	4,500
300	14,000
400	28,000
450	36,000
500	45,000
550	54,000
600	64,000
720	90,000

Nahunta Swamp near Shine

Station No. 23

Location.—Lat 35°29', long. 77°48', at highway bridge 2 miles upstream from Appletree Swamp, 3-1/2 miles north of Shine, Greene County, and 8 miles northwest of Snow Hill. Altitude of gage is 48 ft.

Drainage area.—77.6 sq mi.

Records available.—July 1954 to September 1955.

Flow summary.—1954-55:
Maximum discharge, 2,050 cfs Sept. 20, 1954 (gage height, 12.37 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.0	Oct. 7, 1954
7-day	1.2	Oct. 4-10, 1954
10-day	1.4	Oct. 3-12, 1954
20-day	1.9	Oct. 1-20, 1954
30-day	2.1	Sept. 28-Oct. 27, 1954
60-day	2.4	Sept. 2-Oct. 31, 1954
90-day	3.1	Aug. 5-Nov. 2, 1954
120-day	5.0	July 29-Nov. 25, 1954
183-day	13.3	July 27, 1954-Jan. 25, 1955

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.1	1.8
2.0	27
3.0	90
4.0	170
5.0	270
7.0	500
10	960
15	1,800
20	3,000
30	6,500

Contentnea Creek at Hookerton

Station No. 24

Location.—Lat 35°25'40", long. 77°35'05", at Hookerton, Greene County, 0.3 mile upstream from bridge on State Highway 123, and 2-1/2 miles upstream from Wheat Swamp. Altitude of gage is 16 ft.

Drainage area.—729 sq mi.

Records available.—November 1928 to September 1955.

Flow summary.—1928-55:

Average discharge, 1929-55 (26 years), 717 cfs.

Maximum discharge, 11,100 cfs Oct. 6, 1929 (gage height, 18.9 ft).

Maximum stage known, 23.3 ft in September 1928. Highwater of autumn 1924 was practically same stage.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	15	Oct. 28, 1933
7-day	16.4	Oct. 8-14, 1954
10-day	16.8	Oct. 5-14, 1954
20-day	18.2	Sept. 27-Oct. 16, 1954
30-day	19.1	Sept. 16-Oct. 15, 1954
60-day	21.2	Sept. 6-Nov. 4, 1954
90-day	26.2	Aug. 13-Nov. 10, 1954
120-day	30.5	July 28-Nov. 24, 1954
183-day	52.7	June 8-Dec. 7, 1954
12-month	160	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	730
30	500
50	260
70	140
80	87
90	52
95	35
98	25
99	18
99.5	15
99.8	13
99.9	11

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
13	32
15	110
20	410
30	1,300
40	2,500
50	3,700
70	6,700
80	7,500
90	10,500
110	15,000

Swift Creek near Vanceboro

Station No. 25

Location.—Lat 35°20'42", long. 77°11'44", at highway bridge, 2-1/2 miles upstream from bridge on State Highway 118, 2-1/2 miles downstream from Clayroot Swamp, and 3-1/2 miles northwest of Vanceboro, Craven County. Altitude of gage is 5 ft.

Drainage area.—182 sq mi.

Records available.—January 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years) 124 cfs.
Maximum discharge, 6,060 cfs Sept. 22, 1955 (gage height, 13.67 ft).
Flood of 1909 reached a stage of 16 ft, and flood of 1928 reached a stage of 11.7 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Aug. 8, 1954
7-day	0	Aug. 8-14, 1954
10-day	0	Aug. 8-17, 1954
20-day	0	Aug. 8-27, 1954
30-day	0	Oct. 4-Nov. 2, 1954
60-day	.20	Sept. 28-Nov. 26, 1954
90-day	.49	Sept. 7-Dec. 5, 1954
120-day	.64	July 27-Nov. 23, 1954
183-day	1.63	July 3, 1954-Jan. 1, 1955
12-month	8.63	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	81
30	44
50	18
70	6.1
80	3.6
90	1.2
95	.30

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.06	1.8
.10	3.6
.25	13
.50	34
1.0	89
2.5	320
3.0	440
4.0	620
5.0	840
6.0	1,100

Trent River near Trenton

Station No. 26

Location.—Lat 35°03'54", long. 77°27'25", 50 ft downstream from Free Bridge, 800 ft downstream from Little Chinquapin Branch, 1-1/2 miles southwest of Phillips Crossroads, and 6 miles west of Trenton, Jones County. Datum of gage is 18.75 ft above mean sea level (unadjusted).

Drainage area.—168 sq mi.

Records available.—January 1951 to September 1955.

Flow summary.—1951-55:
Maximum discharge, 9,100 cfs Sept. 21, 1955 (gage height, 17.84 ft).
Flood of 1928 reached a stage of 17.3 ft (discharge, 7,600 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.3	Oct. 12, 1954
7-day	1.36	Oct. 10-16, 1954
10-day	1.37	Oct. 10-19, 1954
20-day	1.46	Oct. 9-28, 1954
30-day	1.51	Oct. 9-Nov. 7, 1954
60-day	1.67	Sept. 28-Nov. 27, 1954
90-day	2.31	Sept. 10-Dec. 8, 1954
120-day	3.02	Aug. 11-Dec. 8, 1954
183-day	4.56	June 18-Dec. 17, 1954
12-month	14.5	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	110
30	62
50	24
70	7.9
80	5.0
90	3.2
95	2.0
98	1.1
99	.26
99.5	.13

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.0	56
2.5	100
3.0	150
4.0	280
5.0	420
6.0	580
7.0	760
8.0	960
9.0	1,150
10	1,400

New River near Gum Branch

Station No. 27

Location.—Lat 34°51'05", long. 77°31'05", just downstream from highway bridge, half a mile downstream from Jenkins Swamp, 1-3/4 miles southwest of Gum Branch, Onslow County and 3-3/4 miles southwest of Richlands. Datum of gage is 3 ft above mean sea level.

Drainage area.—74.5 sq mi.

Records available.—August 1949 to September 1955.

Flow summary.—1949-55:
Average discharge (6 years), 86.8 cfs.
Maximum discharge, 7,900 cfs Sept. 20, 1955 (gage height, 19.99 ft).
Flood of 1908 reached a stage of about 18 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.9	Oct. 6, 1954
7-day	2.00	Oct. 4-10, 1954
10-day	2.00	Oct. 4-13, 1954
20-day	2.00	Oct. 4-23, 1954
30-day	2.01	Oct. 2-31, 1954
60-day	2.42	Sept. 18-Nov. 16, 1954
90-day	3.32	Sept. 3-Dec. 1, 1954
120-day	3.97	Aug. 7-Dec. 4, 1954
183-day	8.79	June 19-Dec. 18, 1954
12-month	17.4	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	56
30	39
50	24
70	11
80	6.8
90	4.2
95	2.8
98	1.7

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.7	10
2.0	30
3.0	90
4.0	190
4.5	240
5.0	300
6.0	440
8.0	790
10	1,200
12	1,600

Haw River near Benaja

Station No. 28

Location.—Lat 36°15', long. 79°34', 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. Altitude of gage is 629 ft.

Drainage area.—168 sq mi.

Records available.—October 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years) 163 cfs.
Maximum discharge, 12,300 cfs Sept. 25, 1947 (gage height, 19.22 ft).
Flood of July 1916 reached a stage of about 17.5 ft.
Minimum discharge for indicated consecutive period

Period	Discharge (cfs)	Dates
1-day	0.6	Oct. 8, 1954
7-day	.81	Oct. 5-11, 1954
10-day	.92	Oct. 3-12, 1954
20-day	1.45	Sept. 25-Oct. 14, 1954
30-day	2.00	Sept. 15-Oct. 14, 1954
60-day	7.77	Aug. 16-Oct. 14, 1954
90-day	13.7	July 17-Oct. 14, 1954
120-day	16.9	June 17-Oct. 14, 1954
183-day	31.2	June 14-Dec. 13, 1953
12-month	80.9	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	140
30	100
50	66
70	41
80	31
90	21
95	16
98	10
99	6.6
99.5	4.4
99.8	1.5
99.9	.81

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.5	0.23
.7	1.2
1.0	4.0
2.0	24
5.0	130
10	420
20	1,300
30	2,500
40	4,000
50	5,600

Horsepen Creek at Battle Ground

Station No. 29

Location.—Lat 36°08'34", long. 79°51'24", at highway bridge half a mile downstream from U. S. Highway 220, three-quarters of a mile north of Battle Ground, Guilford County, and 2 miles upstream from mouth. Datum of gage is 737.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—15.9 sq mi.

Records available.—November 1925 to July 1931 (fragmentary prior to October 1928), May 1934 to September 1955.

Flow summary.—1929-30; 1934-55:
Average discharge (21 years), 14.9 cfs.
Maximum discharge, 6,400 cfs Sept. 24, 1947 (gage height, 10.36 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.50	Oct. 7, 1954
7-day	.80	Sept. 23-29, 1954
10-day	.80	Sept. 23-Oct. 2, 1954
20-day	.91	Sept. 14-Oct. 3, 1954
30-day	.92	Sept. 5-Oct. 4, 1954
60-day	1.97	Aug. 11-Oct. 9, 1954
90-day	2.34	July 12-Oct. 9, 1954
120-day	2.46	June 17-Oct. 14, 1954
183-day	3.71	July 28, 1941-Jan. 26, 1942
12-month	7.19	March 1930-February 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	8.5
30	6.2
50	4.3
70	2.9
80	2.4
90	1.8
95	1.4
98	1.1
99	.91
99.5	.65
99.8	.45
99.9	.41

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.4	0.10
.5	.56
.7	3.6
1.0	13
1.5	36
2.0	72
2.5	115
3.0	170
4.0	300
5.0	470

Remarks.—Total of about 9 million gallons diverted above station by city of Greensboro during period Oct. 5, 6, 10-14, 1954.

Reedy Fork near Gibsonville

Station No. 30

Location.—Lat 36°11', long. 79°37', a quarter of a mile downstream from Huffines Mill, 1-1/4 miles upstream from Buffalo Creek, and 6 miles Northwest of Gibsonville, Guilford County. Datum of gage is 626.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—133 sq mi.

Records available.—September 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years), 111 cfs.
Maximum discharge, 11,600 cfs Sept. 25, 1947 (gage height, 20.77 ft).
Flood of July 1916 reached a stage of 17.9 feet (discharge, 8,640 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.4	Oct. 14, 1954
7-day	1.24	Oct. 8-14, 1954
10-day	1.42	Oct. 5-14, 1954
20-day	1.54	Sept. 25-Oct. 14, 1954
30-day	1.90	Sept. 15-Oct. 14, 1954
60-day	3.23	Aug. 12-Oct. 10, 1953
90-day	4.08	Aug. 5-Oct. 3, 1953
120-day	5.05	Aug. 2-Nov. 29, 1953
183-day	12.3	July 4, 1953-Jan. 2, 1954
12-month	53.4	August 1953-July 1954

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	100
30	65
50	34
70	20
80	15
90	9.1
95	5.8
98	2.9
99	1.5
99.5	1.1
99.8	.76
99.9	.65

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.3	0.04
.5	.25
.8	.57
1.0	1.4
2.0	27
4.0	160
8.0	570
10	840
20	2,400
35	5,400

Remarks.—Flow partly regulated since 1923 by Lake Brandt, 14 miles above station, and since 1943 by Richland Lake 12 miles above station. An average of 14.3 cfs was diverted by city of Greensboro for municipal supply, and Cone Mills diverted an average of 3.6 cfs from Richland Lake during 1955.

South Buffalo Creek near Greensboro

Station No. 31

Location.—Lat 36°03'37", long. 79°43'33", at bridge on McConnell Road, 3.8 miles east of post office in Greensboro, Guilford County, and 6 miles upstream from North Buffalo Creek. Datum of gage is 696.2 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—33.6 sq mi.

