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UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY
of the **UNITED STATES**
1934

PART 3
OHIO RIVER BASIN

Prepared in cooperation with the States of ILLINOIS, INDIANA
KENTUCKY, MARYLAND, NEW YORK, NORTH CAROLINA, OHIO
PENNSYLVANIA, TENNESSEE, VIRGINIA, and WEST VIRGINIA

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 758

UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY

W. C. MENDENHALL, Director

Water-Supply Paper 758

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PART 3

OHIO RIVER BASIN

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Prepared in cooperation with the States of

ILLINOIS, INDIANA, KENTUCKY, MARYLAND

NEW YORK, NORTH CAROLINA, OHIO, PENNSYLVANIA

TENNESSEE, VIRGINIA, and WEST VIRGINIA



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UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON : 1936

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ILLUSTRATION

FIGURE 1. Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.....	Page
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SURFACE WATER SUPPLY OF OHIO RIVER BASIN, 1934

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting records of measurements of flow made on streams in the United States during the year ending September 30, 1934.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L., p. 394):

Provided, That this officer [the Director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States, and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895-1934

1895-----	\$12, 500. 00	1911-17---	\$150, 000. 00	1928-----	\$147, 000. 00
1896-----	24, 500. 00	1918-----	175, 000. 00	1929-----	270, 500. 00
1897-99---	50, 000. 00	1919-----	148, 244. 10	1930-----	275, 000. 00
1900-----	70, 000. 00	1920-----	175, 000. 00	1931-----	565, 000. 00
1901-2----	100, 000. 00	1921-23---	180, 000. 00	1932-----	711, 000. 00
1903-6----	200, 000. 00	1924-25---	170, 000. 00	1933-----	600, 000. 00
1907-----	150, 000. 00	1926-----	165, 000. 00	1934-----	¹ 540, 000. 00
1908-10---	100, 000. 00	1927-----	151, 000. 00		

¹ Only \$340,000 available for expenditure.

In the execution of the work many private and State organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

Measurements of stream flow have been made at about 6,900 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1934, 2,940 gaging stations were

being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

The volume of water flowing in a stream—the “run-off” or “discharge”—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, miner’s inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are “second-feet”, “second-feet per square mile”, “run-off in inches”, and “acre-feet.” They may be defined as follows:

“Second-feet” is an abbreviation for “cubic feet per second.” A second-foot is the rate of discharge of water flowing in a channel of rectangular cross-section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

“Second-feet per square mile” is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

“Run-off in inches” is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An “acre-foot”, equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. This term is commonly used in connection with storage for irrigation.

The following terms not in common use are here defined:

“Stage-discharge relation”—an abbreviation for the term “relation of gage height to discharge.”

“Control”—a term used to designate the natural section or stretch of the channel or artificial structure below the gage, which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1933, and ending September 30, 1934. At the beginning of January in most parts of the United States much of the precipitation in the

preceding 3 months is stored in the form of snow or ice, or in ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground, therefore the run-

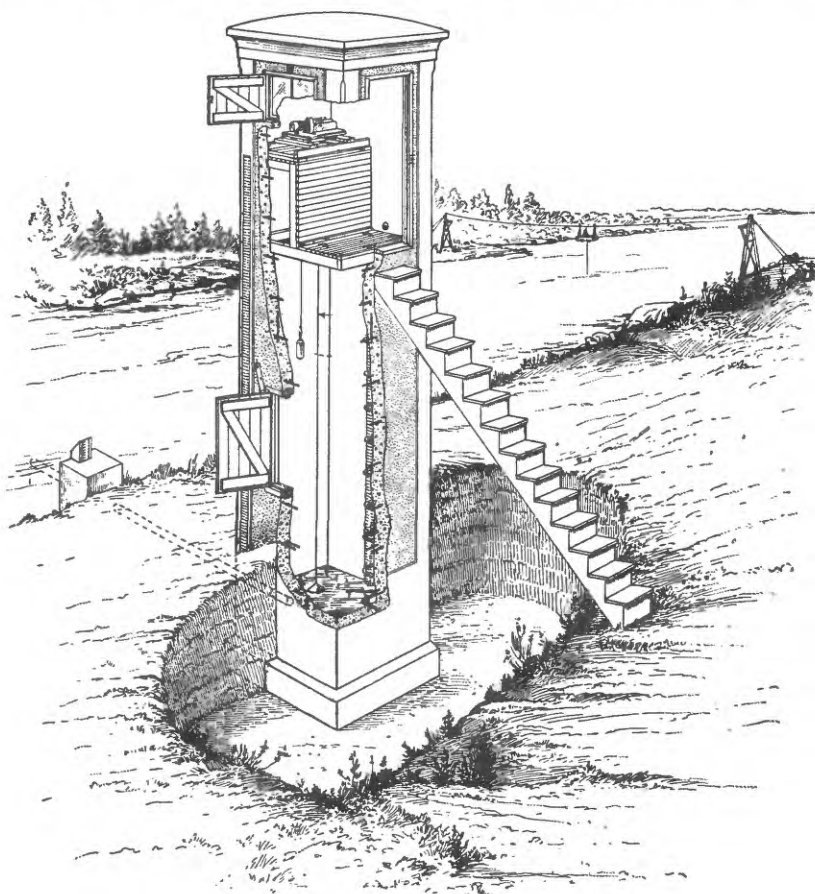


FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods

outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report usually comprise a description of the station, a table showing the daily discharge of the stream, and a table of the monthly and yearly discharge and run-off.

The description of the station gives information in regard to the location and type of gage, diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Information under "Extremes" gives the maximum discharge and gage height; the minimum discharge, if there is little or no regulation; the minimum daily discharge, if there is extensive regulation, and also the minimum discharge, if useful; and the minimum gage height except when it is of no importance. Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum represents the lowest discharge unless otherwise qualified.

The table of daily discharge gives, for stations equipped with non-recording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage height except for stations on streams subject to sudden or rapid fluctuation. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are accurate within 5 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", within 20 percent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published, and that greater degrees of refinement in computations and records may be warranted with increased data and use of improved equipment.

In order to permit greater refinement in analysis and comparison of records for adjacent stations, the following changes have been made in the computation procedure: (a) Mean monthly discharge above 1,000 second-feet and monthly run-off above 10,000 acre-feet are expressed to 4 significant figures instead of 3 significant figures as formerly; (b) monthly run-off in acre-feet is computed from the total second-foot-days for the month and not from the mean discharge for the month; (c) drainage areas above 1,000 square miles, if measured on topographic maps or if otherwise warranted, are expressed to 4 significant figures instead of 3 as formerly. Some of the records in the series of reports for 1934 have been computed in accordance with the modified procedure.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water power, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, professional papers, monographs, and annual reports.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

- PART
1. North Atlantic slope basins (St. John River to York River).
 2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).
 3. Ohio River Basin.
 4. St. Lawrence River Basin.
 5. Hudson Bay and upper Mississippi River Basins.
 6. Missouri River Basin.
 7. Lower Mississippi River Basin.
 8. Western Gulf of Mexico basins.
 9. Colorado River Basin.
 10. The Great Basin.
 11. Pacific slope basins in California.
 12. North Pacific slope basins, in three parts:
 - A. Pacific slope basins in Washington and upper Columbia River Basin.
 - B. Snake River Basin.
 - C. Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will on application furnish lists giving prices.

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

3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Augusta, Maine, Statehouse.
 Boston, Mass., 945 Post Office Building.
 Hartford, Conn., 203 Federal Building.
 Albany, N. Y., 526 Federal Building.
 Trenton N. J., 228 Federal Building.
 Harrisburg, Pa., 490 Education Building.
 Charlottesville, Va., University of Virginia.
 South Charleston, W. Va., Naval Ordnance Plant.

Asheville, N. C., 220 Post Office Building.
 Columbia, S. C., 801 National Loan & Exchange Bank Building.
 Ocala, Fla., Post Office Building.
 Montgomery, Ala., Post Office Building.
 Chattanooga, Tenn., 217 Post Office Building.
 Columbus, Ohio, Engineering Experiment Station, Ohio State University.
 Indianapolis, Ind., 319 Federal Building.
 Urbana, Ill., 302 University New Agricultural Building.
 Madison, Wis., 337N State Capitol.
 St. Paul, Minn., 808 New Post Office Building.
 Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
 St. Louis, Mo., 906 Customhouse, 1114 Market Street.
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of
 Mines and Metallurgy.
 Topeka, Kans., 305 Federal Building.
 Fort Smith, Ark., Post Office Building.
 Austin, Tex., State Highway Building.
 Santa Fe, N. Mex., 3 United States Courthouse.
 Tucson, Ariz., 210 Post Office Building.
 Denver, Colo., 403 Post Office Building.
 Salt Lake City, Utah, 303 Federal Building.
 Idaho Falls, Idaho, 228 Federal Building.
 Boise, Idaho, 429 Federal Building.
 Helena, Mont., 421 Federal Building.
 Tacoma, Wash., 406 Federal Building.
 Portland, Oreg., 606 Post Office Building.
 San Francisco, Calif., 303 Customhouse.
 Los Angeles, Calif., 512 Eighth and Figueroa Building.
 Honolulu, Hawaii, 225 Federal Building.

A list of the Geological Survey publications may be obtained by applying to the Director, United States Geological Survey, Washington, D. C.

Stream-flow records have been obtained at about 6,900 points in the United States, and the data obtained have been published in the reports tabulated below.

Stream-flow data in reports of the United States Geological Survey

[A = Annual Report; B = Bulletin; W = Water-Supply Paper]

Report	Character of data	Year
10th A, pt. 2.....	Descriptive information only.....	
11th A, pt. 2.....	Monthly discharge and descriptive information.....	1884 to Sept. 1890.
12th A, pt. 2.....	do.....	1884 to June 30, 1891.
13th A, pt. 3.....	do.....	1884 to Dec. 31, 1892.
14th A, pt. 2.....	Monthly discharge (long-time records, 1871-93).....	1888 to Dec. 31, 1893.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2.....	Descriptive information only.....	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).....	1895.
W 11.....	Gage heights (also gage heights for earlier years).....	1896.
18th A, pt. 4.....	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).....	1895-96.
W 15.....	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.....	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers and western United States.....	1897.