Records available.—August 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years), 38.0 cfs.
Maximum discharge, 10,000 cfs July 15, 1949 (gage height, 11.54 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.5	Sept. 29, 1930
7-day	.80	Sept. 28-Oct. 4, 1930
10-day	.77	Sept. 27-Oct. 6, 1930
20-day	1.08	Sept. 25-Oct. 14, 1930
30-day	1.30	Sept. 23-Oct. 22, 1930
60-day	1.77	Aug. 22-Oct. 20, 1930
90-day	2.36	Aug. 14-Nov. 11, 1930
120-day	3.65	July 19-Nov. 15, 1930
183-day	5.06	July 31, 1941-Jan. 29, 1942
12-month	13.8	March 1930-February 1931

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.4	0.13
.5	.50
.7	2.0
1.0	6.5
2.0	50
3.0	145
5.0	460
7.0	880
8.0	1,100
9.0	1,350

Remarks.—Low-water flow affected by sewage from Greensboro which enters above station.

North Buffalo Creek near Greensboro

Station No. 32

Location.—Lat 36°07'13", long. 79°42'30", at highway bridge 4.2 miles up ream from mouth, and 5.8 miles northeast of post office in Greensboro, Guilford County. Altitude of gage is 679 ft.

Drainage area.—37.0 sq mi.

Records available.—August 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years), 46.0 cfs.
Maximum discharge, 6,000 cfs Sept. 25, 1947 (gage height, 15.96 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	3.4	Aug. 28, 1932
7-day	6.19	Aug. 28-Sept. 3, 1930
10-day	6.02	Aug. 29-Sept. 7, 1930
20-day	6.98	Aug. 21-Sept. 9, 1930
30-day	7.70	July 31-Aug. 29, 1932
60-day	7.64	Aug. 29-Oct. 27, 1930
90-day	9.20	Sept. 5-Dec. 3, 1931
120-day	11.0	Sept. 2-Dec. 30, 1933
183-day	14.0	June 4-Dec. 3, 1933
12-month	21.7	March 1933-February 1934

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.5	0.25
3.0	1.1
4.0	7.0
5.0	25
6.0	65
7.0	150
8.0	270
10	540
12	900
15	1,500

Remarks.—Diversion into the basin from Greensboro and Proximity Mills enters above station.

Stony Creek near Burlington

Station No. 33

Location.—Lat 36°11', long. 79°25', a quarter of a mile upstream from highway bridge, half a mile upstream from Buttermilk Creek, 4-1/2 miles upstream from mouth, and 6 miles north of Burlington, Alamance County. Datum of gage is 536.3 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—44.2 sq mi.

Records available.—July 1952 to September 1955.

Flow summary.—1952-55:

Maximum gage height, 15.26 ft Oct. 16, 1954 (discharge not determined).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Sept. 12, 1954
7-day	0	Oct. 2-8, 1954
10-day	0	Oct. 2-11, 1954
20-day	.001	Sept. 25-Oct. 14, 1954
30-day	.003	Sept. 15-Oct. 14, 1954
60-day	.010	Oct. 6-Dec. 4, 1953
90-day	.012	Sept. 5-Dec. 3, 1953
120-day	.022	Aug. 8-Dec. 5, 1953
183-day	.91	Jul. 1-Dec. 30, 1953
12-month	19.8	May 1953-April 1954

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.1	10
.4	50
.8	110
1.2	180
1.6	250
2	330
3	520
5	900
10	2,100
15	3,600

Haw River at Haw River

Station No. 34

Location.—Lat 36°05', long. 79°22', at town of Haw River, Alamance County, 650 ft downstream from Southern Railway bridge, and 3 miles downstream from Stony Creek. Datum of gage is 471.69 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—599 sq mi.

Records available.—October 1928 to September 1955.

Flow summary.—1928-55:

Average discharge (27 years) 581 cfs.

Maximum discharge, 37,000 cfs Sept. 18, 1945 (gage height, 31.10 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	5	Sept. 6, 1930
7-day	16.4	Oct. 7-13, 1954
10-day	18.0	Oct. 4-13, 1954
20-day	19.5	Sept. 25-Oct. 14, 1954
30-day	23.2	Sept. 15-Oct. 14, 1954
60-day	51.7	Aug. 16-Oct. 14, 1954
90-day	57.8	Aug. 25-Nov. 22, 1953
120-day	58.4	July 27-Nov. 23, 1953
183-day	97.3	July 8, 1953-Jan. 6, 1954
12-month	254	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	465
30	320
50	190
70	120
80	84
90	52
95	34
98	25
99	19
99.5	15
99.8	12
99.9	9.4

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
3.9	0.6
4.5	1.3
8.0	5.0
11	9.4
13	22
20	160
40	1,100
60	2,700
100	8,000
200	27,000

Remarks.—Large diurnal fluctuation and some regulation at low flow caused by power plants above station. City of Burlington diverts 6.7 cfs of which about half is returned above station as sewage.

Haw River near Pittsboro

Station No. 35

Location.—Lat 35°42', long. 79°05', 100 ft upstream from Robeson Creek, 2 miles downstream from bridge on U. S. Highway 64, and 5 miles east of Pittsboro, Chatham County. Datum of gage is 180.06 ft above mean sea level.

Drainage area.—1,310 sq mi, approximately.

Records available.—November 1928 to September 1955.

Flow summary.—1928–55:
Average discharge (27 years), 1,238 cfs.
Maximum discharge 79,000 cfs Sept. 18 1945 (gage height, 28.58 ft).
Flood of August 1908 reached a stage of 32.1 ft (discharge, 98,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	5.3	Sept. 20, 1953
7-day	21.3	Sept. 6–12, 1954
10-day	24.1	Sept. 5–14, 1954
20-day	26.9	Sept. 22–Oct. 11, 1954
30-day	31.9	Sept. 5–Oct. 4, 1954
60-day	61.8	Oct. 6–Dec. 4, 1953
90-day	74.8	Aug. 25–Nov. 22, 1953
120-day	76.2	July 30–Nov. 26, 1953
183-day	154	July 10–Jan. 8, 1953
12-month	444	March 1933–February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	940
30	680
50	400
70	210
80	140
90	84
95	45
98	24
99	18
99.5	14
99.8	7.9
99.9	6.1

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
3.5	0.1
4.5	1.0
7.6	5.2
14	12
15	16
19	40
50	1,000
100	6,200
200	25,000
300	48,000

Remarks.—Considerable diurnal fluctuations and some regulation at low flow caused by power plants above station.

New Hope River near Pittsboro

Station No. 36

Location.—Lat 35°44', long. 79°02', at bridge on U. S. Highway 64, a quarter of a mile downstream from Whiteoak Creek, and 8-3/4 miles east of Pittsboro, Chatham County. Datum of gage is 176.42 ft above mean sea level.

Drainage area.—285 sq mi.

Records available.—January 1949 to September 1955.

Flow summary.—1949-55:

Average discharge (6 years), 228 cfs.

Maximum discharge, 7,900 cfs Mar. 5, 1952 (gage height, 19.74 ft).

Flood of September 1945 reached a stage of 27.65 ft.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	2.2	Sept. 4, 1953
7-day	2.97	Aug. 29-Sept. 4, 1953
10-day	3.06	Aug. 26-Sept. 4, 1953
20-day	3.67	Sept. 6-25, 1954
30-day	3.75	Sept. 3-Oct. 2, 1954
60-day	6.45	Aug. 16-Oct. 14, 1954
90-day	9.69	July 18-Oct. 15, 1954
120-day	11.0	June 18-Oct. 15, 1954
183-day	21.5	June 6-Dec. 5, 1951
12 month	111	December 1950-November 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	160
30	90
50	38
70	15
80	9.4
90	5.2
95	3.8
98	2.5
99	2.1
99.5	1.9
99.8	1.8
99.9	1.6

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
3.3	32
4.3	80
5.6	150
7.7	300
10	500
13	800
23	2,000
43	5,200
58	8,000
80	13,000

Remarks.—Discharge of 3.9 cfs in 1955 diverted into basin above the station by city of Durham.

West Fork Deep River near High Point

Station No. 37

Location.—Lat 36°00'15", long. 79°58'42", 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. Altitude of gage is 758 ft.

Drainage area.—32.1 sq mi.

Records available.—June 1923 to September 1926, July 1928 to September 1955.

Flow summary.—1923-26, 1928-55:
Average discharge (30 years), 31.7 cfs.
Maximum discharge 3,450 cfs Sept. 24, 1947 (gage height, 19.92 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.6	Sept. 1, 1932
7-day	1.07	Aug. 27-Sept. 2, 1932
10-day	1.18	Aug. 24-Sept. 2, 1932
20-day	1.72	Sept. 25-Oct. 14, 1954
30-day	1.80	Aug. 22-Sept. 20, 1932
60-day	2.96	Aug. 7-Oct. 5, 1932
90-day	3.65	Aug. 27-Nov. 24, 1941
120-day	4.08	Aug. 6-Dec. 3, 1941
183-day	5.65	Aug. 1, 1941-Jan. 30, 1942
12-month	16.1	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	19.0
30	14.0
50	8.7
70	6.1
80	4.9
90	3.6
95	2.9
98	2.2
99	1.7
99.5	1.4
99.8	.97
99.9	.84

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.6	0.2
.82	1.0
1.3	6.5
1.8	20
3.2	100
4	190
4.9	300
6.3	500
8.5	880
12	1,600

East Fork Deep River near High Point

Station No. 38

Location.—Lat 36°02'15", long. 79°56'46", at highway bridge, 3.3 miles upstream from High Point Dam, and 5.2 miles northeast of High Point College, High Point, Guilford County. Datum of gage is 764.02 ft above mean sea level, unadjusted.

Drainage area.—14.7 sq mi.

Records available.—July 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years) 14.7 cfs.
Maximum discharge, 6,300 cfs Sept. 24, 1947 (gage height, 10.87 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.2	Oct. 7, 1954
7-day	1.46	Oct. 2-8, 1954
10-day	1.48	Sept. 28-Oct. 7, 1954
20-day	1.54	Sept. 24-Oct. 13, 1954
30-day	1.62	Sept. 9-Oct. 8, 1954
60-day	1.97	Sept. 7-Nov. 5, 1941
90-day	2.13	Sept. 5-Dec. 3, 1941
120-day	2.40	Aug. 6-Dec. 3, 1941
183-day	2.90	Aug. 1, 1941-Jan. 30, 1942
12-month	6.70	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	7.6
30	6.1
50	4.2
70	3.1
80	2.7
90	2.2
95	1.9
98	1.6
99	1.3
99.5	1.1
99.8	.94

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.92	0.12
1.0	.60
1.1	2.0
1.2	4.5
1.5	20
1.7	36
2.0	67
3.0	220
4.0	400
5.0	600

Deep River near Randleman

Station No. 39

Location.—Lat 35°54'10", long. 79°51'15", 500 ft downstream from highway bridge, a quarter of a mile downstream from Coltrane's mill, half a mile south of Guilford County line, 4-3/4 miles upstream from Muddy Creek, and 7 miles north of Randleman, Randolph County. Datum of gage is 638.11 ft above mean sea level.

Drainage area.—124 sq mi.

Records available.—October 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (27 years), 119 cfs.
Maximum discharge, 20,000 cfs Sept. 25, 1947 (gage height, 32.2 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.2	Nov. 12, 1933
7-day	3.94	Sept. 30-Oct. 6, 1930
10-day	4.20	Sept. 30-Oct. 9, 1930
20-day	4.78	Sept. 30-Oct. 19, 1930
30-day	5.08	Sept. 29-Oct. 28, 1930
60-day	8.22	Sept. 8-Nov. 6, 1941
90-day	9.51	Sept. 5-Dec. 3, 1941
120-day	11.4	Sept. 6-Jan. 3, 1941
183-day	13.4	Aug. 7-Feb. 5, 1941
12-month	55.4	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	78
30	55
50	31
70	16
80	12
90	7.8
95	5.8
98	3.9
99	3.1
99.5	2.5
99.8	1.9
99.9	1.7

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.9	0.15
1.0	.27
1.2	.50
1.5	.80
2.0	1.3
2.5	2.2
4.0	21
7.0	180
10	490
20	2,000
40	6,600

Remarks.—Large diurnal fluctuation at low flow caused by Coltrane's mill. Flow slightly regulated by High Point Lake (capacity, 220,588,000 cu ft). About 3 cfs diverted by city of High Point for municipal supply.

Deep River at Ramseur

Station No. 40

Location.—Lat 35°44', long. 79°39, 1,600 ft downstream from railroad station at Ramseur, Randolph County and 1-1/2 miles downstream from Sandy Creek. Datum of gage is 419.50 ft above mean sea level.

Drainage area.—346 sq mi.

Records available.—November 1922 to September 1955.

Flow summary.—1922-55:
Average discharge (32 years), 343 cfs.
Maximum discharge, 43,000 cfs Sept. 18, 1945 (gage height, 34.04 ft).
Flood of August 1901 reached a stage of 28.75 ft (discharge, 30,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.7	Nov. 29, 1941
7-day	3.57	Oct. 19-25, 1941
10-day	4.31	Oct. 19-28, 1941
20-day	6.08	Oct. 18-Nov. 6, 1941
30-day	7.21	Oct. 8-Nov. 6, 1941
60-day	9.0	Sept. 20-Nov. 18, 1941
90-day	12.8	Sept. 9-Dec. 7, 1941
120-day	21.4	Aug. 10-Dec. 7, 1941
183-day	29.4	Aug. 5, 1941-Feb. 3, 1942
12-month	130	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	230
30	160
50	98
70	52
80	34
90	17
95	11
98	6.5
99	4.1
99.5	2.7
99.8	1.7
99.9	1.3

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.5	1.9
4.0	13
7.0	90
10	250
15	600
20	1,100
30	2,400
40	3,900
60	7,500
80	11,000
100	16,000

Remarks.—Large diurnal fluctuation caused by powerplants above station. Flow regulated by High Point Lake (capacity 220,588,000 cu ft) and small powerplant reservoirs. An average of 1.0 cfs diverted into basin above station by town of Asheboro.

Bear Creek at Robbins

Station No. 41

Location.—Lat 35°26', long. 79°36', 300 ft downstream from Cabin Creek and half a mile west of Robbins, Moore County. Datum of gage is 323.23 ft above mean sealevel, datum of 1929, supplementary adjustment of 1936.

Drainage area.—134 sq mi.

Records available.—November 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 145 cfs.
Maximum discharge, 38,800 cfs Sept. 18, 1945 (gage height, 32.02 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Oct. 23, 1941
7-day	.03	Oct. 21-27, 1941
10-day	.09	Oct. 18-27, 1941
20-day	.28	Oct. 8-27, 1941
30-day	.44	Sept. 15-Oct. 14, 1954
60-day	2.0	Aug. 29-Oct. 27, 1941
90-day	3.0	July 30-Oct. 27, 1941
120-day	7.2	Aug. 7-Dec. 4, 1941
183-day	14.1	June 5-Dec. 4, 1941
12-month	57.4	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	91
30	66
50	38
70	19
80	12
90	5.5
95	3.2
98	1.5
99	.48
99.5	.23

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.64	11
.80	16
1.3	35
2	68
3	130
5	280
10	800
21	2,600
40	7,000
50	10,000

Remarks.—Town of Robbins diverts 300,000 gallons per day from gage pool below the gage. Figures herein represent flow past the gage.

Deep River at Moncure

Station No. 42

Location.—Lat 35°36', long. 79°05', 1-1/2 miles northwest of Moncure, Chatham County, 2-1/4 miles downstream from Rocky River, and 4-1/2 miles upstream from confluence with Haw River. Datum of gage is 185.88 ft above mean sea level.

Drainage area.—1,410 sq mi, approximately.

Records available.—July 1930 to September 1955

Flow summary.—1930-55:
Average discharge (25 years), 1,405 cfs.
Maximum discharge, 80,300 cfs Sept. 18, 1945 (gage height, 17.20 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	6	Oct. 9, 1954
7-day	6.6	Oct. 8-14, 1954
10-day	7.8	Oct. 5-14, 1954
20-day	13.0	Nov. 3-22, 1941
30-day	13.6	Nov. 3-Dec. 2, 1941
60-day	27.0	Oct. 6-Dec. 4, 1941
90-day	36.1	Sept. 6-Dec. 4, 1941
120-day	57.0	Aug. 26-Dec. 23, 1941
183-day	105	Aug. 1, 1941-Jan. 30, 1942
12-month	396	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	1,000
30	650
50	350
70	170
80	110
90	53
95	35
98	18
99	14
99.5	10
99.8	7.4
99.9	6.0

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
6.5	16
10	64
12	110
18	300
30	900
50	2,400
70	4,500
90	7,000
160	19,000
300	55,000

Remarks.—Diurnal fluctuation and considerable regulation at low flow caused by powerplants above station.

Cape Fear River at Lillington

Station No. 43

Location.—Lat 35°24', long. 78°49', at 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. Datum of gage is 105.71 ft above mean sea level.

Drainage area.—3,440 sq mi, approximately.

Records available.—December 1923 to September 1955.

Flow summary.—1923-55:

Average discharge (31 years), 3,292 cfs.

Maximum discharge uncertain, occurred Sept. 19, 1945 (gage height, 33.19 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	11	Oct. 14, 1954
7-day	28.3	Oct. 5-11, 1926
10-day	34.9	Oct. 2-11, 1926
20-day	76.5	Sept. 25-Oct. 14, 1954
30-day	84.2	Sept. 15-Oct. 14, 1954
60-day	111	Oct. 5-Dec. 3, 1941
90-day	154	Sept. 21, 1933-Dec. 19, 1933
120-day	225	Sept. 22, 1933-Jan. 19, 1934
183-day	374	Aug. 1, 1941-Jan. 30, 1942
12-month	1,030	March 1933-February 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,600
30	1,800
50	920
70	500
80	320
90	170
95	97
98	52
99	45
99.5	39
99.8	32
99.9	24

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
27	72
43	200
76	700
90	1,100
110	2,300
120	3,000
140	4,200
200	9,000
500	54,000
1,000	200,000

Remarks.—Large diurnal fluctuation and considerable regulation at low flow caused by powerplants above station.

Little River at Linden

Station No. 44

Location.—Lat 35°16', long. 78°47', at bridge on U. S. Highway 15A, 1.6 miles west of Linden, Cumberland County, 2 miles upstream from Stewart Creek, and 4-1/2 miles upstream from mouth. Datum of gage is 73.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—460 sq mi.

Records available.—November 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (26 years), 535 cfs.
Maximum discharge 13,500 cfs Sept. 18, 1945. Maximum gage height, 41.47 ft Sept. 19 or 20, 1945.
Flood of Sept. 21, 1928 reached a stage of 37.3 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	31	Aug. 1, 1940
7-day	35.4	July 28-Aug. 4, 1940
10-day	36.2	Oct. 5-14, 1940
20-day	38.1	Sept. 28-Oct. 17, 1940
30-day	40.4	Sept. 26-Oct. 25, 1940
60-day	50.3	Sept. 1-Oct. 30, 1940
90-day	73.9	July 26-Oct. 23, 1940
120-day	77.5	July 17-Nov. 13, 1940
183-day	106	June 17-Dec. 16, 1940
12-month	227	February 1951-January 1952

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	520
30	390
50	240
70	130
80	97
90	65
95	49
98	36
99	31
99.5	28
99.8	25

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
22	2.2
26	30
30	110
35	290
50	1,100
60	1,800
80	4,000
100	6,500
150	16,000

Cape Fear River at lock 3, near Tarheel

Station No. 45

Location.—Lat 34°50', long. 78°48', 100 ft upstream from lock 3, 7 miles north of Tarheel, Bladen County, 9 miles upstream from Phillips Creek, and at mile 95. Datum of gage is 28.935 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—4,810 sq mi, approximately.

Records available.—October 1937 to September 1955.

Flow summary.—1937-55:
Average discharge (18 years), 4,763 cfs.
Maximum discharge not determined, occurred Sept. 22, 1945 (gage height, 43.44 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	208	Sept. 13, 1954
7-day	269	Sept. 11-17, 1954
10-day	265	Sept. 11-20, 1954
20-day	305	Sept. 9-Oct. 28, 1954
30-day	308	Sept. 9-Oct. 8, 1954
60-day	423	Aug. 16-Oct. 14, 1954
90-day	519	Sept. 7-Dec. 5, 1941
120-day	656	July 20-Nov. 16, 1953
183-day	928	Aug. 2-Jan. 31, 1941
12-month	2,360	December 1950-November 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	4,000
30	2,800
50	1,600
70	970
80	710
90	510
95	370
98	270
99	230
99.5	200
99.8	180
99.9	160

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
140	2.5
150	8.0
180	95
230	800
280	2,300
400	7,400
560	20,000
700	35,000
1,100	92,000
2,000	330,000

Remarks.—Slight diurnal fluctuation and some regulation at low flow caused by powerplants above station.

Little Coharie Creek near Roseboro

Station No. 46

Location.—Lat 34°57', long. 78°29', at bridge on State Highway 24, 1-1/4 miles east of Roseboro, Sampson County, and 1-1/2 miles upstream from Bearskin Swamp. Altitude of gage is 81 ft.

Drainage area.—96.4 sq mi.

Records available.—January 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years), 78.1 cfs.
Maximum discharge 1,860 cfs Sept. 6, 1955 (gage height, 9.00 ft).
Flood of 1924 reached a stage of 11.6 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.1	Sept. 13, 1954
7-day	.1	Oct. 1-Oct. 7, 1954
10-day	.1	Oct. 1-10, 1954
20-day	.13	Sept. 25-Oct. 14, 1954
30-day	.17	Sept. 13-Oct. 12, 1954
60-day	.88	Aug. 16-Oct. 14, 1954
90-day	3.8	July 28-Oct. 25, 1954
120-day	4.9	June 21-Oct. 18, 1954
183-day	11.5	May 31-Nov. 29, 1954
12-month	43.6	August 1950-July 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	74
30	54
50	28
70	14
80	8.4
90	3.6
95	1.4
98	.25
99	.092

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.6	15
1	32
1.5	57
2.2	100
3.5	190
5	320
7	520
11	1,000
20	2,300
30	4,200

Black River near Tomahawk

Station No. 47

Location.—Lat 34°45', long. 78°17', at bridge on State Highway 411, a quarter of a mile downstream from Clear Run Swamp and 3-3/4 miles northeast of Tomahawk, Sampson County. Datum of gage is 0.39 ft below mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—680 sq mi.

Records available.—October 1951 to September 1955.

Flow summary.—1951-55:

Maximum discharge, 6,550 cfs Sept. 9, 1955 (gage height, 44.16 ft).
Flood of 1928 reached a stage of 47.0 ft (discharge, 9,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	8.9	Sept. 13, 1954
7-day	9.9	Oct. 9-15, 1954
10-day	10.0	Oct. 6-15, 1954
20-day	10.6	Sept. 26-Oct. 15, 1954
30-day	11.9	Sept. 16-Oct. 15, 1954
60-day	13.5	Aug. 17-Oct. 15, 1954
90-day	21.6	Aug. 7-Nov. 4, 1954
120-day	32.6	July 24-Nov. 20, 1954
183-day	57.3	June 4-Dec. 3, 1954
12-month	226	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	460
30	350
50	180
70	78
80	46
90	28
95	16
98	7.8

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
9.4	70
11	150
13	260
15	370
20	700
30	1,500
40	2,500
60	5,000
100	11,000
200	31,000

South River near Parkersburg

Station No. 48

Location.—Lat 34°48', long. 78°27', at bridge at Bladen-Sampson County line, 1.9 miles southwest of Parkersburg, Sampson County. Datum of gage is 0.38 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—382 sq mi.