Stream-flow data in reports of the United States Geological Survey—Continued

Report	Character of data	Year
19th A, pt. 4.....	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28.....	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4.....	Monthly discharge (also for many earlier years)	1898.
W 35 to 39.....	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4.....	Monthly discharge.	1899.
W 47 to 52.....	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4.....	Monthly discharge.	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.	1901.
W 82 to 85.....	Complete data.	1902.
W 97 to 100.....	do	1903.
W 124 to 135.....	do	1904.
W 165 to 178.....	do	1905.
W 201 to 214.....	do	1906.
W 241 to 252.....	do	1907-8.
W 261 to 272.....	do	1909.
W 281 to 292.....	do	1910.
W 301 to 312.....	do	1911.
W 321 to 332.....	do	1912.
W 351 to 362.....	do	1913.
W 381 to 394.....	do	1914.
W 401 to 414.....	do	1915.
W 431 to 444.....	do	1916.
W 451 to 464.....	do	1917.
W 471 to 484.....	do	1918.
W 501 to 514.....	do	1919-20.
W 521 to 534.....	do	1921.
W 541 to 554.....	do	1922.
W 561 to 574.....	do	1923.
W 581 to 594.....	do	1924.
W 601 to 614.....	do	1925.
W 621 to 634.....	do	1926.
W 641 to 654.....	do	1927.
W 661 to 674.....	do	1928.
W 681 to 694.....	do	1929.
W 696 to 709.....	do	1930.
W 711 to 724.....	do	1931.
W 726 to 739.....	do	1932.
W 741 to 754.....	do	1933.
W 756 to 769.....	do	1934.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report, in the same relative order as the regular gaging stations. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1934. The data for any particular station will, as a rule, be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899-1934

[For basins included, see p. 6]

Year	1	2	3	4	5	6	7	8	9	10	11	12-A	12-B	12-C
1899-1	35	35, 36	39	36	36	3, 36, 37	37	37	37, 38	38, 39	38, 39	38	38	38
1900-7	47, 48	48, 49	49	49	49	49, 50	50	50	50	51	51	51	51	51
1901	65, 75	65, 75	65, 75	65, 75	65, 75	65, 75	65, 75	65, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	82	83	83	83	83	83	83	83	85	85	85	85	85
1903	97, 98	97, 98	98	97	97	97	97	97	97	100	100	100	100	100
1904	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	124, 125, 126	133, 134	134	135	135	135
1905	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	165, 166, 167	176, 177	177	178	178	178
1906	203, 204	203, 204	203, 204	203, 204	203, 204	203, 204	203, 204	203, 204	203, 204	212, 213	213	214	214	214
1907-8	241	241	241	241	241	241	241	241	241	250, 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, 271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919-20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724
1932	726	727	728	729	730	731	732	733	734	735	736	737	738	739
1933	741	742	743	744	745	746	747	748	749	750	751	752	753	754
1934	756	757	758	759	760	761	762	763	764	765	766	767	768	769

Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, pt. 4.

1 Faces River only.

2 Gallatin River.

3 Green and Gunnison Rivers and Colorado River above Gunnison River.

4 Kings and Kern Rivers and south Pacific slope basins.

5 Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52.

6 Monthly discharge for 1900 in 21st Annual Report, part. 4.

7 Wissahickon and Schuylkill Rivers to James River.

8 Scioto River.

9 Loup, Platte, and Elkhorn Rivers, and tributaries below Platte River.

10 Tributaries of Mississippi River from east.

11 Lake Ontario and tributaries to St. Lawrence River proper.

12 Hudson Bay only.

13 New England rivers only.

14 Susquehanna River to Delaware River, inclusive.

15 Plate and Kansas Rivers.

16 The Great Basin in California, except Truckee and Carson River Basins.

17 Below Junction with Gila River.

18 Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work was done under cooperative agreements with the several States as follows: In Illinois with the Illinois Department of Registration and Education, John J. Hallihan, director, through the State Water Survey Division, Arthur M. Buswell, chief; in Indiana with the State Department of Public Works, V. M. Simmons, administrative officer, and the Sanitary District of Indianapolis, M. E. Tennant, president; for the station on Big Piney Run near Salisbury, Pa., with the Maryland Geological Survey, E. B. Matthews, State geologist; in New York with the State Water Power and Control Commission, Lithgow Osborne, chairman; in North Carolina with the Department of Conservation and Development, R. Bruce Etheridge, director; in Ohio with the Ohio Cooperative Topographic Survey, C. E. Sherman, inspector; in Pennsylvania, except the station on Big Piney Run near Salisbury, Pa., with the Department of Forests and Waters, Lewis E. Staley, secretary, through the Water and Power Resources Board, Charles E. Ryder, chief engineer; in Tennessee with the Tennessee Division of Geology, Walter F. Pond, State geologist; in Virginia with the Conservation and Development Commission, W. C. Hall, chairman; in West Virginia with the Public Service Commission, C. E. Nethken, acting chairman (until July 1, 1934), succeeded by John J. D. Preston, chairman. Work in the Tennessee River Basin was also done under cooperative agreement with the Tennessee Valley Authority.

Acknowledgments are due also to the Corps of Engineers, United States Army, and United States Weather Bureau for financial assistance in collecting records published herein.

Assistance in collecting records was also rendered by the following municipalities, organizations, corporations, and individuals: In Kentucky by the Southern Industries & Utilities, Inc., and Kentucky Utilities Co.; in North Carolina by the Appalachian Electric Power Co., Carolina Power & Light Co., Champion Fibre Co., city of Asheville, Knoxville Power Co., Sylva Paperboard Co., and town of Highlands; in Pennsylvania by the West Penn Power Co. and the Clarion River Power Co.; in Tennessee by the Tennessee Electric Power Co. and Holston River Power Co.; in Virginia by the Appalachian Electric Power Co.; in West Virginia by the Clarksburg Water Board, Kanawha Valley Power Co., West Virginia Power Co., West Virginia Water Service Co., and Prof. C. E. Carpenter.

Funds for the rehabilitation of gaging stations, repairs, replacement of equipment, improvement of records, and establishment and operation of new stations on the Ohio River were allocated by the Public Works Administration from funds made available by the National Industrial Recovery Act.

DIVISION OF WORK

The data for stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In Illinois, J. H. Morgan; in Indiana and in the Licking, Green, and Kentucky River Basins in Kentucky, H. E. Grosbach; for the station on Big Piney Run near Salisbury, Pa., A. H. Horton; in New York, A. W. Harrington; in North Carolina, E. D. Burchard; in Ohio, Lasley Lee; in Pennsylvania, except for the station on Big Piney Run near Salisbury, Pa., J. W. Mangan; in the Cumberland and Tennessee River Basins in Alabama, Georgia, Kentucky, and Tennessee, W. R. King (until July 26, 1934), succeeded by C. E. McCashin; in Virginia, J. J. Dirzulaitis; and in West Virginia, William Kessler.

OHIO RIVER PROPER

Allegheny River at Larabee, Pa.

Location.- Chain gage at bridge on U. S. Highway 6 at Larabee, McKean County, $1\frac{1}{2}$ miles below mouth of Potato Creek and $3\frac{1}{2}$ miles south of Eldred.

Drainage area.- 541 square miles.

Records available.- October 1920 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; June 1915 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 10 years (1920-21, 1925-34), 798 second-feet.

Extremes.- Maximum discharge recorded during year, 4,080 second-feet Jan. 2 (gage height, 11.80 feet); minimum, about 0.1 second-foot July 25 (gage height, 0.22 foot); minimum daily discharge, 3.5 second-feet Aug. 8.
1915-34: Maximum discharge, about 9,100 second-feet Nov. 18, 1927 (gage height, 17.6 feet, from graph based on gage readings); minimum, that of July 25, 1934; minimum daily discharge, that of Aug. 8, 1934.

Remarks.- Records fair except those estimated for periods of ice effect, Nov. 16-21, Dec. 10-16, 28-31, Jan. 30 to Mar. 3, and those below 10 second-feet; which are poor. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	116	950	2,940	410	114	1,860	387	127	30	26	28
2	60	104	1,010	3,960	370	120	1,700	427	121	38	44	22
3	64	108	1,070	3,720	330	200	1,860	407	108	54	51	17
4	38	114	1,130	2,760	300	2,520	2,180	407	97	18	106	17
5	69	108	1,130	2,060	270	3,630	2,220	387	120	84	51	18
6	91	104	890	1,780	250	3,060	1,980	368	143	40	22	18
7	86	123	755	1,780	230	1,880	1,940	368	119	60	11	20
8	86	143	730	2,360	220	1,460	1,580	332	75	112	3.5	34
9	86	147	680	1,780	210	1,040	1,480	315	114	97	15	119
10	95	137	600	1,780	200	730	1,460	332	99	36	12	82
11	108	131	480	1,700	190	705	2,220	407	88	28	22	55
12	121	167	420	1,420	180	755	3,840	350	71	32	58	36
13	110	358	390	1,130	170	1,130	3,900	332	123	26	131	34
14	95	632	370	950	160	1,070	3,360	332	95	80	116	14
15	60	558	350	833	155	1,010	2,660	332	40	66	80	17
16	14	450	450	705	150	950	1,980	280	66	44	51	84
17	95	360	950	656	145	833	1,580	262	51	36	49	244
18	97	300	1,520	656	140	656	1,420	262	51	22	49	157
19	91	270	1,190	608	135	656	1,250	262	219	17	38	95
20	82	270	1,100	538	130	632	1,160	225	262	17	28	62
21	91	350	1,130	492	125	584	1,040	216	139	17	24	60
22	102	1,130	1,160	515	125	561	980	225	110	18	20	51
23	93	1,040	1,190	584	130	538	920	225	106	9.0	22	75
24	127	920	1,900	632	130	538	833	206	93	5.3	44	77
25	143	920	1,940	705	125	608	780	234	66	5.3	32	64
26	196	1,130	1,860	780	120	608	705	206	66	7.0	20	64
27	157	1,190	1,580	890	117	705	680	177	53	14	28	55
28	157	920	1,250	1,070	114	730	608	167	44	14	51	80
29	141	890	1,150	888		833	538	157	40	20	93	239
30	129	890	1,100	650		920	492	147	42	20	77	561
31	121		1,600	500		1,280		135		14	32	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	196	14	99.2	0.183	0.21
November	1,190	104	469	.867	.97
December	1,940	350	1,033	1.91	2.20
January	3,960	492	1,549	2.49	2.87
February	410	114	190	.351	.37
March	3,650	114	1,002	1.65	2.13
April	3,900	492	1,640	3.03	3.38
May	427	135	286	.529	.61
June	262	40	98.6	.182	.20
July	112	5.3	34.2	.063	.07
August	131	3.5	45.4	.084	.10
September	561	14	83.3	.154	.17
The year.	3,960	3.5	530	.980	13.28

Allegheny River at Red House, N. Y.

Location.— Water-stage recorder at site of old highway bridge in Red House, Cattaraugus County.

Drainage area.— 1,690 square miles (revised).

Records available.— September 1903 to September 1934.

Average discharge.— 29 years (1905-34), 2,742 second-feet.

Extremes.— Maximum discharge during year, 18,800 second-feet Jan. 2; maximum gage height, 13.78 feet Mar. 4 (backwater from ice jam); minimum discharge, 84 second-feet Sept. 7 (gage height, 2.82 feet).
1903-34: Maximum discharge, 41,000 second-feet Mar. 2, 1910; maximum gage height, that of Mar. 4, 1934; minimum discharge, that of Sept. 7, 1934.