Records available.—October 1951 to September 1955.

Flow summary.—1951-55:
Maximum discharge, 5,000 cfs Aug. 24, 1955 (gage height, 64.20 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.1	Oct. 3, 1954
7-day	0.14	Sept. 30-Oct. 6, 1954
10-day	0.17	Oct. 3-12, 1954
20-day	0.22	Sept. 25-Oct. 14, 1954
30-day	0.61	Sept. 15-Oct. 14, 1954
60-day	1.65	Aug. 16-Oct. 14, 1954
90-day	6.82	Aug. 9-Nov. 6, 1954
120-day	10.6	July 24-Nov. 20, 1953
183-day	26.0	May 26-Nov. 24, 1953
12-month	157	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	278
30	207
50	106
70	28
80	14
90	6.1
95	2.6
98	.43
99	.17

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.0	20
2.0	64
4.0	170
6.0	310
10	600
15	1,100
20	1,700
40	4,400
80	11,000
120	20,000

Colly Creek near Kelly

Station No. 49

Location.—Lat 34°28', long. 78°15', at bridge on State Highway 53, 4 miles east of Kelly, Bladen County, and 6-3/4 miles upstream from mouth. Datum of gage is 15.4 ft above mean sea level, unadjusted.

Drainage area.—85.2 sq mi.

Records available.—January 1950 to September 1955.

Flow summary.—1950-55:
Average discharge (5 years), 69.1 cfs.
Maximum discharge, 910 cfs Sept. 22, 1955 (gage height, 7.20 ft).
Floods of 1908, 1928, and September 1945 reached stages of 11.1, 7.7 and 10.2 ft respectively.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Oct. 27, 1951
7-day	0	Oct. 27-Nov. 2, 1951
10-day	0	July 23-Aug. 1, 1953
20-day	0	Oct. 12-31, 1953
30-day	0	Oct. 12-Nov. 10, 1953
60-day	0	Aug. 9-Oct. 6, 1954
90-day	.03	Aug. 2-Oct. 30, 1954
120-day	.23	July 31-Nov. 27, 1954
183-day	.99	June 6-Dec. 5, 1954
12-month	20.8	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	71
30	52
50	21
70	3.2
80	.91
90	.04

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.5	43
.8	78
1.2	130
2	250
4	600
6	1,000
8	1,500
10	2,000
14	3,000
20	4,800

Northeast Cape Fear River near Chinquapin

Station No. 50

Location.—Lat 34°49', long. 77°50', 540 ft downstream from bridge on State Highway 41, half a mile downstream from Muddy Creek, and 1-1/4 miles west of Chinquapin, Duplin County. Datum of gage is 17.28 ft above mean sea level.

Drainage area.—600 sq mi.

Records available.—July 1940 to September 1955.

Flow summary.—1940-55:
Average discharge (15 years), 614 cfs.
Maximum discharge, 15,200 cfs Sept. 22, 1955 (gage height, 17.97 ft).
Flood of 1908 reached a stage of 22.6 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	5.3	Oct. 10, 1954
7-day	5.47	Oct. 8-14, 1954
10-day	5.81	Oct. 5-14, 1954
20-day	6.88	Oct. 3-22, 1954
30-day	7.44	Sept. 29-Oct. 28, 1954
60-day	8.14	Sept. 9-Nov. 7, 1954
90-day	9.89	Aug. 11-Nov. 8, 1954
120-day	11.6	July 29-Nov. 25, 1954
183-day	18.6	June 18-Dec. 17, 1954
12-month	97.0	June 1954-May 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	610
30	400
50	220
70	84
80	47
90	21
95	13
98	8.4
99	6.8
99.5	5.5
99.8	4.2

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
3.5	0.07
4	1.2
5	13
7.8	150
11	420
22	1,900
33	3,700
45	6,000
60	9,000
70	11,000

Waccamaw River at Freeland

Station No. 51

Location.—Lat 34°05'43", long. 78°32'56", 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. Datum of gage is 15.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—626 sq mi.

Records available.—July 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 611 cfs.

Maximum discharge, 10,200 cfs Sept. 25, 1955. Maximum gage height, 16.63 ft Sept. 26, 1955.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.1	Aug. 30, 1954
7-day	.10	Oct. 4-10, 1954
10-day	.10	Oct. 4-13, 1954
20-day	.16	Sept. 25-Oct. 14, 1954
30-day	.28	Sept. 15-Oct. 14, 1954
60-day	.37	Aug. 16-Oct. 14, 1954
90-day	.82	Aug. 22-Nov. 19, 1954
120-day	.90	Aug. 14-Dec. 11, 1954
183-day	4.26	June 29-Dec. 28, 1954
12-month	145	March 1940-February 1941

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	620
30	400
50	180
70	45
80	21
90	5.0
95	.91
98	.63
99	.54
99.5	.47
99.8	.32

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.13	0.7
.20	3.5
.30	9
.60	30
1.0	62
3.0	300
5.0	550
40	7,500
70	15,000
100	25,000

Yadkin River at Patterson

Station No. 52

Location.—Lat 35°59'30", long. 81°33'30", 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. Datum of gage is 1,212.47 ft above mean sea level, unadjusted.

Drainage area.—28.8 sq mi.

Records available.—November 1939 to September 1955.

Flow summary.—1939-55:
Average discharge (16 years), 44.4 cfs
Maximum discharge, 16,200 cfs Aug. 13, 1940 (gage height, 12.70 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	5.3	Sept. 30, 1954
7-day	5.73	Sept. 25-Oct. 1, 1954
10-day	6.04	Sept. 22-Oct. 1, 1954
20-day	6.48	Sept. 12-Oct. 1, 1954
30-day	6.84	Sept. 2-Oct. 1, 1954
60-day	7.68	Sept. 3-Nov. 1, 1954
90-day	8.93	Aug. 5-Nov. 2, 1954
120-day	9.22	July 20-Nov. 16, 1954
183-day	11.1	June 29-Dec. 28, 1954
12-month	23.4	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	36
30	30
50	21
70	15
80	12
90	9.4
95	7.8
98	6.2
99	5.0
99.5	4.5
99.8	4.1
99.9	3.9

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
4.0	1.9
5.0	18
6.0	60
7.0	140
8.0	250
9.0	390
10	550
12	910
13	1,100
15	1,500

Reddies River at North Wilkesboro

Station No. 53

Location.—Lat 36°10', long. 81°10', 400 ft upstream from highway bridge, 1-1/4 miles northwest of North Wilkesboro, Wilkes County, 1-1/4 miles upstream from North Wilkesboro municipal dam, and 2 miles upstream from mouth. Datum of gage is 978.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—93.9 sq mi.

Records available.—December 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 135 cfs.

Maximum discharge, 27,000 cfs Aug. 14, 1940 (gage height, 22.02 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	23	Aug. 17, 1954
7-day	25.0	Aug. 11-17, 1954
10-day	25.8	Aug. 9-18, 1954
20-day	29.8	Sept. 12-Oct. 1, 1954
30-day	29.1	Sept. 15-Oct. 14, 1954
60-day	32.6	Aug. 31-Oct. 29, 1954
90-day	40.2	Aug. 29-Nov. 27, 1954
120-day	41.1	July 15-Nov. 11, 1954
183-day	46.6	June 6-Dec. 5, 1954
12-month	74.3	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	100
30	88
50	71
70	54
80	47
90	39
95	34
98	26
99	22
99.5	19
99.8	18
99.9	17

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
18	14
20	50
25	250
30	600
35	1,100
40	1,800
43	2,400
45	2,800
47	3,200
50	4,000

Yadkin River at Wilkesboro

Station No. 54

Location.—Lat 36°09', long. 81°09', 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. Datum of gage is 942.35 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—493 sq mi.

Records available.—April 1903 to June 1909, October 1920 to September 1955.

Flow summary.—1903-9, 1920-55:
Average discharge 1903-6, 1920-55 (38 years), 771 cfs.
Maximum discharge, 160,000 cfs Aug. 14, 1940 (gage height, 37.6 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	113	Sept. 30, 1954
7-day	120	Sept. 24-30, 1954
10-day	123	Oct. 5-14, 1954
20-day	128	Sept. 25-Oct. 14, 1954
30-day	130	Sept. 14-Oct. 13, 1954
60-day	150	Aug. 31-Oct. 29, 1954
90-day	183	Aug. 4-Nov. 1, 1954
120-day	194	July 19-Nov. 15, 1954
183-day	240	June 6-Dec. 5, 1954
12-month	417	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	600
30	500
50	390
70	290
80	250
90	200
95	170
98	140
99	130
99.5	110
99.8	91
99.9	81

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
80	15
90	160
100	540
120	1,500
140	2,900
170	5,600
200	9,800
230	15,000
250	19,500
270	25,000

Remarks.—Slight diurnal fluctuation at low flow caused by powerplant on Reddies River 1 mile above station.

Fisher River near Copeland

Station No. 55

Location.—Lat 36°20', long. 80°40', 500 ft upstream from bridge on State Highway 268, 1 mile upstream from Cody Creek, and 2 miles northwest of Copeland, Surry County. Altitude of gage is 913 ft (by barometer).

Drainage area.—121 sq mi

Records available.—October 1931 to September 1955.

Flow summary.—1931-55:
Average discharge (24 years), 178 cfs.
Maximum discharge, 27,300 cfs Aug. 14, 1940 (gage height, 18.4 feet).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	17	Sept. 18, 1954
7-day	20.6	Sept. 13-19, 1954
10-day	21.4	Sept. 11-20, 1954
20-day	25.3	Sept. 11-30, 1954
30-day	27.9	Sept. 1-30, 1954
60-day	38.6	Aug. 11-Oct. 9, 1954
90-day	44.9	July 17-Oct. 14, 1954
120-day	52.2	July 12-Nov. 8, 1954
183-day	65.6	Aug. 25, 1933-Feb. 23, 1934
12-month	98.9	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	140
30	110
50	87
70	64
80	55
90	42
95	36
98	27
99	23
99.5	20
99.8	17
99.9	15

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
12	1.5
15	13
20	80
25	270
30	600
40	1,600
50	3,000
55	3,800
60	4,700
65	5,600

Remarks.—Records collected at station near Dobson (drainage area, 109 sq mi) 1920-32.

Forbush Creek near Yadkinville

Station No. 56

Location.—Lat 36°08', long. 80°33', 900 ft upstream from highway bridge, three-quarters of a mile north of Forbush Church, 2-3/4 miles upstream from Logan Creek, 3-1/2 miles upstream from mouth, and 6 miles east of Yadkinville, Yadkin County. Altitude of gage is 728 ft (by barometer).

Drainage area.—21.7 sq mi.

Records available.—April 1940 to September 1955.

Flow summary.—1940-55:
Average discharge (15 years), 21.2 cfs.
Maximum discharge, 2,450 cfs Sept. 30, 1944 (gage height, 11.02 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.3	Sept. 21, 1955
7-day	1.50	Sept. 17-23, 1955
10-day	1.66	Sept. 10-19, 1954
20-day	1.82	Sept. 18-Oct. 7, 1954
30-day	1.79	Sept. 9-Oct. 8, 1954
60-day	3.41	Aug. 16-Oct. 14, 1954
90-day	4.54	July 17-Oct. 14, 1954
120-day	5.38	June 17-Oct. 14, 1954
183-day	7.62	June 20-Dec. 19, 1951
12-month	12.2	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	15
30	12
50	9.0
70	6.7
80	5.5
90	4.2
95	3.3
98	2.5
99	2.0
99.5	1.6

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.0	0.3
1.3	5.0
1.5	11
2.0	32
3.0	93
4.0	170
5.0	260
6.0	360
7.0	470
8.0	600

Remarks.—Diurnal fluctuation and slight regulation for short periods during low flow caused by mills above station.