Remarks.— Records good except those for periods of ice effect, Nov. 16-21, Dec. 11-17, 28-31, Jan. 19-21, Jan. 26 to Mar. 5; those for period of weed effect, July 3 to Sept. 30, and those estimated, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	420	446	5,700	13,500	1,300	*440	4,630	1,420	367	187	97	161
2	367	420	4,000	17,400	*1,100	*550	4,890	1,310	361	174	101	139
3	344	385	3,300	11,700	*1,000	*1,500	4,630	1,230	328	168	133	117
4	320	385	4,380	*8,440	950	*10,000	6,760	1,160	297	155	155	112
5	297	367	4,380	*6,710	850	*15,000	7,460	1,120	282	161	181	97
6	305	367	3,520	*5,420	800	14,200	6,120	1,090	328	174	174	97
7	328	367	3,080	5,700	750	8,860	5,980	1,030	336	187	155	88
8	336	429	2,670	7,160	*700	5,440	5,280	966	312	193	133	97
9	328	484	2,180	*5,980	*650	3,760	4,500	894	269	187	117	106
10	336	531	1,750	*4,890	*600	2,890	4,000	870	289	233	106	128
11	328	610	1,300	*4,130	*550	2,180	7,950	942	312	219	101	181
12	305	640	950	*3,520	*550	1,830	15,400	966	297	193	97	181
13	289	1,040	850	3,300	*550	2,090	13,000	894	312	168	106	161
14	275	2,570	800	2,980	*550	4,390	9,860	859	312	161	181	133
15	268	2,180	800	2,670	*550	3,760	8,270	870	297	161	254	133
16	247	1,200	2,400	2,180	*500	3,080	6,560	837	268	155	247	174
17	247	1,100	3,800	1,810	*500	2,880	5,560	793	240	168	206	402
18	268	1,100	5,150	1,450	*500	3,880	4,630	760	240	161	181	464
19	320	1,100	4,630	1,400	*550	3,410	4,000	727	268	150	168	402
20	367	1,200	3,760	1,400	*550	2,880	3,640	683	420	144	144	289
21	344	1,400	4,890	1,400	*550	2,670	3,300	630	484	128	133	226
22	336	5,890	4,630	1,440	*600	3,300	2,980	590	402	117	128	213
23	336	7,240	3,760	1,800	*600	2,570	2,670	560	320	117	123	376
24	376	4,870	5,090	2,370	550	2,090	2,570	550	262	112	117	560
25	572	3,410	10,600	2,370	*500	1,930	2,470	550	247	101	117	393
26	716	3,640	8,000	2,600	460	1,780	2,180	540	226	97	112	320
27	661	5,280	5,150	2,200	*440	3,190	1,980	512	226	97	112	275
28	590	4,260	3,600	2,400	*420	7,780	1,880	455	219	101	133	261
29	540	3,410	*2,400	2,800	6,560	1,720	429	213	92	92	139	268
30	502	5,490	*1,800	1,700	5,020	1,550	411	200	101	101	144	446
31	465		2,400	1,400	4,130		385			101	161	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				716	247	378	0.224	0.26				
November				7,240	367	2,060	1.22	1.36				
December				10,600	800	3,601	2.13	2.46				
January				17,400	1,400	4,330	2.56	2.95				
February				1,300	420	649	.384	.40				
March				15,000	440	4,324	2.56	2.95				
April				15,400	1,550	5,215	3.09	3.45				
May				1,420	385	808	.478	.55				
June				484	200	299	.177	.20				
July				233	92	150	.089	.10				
August				254	97	144	.085	.10				
September				560	88	233	.138	.15				
The year.				17,400	88	1,856	1.10	14.93				

*Estimated.

Allegheny River at Franklin, Pa.

Location.- Water-stage recorder at Eighth Street Bridge, at Franklin, Venango County.
Zero of gage is 966.26 feet above mean sea level.

Drainage area.- 5,982 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; April 1905 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 16 years (1918-34), 9,579 second-feet.

Extremes.- Maximum discharge during year, 60,500 second-feet Jan. 2 (gage height, 13.54 feet); maximum gage height, 15.2 feet Mar. 5 (backwater from ice); minimum, .334 second-feet July 30 (gage height, 1.63 feet).

1905-34: Maximum discharge (estimated), 152,000 second-feet Mar. 28, 1913; maximum gage height, 26.0 feet, present datum, Feb. 27, 1917 (caused by ice jam); minimum discharge, that of July 30, 1934.

Maximum free-flow stage known, 25.0 feet, present datum, Mar. 17, 1865 (discharge not determined).

Remarks.- Records fair. Discharge estimated for periods of ice effect, Nov. 16-20, Dec. 14-17, Jan. 19-23, Feb. 1 to Mar. 5, and determined from graphs based on chain-gage readings Dec. 27-30, Jan. 6-17, Jan. 30 to Feb. 3, Feb. 9, 10, 14-17, Feb. 21 to Mar. 2.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,260	19,600	29,600	7,200	2,300	14,900	5,640	1,420	702	530	570
2	1,140	1,190	17,400	57,700	6,000	2,600	15,900	5,130	1,340	646	480	550
3	1,040	1,130	15,400	48,100	5,200	6,000	15,900	4,760	1,260	580	£27	520
4	954	1,100	12,500	35,300	4,600	26,000	24,300	4,440	1,220	580	798	510
5	919	1,090	16,900	26,100	4,100	37,000	28,500	4,190	1,390	668	£57	490
6	875	1,130	14,900	22,500	3,700	52,600	25,500	3,940	1,340	690	580	453
7	864	1,130	12,000	20,700	3,600	43,500	21,900	3,630	1,210	750	520	426
8	842	1,150	9,970	23,100	3,200	32,700	19,000	3,350	1,150	766	490	444
9	864	1,280	8,370	22,500	3,000	23,100	16,400	3,120	1,110	738	£67	453
10	875	1,470	6,360	19,600	2,800	16,900	13,900	2,930	1,140	702	1,050	453
11	886	1,650	5,470	15,900	2,700	13,500	16,900	2,880	1,190	657	£36	435
12	875	1,770	4,400	12,600	2,600	9,560	36,000	2,360	1,070	624	726	435
13	842	2,150	3,260	11,300	2,550	8,560	36,000	2,910	1,020	646	£46	444
14	810	4,110	2,700	10,800	2,500	11,000	30,300	2,910	1,010	668	£02	480
15	780	7,060	3,500	9,970	2,450	16,900	26,100	2,840	982	624	£46	932
16	760	4,900	10,000	8,950	2,410	14,900	23,100	2,790	940	540	750	1,210
17	810	3,700	13,000	7,800	2,370	13,000	20,100	2,660	901	520	738	1,180
18	820	3,500	18,400	6,340	2,340	13,800	17,400	2,480	888	480	750	1,620
19	864	3,400	17,400	5,600	2,310	14,900	14,900	2,350	1,250	462	726	1,260
20	930	4,500	15,900	5,400	2,290	13,900	13,000	2,210	1,310	500	657	1,190
21	1,030	5,470	26,300	5,500	2,270	12,700	11,500	2,130	1,360	490	591	1,110
22	1,160	12,900	27,300	5,600	2,250	15,400	10,400	2,010	1,190	490	540	954
23	1,260	27,300	21,900	8,600	2,230	13,700	9,560	1,920	1,180	462	530	866
24	1,190	26,100	17,400	10,600	2,210	10,600	9,150	1,860	1,110	435	550	774
25	1,220	19,600	20,500	11,500	2,190	8,950	8,950	1,680	940	399	560	927
26	1,360	13,900	24,900	11,300	2,180	8,180	8,760	1,860	810	366	540	1,010
27	1,700	16,200	19,000	10,800	2,170	10,400	7,990	1,810	875	358	520	1,050
28	1,800	16,400	12,600	11,200	2,160	19,000	7,430	1,720	968	374	520	940
29	1,630	14,900	9,970	17,400		20,700	6,680	1,620	798	358	520	1,250
30	1,470	12,800	12,000	13,300		17,400	6,160	1,560	810	366	560	1,670
31	1,360		8,000	8,370		15,400		1,480		530	672	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,800	780	1,071	0.179	0.21
November	27,300	1,090	7,208	1.20	1.34
December	27,300	2,700	13,800	2.31	2.66
January	57,700	5,400	16,820	2.76	3.18
February	7,200	2,160	3,055	.510	.53
March	52,600	2,300	16,910	2.83	3.26
April	36,000	6,160	17,230	2.68	3.21
May	5,640	1,480	2,835	.474	.55
June	1,420	798	1,106	.185	.21
July	786	358	555	.093	.11
August	1,050	480	639	.107	.12
September	1,670	426	821	.137	.15
The year	57,700	358	6,846	1.14	15.53

Allegheny River at Parkers Landing, Pa.

Location.- Water-stage recorder at highway bridge at Parkers Landing, Armstrong County, 1.1 miles below mouth of Clarion River. Zero of gage is 845.14 feet above mean sea level.

Drainage area.- 7,671 square miles.

Records available.- October 1932 to September 1934.

Extremes.- Maximum discharge during year, 67,300 second-feet Jan. 2 (gage height, 12.78 feet); maximum gage height, 27.85 feet Mar. 5 (affected by ice); minimum, 409 second-feet July 30 (gage height, 0.67 foot).
1932-34: Maximum discharge, 68,900 second-feet Mar. 16, 1933 (gage height, 13.02 feet); minimum, that of July 30, 1934.
Maximum stage known, 29.0 feet in March 1865 (discharge not determined).

Remarks.- Records fair except those for extremely high stages and those estimated for periods of ice effect, Nov. 18, Jan. 30 to Mar. 6, which are pocr. Regulation at low stages from power operations on Clarion River.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,180	1,600	16,600	39,300	9,200	2,700	17,800	6,720	1,850	1,510	660	983
2	2,050	1,520	19,400	65,300	8,000	3,000	19,200	5,990	1,830	1,040	776	793
3	2,810	1,420	15,100	54,700	7,000	6,500	19,800	5,640	1,770	862	1,160	811
4	2,630	1,360	12,700	40,500	6,100	30,000	27,000	5,590	1,490	932	1,750	710
5	2,600	1,340	17,300	29,600	5,400	40,000	36,300	5,110	1,410	952	1,220	611
6	2,110	1,420	16,700	25,200	4,800	60,000	32,900	5,010	1,730	967	897	595
7	1,150	1,440	14,200	24,600	4,400	50,500	29,000	4,300	1,530	1,080	743	569
8	1,060	1,440	11,600	29,600	4,100	39,900	24,000	4,170	1,490	1,370	862	811
9	1,060	1,460	10,000	28,400	3,800	28,400	19,600	3,930	1,310	1,340	776	564
10	1,060	1,640	8,480	25,200	3,600	19,700	18,600	3,770	1,540	1,730	1,220	548
11	1,060	1,820	6,380	21,400	3,450	15,200	20,600	4,000	1,490	1,530	1,320	548
12	1,080	2,010	5,020	17,900	3,300	11,200	37,400	4,240	1,490	1,640	1,220	532
13	1,060	2,230	3,690	15,400	3,200	10,600	43,300	4,060	1,370	1,560	1,370	548
14	1,040	3,190	2,990	12,900	3,100	12,600	38,400	3,430	1,260	1,450	1,650	564
15	1,240	5,850	3,440	12,700	3,000	13,800	32,200	3,680	1,290	1,040	1,270	845
16	1,020	6,730	8,500	11,400	2,900	18,600	28,400	3,480	1,260	1,100	1,190	1,200
17	1,160	4,350	13,700	9,750	2,820	15,300	24,600	3,500	1,440	1,410	1,400	2,010
18	1,080	4,200	18,600	7,920	2,780	18,300	20,100	3,280	1,210	1,320	1,320	1,870
19	1,040	4,380	21,600	7,210	2,700	16,700	18,900	3,130	1,530	1,540	1,160	2,010
20	1,060	5,070	19,300	7,350	2,650	16,700	16,900	2,940	1,980	1,570	1,020	1,740
21	1,130	5,530	27,600	6,670	2,600	15,000	14,100	2,600	1,810	1,240	949	1,660
22	1,510	7,760	34,200	7,000	2,550	16,100	12,100	2,750	2,040	1,180	776	1,480
23	1,560	23,100	28,400	8,200	2,500	16,600	11,500	2,660	1,810	743	811	1,170
24	1,520	27,700	21,700	10,400	2,470	13,000	11,000	2,540	1,620	611	811	1,080
25	1,440	23,100	21,000	13,200	2,440	10,600	10,500	2,510	1,360	548	1,170	1,080
26	1,490	16,200	28,400	13,100	2,420	10,100	10,300	2,530	1,220	501	845	1,350
27	1,560	14,700	23,700	12,600	2,400	15,700	9,720	2,330	1,350	470	743	1,390
28	1,990	16,700	16,800	11,900	2,400	27,600	8,680	2,130	1,260	464	710	1,430
29	2,060	17,300	12,400	19,600		26,400	7,900	2,250	1,300	517	811	1,840
30	1,890	13,600	9,900	14,000		23,400	7,080	2,130	1,200	501	726	3,030
31	1,720		18,100	11,000		20,500		1,810		564	726	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	2,810			1,040			1,533			0.200		0.23
November	27,700			1,340			7,407			.966		1.08
December	34,200			2,990			15,730			2.05		2.36
January	65,300			6,670			19,810			2.58		2.97
February	9,200			2,400			3,788			.494		.51
March	60,000			2,700			20,050			2.61		3.01
April	43,300			7,080			20,940			2.73		3.05
May	6,720			1,810			3,610			.471		.54
June	2,040			1,200			1,508			.197		.22
July	1,730			464			1,069			.139		.16
August	1,750			660			1,034			.135		.16
September	3,030			532			1,146			.149		.17
The year	65,300			454			8,175			1.07		14.46

Ohio River at Sewickley, Pa.

Location.- Water-stage recorder 200 feet upstream from highway bridge at Sewickley, Allegheny County, and $\frac{1}{2}$ miles upstream from Dashfields Dam. Zero of gage is 690.00 feet above mean sea level.

Drainage area.- 19,500 square miles.

Records available.- October 1933 to September 1934.

Extremes.- Maximum discharge during year, 202,000 second-feet Mar. 6 (gage height, 12.51 feet); minimum, about 2,000 second-feet July 25: minimum daily discharge, 2,150 second-feet July 25.

Maximum stage known, about 28 feet during flood of March 1907 (discharge not determined).

Remarks.- Records good except those below 10,000 second-feet and those estimated, which are fair. Discharge estimated for Oct. 21, Nov. 12-15, 23, Dec. 12-14, Jan. 2-4, Feb. 21-23, July 17-19, Aug. 22, and for period of ice effect, Feb. 13 to Mar. 2. Discharge corrected for periods during which flashboards were used on dam, Oct. 1-23, July 19 to Aug. 22, and for period of construction of new crest of dam, Aug. 23 to Sept. 30. Some regulation at low stages from operation of locks upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,360	3,360	19,600	31,900	22,900	4,800	48,600	15,600	4,670	3,540	4,940	4,400
2	6,200	3,360	25,000	83,400	24,300	6,500	40,000	14,700	4,470	3,420	4,080	3,770
3	5,740	3,360	25,000	107,000	22,900	16,200	41,000	13,700	4,530	3,600	5,150	3,360
4	6,750	3,480	20,200	87,400	18,900	81,600	48,600	12,700	4,340	3,260	5,810	3,190
5	7,000	3,600	20,200	70,800	15,700	139,000	101,000	11,000	3,830	3,190	7,000	2,980
6	6,430	3,890	28,900	66,600	16,400	172,000	91,400	10,200	3,250	3,420	5,520	2,760
7	6,120	4,020	27,300	78,400	16,100	136,000	81,300	9,560	3,420	3,420	4,880	2,620
8	6,510	4,270	25,800	134,000	14,100	95,400	74,500	9,090	3,420	2,810	4,340	2,580
9	5,660	4,340	24,300	115,000	12,100	70,600	56,500	8,280	3,080	2,870	6,900	2,380
10	3,540	5,590	18,900	83,400	10,300	54,500	47,600	8,280	2,980	3,140	11,600	2,670
11	3,060	6,590	15,200	64,500	7,670	42,000	44,800	8,900	2,980	3,190	11,800	2,470
12	2,710	5,900	13,100	50,500	6,620	32,100	56,500	9,360	3,360	3,710	16,200	2,330
13	2,620	5,200	11,300	42,000	6,400	26,600	81,300	10,300	3,890	4,210	13,700	2,620
14	2,570	7,600	10,500	33,600	6,200	32,100	79,200	10,300	4,060	13,400	11,600	3,770
15	2,660	10,000	10,400	28,100	6,000	46,700	69,800	9,380	4,080	18,900	10,800	6,920
16	2,920	12,300	15,600	26,900	5,800	50,500	60,500	10,500	3,890	9,930	12,300	7,330
17	2,610	12,800	41,000	25,800	5,650	44,600	54,500	11,900	4,020	6,280	35,500	9,360
18	2,710	12,900	106,000	22,200	5,600	39,100	50,500	12,600	3,770	5,220	35,500	12,000
19	2,870	13,700	99,400	18,900	5,400	36,400	42,900	12,900	5,370	3,830	21,500	10,400
20	3,690	13,000	70,800	17,700	5,300	39,100	37,300	10,200	10,600	4,340	12,600	7,750
21	4,100	15,000	77,000	15,500	5,200	36,400	33,000	6,540	10,300	4,020	9,090	6,120
22	4,340	16,300	93,400	14,600	5,100	32,100	27,300	8,190	8,190	3,540	7,260	5,290
23	4,400	21,400	76,100	15,600	5,000	33,600	22,900	8,020	7,410	2,980	6,430	4,740
24	3,950	39,100	56,500	20,200	4,900	29,700	22,900	7,930	7,160	2,870	10,500	4,400
25	3,650	39,100	48,600	25,000	4,800	22,200	20,800	7,500	6,510	2,150	16,700	3,770
26	3,360	26,900	46,700	26,100	4,750	20,200	18,900	7,160	5,810	2,240	13,400	3,650
27	3,600	21,500	48,600	28,100	4,700	28,700	18,300	6,750	5,810	2,280	9,740	3,950
28	4,400	24,300	37,300	27,300	4,650	78,400	18,300	5,280	5,290	2,420	8,210	3,950
29	3,830	26,600	26,600	30,500		95,400	18,300	6,040	4,880	3,690	7,410	9,090
30	3,360	24,300	20,800	38,200		76,600	16,600	6,120	4,640	5,150	5,590	28,100
31	3,890		19,600	27,300		58,500		5,520		5,290	5,010	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	7,000	2,570	4,259	0.218	0.25
November	39,100	3,360	13,260	.680	.76
December	106,000	10,400	38,050	1.95	2.25
January	134,000	14,600	47,120	2.42	2.79
February	24,300	4,650	9,726	.499	.52
March	172,000	4,800	54,190	2.76	3.20
April	101,000	16,600	47,500	2.44	2.72
May	15,500	5,520	9,593	.492	.57
June	10,600	2,980	5,001	.266	.29
July	18,900	2,150	4,697	.226	.27
August	35,500	4,080	11,100	.569	.66
September	28,100	2,330	5,614	.288	.32
The year	172,000	2,150	20,960	1.07	14.60

Ohio River at Metropolis, Ill.

Location.— Water-stage recorders at Paducah, Ky., and Joppa, Metropolis, and Dam 52 near Brookport, Ill., operated to obtain sufficient gage-height data to permit computation of discharge at Metropolis. Most important gage is at foot of Jefferson Street in Paducah, Ky., a quarter of a mile below Tennessee River. Zero of this gage is 286.23 feet above mean sea level (adjustment of 1929, U. S. Coast and Geodetic Survey).

Drainage area.— 203,000 square miles (authority Mississippi River Commission).

Records available.— January to September 1934 in reports of U. S. Geological Survey; since January 1928 in reports of Mississippi River Commission.

Daily gage heights for Paducah gage, June 1874 to December 1889, have been published in reports of Mississippi River Commission; since January 1890 in reports of U. S. Weather Bureau.

Results of discharge measurements made intermittently since December 1881 at Paducah, Brookport, or Metropolis by Corps of Engineers, U. S. Army, and Mississippi River Commission are contained in reports of those organizations.

Extremes.— Maximum discharge during year, 774,000 second-feet Mar. 15 (gage height, 39.27 feet, Paducah gage); minimum daily discharge, 29,500 second-feet Feb. 23.

Maximum stage known, 54.3 feet (Paducah gage) Apr. 7, 1913 (estimated discharge, 1,600,000 second-feet).

Remarks.— Records good. Flow controlled by operation of navigation dams above and below Metropolis except during periods of high water, when dams are lowered and open-river conditions prevail. Discharge computed from records of operation of wicket and bear-trap gates in Dam 52 by formulas and by application of correction factors obtained from discharge measurements except for open-river periods, Jan. 11–22, Feb. 26 to May 3, during which a stage-discharge relation, using rate of change of slope as a factor, based on Paducah gage and defined by discharge measurements was used. Discharge estimated Jan. 21, 22, Feb. 26 to Mar. 1, May 1–3, Aug. 24–25. Gage-height record (Paducah gage) collected in cooperation with U. S. Weather Bureau.

Discharge measurements of Ohio River at Metropolis, Ill., 1934.