Yadkin River at Yadkin College

Station No. 57

Location.—Lat 35°51'24", long. 80°23'09", 80 ft downstream from bridge on U. S. Highway 64, 1-1/2 miles south of Yadkin College, Davidson County, and 6-1/4 miles downstream from Reedy Creek. Datum of gage is 638.65 ft above mean sea level.

Drainage area.—2,280 sq mi, approximately.

Records available.—July 1928 to September 1955.

Flow summary.—1928-55:

Average discharge (27 years), 2,849 cfs.

Maximum discharge, 80,200 cfs Aug. 15, 1940 (gage height, 33.75 ft); maximum stage known, 36.3 ft during July 1916 (discharge 94,300 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	330	Oct. 9, 1954
7-day	385	Oct. 8-14, 1954
10-day	397	Oct. 5-14, 1954
20-day	422	Sept. 25-Oct. 14, 1954
30-day	431	Sept. 15-Oct. 14, 1954
60-day	637	Aug. 16-Oct. 14, 1954
90-day	720	July 17-Oct. 14, 1954
120-day	845	June 17-Oct. 14, 1954
183-day	1,106	May 30-Nov. 28, 1954
12-month	1,591	April 1930-May 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,200
30	1,900
50	1,400
70	1,100
80	910
90	720
95	610
98	480
99	410
99.5	360
99.8	300
99.9	270

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
230	20
250	80
300	650
400	4,000
500	8,700
600	15,000
700	23,000
800	32,000
1,000	57,000

Remarks.—Diurnal fluctuation during low flow caused by small powerplant with little storage capacity 10 miles upstream from station.

Rocky River at Turnersburg

Station No. 58

Location.—Lat 35°54', long. 80°48', 1,000 ft downstream from bridge on U. S. Highway 21 at Turnersburg, Iredell County, 1 mile downstream from Mud Creek, and 1-1/2 miles upstream from mouth. Datum of gage is 724.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—85.5 sq mi.

Records available.—April 1940 to September 1955.

Flow summary.—1940-55:

Average discharge (15 years), 107 cfs.

Maximum discharge, 6,080 cfs Jan. 22, 1954 (gage height, 13.70 ft).

A stage of about 18 ft was reached by flood sometime during the years 1936 to 1938.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	13	Sept. 19, 1954
7-day	14.7	Sept. 13-19, 1954
10-day	14.8	Sept. 10-19, 1954
20-day	16.1	Sept. 1-20, 1954
30-day	16.1	Sept. 8-Oct. 7, 1954
60-day	20.3	Aug. 30-Oct. 28, 1954
90-day	24.6	Aug. 11-Nov. 8, 1954
120-day	29.2	July 6-Nov. 2, 1954
183-day	37.2	June 6-Dec. 5, 1954
12-month	63.0	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	79
30	66
50	50
70	37
80	32
90	26
95	22
98	17
99	14
99.5	12

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
9.0	0.65
11	23
13	110
15	190
20	450
25	860
30	1,400
35	2,100
40	3,000

Remarks.—Considerable diurnal fluctuation at low flow caused by mills above station affected minimum of record. Slight fluctuation in recent years.

South Yadkin River near Mocksville

Station No. 59

Location.—Lat 35°51', long. 80°40', at downstream side of highway bridge, 1 mile upstream from Little Creek, 4 miles downstream from Fifth Creek, 4-1/2 miles upstream from Hunting Creek, and 6-1/2 miles southwest of Mocksville, Davie County. Altitude of gage is 660 ft (by barometer).

Drainage area.—313 sq mi.

Records available.—October 1938 to September 1955.

Flow summary.—1938-55:

Average discharge (17 years), 307 cfs.

Maximum discharge, 9,240 cfs Jan. 23, 1954 (gage height, 16.73 ft); maximum stage known, 22.6 ft Oct. 3, 1929.

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	35	Oct. 8, 1954
7-day	39.3	Oct. 5-11, 1954
10-day	40.3	Oct. 5-14, 1954
20-day	41.8	Sept. 25-Oct. 14, 1954
30-day	43.0	Sept. 10-Oct. 9, 1954
60-day	56.7	Aug. 16-Oct. 14, 1954
90-day	67.5	Aug. 5-Nov. 2, 1954
120-day	78.6	July 7-Nov. 3, 1954
183-day	99.5	May 30-Nov. 28, 1954
12-month	177	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	230
30	190
50	140
70	110
80	90
90	72
95	61
98	49
99	40
99.5	30
99.8	27
99.9	26

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
25	3.1
30	58
40	550
50	1,200
60	2,100
70	3,100
80	4,200
90	5,600
100	7,000
115	9,600

Hunting Creek near Harmony

Station No. 60

Location.—Lat 36°00', long. 80°44', 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 3-1/2 miles northeast of Harmony. Altitude of gage is 731 ft (by barometer).

Drainage area.—153 sq mi.

Records available.—January 1951 to September 1955.

Flow summary.—1951-55:
Maximum discharge, 6,110 cfs Jan. 22, 1954 (gage height, 18.30 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	23	Oct. 8, 1954
7-day	28.9	Oct. 5-11, 1954
10-day	29.4	Oct. 5-14, 1954
20-day	33.4	Sept. 25-Oct. 14, 1954
30-day	34.7	Sept. 15-Oct. 14, 1954
60-day	45.0	Aug. 31-Oct. 29, 1954
90-day	55.5	Aug. 11-Nov. 8, 1954
120-day	62.2	July 20-Nov. 16, 1954
183-day	72.6	June 6-Dec. 5, 1954
12-month	113	September 1954-August 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	120
30	91
50	66
70	51
80	43
90	35
95	29
98	23
99	20
99.5	18
99.8	17
99.9	16

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
16	1.1
18	3.0
20	15
22	40
25	100
30	260
35	480
40	680
50	1,280
60	2,300

Remarks.—Slight diurnal fluctuation at low flow caused by mills above station.

South Yadkin River at Cooleemee

Station No. 61

Location.—Lat 35°48', long 80°34', 150 feet downstream from tailrace of Erwin Cotton Mills at Cooleemee, Davie County, 550 ft upstream from bridge on State Highway 801, 2-1/4 miles downstream from Bear Creek, and 2-1/2 miles upstream from Third Creek. Datum of gage is 624.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—569 sq mi.

Records available.—June 1928 to September 1955.

Flow summary.—1928-55:
Average discharge (25 years), 606 cfs.
Maximum discharge, 24,800 cfs Oct. 3, 1929 (gage height, 32.25 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	23	Oct. 12, 1941
7-day	70.4	Oct. 6-12, 1954
10-day	76.6	Sept. 11-20, 1954
20-day	82.2	Sept. 25-Oct. 14, 1954
30-day	82.2	Sept. 11-Oct. 10, 1954
60-day	124	Aug. 31-Oct. 29, 1954
90-day	145	Aug. 6-Nov. 3, 1954
120-day	163	July 8-Nov. 4, 1954
183-day	200.6	May 30-Nov. 28, 1954
12-month	343.1	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	450
30	360
50	270
70	200
80	170
90	130
95	100
98	78
99	61
99.5	52
99.8	39
99.9	27

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
20	5.4
30	16
45	36
50	76
60	270
70	600
100	2,300
150	6,700
200	13,000
250	22,000

Remarks.—Large diurnal fluctuation and slight regulation during low and medium flow caused by Erwin Cotton Mill above station.

Third Creek at Cleveland

Station No. 62

Location.—Lat 35°45', long 80°41', 200 ft downstream from highway bridge, three-quarters of a mile north of Cleveland, Rowan County, and 7 miles upstream from Fourth Creek. Datum of gage is 684.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—87.4 sq mi.

Records available.—April 1940 to September 1955.

Flow summary.—1940-55:
Average discharge (15 years), 85.5 cfs.
Maximum discharge, 3,080 cfs about Sept. 19, 1945 (gage height, 15.76 ft); maximum stage known, 22.5 ft, sometime in July 1916.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	11	Sept. 8, 1954
7-day	11.3	Sept. 8-14, 1954
10-day	11.4	Sept. 6-15, 1954
20-day	12.1	Aug. 31-Sept. 19, 1954
30-day	18.0	Sept. 18-Oct. 7, 1954
60-day	17.4	Aug. 27-Oct. 25, 1954
90-day	19.6	July 31-Oct. 28, 1954
120-day	21.5	July 6-Nov. 2, 1954
183-day	26.6	June 6-Dec. 5, 1954
12-month	46.4	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	61
30	50
50	37
70	28
80	23
90	19
95	16
98	13
99	11
99.5	8.1

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
8.0	5.5
9.0	20
10	50
12	125
15	280
20	730
25	1,400
30	2,450

Remarks.—Town of Statesville diverts about three-quarters of a cubic foot per second into basin above station. Creek channel improved considerably by dredging since 1916.

Abbotts Creek at Lexington

Station No. 63

Location.—Lat 35°48'24", long. 80°14'06", 200 ft downstream from small tributary, 200 ft upstream from highway bridge, 0.6 mile downstream from bridge on U. S. Highway 64, 1-1/2 miles southeast of Lexington, Davidson County and 4.9 miles downstream from Rich Fork. Datum of gage is 622.55 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—174 sq mi.

Records available.—March 1940 to September 1955.

Flow summary.—1940-1955:
Average discharge (15 years), 161 cfs.
Maximum discharge, 14,800 cfs Sept. 25, 1947 (gage height, 22.12 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.9	Oct. 8, 1954
7-day	1.3	Oct. 4-10, 1954
10-day	1.7	Oct. 3-12, 1954
20-day	2.7	Sept. 25-Oct. 14, 1954
30-day	3.7	Sept. 15-Oct. 14, 1954
60-day	5.7	Sept. 13-Nov. 11, 1941
90-day	8.6	Aug. 29-Nov. 26, 1941
120-day	9.9	Aug. 6-Dec. 3, 1941
183-day	16.6	July 31, 1941-Jan. 29, 1942
12-month	77.2	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	110
30	75
50	44
70	25
80	18
90	11
95	7.4
98	5.0
99	3.6
99.5	2.8
99.8	1.9
99.9	1.1

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.6	19
3.0	30
4.0	70
5.0	120
7.0	250
12	700
18	1,500
27	3,000
42	6,000
50	7,500

Remarks.—Town of Lexington diverted an average of 2.6 cfs 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.

Yadkin River at High Rock

Station No. 64

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, 1-3/4 miles upstream from Lick Creek, and at mile 253. Datum of gage is 558.68 ft above mean sea level, datum of 1929, and 590.00 ft above Carolina Aluminum Company datum.

Drainage area.—3,980 sq mi, approximately.

Records available.—January 1919 to November 1927, November 1941 to September 1955.

Flow summary.—1941-1955:

Average discharge (13 years), 4,481 cfs (1942-1955).

Maximum discharge, 71,900 cfs Sept. 18, 1945 (gage height, 15.37 ft).