Date	Width	Area of section	Mean velocity	Gage height	Discharge	Date	Width	Area of section	Mean velocity	Gage height	Discharge
	Feet	Square feet	Feet per second	Feet			Feet	Square feet	Feet per second	Feet	
Jan. 11	3,834	109,000	3.66	22.84	399,000	Apr. 2	5,138	163,000	3.92	55.08	639,000
Jan. 12	3,860	119,000	3.72	25.13	443,000	Apr. 10	5,868	102,000	2.97	20.86	303,000
Jan. 18	3,920	98,000	3.17	20.20	311,000	Apr. 17	5,810	90,500	2.93	18.14	265,000
Jan. 26	3,791	85,500	1.21	16.14	101,000	Apr. 25	3,791	86,400	2.86	17.19	247,000
Feb. 1	3,791	82,100	1.22	15.72	99,900	May 5	3,791	82,400	1.40	16.06	116,000
Feb. 7	3,791	83,900	.97	16.14	81,100	May 11	3,795	83,800	1.04	16.13	86,800
Feb. 14	3,789	82,000	.92	15.59	75,600	May 14	3,795	83,100	.84	15.98	69,800
Feb. 20	3,788	85,000	.48	16.18	41,100	May 19	3,795	83,700	1.06	16.20	88,700
Feb. 21	3,791	84,100	.47	16.06	39,900	May 21	3,795	82,200	1.04	15.80	86,600
Feb. 22	3,791	85,400	.48	16.08	39,800	May 26	3,795	83,000	.81	15.89	67,100
Feb. 23	3,791	85,600	.48	16.07	39,800	June 4	3,789	81,900	.60	15.57	49,000
Feb. 24	3,791	85,800	.48	16.10	40,000	June 8	3,791	83,600	.67	16.07	55,700
Feb. 26	3,791	85,100	1.34	16.35	114,000	June 11	3,791	82,800	1.44	15.88	119,000
Mar. 2	3,786	82,900	2.92	16.27	242,000	June 15	3,791	83,600	1.27	16.10	106,000
Mar. 3	3,876	91,800	3.18	19.70	292,000	June 22	3,791	81,300	1.24	15.61	101,000
Mar. 4	3,901	105,000	3.42	22.16	359,000	June 25	3,791	82,300	1.46	15.94	120,000
Mar. 5	3,951	117,000	3.64	25.39	426,000	July 5	3,793	82,400	.59	15.90	48,700
Mar. 6	4,081	126,000	3.76	27.50	474,000	July 9	3,786	85,000	.87	16.58	75,800
Mar. 7	4,158	132,000	3.97	29.38	524,000	July 18	3,791	80,700	1.09	15.36	87,600
Mar. 8	4,370	145,000	4.02	31.59	675,000	July 23*	2,789	66,000	1.18	15.67	78,200
Mar. 9	4,443	154,000	4.19	33.93	645,000	July 26	3,786	80,600	.78	15.32	62,700
Mar. 10	5,028	165,000	4.22	35.82	696,000	July 31	3,786	79,400	.39	15.16	31,000
Mar. 12	5,590	178,000	4.21	37.90	750,000	Aug. 6	3,791	82,000	1.10	15.73	90,500
Mar. 13	5,633	181,000	4.19	38.53	759,000	Aug. 13	3,786	79,500	1.21	15.02	96,000
Mar. 14	5,734	184,000	4.19	39.07	771,000	Aug. 20*	2,802	69,000	1.57	15.45	108,000
Mar. 15	5,739	185,000	4.17	39.24	771,000	Aug. 27	3,793	84,600	1.38	16.34	117,000
Mar. 16	5,674	184,000	4.05	38.78	745,000	Aug. 30*	2,797	69,100	1.39	16.03	94,700
Mar. 17	5,468	176,000	3.90	37.17	697,000	Sept. 6*	2,793	64,300	1.01	15.80	64,800
Mar. 19	4,338	142,000	3.53	30.78	501,000	Sept. 6	3,791	82,900	.63	15.92	59,600
Mar. 20	3,986	123,000	3.24	26.02	398,000	Sept. 10*	2,762	62,500	.80	15.78	49,600
Mar. 21	3,911	108,000	3.09	22.58	334,000	Sept. 13	3,786	80,700	.64	15.36	51,600
Mar. 22	3,891	101,000	3.04	20.64	307,000	Sept. 18*	2,777	64,900	1.01	15.87	65,300
Mar. 23	3,886	99,400	3.09	20.38	307,000	Sept. 20	3,791	83,500	.84	15.97	70,200
Mar. 24	3,891	101,000	3.17	20.75	320,000	Sept. 24*	2,767	63,700	.83	16.08	52,600
Mar. 26	3,946	118,000	3.65	25.06	419,000	Sept. 26	3,796	84,100	.61	16.16	57,600
Mar. 28	4,146	137,000	3.85	29.75	528,000	Sept. 27*	2,759	62,500	.80	15.74	50,100

*Measurement made at Chicago, Burlington & Quincy Railroad Co.'s bridge at Metropolis.

Note.— Gage heights are those obtained from water-stage recorder at Paducah, Ky. Measurements made at Brookport highway bridge just below Paducah, Ky., and 7 miles above Metropolis, unless otherwise noted. Navigation dam in operation and pool levels controlled Jan. 21 to Mar. 1, May 1 to Sept. 30.

OHIO RIVER PROPER

19

Gage height, in feet, of Ohio River at Metropolis, Ill., 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					15.75	14.40	34.71	14.01	15.74	15.80	15.83	16.21
2					15.93	16.21	35.08	12.66	15.91	15.97	15.74	16.02
3					16.25	18.80	35.29	11.70	15.81	15.72	15.33	16.15
4					16.17	22.31	35.25	14.70	15.68	15.86	15.43	16.10
5					15.85	25.31	34.50	16.06	16.04	15.90	16.02	15.92
6					16.10	27.54	32.45	15.81	16.21	15.96	15.63	15.98
7					16.15	29.41	29.46	15.63	15.93	16.09	16.72	16.37
8					16.26	31.60	26.36	15.63	16.16	16.04	15.43	16.18
9					16.06	33.93	23.45	15.76	16.12	16.49	15.57	16.03
10					15.94	35.75	20.90	16.10	16.25	15.94	15.34	15.94
11				22.82	16.06	37.08	19.06	16.14	15.90	15.82	15.91	16.14
12				25.08	16.06	37.88	17.97	16.20	15.95	15.85	15.64	15.85
13				26.72	15.79	38.51	17.53	15.85	16.21	16.54	15.03	15.53
14				27.16	16.72	39.06	17.59	15.93	16.27	16.40	15.43	15.57
15				26.24	16.06	39.24	17.79	15.94	16.12	16.15	15.64	15.51
16				24.22	15.99	38.74	17.97	16.05	15.91	15.91	15.61	16.08
17				22.08	15.88	37.18	18.14	15.81	16.18	15.91	15.53	16.06
18				20.08	16.29	34.48	18.03	15.79	16.15	15.40	15.22	15.88
19				18.23	16.39	30.52	17.72	16.16	16.34	15.24	15.07	16.11
20				16.38	16.19	26.21	17.43	16.07	16.15	15.11	15.43	16.00
21				14.57	16.06	22.46	17.26	15.87	15.91	15.52	15.57	16.01
22				13.01	16.08	20.55	17.13	15.28	15.77	16.00	15.63	16.24
23				14.42	16.09	20.41	17.06	16.10	15.76	15.56	16.49	16.07
24				16.12	16.11	20.80	17.09	16.01	15.81	15.36	13.72	15.95
25				16.13	16.24	22.16	17.21	16.02	15.91	15.28	12.22	16.09
26				16.21	16.25	25.01	17.32	15.86	15.69	15.33	15.12	16.11
27				15.89	13.75	27.78	17.56	15.86	15.76	15.23	16.33	15.80
28				15.93	13.02	28.77	17.28	15.95	15.80	15.33	16.39	15.91
29				16.08		31.57	18.40	15.85	16.10	15.53	16.03	16.16
30				15.79		33.01	18.27	16.39	15.98	15.50	16.03	15.74
31				15.69		34.10		16.30		15.35	16.20	

Discharge, in second-feet, of Ohio River at Metropolis, Ill., 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					97,000	215,000	646,000	190,000	55,500	69,000	88,000	87,500
2					102,000	243,000	656,000	170,000	52,500	74,500	99,000	71,500
3					103,000	295,000	661,000	140,000	51,000	62,000	102,000	68,500
4					89,000	364,000	659,000	94,500	43,000	47,500	84,000	67,500
5					79,000	423,000	628,000	108,000	36,500	48,000	90,000	59,000
6					80,000	471,000	564,000	109,000	58,000	49,500	95,000	47,500
7					81,500	518,000	485,000	109,000	75,000	59,000	94,000	42,500
8					89,500	577,000	413,000	104,000	67,000	54,500	82,000	54,000
9					93,500	640,000	352,000	98,000	73,500	73,000	66,500	47,500
10					118,000	684,000	304,000	87,000	97,000	61,000	50,000	44,000
11				393,000	97,000	718,000	272,000	84,000	119,000	50,500	59,500	47,500
12				442,000	96,000	739,000	257,000	81,000	105,000	51,000	64,500	65,500
13				475,000	83,000	753,000	253,000	84,500	107,000	67,500	102,000	57,000
14				478,000	69,500	768,000	256,000	77,000	106,000	80,500	115,000	62,000
15				444,000	52,500	775,000	258,000	77,500	106,000	90,000	121,000	50,000
16				397,000	47,000	747,000	261,000	92,500	97,000	96,000	119,000	63,000
17				353,000	40,500	695,000	264,000	101,000	92,000	93,000	119,000	66,500
18				313,000	34,500	612,000	261,000	87,000	110,000	87,500	109,000	65,500
19				277,000	32,000	502,000	254,000	88,500	138,000	81,000	102,000	68,000
20				245,000	31,500	402,000	249,000	88,000	132,000	66,000	112,000	71,000
21				215,000	30,000	333,000	247,000	86,000	120,000	55,000	128,000	72,500
22				185,000	30,000	307,000	245,000	89,000	112,000	58,000	131,000	73,500
23				96,500	29,500	306,000	244,000	89,500	106,000	77,500	148,000	65,000
24				85,500	30,000	316,000	245,000	82,500	112,000	77,000	200,000	53,000
25				102,000	61,000	352,000	247,000	74,500	120,000	56,000	150,000	42,500
26				101,000	90,000	424,000	248,000	67,500	99,000	56,000	88,000	57,500
27				95,000	200,000	478,000	253,000	68,500	68,000	47,000	109,000	48,500
28				95,500	180,000	501,000	245,000	74,500	69,000	38,500	97,500	35,500
29				97,500		510,000	250,000	67,500	78,500	43,500	97,000	54,500
30				99,500		610,000	205,000	67,500	77,000	68,000	95,500	79,500
31				91,500		632,000		67,500		47,500	96,000	

Month	Maximum	Minimum	Mean	Per square mile	Run-off	
					Inches	Acre-foot
October						
November						
December						
January 11-31	478,000	85,500	242,000	1.19	0.93	10,080,000
February	200,000	29,500	77,380	.381	.40	4,297,000
March	775,000	215,000	515,200	2.54	2.23	31,680,000
April	661,000	205,000	345,500	1.70	1.90	27,650,000
May	190,000	57,500	92,290	.460	.53	5,736,000
June	138,000	36,500	89,420	.440	.49	5,321,000
July	96,000	38,500	64,030	.315	.36	3,937,000
August	200,000	50,000	104,600	.515	.59	6,435,000
September	87,500	33,500	59,450	.293	.33	3,535,000
The period						91,570,000

Brokenstraw Creek at Youngsville, Pa.

Location.- Chain gage at highway bridge at Youngsville, Warren County. Zero of gage is 1,187.92 feet above mean sea level (datum of gage lowered 1.00 foot effective Oct. 1, 1933).

Drainage area.- 304 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; October 1909 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 20 years (1910-15, 1919-34), 547 second-feet.

Extremes.- Maximum discharge during year, 4,730 second-feet Jan. 1 (gage height, 7.4 feet, from graph based on gage readings); minimum, 24 second-feet Sept. 3, 5, 6 (gage height, 0.30 foot).
1909-34: Maximum gage height, 13.2 feet (present datum) Mar. 25, 1913 (discharge not determined); minimum, that of Sept. 3, 5, 6, 1934.

Remarks.- Records fair except those above 3,000 second-feet and those estimated for periods of ice effect, Nov. 28-30, Dec. 13-15, Feb. 8 to Mar. 1, which are poor. No gage-height record and discharge estimated June 4-8.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	63	1,370	4,120	464	140	630	189	76	41	26	26
2	46	60	850	4,030	360	148	630	168	73	39	27	26
3	46	57	558	2,060	304	1,080	606	166	70	42	36	26
4	46	63	1,080	913	270	2,250	1,140	156	68	47	26	26
5	46	56	970	605	236	3,730	722	151	110	54	36	25
6	47	63	656	682	220	2,250	850	156	75	64	31	25
7	46	67	486	910	206	1,620	682	154	60	50	27	26
8	46	85	380	1,030	195	1,160	556	140	57	48	27	26
9	43	92	287	850	188	605	442	133	65	47	33	27
10	42	107	238	630	181	486	400	133	61	42	37	27
11	39	111	189	464	176	304	1,240	135	68	39	34	26
12	40	123	156	380	170	552	1,370	129	61	39	31	25
13	39	269	144	341	166	380	970	129	57	48	31	36
14	34	568	132	322	162	784	792	140	67	47	30	33
15	34	412	160	304	158	682	736	151	55	41	37	33
16	38	275	1,860	254	154	605	736	144	54	34	35	48
17	46	275	1,370	211	180	605	630	142	54	35	38	52
18	57	298	1,270	228	146	850	609	142	52	33	36	36
19	90	321	682	251	142	682	421	142	106	32	32	30
20	85	346	987	254	138	556	360	137	79	35	29	28
21	72	415	1,890	229	135	486	304	135	64	33	27	26
22	72	2,260	1,580	214	131	850	287	140	60	33	26	27
23	73	2,850	970	592	129	486	287	129	57	34	28	42
24	76	1,970	910	682	127	442	304	129	44	27	28	38
25	111	1,320	970	605	126	287	322	131	43	27	28	34
26	139	970	736	656	125	270	287	120	46	27	27	30
27	116	1,300	360	464	124	858	287	108	50	30	29	30
28	101	1,000	322	1,150	126	1,010	254	104	67	30	41	32
29	81	800	304	970		556	286	93	49	28	40	40
30	73	1,100	287	656		556	208	85	43	27	36	44
31	66		558	605		556		79		29	30	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				139	34	62.1	0.204		0.24			
November				2,850	56	590	1.94		2.16			
December				1,890	132	731	2.40		2.77			
January				4,120	211	827	2.72		3.14			
February				464	124	186	.612		.64			
March				3,730	140	829	2.73		3.15			
April				1,370	208	573	1.88		2.10			
May				189	79	135	.444		.51			
June				110	43	62.0	.204		.25			
July				54	27	37.3	.124		.14			
August				47	26	32.3	.106		.12			
September				52	25	31.7	.104		.12			
The year.				4,120	25	345	1.13		16.32			

Tionesta Creek at Nebraska, Pa.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	62	770	3,480	600	166	1,020	444	95	42	50	40
2	44	62	652	4,280	500	170	1,020	424	89	40	40	37
3	44	58	542	2,360	400	350	1,020	400	81	39	111	35
4	42	58	959	1,840	340	8,000	2,840	385	74	68	70	33
5	42	68	950	1,400	300	6,060	2,250	362	74	60	60	33
6	44	74	770	900	280	2,040	1,840	381	86	62	43	32
7	43	89	681	1,400	270	1,650	1,840	352	84	60	39	32
8	44	100	596	2,250	260	1,160	1,470	320	70	100	35	33
9	52	122	516	1,500	250	890	1,310	285	64	92	43	33
10	62	113	486	1,100	240	1,220	1,090	281	66	58	45	33
11	62	100	400	850	250	3,610	2,730	302	89	48	42	40
12	54	122	334	650	225	4,410	4,380	285	70	51	47	37
13	48	230	300	450	220	3,420	2,590	243	66	51	51	37
14	45	485	350	530	215	2,170	2,250	255	66	48	72	51
15	43	325	490	440	210	890	1,840	268	62	44	64	54
16	43	194	1,760	390	205	710	1,650	247	55	40	64	125
17	54	289	2,250	340	200	740	1,550	218	52	36	64	725
18	55	281	1,700	300	195	770	1,310	206	55	34	58	300
19	92	239	1,200	340	190	770	1,160	194	113	33	50	100
20	98	255	2,470	300	185	770	1,090	179	168	32	44	70
21	86	264	2,830	280	182	710	1,020	175	95	32	40	58
22	78	819	1,940	270	179	1,090	890	154	68	33	38	51
23	100	1,090	1,400	450	176	710	890	157	64	31	43	68
24	119	740	1,000	750	173	710	850	150	57	30	45	161
25	119	569	1,100	750	170	681	740	157	52	28	50	81
26	109	516	850	700	169	652	652	150	45	28	42	62
27	103	770	600	650	168	1,290	652	136	54	30	40	55
28	84	681	380	900	167	1,960	596	126	55	32	44	55
29	74	569	320	1,100		1,160	542	115	52	32	50	274
30	66	569	400	900		1,020	485	106	50	40	51	626
31	62		600	700		950		103		74	44	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					119	42	66.4	0.139	0.16			
November					1,090	58	331	.688	.77			
December					2,830	300	955	1.99	2.29			
January					4,280	270	1,049	2.18	2.51			
February					600	167	246	.511	.53			
March					8,000	168	1,642	3.41	3.95			
April					4,380	485	1,452	3.02	3.37			
May					444	103	244	.507	.58			
June					168	45	72.4	.151	.17			
July					100	28	46.1	.096	.11			
August					111	35	50.9	.106	.12			
September					725	32	112	.233	.26			
The year					8,000	28	525	1.09	14.80			

Tionesta Creek at Nebraska, Pa.

Location.- Staff gage 500 feet below highway bridge at Nebraska, Forest County, a third of a mile below mouth of Coon Creek. Prior to July 6, 1933, chain gage at same datum at highway bridge used. Zero of gage is 1,079.00 feet above mean sea level.

Drainage area.- 481 square miles (revised).

Records available.- October 1931 to September 1934 in reports of U. S. Geological Survey; October 1909 to September 1911 in report of Flood Commission of Pittsburgh, 1911; August 1923 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1933, 5,140 second-feet Mar. 21 (gage height, 7.10 feet); minimum, 33 second-feet Aug. 22 (gage height, 0.18 foot).

Maximum discharge during year ending Sept. 30, 1934, about 16,900 second-feet Mar. 4 (gage height, 11.4 feet, from graph based on gage readings); minimum, 28 second-feet July 25, 28 (gage height, 0.11 foot).

1909-11, 1923-34: Maximum discharge, that of Mar. 4, 1934; minimum, 25 second-feet Sept. 7-10, 25, 1927.

Remarks.- Records fair except those estimated for periods of ice effect, Nov. 27 to Dec. 3, Dec. 12-23, 1932, Jan. 14-19, Feb. 11-19, Dec. 13, 14, 1933, Feb. 1 to Mar. 4, 1934, and for periods of missing gage-height record, July 7-28, Dec. 18, 19, 23-31, 1933, Jan. 5-7, Jan. 9 to Feb. 3, 1934, which may be poor.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	156	240	633	531	1,270	2,340	398	607	102	52	39
2	40	396	245	935	688	1,060	2,430	396	531	155	68	37
3	37	337	258	870	807	935	2,530	633	484	251	81	76
4	36	221	236	807	531	607	2,340	746	418	221	251	108
5	45	193	207	807	356	688	1,890	568	561	116	210	95
6	116	193	180	688	337	556	1,890	1,110	1,000	96	119	74
7	207	180	180	581	508	581	2,160	2,250	950	90	74	61
8	102	193	267	556	1,170	1,340	1,890	1,810	3,250	80	60	43
9	72	168	267	484	856	1,130	1,650	1,650	2,040	75	62	41
10	55	1,180	145	439	508	870	1,490	1,490	1,600	70	64	41
11	48	1,040	125	396	440	633	1,410	1,270	935	66	66	38
12	46	607	115	396	420	746	3,210	1,060	746	62	62	36
13	44	396	110	145	420	824	2,730	1,000	607	59	62	34
14	47	300	105	120	440	3,430	2,160	1,130	508	57	58	42
15	44	251	100	110	460	4,720	1,810	870	439	55	52	196
16	43	236	97	110	440	3,410	1,650	935	376	75	48	168
17	44	495	95	150	450	2,530	1,950	1,570	337	93	43	95
18	53	531	95	200	420	1,950	1,950	1,270	287	89	40	62
19	68	1,440	95	360	440	1,980	1,890	1,000	207	74	37	61
20	55	2,260	98	688	633	2,530	1,650	746	207	62	39	55
21	53	1,410	106	531	746	4,240	1,270	670	193	54	35	57
22	46	1,000	125	807	484	4,040	1,130	688	180	48	33	62
23	51	746	200	1,410	807	2,950	1,000	607	168	54	35	81
24	49	681	1,420	1,060	688	2,160	870	607	145	64	43	92
25	50	508	1,570	670	1,050	1,730	807	1,000	135	64	58	61
26	52	418	1,200	870	2,360	1,490	746	870	125	63	68	70
27	108	340	870	935	1,650	1,200	688	1,000	116	61	52	62
28	207	280	688	807	1,410	1,340	556	1,060	116	59	43	57
29	116	250	607	633		1,060	508	1,130	108	57	42	55
30	90	240	531	566		1,060	462	1,000	94	51	35	52
31	74		935	531		1,410		746		48	36	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	207	36	66.8	0.143	0.16
November	2,260	156	551	1.15	1.28
December	1,570	95	371	.771	.69
January	1,410	110	506	1.24	1.43
February	2,560	337	708	1.47	1.53
March	4,720	566	1,770	3.68	4.24
April	3,210	462	1,640	3.41	3.61
May	2,950	366	1,020	2.12	2.44
June	3,250	94	569	1.18	1.32
July	251	48	82.3	.171	.20
August	251	33	65.4	.136	.16
September	198	34	68.4	.142	.16
The year	4,720	33	623	1.30	17.62

French Creek at Carters Corners, Pa.

Location.- Chain gage at highway bridge at Carters Corners (formerly called Kimmeytown), Erie County, 4 miles northwest of Union City and 5 miles upstream from mouth of South Branch of French Creek. Zero of gage is 1,235.7 feet above mean sea level.

Drainage area.- 208 square miles.

Records available.- October 1919 to September 1920, October 1932 to September 1934 in reports of U. S. Geological Survey; May 1910 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 18 years (1910-18, 1919-28, 1932-34), 418 second-feet.