Maximum stage known, 22.1 ft in July 1916;

Flood of July 21, 1919 reached a stage of 15.9 ft (discharge, 76,600 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	12	Aug. 9, 1942
7-day	53.6	Sept. 9-15, 1951
10-day	333	Aug. 6-15, 1954
20-day	552	Aug. 5-24, 1954
30-day	742	Aug. 1-30, 1954
60-day	1,110	July 31-Sept. 28, 1954
90-day	1,180	Aug. 9-Nov. 8, 1953
120-day	1,250	Aug. 9-Dec. 6, 1953
12-month	2,960	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	3,600
30	3,200
50	2,700
70	2,000
80	1,500
90	650
95	430
98	220
99	180
99.5	140
99.8	110
99.9	96

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
10	3.0
30	20
40	39
50	120
70	260
200	1,200
500	3,400
800	10,000
1,000	36,000
1,500	90,000

Remarks.—Except for major floods, flow completely regulated by High Rock Reservoir since 1927 (usual capacity, 10,230,000,000 cubic feet).

Uwharrie River near Eldorado

Station No. 65

Location.—Lat 35°25'30", long. 80°01'00", 300 ft downstream from State Highway 109, one mile upstream from McLeans Creek, and 3 miles south of Eldorado, Montgomery County. Altitude of gage is 297 ft.

Drainage area.—347 sq mi.

Records available.—October 1938 to September 1955.

Flow summary.—1938-55:

Average discharge (17 years), 318 cfs.
Maximum discharge, 23,300 cfs Sept. 18, 1945 (gage height, 26.22 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.5	Oct. 13, 1941
7-day	.71	Nov. 5-11, 1941
10-day	.74	Nov. 5-14, 1941
20-day	1.03	Oct. 30-Nov. 18, 1941
30-day	1.52	Oct. 19-Nov. 17, 1941
60-day	2.00	Sept. 19-Nov. 17, 1941
90-day	4.24	Sept. 7-Dec. 5, 1941
120-day	7.22	Aug. 6-Dec. 3, 1941
183-day	16.5	Aug. 2, 1941-Jan. 31, 1942
12-month	124	February 1941-January 1942

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	220
30	150
50	81
70	41
80	28
90	16
95	9.1
98	3.7
99	1.4

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.7	2.1
1.1	8.2
2.2	50
2.6	78
3.0	100
4.5	200
7.0	400
20	2,000
42	6,000
80	15,500

Remarks.—Marked diurnal fluctuation and some regulation for short periods at low flow caused by grist mill above station. Town of Asheboro diverts an average of 1.0 cfs from the basin above the station for water supply. Sewage returns to Deep River (Cape Fear River basin).

Big Bear Creek near Richfield

Station No. 66

Location.—Lat 35°20', long. 80°20', 200 ft upstream from highway bridge, 300 feet downstream from Little Creek and 10 miles Southwest of Richfield, Stanly County. Altitude of gage is 360 ft.

Drainage area.—56.3 sq mi.

Records available.—May 1954 to September 1955.

Flow summary.—1954-55:
Maximum discharge, 4,120 cfs Feb. 6, 1955 (gage height, 11.90 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0	Sept. 12, 1954
7-day	0	Sept. 12-18, 1954
10-day	0	Sept. 12-21, 1954
20-day	0	Sept. 12-Oct. 1, 1954
30-day	0	Sept. 12-Oct. 11, 1954
60-day	1.7	Aug. 16-Oct. 14, 1954
90-day	7.5	July 16-Oct. 14, 1954
120-day	11.6	June 17-Oct. 14, 1954
183-day	16.7	May 27-Nov. 25, 1954

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.3	14
.5	20
1.0	40
2.0	92
3.0	160
5.0	320
10	820
20	2,000
30	3,500

Rocky River near Norwood

Station No. 67

Location.—Lat 35°09'00", long. 80°10'30", 1,000 ft downstream from Lanes Creek, 1-1/2 miles upstream from highway bridge, and 6 miles southwest of Norwood, Stanly County. Datum of gage is 212.91 ft above mean sea level, Datum of 1929.

Drainage area.—1,370 sq mi, approximately.

Records available.—October 1929 to September 1955.

Flow summary.—1929-55:

Average discharge (26 years), 1,251 cfs.

Maximum discharge, 155,000 cfs Sept. 18, 1945 (gage height, 46.37 ft).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	19	Oct. 8, 1954
7-day	25.9	Oct. 7-13, 1954
10-day	26.3	Oct. 5-14, 1954
20-day	29.2	Sept. 25-Oct. 14, 1954
30-day	30.0	Sept. 5-Oct. 14, 1954
60-day	57.8	Oct. 5-Dec. 3,.1941
90-day	68.6	Sept. 6-Dec. 4, 1941
120-day	102	Oct. 5, 1933-Feb. 1, 1934
183-day	170	Aug. 26, 1933-Feb. 25, 1934
12-month	428	August 1950-July 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	810
30	520
50	240
70	120
80	85
90	58
95	44
98	33
99	27
99.5	22
99.8	19
99.9	17

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
20	32
30	320
40	680
50	1,150
70	2,400
100	5,200
150	12,000
200	22,000
300	50,000
600	200,000

Brown Creek near Polkton

Station No. 68

Location.—Lat 35°02'10", long. 80°08'40", 400 ft downstream from bridge on State Highway 742, 3-1/2 miles downstream from Little Brown Creek, and 4 miles northeast of Polkton, Anson County. Altitude of gage is 216 ft.

Drainage area.—110 sq mi.

Records available.—October 1937 to September 1955.

Flow summary.—1937-55:
Average discharge (18 years), 81.4 cfs.
Maximum discharge, 17,300 cfs Sept. 18, 1945 (gage height, 17.68 ft).

Period	Discharge (cfs)	Dates
1-day	0	Oct. 10, 1938
7-day	0	Oct. 10-16, 1938
10-day	0	Oct. 10-19, 1938
20-day	0	June 28-July 17, 1940
30-day	0	Sept. 1-30, 1954
60-day	.0002	Aug. 16-Oct. 14, 1954
90-day	.044	Sept. 27-Dec. 25, 1943
120-day	.77	Aug. 6-Dec. 3, 1950
183-day	1.26	June 6-Dec. 5, 1954
12-month	18.4	April 1950-March 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	48
30	22
50	6.1
70	1.3
80	.43
90	.10

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.10	7.0
.20	16
.30	25
.50	44
1.0	90
2.0	180
3.0	300
5.0	640
10	1,900
20	6,000

Little River near Star

Station No. 69

Location.—Lat 35°23', long. 79°50', at bridge, a quarter of a mile upstream from Norfolk Southern Railroad bridge, 0.3 mile downstream from West Fork Little River, and 3 miles west of Star, Montgomery County. Datum of gage is 409 ft above mean sea level.

Drainage area.—97.6 sq mi.

Records available.—April 1954 to September 1955.

Flow summary.—1954-55:

Maximum discharge, 10,400 cfs Oct. 15, 1954 (gage height, 16.46 ft).
Flood of September 1948 reached a stage of about 20 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.3	Oct. 6, 1954
7-day	.31	Oct. 8-14, 1954
10-day	.33	Oct. 5-14, 1954
20-day	1.28	Sept. 25-Oct. 14, 1954
30-day	1.24	Sept. 15-Oct. 14, 1954
60-day	7.63	Aug. 16-Oct. 14, 1954
90-day	8.45	July 17-Oct. 14, 1954
120-day	12.3	June 17-Oct. 14, 1954
183-day	56.2	May 30-Nov. 28, 1954

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.7	4.6
1.0	9.6
2.0	38
4.0	135
7.0	330
10	560
20	1,500
40	3,900
60	6,600

Pee Dee River near Rockingham

Station No. 70

Location.—Lat 34°56'40", long. 79°52'10", 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. Datum of gage is 120.68 ft above mean sea level.

Drainage area.—6,870 sq mi approximately.

Records available.—August 1906 to January 1912 (gage heights and fragmentary discharge only), September 1927 to September 1955.

Flow summary.—1927-1955:
Average discharge (28 years), 7,716 cfs (unadjusted).
Maximum discharge, 270,000 cfs Sept. 18, 1945 (gage height, 30.80 ft).
Maximum stage known, 31.28 ft Aug. 27, 1908 (discharge, 276,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	58	Dec. 2, 1951
7-day	420	Sept. 24-30, 1954
10-day	488	Sept. 24-Oct. 3, 1954
20-day	545	Sept. 24-Oct. 13, 1954
30-day	679	Sept. 15-Oct. 14, 1954
60-day	1,020	Aug. 15-Oct. 13, 1954
90-day	1,640	July 19-Oct. 15, 1954
120-day	2,020	June 17-Oct. 14, 1954
183-day	2,640	May 27-Nov. 25, 1951
12-month	4,080	April 1933-March 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	5,900
30	4,900
50	3,600
70	2,800
80	2,100
90	1,400
95	760
98	340
99	220
99.5	160
99.8	130
99.9	110

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
85	47
150	115
300	270
400	470
500	1,800
600	6,000
800	14,000
1,000	24,000
1,500	50,000
2,000	90,000
2,600	170,000

Remarks.—Large diurnal fluctuation caused by powerplants above station. Flow largely regulated since 1928 by four reservoirs with a combined usable capacity of 24,259,016,000 cubic feet.

Drowning Creek near Hoffman

Station No. 71

Location.—Lat 35°03'38", long. 79°29'39", at bridge on U. S. Highway 1, three-quarters of a mile downstream from Deep Creek, 1 mile upstream from Seaboard Airline Railway bridge, and 4 miles northeast of Hoffman, Richmond County. Altitude of gage is 270 ft.

Drainage area.—178 sq mi.

Records available.—October 1939 to September 1955.

Flow summary.—1939-55:

Average discharge (16 years), 253 cfs.
Maximum discharge, 10,900 cfs Sept. 18, 1945 (gage height, 10.29 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	29	Aug. 3, 1940
7-day	31.3	July 29-Aug. 4, 1940
10-day	32.6	July 27-Aug. 5, 1940
20-day	38.2	July 22-Aug. 10, 1940
30-day	42.1	Sept. 9-Oct. 8, 1954
60-day	47.2	Sept. 1-Oct. 30, 1940
90-day	64.7	July 18-Oct. 15, 1954
120-day	67.3	June 28-Oct. 25, 1940
183-day	79.9	May 14-Nov. 12, 1940
12-month	137	January 1951-December 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	240
30	190
50	140
70	94
80	74
90	56
95	43
98	32
99	30
99.5	27
99.8	25
99.9	23

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
20	1.3
21	5
22	12
26	47
29	100
32	200
40	540
50	1,300
65	3,000
90	7,500

Lumber River at Boardman

Station No. 72

Location.—Lat 34°26', long. 78°58', at bridge on U. S. Highway 74, 1 mile downstream from Atlantic Coast Line Railroad bridge at Boardman, Columbus County, and 1-1/2 miles downstream from Big Swamp. Datum of gage is 72.05 ft above mean sea level, datum of 1929.

Drainage area.—1,220 sq mi, approximately.

Records available.—September 1929 to September 1955.

Flow summary.—1929-55:
Average discharge (26 years), 1,206 cfs.
Maximum discharge, 13,400 cfs Sept. 24, 1945 (gage height, 10.64 ft).
Maximum stage known, 11.8 ft in August 1928 (discharge, 25,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	88	Oct. 14, 1954
7-day	91.6	Oct. 8-14, 1954
10-day	93.1	Oct. 5-14, 1954
20-day	96.2	Sept. 25-Oct. 14, 1954
30-day	97.4	Sept. 15-Oct. 14, 1954
60-day	109	Aug. 16-Oct. 14, 1954
90-day	145	July 19-Oct. 16, 1954
120-day	168	June 24-Oct. 21, 1954
183-day	261	June 5-Dec. 4, 1954
12-month	391	June 1933-May 1934

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	1,100
30	870
50	590
70	340
80	260
90	180
95	140
98	110
99	92
99.5	78
99.8	60

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
64	50
70	150
80	600
90	1,200
100	1,800
150	5,500
200	11,000
300	28,000

Catawba River near Marion

Station No. 7?

Location.—Lat 35°42'20", long. 82°02'10", at 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. Datum of gage is 1,208 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—171 sq mi (including area of small tributary which enters above control).

Records available.—October 1941 to September 1955.

Flow summary.—1941-55:
Average discharge (14 years), 307 cfs.
Maximum discharge, 19,700 cfs Aug. 28, 1949 (gage height, 15.02 ft).
Flood of Aug. 13, 1940 reached a stage of 19.34 ft (discharge, 71,400 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	29	Sept. 30, 1954
7-day	31.6	Oct. 9-15, 1954
10-day	35.3	Oct. 9-18, 1954
20-day	37.9	Oct. 4-23, 1954
30-day	39.5	Sept. 16-Oct. 15, 1954
60-day	39.4	Sept. 2-Oct. 31, 1954
9 -day	45.8	Aug. 7-Nov. 4, 1954
120-day	52.0	July 19-Nov. 15, 1954
183-day	67.2	June 28-Dec. 27, 1954
12-month	144	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	260
30	210
50	150
70	110
80	87
90	65
95	49
98	35
99	28
99.5	25
99.8	21
99.9	20

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
20	1.3
25	51
30	250
40	1,100
50	2,300
60	3,900
70	5,600
80	7,500
90	9,500
100	11,000

Remarks.—Considerable diurnal fluctuation and slight regulation at low flow caused by powerplants above station.

Linville River at Branch

Station No. 74

Location.—Lat 35°47'50", long 81°53'20", at bridge on State Highway 126 at Branch, Burke County, and 0.2 mile upstream from Lake James. Datum of gage is 1,205.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—65 sq mi, approximately.

Records available.—May 1907 to December 1908 (fragmentary); June 1922 to September 1955.

Flow summary.—1907-08, 1922-55:
Average discharge (33 years, 1922-55), 139 cfs.
Maximum discharge, 39,500 cfs Aug. 13, 1940 (gage height, 11.4 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	8	Sept. 7, 1925
7-day	10.4	Aug. 22-28, 1925
10-day	11.3	Aug. 22-31, 1925
20-day	11.8	Aug. 22-Sept. 10, 1925
30-day	13.0	Aug. 15-Sept. 13, 1925
60-day	14.0	Aug. 15-Oct. 13, 1925
90-day	16.8	July 27-Oct. 24, 1925
120-day	23.8	July 12-Nov. 8, 1925
183-day	32.7	June 29-Dec. 28, 1954
12-month	66.3	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	110
30	86
50	61
70	41
80	32
90	23
95	17
98	13
99	11
99.5	9.1
99.8	7.4
99.9	6.6

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
6.0	0.85
7.0	3.9
8.0	12
10	60
12	180
15	410
20	870
25	1,400
35	2,800
45	4,500

Remarks.—Occasional slight diurnal fluctuation caused by small mill above station.

Lower Little River near All Healing Springs

Station No. 75

Location.—Lat 35°57', long. 81°14', 0.3 mile downstream from Grassy Creek, 0.4 mile upstream from Lambert Creek, 2.2 miles northeast of All Healing Springs, Alexander County, and 4 miles northwest of Taylorsville.

Drainage area.—31.2 sq mi.

Records available.—January 1953 to September 1955.

Flow summary.—1953-55:
Maximum discharge, 1,040 cfs Jan. 22, 1954 (gage height, 11.80 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	3.1	Sept. 29, 1955
7-day	3.39	Sept. 17-23, 1955
10-day	3.74	Sept. 15-24, 1955
20-day	4.29	Sept. 21-Oct. 10, 1954
30-day	4.17	Sept. 9-Oct. 8, 1954
60-day	5.29	Aug. 30-Oct. 26, 1954
90-day	6.15	July 29-Oct. 26, 1954
120-day	6.83	July 5-Nov. 1, 1954
183-day	9.51	June 6-Dec. 5, 1954
12-month	16.4	April 1954-March 1955

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
2.3	0.5
3.0	10
4.0	46
5.0	106
6.0	185
8.0	410
10	730

Catawba River at Catawba

Station No. 76

Location.—Lat 35°43', long. 81°04', at bridge on U. S. Highways 64 and 70, half a mile upstream from Lyle Creek, five-eights of a mile upstream from Southern Railway bridge, and 1 mile northeast of Catawba, Catawba County. Records include flow of Lyle Creek. Datum of gage is 746.49 ft above mean sea level.

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 1955.

Flow summary.—1896–1902; 1934–55:
Average discharge (23 years, 1896–99, 1935–55), 2,276 cfs (unadjusted).
Maximum discharge, 177,000 cfs Aug. 14, 1940 (gage height, 36.8 ft).
Maximum stage known, 44.1 ft July 16, 1916, affected by failure of earth dike 4 miles above station. Discharge not determined.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	101	July 12, 1953
7-day	166	Sept. 27–Oct. 3, 1954
10-day	170	Sept. 24–Oct. 3, 1954
20-day	223	Sept. 22–Oct. 11, 1954
30-day	314	Sept. 22–Oct. 21, 1954
60-day	502	Sept. 18–Nov. 16, 1954
90-day	588	Sept. 21–Dec. 19, 1954
120-day	692	Sept. 1–Dec. 29, 1954
183-day	800	Sept. 12, 1954–Mar. 13, 1955
12-month	1,100	July 1954–June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	2,000
30	1,700
50	1,200
70	790
80	480
90	170
95	110
98	95
99	88
99.5	81

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
80	18
90	42
100	84
150	530
200	1,300
300	3,100
400	5,900
500	12,000
600	20,000
800	52,000

Remarks.—Flow regulated by four reservoirs above station which have a combined usable capacity of 14,975,000,000 cu ft.

Henry Fork near Henry River

Station No. 77

Location.—Lat 35°41', long. 81°24', at old Link Ford, 450 ft downstream from highway bridge, and 2 miles southeast of Henry River, Burke County. Datum of gage is 890.99 ft above mean sea level.

Drainage area.—80 sq mi, approximately.

Records available.—July 1925 to November 1931, December 1941 to September 1955.

Flow summary.—1925-31, 1942-55:
Average discharge (19 years), 122 cfs.
Maximum discharge, 15,300 cfs Oct. 2, 1929 (gage height, 18.40 ft).
Maximum stage known, 29.2 ft Aug. 13, 1940 (discharge, 31,300 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	4	Nov. 15, 1942
7-day	13.8	July 18-24, 1926
10-day	13.3	July 17-26, 1926
20-day	21.5	Sept. 25-Oct. 14, 1926
30-day	21.4	Sept. 17-Oct. 16, 1926
60-day	25.4	Sept. 3-Nov. 1, 1926
90-day	24.6	Aug. 19-Nov. 15, 1926
120-day	32.9	July 18-Nov. 14, 1954
183-day	36.0	May 27-Nov. 25, 1926
12-month	57.1	June 1926-May 1927

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	91
30	73
50	54
70	40
80	32
90	23
95	16
98	6.5
99	5.0

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
3.0	0.36
4.0	1.4
5.0	2.5
7.0	4.6
9.0	7.1
11	22
20	270
30	1,400
40	4,100

Remarks.—Considerable diurnal fluctuation and some regulation caused by mill above station. City of Morganton diverts an average of 3 cfs from basin for municipal water supply.

Indian Creek near Laboratory

Station No. 78

Location.—Lat 35°25'20", long. 81°15'50", half a mile upstream from highway bridge, 1-1/2 miles upstream from mouth, 1-1/2 miles south of Laboratory, Lincoln County, and 3-1/2 miles south of Lincolnton. Altitude of gage is 736 ft.

Drainage area.—68.4 sq mi.

Records available.—August 1951 to September 1955.

Flow summary.—1951-55:
Maximum discharge, 5,030 cfs Mar. 4, 1952 (gage height, 8.74 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	5.2	Oct. 7, 1954
7-day	5.95	Oct. 3-9, 1954
10-day	6.20	Oct. 2-11, 1954
20-day	6.90	Sept. 25-Oct. 14, 1954
30-day	7.88	Sept. 23-Oct. 22, 1954
60-day	8.36	Aug. 31-Oct. 29, 1954
90-day	10.2	Aug. 4-Nov. 1, 1954
120-day	11.9	July 19-Nov. 15, 1954
183-day	16.7	June 26-Dec. 25, 1954
12-month	35.8	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	49
30	40
50	26
70	19
80	14
90	11
95	7.3
98	5.0
99	4.6
99.5	4.2

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
4.0	1.0
5.0	14
6.0	50
7.0	100
8.0	160
9.0	240
10	330
15	970
20	1,800
25	2,800

Long Creek near Bessemer City

Station No. 79

Location.—Lat 35°18'20", long. 81°14'05", at highway bridge, 2 miles northeast of Bessemer City, Gaston County, and 8-1/4 miles upstream from mouth. Datum of gage is 706.1 ft above mean sea level, datum of 1929.

Drainage area.—31.4 sq mi.

Records available.—December 1952 to September 1955.

Flow summary.—1952-55:
Maximum discharge, 1,040 cfs May 21, 1955 (gage height, 5.33 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.8	Oct. 7, 1954
7-day	1.27	Oct. 2-8, 1954
10-day	1.39	Sept. 29-Oct. 8, 1954
20-day	1.70	Sept. 24-Oct. 14, 1954
30-day	1.77	Sept. 9-Oct. 8, 1954
60-day	2.16	Aug. 31-Oct. 29, 1954
90-day	3.06	Aug. 18-Nov. 15, 1954
120-day	3.59	July 20-Nov. 16, 1954
183-day	5.30	June 6-Dec. 5, 1954
12-month	14.7	May 1954-April 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	14
30	11
50	7.0
70	4.1
80	2.9
90	1.8
95	1.2
98	.86
99	.73
99.5	.64
99.8	.60

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.7	0.19
.8	.50
1.0	2.0
1.5	14
2.0	39
2.5	72
3.0	120
5.0	350
7.0	670
10	1,300

Remarks.—Bessemer City diverts approximately 1.2 cfs out of basin for municipal supply.

South Fork Catawba River at Lowell

Station No. 80

Location.—Lat 35°17'09", long. 81°06'04", 120 ft downstream from Housers Creek, 1 mile north of Lowell, Gaston County, and 3 miles downstream from Long Creek. Datum of gage is 603.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—630 sq mi.

Records available.—January 1942 to September 1955.

Flow summary.—1942-55:
Average discharge (13 years), 771 cfs.
Maximum discharge, 22,000 cfs Sept. 19, 1945 (gage height, 16.98 ft).
Maximum stage known, 21.33 ft August 1940 (discharge, 34,000 cfs).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	31	Oct. 8, 1954
7-day	76.9	Oct. 5-11, 1954
10-day	75.4	Oct. 2-11, 1954
20-day	86.8	Sept. 25-Oct. 14, 1954
30-day	93.2	Sept. 15-Oct. 14, 1954
60-day	106	Sept. 4-Nov. 2, 1954
90-day	138	Aug. 31-Nov. 28, 1954
120-day	152	July 20-Nov. 16, 1954
183-day	196	June 6-Dec. 5, 1954
12-month	472	December 1950-November 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	580
30	470
50	360
70	260
80	210
90	170
95	130
98	94
99	76
99.5	64
99.8	38

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
26	6.0
30	10
40	21
50	31
55	62
60	130
80	760
100	2,000
150	6,400
300	35,000

Remarks.—Considerable diurnal fluctuation and slight regulation at low flow caused by powerplant above station. Diversion of approximately 11 cfs are made above station for municipal supplies at cities of Gastonia, Morganton, and Bessemer City. Approximately 2 cfs are returned to basin above station as sewage.