Extremes.- Maximum discharge recorded during year, 5,570 second-feet Jan. 1 (gage height, 8.70 feet); minimum, 6.3 second-feet Aug. 1 (gage height, 0.44 foot).
1910-34: Maximum discharge (estimated), 9,940 second-feet Mar. 25, 1913; maximum gage height, about 15.2 feet Mar. 12, 1920 (caused by ice jam); minimum discharge not determined.

Remarks.- Records fair except those estimated for periods of ice effect, Dec. 13-15, Feb. 6 to Mar. 3, and Mar. 11-13, which may be poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	55	1,100	4,500	456	122	476	143	32	17	8.0	13
2	33	51	658	3,820	366	135	476	129	33	14	7.2	17
3	33	50	476	1,220	283	300	456	111	33	15	14	14
4	29	51	901	700	253	3,210	949	104	30	14	13	15
5	29	50	834	535	236	4,260	834	96	27	13	14	13
6	31	55	575	700	220	3,160	535	87	25	17	12	9.4
7	29	53	438	788	210	2,220	456	81	24	17	13	8.4
8	32	129	348	738	197	788	366	72	22	13	11	11
9	29	155	268	616	190	495	299	68	24	17	14	11
10	28	183	224	495	183	401	268	66	24	16	14	12
11	30	196	210	366	175	370	671	63	23	14	15	12
12	32	224	183	283	170	360	1,140	59	21	13	12	9.4
1*	32	310	180	299	165	400	834	56	28	21	11	10
14	29	525	180	283	160	700	700	79	26	21	11	9.4
15	29	419	220	283	155	575	700	83	23	14	11	13
16	28	331	1,110	236	150	495	658	68	28	14	12	21
17	29	383	880	224	145	658	535	59	24	14	14	22
18	44	348	744	268	140	1,080	419	55	23	12	14	20
19	196	366	401	253	137	700	315	56	45	10	16	17
20	140	419	542	268	134	575	253	47	38	12	16	14
21	87	468	1,490	210	131	535	224	47	32	13	13	13
22	74	2,700	1,140	210	128	616	210	41	26	14	10	12
23	83	3,000	700	759	128	348	268	45	21	11	8.8	14
24	83	1,280	788	788	124	283	332	44	21	8.8	14	13
25	160	783	880	700	122	210	332	53	18	7.2	14	14
26	183	1,100	575	744	120	196	283	45	17	8.0	13	13
27	134	1,460	268	535	119	462	238	41	19	14	16	14
28	96	880	348	1,190	118	535	210	41	20	13	18	16
29	79	941	332	1,030		495	196	35	17	8.0	18	17
30	75	1,530	383	700		456	162	33	16	9.4	16	17
31	59		494	575		456		31		11	16	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				196	28	65.1	0.313	0.36				
November				3,000	50	617	2.97	3.31				
December				1,490	180	576	2.77	3.19				
January				4,500	210	788	3.73	4.36				
February				456	118	183	2.89	4.92				
March				4,260	196	826	3.97	4.68				
April				1,140	162	460	2.21	2.47				
May				143	31	65.7	.316	.36				
June				45	16	25.3	.122	.14				
July				21	7.2	13.6	.065	.07				
August				18	7.2	13.2	.063	.07				
September				22	8.4	13.8	.066	.07				
The year				4,500	7.2	305	1.47	19.90				

Oil Creek at Rouseville, Pa.

Location.- Chain gage at highway bridge 1 mile above Rouseville, Venango County, and 1½ miles above former gaging station.

Drainage area.- 300 square miles.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge during year, about 7,320 second-feet Jan. 1 (gage height, 8.2 feet, from graph based on gage readings); minimum, 22 second-feet July 29, Sept. 5, 7 (gage height, 1.78 feet).
1932-34: Maximum discharge, that of Jan. 1, 1934; minimum, that of July 29, Sept. 5, 7, 1934.

Remarks.- Records fair except those for high stages and those estimated for periods of ice effect, Dec. 12-15, Feb. 4 to Mar. 3, Mar. 11, 12, which are poor. Records include of Cherrytree Run. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	50	660	4,610	535	165	765	213	66	48	27	29
2	44	49	395	4,490	395	175	765	210	62	42	25	27
3	42	49	420	1,390	297	200	660	203	58	40	115	25
4	40	48	862	853	270	2,720	2,240	187	64	66	61	24
5	44	49	730	695	255	4,010	1,560	172	242	55	42	23
6	42	58	505	800	240	3,520	1,070	194	118	64	32	23
7	41	62	395	912	230	1,410	950	181	78	61	27	23
8	40	72	314	1,240	225	875	730	155	62	54	27	24
9	40	76	276	838	220	565	595	142	61	49	44	32
10	40	90	150	695	215	395	505	140	74	42	54	29
11	39	74	184	535	210	310	1,600	144	66	39	40	25
12	37	87	165	395	205	270	1,840	130	60	48	36	26
13	35	173	150	420	200	346	1,070	127	58	41	35	34
14	35	420	140	448	195	780	950	140	56	42	41	46
15	34	276	170	370	190	602	950	147	52	41	35	37
16	35	249	1,440	319	185	628	875	134	50	39	39	39
17	46	264	1,110	284	180	595	765	124	49	29	44	55
18	50	241	990	245	178	875	595	113	50	27	41	50
19	71	230	595	302	176	476	535	113	132	25	34	40
20	67	224	570	249	174	505	448	104	109	26	30	53
21	58	329	2,480	245	172	568	395	96	71	30	27	29
22	64	2,050	1,280	234	170	1,150	370	92	55	30	27	27
23	63	2,020	765	505	168	482	346	92	76	33	39	29
24	69	875	628	628	166	420	370	87	55	29	35	28
25	56	535	765	505	165	302	346	98	49	24	35	28
26	96	535	505	595	164	323	319	92	44	23	33	28
27	76	1,080	346	420	163	1,080	302	81	58	24	29	30
28	66	628	297	742	163	1,190	276	78	147	27	33	36
29	56	505	293	1,370	730	253	74	74	23	23	44	74
30	54	660	241	595	628	628	227	74	60	35	40	61
31	50		469	535		628		67		29	34	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	96			34			52.5			0.175	0.20	
November	2,050			49			402			1.34	1.50	
December	2,480			140			589			1.96	2.26	
January	4,610			234			853			2.64	3.27	
February	535			163			218			.727	.76	
March	4,010			165			868			2.69	3.33	
April	2,240			227			766			2.52	2.81	
May	213			67			129			.430	.50	
June	242			44			75.2			.251	.28	
July	66			23			38.3			.126	.15	
August	115			25			39.6			.129	.15	
September	81			23			34.5			.115	.13	
The year	4,610			23			399			1.13	15.34	

French Creek at Saegerstown, Pa.

Location.- Chain gage at highway bridge at Saegerstown, Crawford County, half a mile above mouth of Woodcock Creek.

Drainage area.- 629 square miles.

Records available.- April to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; April 1921 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 13 years (1921-34), 1,037 second-feet.

Extremes.- Maximum discharge during year, 11,100 second-feet Jan. 3 (gage height, 12.0 feet from graph based on gage readings); minimum, 24 second-feet Aug. 25, 26 (gage height, 2.12 feet).

1921-34: Maximum discharge, about 17,000 second-feet Jan. 20, 1929 (gage height, 15.9 feet, from graph based on gage readings); minimum, that of Aug. 25, 26, 1934.

Remarks.- Records good except those for low stages, which are fair, and those estimated for periods of ice effect, Jan. 31 to Mar. 3, which may be poor. Regulation at low stages from small power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	182	144	3,020	5,800	950	257	1,310	455	100	62	32	43
2	130	130	1,910	8,870	760	260	1,390	403	96	58	34	38
3	116	116	1,310	8,660	600	1,000	1,510	370	99	56	45	32
4	116	126	2,090	2,930	500	4,520	2,500	327	59	52	52	28
5	100	126	2,390	1,730	450	8,070	2,910	316	81	67	54	27
6	103	141	1,730	1,910	420	9,320	2,000	286	81	60	48	28
7	103	148	1,310	2,090	400	7,070	1,550	276	76	78	45	29
8	92	175	1,080	2,590	380	3,740	1,230	256	73	73	78	38
9	95	228	870	2,090	360	1,910	1,010	228	76	69	56	30
10	97	322	668	1,640	340	1,230	836	219	78	67	50	28
11	92	353	546	1,310	330	870	1,200	223	78	60	78	28
12	78	364	432	940	320	768	2,490	201	78	56	56	28
13	84	572	450	870	310	870	2,390	184	76	56	56	28
14	84	1,010	491	905	300	1,730	2,090	210	81	54	39	27
15	78	993	668	870	290	1,910	2,190	238	73	52	33	32
16	78	590	3,040	801	285	1,640	1,820	247	69	48	36	38
17	86	668	3,350	803	280	1,730	1,550	210	69	45	30	41
18	71	801	2,590	590	277	2,290	1,310	188	73	38	34	47
19	110	870	2,000	668	274	2,090	1,010	175	96	41	29	52
20	242	940	1,860	636	271	1,730	836	160	107	43	56	45
21	238	1,140	4,190	603	268	1,550	701	160	120	36	33	45
22	197	4,220	4,190	636	266	2,190	636	152	107	41	32	41
23	171	5,910	2,490	1,530	264	1,390	668	162	100	34	33	41
24	175	5,910	1,910	2,290	262	940	836	141	78	34	30	39
25	197	3,100	1,910	1,820	260	734	870	141	73	34	28	39
26	291	2,290	1,820	1,910	258	701	801	152	67	29	24	38
27	311	3,240	1,010	1,470	257	1,080	701	130	60	27	29	36
28	242	2,800	701	1,800	256	1,730	668	130	137	32	33	34
29	188	2,000	801	2,690		1,390	559	130	107	32	36	38
30	171	2,490	801	1,500		1,230	497	116	84	30	41	36
31	156		1,100	1,200		1,310		107		28	41	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	311	71	143	0.227	0.26
November	5,910	116	1,397	2.22	2.48
December	4,190	432	1,701	2.70	3.11
January	8,870	590	2,063	3.28	3.78
February	950	256	364	0.579	0.60
March	9,320	257	2,169	3.45	3.98
April	2,910	497	1,329	2.11	2.35
May	455	107	216	0.343	0.40
June	137	60	85.4	0.156	0.15
July	78	27	48.1	0.076	0.09
August	78	24	38.8	0.062	0.07
September	52	27	35.8	0.057	0.06
The year	9,320	24	804	1.28	17.33

French Creek at Utica, Pa.

Location.- Water-stage recorder at highway bridge at Utica, Venango County, a third of a mile above Mill Creek. Prior to Nov. 27, 1933, chain gage was used at same location and datum. Zero of gage is 1,019.54 feet above mean sea level.

Drainage area.- 1,028 square miles.

Records available.- August 1932 to September 1934.

Extremes.- Maximum discharge during year, 11,700 second-feet Mar. 6 (gage height, 9.46 feet); maximum gage height, 9.70 feet Mar. 4 (caused by ice); minimum, 43 second-feet July 30 (gage height, 1.03 feet).
1932-34: Maximum and minimum stages and discharges are same as given above.
Maximum stage known, about 15.7 feet during flood of March 1913 (discharge not determined).