Little Sugar Creek near Charlotte

Station No. 81

Location.—Lat 35°09'20", long. 80°51'10", 500 ft downstream from Briar Creek, 600 ft upstream from city of Charlotte sewage-disposal plant, and 4.7 miles south of city hall, Charlotte, Mecklenburg County. Datum of gage is 571.6 ft above mean sea level.

Drainage area.—41.4 sq mi.

Records available.—July 1924 to September 1955.

Flow summary.—1924-55:
Average discharge (31 years), 44.2 cfs.
Maximum discharge, 8,370 cfs Apr. 6, 1936 (gage height, 16.2 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	1.6	Aug. 1, 1925
7-day	2.09	Oct. 5-11, 1925
10-day	2.12	Oct. 4-13, 1925
20-day	2.19	Sept. 23-Oct. 12, 1925
30-day	2.3	Sept. 14-Oct. 13, 1925
60-day	3.28	Aug. 25-Oct. 23, 1925
90-day	5.68	Sept. 1-Nov. 29, 1926
120-day	7.50	Aug. 27-Dec. 24, 1926
183-day	10.0	May 3-Nov. 1, 1926
12-month	20.1	September 1926-August 1927

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	27.0
30	19
50	12
70	7.6
80	6.0
90	4.6
95	3.7
98	2.9
99	2.3
99.5	1.8
99.8	1.5
99.9	1.4

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
1.3	0.3
1.4	.8
1.6	3.3
1.8	8.5
2.0	15
2.5	32
3.0	55
5.0	190
10	660
15	1,600

Broad River near Chimney Rock

Station No. 82

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. Altitude of gage is 860 ft.

Drainage area.—97 sq mi, approximately.

Records available.—May 1907 to June 1909 (fragmentary), March 1927 to September 1955.

Flow summary.—1927-55:
Average discharge (28 years), 171 cfs.
Maximum discharge, 26,000 cfs Aug. 15, 1928 (gage height, 16.8 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	0.8	Sept. 24, 1928
7-day	.87	Sept. 23-29, 1928
10-day	.90	Sept. 20-29, 1928
20-day	11.6	Oct. 9-Oct. 28, 1941
30-day	20.8	Sept. 24-Oct. 23, 1954
60-day	23.4	Sept. 20-Nov. 18, 1954
90-day	31.2	Aug. 17-Nov. 14, 1954
120-day	33.7	July 22-Nov. 18, 1954
183-day	43.0	June 30-Dec. 29, 1954
12-month	76.4	May 1954-April 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	160
30	120
50	94
70	54
80	45
90	4.5
95	2.6
98	1.7
99	1.3
99.5	.97
99.8	.71
99.9	.65

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
0.6	0.25
.7	1.1
.8	2.1
1.2	6.1
2	14
5	46
13	120
15	150
20	290
30	1,000
50	4,400

Remarks.—Large diurnal fluctuation and complete regulation at low flow caused by powerplant above station.

Cove Creek near Lake Lure

Station No. 83

Location.—Lat 35°25'30", long. 82°06'35", at bridge on U. S. Highways 64 and 74, 1 mile upstream from mouth and 5 miles east of Lake Lure, Rutherford County.

Drainage area.—77.0 sq mi.

Records available.—January 1951 to September 1955.

Flow summary.—1951-55:
Maximum discharge, 7,000 cfs Mar. 11, 1952 (gage height, 14.00 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	21	Sept. 28, 1954
7-day	21.2	Sept. 30-Oct. 6, 1954
10-day	21.2	Sept. 28-Oct. 7, 1954
20-day	21.7	Sept. 24-Oct. 13, 1954
30-day	22.5	Sept. 15-Oct. 14, 1954
60-day	24.6	Sept. 1-Oct. 30, 1954
90-day	26.8	Aug. 3-Oct. 31, 1954
120-day	28.0	Aug. 1-Nov. 27, 1954
183-day	34.5	June 5-Dec. 4, 1954
12-month	56.7	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	70
30	58
50	39
70	30
80	27
90	23
95	18
98	16
99	15

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
15	26
16	65
18	180
20	330
23	620
26	1,000
30	1,600
35	2,400
40	3,200

Second Broad River at Cliffside

Station No. 84

Location.—Lat 35°14', long. 81°46', a quarter of a mile downstream from Cliffside Mills dam, at Cliffside, Rutherford County, and 1-1/2 miles upstream from mouth. Altitude of gage is 670 ft.

Drainage area.—211 sq mi.

Records available.—June 1925 to September 1955.

Flow summary.—1925-55:
Average discharge (30 years), 287 cfs.
Maximum discharge, 15,000 cfs Aug. 14, 1940 (gage height, 17.93 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	6	June 9, 1940
7-day	39.1	Oct. 28-Nov. 3, 1926
10-day	40.8	Sept. 29-Oct. 7, 1926
20-day	44.3	Oct. 19-Nov. 7, 1926
30-day	51.7	Sept. 10-Oct. 9, 1954
60-day	56.0	Aug. 30-Oct. 28, 1954
90-day	63.2	Aug. 5-Nov. 2, 1954
120-day	69.8	July 23-Nov. 19, 1954
183-day	85.0	June 6-Dec. 5, 1954
12-month	140	July 1954-June 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	220
)	180
50	130
70	100
80	85
90	66
95	52
98	34
99	24
99.5	16
99.8	9.1
99.9	7.2

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
5.2	1.3
10	6.4
25	22
30	42
40	300
50	900
60	1,800
70	3,200
80	4,600
100	9,200

Remarks.—Considerable diurnal fluctuation and some regulation caused by mills above station.

Broad River near Boiling Springs

Station No. 85

Location.—Lat 35°12'35", long. 81°41'50", half a mile upstream from Sandy Run Creek, 3 miles downstream from Second Broad River, and 3-1/2 miles southwest of Boiling Springs, Cleveland County. Datum of gage is 639.92 ft above mean sea level.

Drainage area.—864 sq mi.

Records available.—June 1925 to September 1955.

Flow summary.—1925-55:
Average discharge (30 years) 1,389 cfs.
Maximum discharge, 73,300 cfs Aug. 16, 1928 (gage height, 24.3 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	105	Oct. 10, 1954
7-day	198	Oct. 4-10, 1954
10-day	195	Oct. 1-10, 1954
20-day	218	Sept. 29-Oct. 18, 1954
30-day	233	Sept. 19-Oct. 18, 1954
60-day	256	Sept. 9-Nov. 7, 1954
90-day	295	Aug. 19-Nov. 16, 1954
120-day	329	July 23-Nov. 19, 1954
183-day	397	June 29-Dec. 28, 1954
12-month	705	April 1954-March 1955

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	1,100
30	920
50	700
70	530
80	440
90	340
95	280
98	220
99	190
99.5	170
99.8	150
99.9	120

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
74	5.8
90	21
130	66
170	700
200	2,000
250	5,800
300	11,000
350	18,000
400	26,000
500	45,000

Remarks.—Considerable diurnal fluctuation and some regulation caused by powerplants above station.

First Broad River near Lawndale

Station No. 86

Location.—Lat 35°22'50", long. 81°32'40", 0.2 mile upstream from Shoal Rock Creek, 0.4 mile downstream from highway bridge at Double Shoals, and 2-1/2 miles southeast of Lawndale, Cleveland County. Datum of gage is 735.94 above mean sea level, datum of 1929, supplementary adjustment of 1936.

Drainage area.—198 sq mi.

Records available.—February 1940 to September 1955.

Flow summary.—1940-55:
Average discharge (15 years), 260 cfs.
Maximum discharge, 32,500 cfs Aug. 14, 1940 (gage height, 37.8 ft).
Flood of July 1916 reached a stage of 37.8 ft.
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	23	Sept. 19, 1954
7-day	42.0	Sept. 13-19, 1954
10-day	40.8	Sept. 10-19, 1954
20-day	45.8	Aug. 31-Sept. 19, 1954
30-day	53.5	Sept. 23-Oct. 22, 1954
60-day	63.1	Sept. 2-Oct. 31, 1954
90-day	73.6	Aug. 1-Oct. 29, 1954
120-day	65.5	Jul. 19-Nov. 15, 1954
183-day	78.6	Jun. 28-Dec. 27, 1954
12-month	185	December 1950-November 1951

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	190
30	150
50	120
70	84
80	73
90	60
95	50
98	41
99	34
99.5	30
99.8	25
99.9	21

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
16	1.1
20	5.6
25	13
28	21
30	35
40	330
50	1,100
70	3,900
90	8,000
120	16,000

Remarks.—Considerable diurnal fluctuation and slight regulation at low flow caused by powerplants and mills above station.

South Fork New River near Jefferson

Station No. 87

Location.—Lat 36°24', long 81°25', 600 ft upstream from bridge on State Highways 16 and 88, a quarter of a mile downstream from Bear Creek, and 4 miles southeast of Jefferson, Ashe County. Datum of gage is 2,657.04 ft above mean sea level, unadjusted.

Drainage area.—207 sq mi.

Records available.—October 1924 to September 1926, July 1928 to September 1955.

Flow summary.—1924-26, 1928-55:

Average discharge 1925-26, 1928-55 (28 years), 410 cfs.

Maximum discharge, 52,800 cfs Aug. 14, 1940 (gage height, 22.50 ft).

Maximum stage known prior to 1924, 18.0 ft July 15, 1916 (discharge, 35,200 cfs).

Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	65	Sept. 9, 1925
7-day	72.1	Aug. 21-27, 1925
10-day	76.5	Aug. 18-27, 1925
20-day	87.5	Aug. 21-Sept. 9, 1925
30-day	90.3	July 29-Aug. 27, 1925
60-day	103	July 29-Sept. 26, 1925
90-day	105	July 17-Oct. 14, 1925
120-day	123	June 27-Oct. 24, 1925
183-day	145	July 20-Nov. 16, 1954
12-month	236	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	290
30	240
50	190
70	140
80	110
90	91
95	78
98	66
99	61
99.5	56
99.8	51
99.9	48

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
45	3.30
52	40
60	200
70	600
90	1,900
110	4,000
130	7,000
150	10,000
180	18,000

North Fork New River at Crumpler

Station No. 88

Location.—Lat 36°30', long. 81°23', a quarter of a mile downstream from bridge on State Highway 16 at Crumpler, Ashe County, about 6 miles upstream from mouth, and 7-1/2 miles northeast of Jefferson. Datum of gage is 2,518.81 ft above mean sea level, unadjusted.

Drainage area.—277 sq mi.

Records available.—August 1900 to December 1901 (fragmentary), August 1908 to September 1916, and July 1928 to September 1955.

Flow summary.—1908-16, 1928-55:
Average discharge (35 years), 467 cfs.
Maximum discharge, 79,400 cfs Aug. 14, 1940 (gage height, 23.0 ft).
Minimum discharge for indicated consecutive period:

Period	Discharge (cfs)	Dates
1-day	53	Sept. 19, 1954
7-day	60.7	Sept. 13-19, 1954
10-day	68.3	Sept. 10-19, 1954
20-day	67.5	Aug. 31-Sept. 19, 1954
30-day	80.7	Sept. 1-30, 1954
60-day	85.5	Aug. 29-Oct. 27, 1953
90-day	92.9	Aug. 23-Nov. 20, 1953
120-day	101	Aug. 6-Dec. 3,1953
183-day	139	Aug. 26, 1933-Feb. 24, 1934
12-month	245	April 1930-March 1931

Duration of daily flow

Percent time indicated flow was equaled or exceeded	Discharge (mgd)
20	390
30	310
50	220
70	150
80	120
90	87
95	71
98	60
99	53
99.5	48

Storage required to maintain indicated flow

Regulated flow (mgd)	Storage required (million gallons)
36	2.0
40	10
45	50
50	160
60	520
70	1,200
90	3,000
110	5,400
135	9,500
160	13,000

Remarks.—Some diurnal fluctuation at low flow caused by powerplant above station.