Remarks.- Records good except those estimated for periods of ice effect, Feb. 1 to Mar. 3, which may be fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	198	189	3,510	5,790	1,400	362	1,990	1,020	157	114	49	85
2	189	177	3,050	7,330	1,100	370	2,120	618	142	93	56	85
3	160	166	2,090	10,200	900	1,000	1,990	572	129	82	133	78
4	144	166	2,220	8,260	750	6,350	4,170	522	129	83	129	74
5	142	166	3,200	4,180	670	8,080	4,570	484	170	82	105	66
6	137	160	2,760	3,350	600	11,000	3,880	473	127	105	87	59
7	125	155	2,220	3,510	550	10,800	3,010	432	120	99	78	56
8	118	166	1,630	4,000	520	8,480	2,310	398	114	103	71	69
9	116	221	1,320	3,510	500	4,760	1,810	374	107	99	295	89
10	116	273	1,020	2,900	480	3,020	1,490	352	127	89	457	83
11	116	384	796	2,350	460	2,240	1,680	338	127	83	312	69
12	107	408	584	1,740	450	1,440	2,980	325	111	83	241	66
13	103	513	602	1,420	440	1,350	3,550	308	109	83	176	67
14	99	796	632	1,520	430	2,100	3,240	325	107	89	157	67
15	103	729	1,140	1,420	420	2,720	3,080	342	105	87	152	71
16	105	571	3,290	1,230	410	2,440	2,860	352	99	78	146	115
17	112	696	4,340	1,020	405	2,440	2,510	342	93	74	160	149
18	114	938	3,670	865	400	2,860	2,050	308	95	73	142	134
19	88	1,020	2,900	975	395	3,080	1,640	287	139	69	122	120
20	110	1,140	2,620	1,020	390	2,580	1,300	268	134	78	116	120
21	112	1,660	3,940	938	385	2,310	1,110	252	142	80	105	116
22	254	4,200	5,240	900	380	2,940	985	249	157	74	103	109
23	228	6,170	4,340	1,490	375	2,580	954	234	142	64	99	107
24	195	7,730	3,200	2,900	370	1,700	1,020	220	125	61	103	99
25	204	5,640	2,480	2,760	368	1,340	1,110	216	107	58	107	91
26	228	3,200	1,970	2,620	366	1,140	1,110	213	95	53	89	93
27	315	3,510	1,580	2,220	364	1,930	1,010	210	119	55	83	95
28	315	4,000	938	2,200	362	2,380	924	198	116	53	85	101
29	262	2,900	975	3,530		2,310	938	198	136	46	89	130
30	228	2,760	1,060	2,870		2,050	745	198	142	46	87	144
31	201		1,630	1,850		1,990		179		55	83	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						315	88	163	0.159		0.18	
November.						7,730	155	1,693	1.65		1.84	
December.						5,240	584	2,289	2.23		2.57	
January						10,200	865	2,928	2.85		3.29	
February						1,400	362	3,230	3.14		3.62	
March						11,000	362	3,230	3.14		3.62	
April						4,570	745	2,068	2.01		2.24	
May						1,020	179	549	.339		.39	
June						170	93	124	.121		.14	
July						114	46	77.1	.075		.09	
August						457	49	136	.132		.15	
September						149	56	93.6	.091		.10	
The year						11,000	46	1,146	1.11		15.14	

Cussewago Creek near Meadville, Pa.

Location.- Chain gage at highway bridge 4 miles northwest of Meadville, Crawford County.
Zero of gage is 1,071.77 feet above mean sea level.

Drainage area.- 90.2 square miles.

Records available.- October 1918 to September 1920, October 1931 to September 1934 in reports of U. S. Geological Survey; May 1910 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 24 years (1910-34), 129 second-feet.

Extremes.- Maximum discharge recorded during year, about 1,680 second-feet Mar. 5 (gage height, 10.84 feet); minimum discharge, 0.2 second-foot July 31, Aug. 1, 2; minimum gage height, 0.31 foot Aug. 2.

1910-34: Maximum gage height, 16.00 feet Mar. 25, 1913 (discharge not determined); minimum, that of July 31, Aug. 1, 2, 1934.

Remarks.- Records poor. Discharge estimated for period of ice effect, Feb. 4 to Mar. 4. Slight regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	7.4	306	365	225	19	163	35	3.7	0.8	0.2	2.8
2	6.5	6.7	267	1,260	127	20	169	29	3.0	.7	.2	2.2
3	4.7	5.6	157	711	37	30	210	26	2.6	.7	4.7	1.8
4	3.5	5.7	210	374	65	400	338	23	2.4	.7	2.1	1.6
5	3.0	6.5	350	196	52	1,540	495	21	2.4	.8	1.5	1.4
6	2.6	7.2	385	169	45	1,400	495	20	2.1	1.1	2.2	.9
7	2.6	8.0	263	210	38	840	249	18	1.9	1.2	1.6	.8
8	2.4	12	127	267	35	622	151	16	1.9	1.2	1.1	1.2
9	2.1	14	83	276	29	408	107	14	1.9	1.1	111	1.8
10	1.9	18	67	210	27	203	79	12	1.9	1.1	189	2.1
11	1.9	22	52	151	26	117	122	13	2.1	.9	115	2.2
12	1.8	28	46	107	25	87	267	12	2.8	.8	32	2.2
13	1.8	38	42	87	24	63	338	11	2.2	.8	16	1.8
14	1.8	63	41	83	24	156	258	13	1.9	.8	12	1.5
15	1.6	79	42	102	23	267	258	16	1.5	.7	11	5.0
16	1.4	87	313	102	23	217	217	16	1.4	.6	12	12
17	1.2	87	495	92	22	210	169	14	1.2	.5	10	9.6
18	1.5	79	543	79	22	267	127	13	1.6	.4	8.0	7.6
19	1.9	83	438	71	22	249	87	11	3.5	.4	6.1	5.4
20	3.2	102	301	67	21	169	67	10	4.3	.5	4.3	3.5
21	5.0	127	373	63	21	225	56	9.4	4.7	.7	2.8	2.1
22	5.6	468	495	60	21	267	52	8.8	3.7	.5	2.2	1.8
23	6.1	1,230	543	119	21	217	52	7.4	2.6	.7	1.9	1.4
24	7.0	688	311	299	20	133	63	6.7	2.2	.7	1.9	1.4
25	9.2	543	157	373	20	87	67	6.7	2.1	.7	1.5	1.1
26	11	398	127	248	20	79	63	6.1	1.6	.5	1.4	1.1
27	12	296	117	145	20	107	56	5.7	1.1	.7	1.4	1.1
28	10	286	112	141	19	175	52	5.6	.7	.5	2.1	.8
29	9.6	296	97	267		196	47	5.0	1.1	.4	2.4	1.9
30	9.6	258	79	296		151	41	4.3	1.1	.4	3.7	3.5
31	8.4		71	327		157		3.9		.2	3.7	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12	1.2	4.83	0.054	0.06
November	1,230	5.6	178	1.97	2.20
December	543	41	226	2.51	2.89
January	1,260	60	236	2.62	3.02
February	225	19	40.1	.446	.46
March	1,540	19	293	3.25	3.75
April	495	41	164	1.82	2.03
May	35	3.9	13.3	.147	.17
June	4.7	.7	2.24	.025	.03
July	1.2	.2	.703	.008	.01
August	189	.2	18.2	.202	.23
September	12	.8	2.79	.031	.03
The year	1,540	.2	98.9	1.10	14.88

Sugar Creek at Sugarcreek, Pa.

Location.- Chain gage at highway bridge three-quarters of a mile north of Sugarcreek, Venango County, and three-quarters of a mile above mouth.

Drainage area.- 166 square miles (revised).

Records available.- August 1932 to September 1934.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1933, about 2,900 second-feet Mar. 14 (gage height, 5.98 feet); minimum, 11 second-feet Sept. 13 (gage height, 1.38 feet).

Maximum discharge recorded during year ending Sept. 30, 1934, about 2,950 second-feet Jan. 1 (gage height, 6.03 feet); minimum, 10 second-feet Sept. 13, 14 (gage height, 1.33 feet).

Remarks.- Records poor. Discharge estimated for periods of ice effect, Nov. 28 to Dec. 1, Dec. 11-23, 1932, Jan. 1-3, 14, Feb. 10-15, Dec. 11, 12, 1933, Jan. 30 to Mar. 3, 1934. Probably some regulation owing to operation of mills upstream.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	92	51	550	120	251	646	146	130	45	22	15
2	16	101	49	350	174	212	609	140	115	55	25	16
3	24	75	48	250	140	186	633	202	106	80	28	27
4	18	63	69	199	110	180	544	165	110	52	58	37
5	26	63	67	240	92	154	428	146	412	43	30	50
6	56	69	66	192	97	128	418	157	205	41	25	25
7	45	64	80	180	118	128	476	202	190	41	22	22
8	27	59	115	157	442	445	433	192	1,160	41	22	20
9	19	67	101	146	236	407	372	222	407	39	29	18
10	22	247	73	132	160	291	326	215	274	34	25	16
11	22	159	58	118	120	199	343	189	212	34	25	21
12	23	143	49	118	105	205	1,010	180	157	30	25	16
13	24	108	42	86	98	322	615	169	140	28	22	15
14	24	97	36	80	105	1,850	466	171	130	30	20	30
15	23	86	32	77	125	1,440	382	151	115	30	20	52
16	28	90	31	84	138	1,020	521	159	110	31	17	28
17	24	148	30	92	122	544	504	208	103	49	19	23
18	30	162	29	88	120	402	454	165	92	32	19	21
19	27	776	30	162	130	504	471	143	90	32	17	19
20	23	360	32	168	222	532	627	135	84	27	17	39
21	19	262	35	130	225	804	510	135	77	27	17	34
22	19	192	42	195	189	609	372	120	77	29	14	50
23	27	159	51	266	192	465	358	108	63	25	15	48
24	25	151	512	180	165	358	258	189	59	59	23	34
25	20	146	339	159	669	321	240	186	56	33	25	28
26	24	115	202	180	612	299	215	363	56	31	19	28
27	111	82	162	180	532	240	195	240	53	27	16	34
28	61	69	120	180	363	287	180	240	50	25	17	38
29	46	61	160	148		287	159	195	48	24	16	30
30	25	55	908	122		488	154	159	48	24	14	24
31	38		901	115		597		148		24	15	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				111		16		30.4		0.183		0.21
November				776		59		145		.873		.97
December				908		29		146		.880		1.01
January				550		77		172		1.04		1.20
February				669		92		211		1.27		1.32
March				1,850		128		457		2.75		3.17
April				1,010		154		431		2.60		2.90
May				363		108		178		1.07		1.23
June				1,160		48		164		.988		1.10
July				80		24		36.2		.218		.25
August				58		14		21.9		.132		.15
September				52		15		28.3		.170		.19
The year				1,850		14		168		1.01		13.70

Sugar Creek at Sugarcreek, Pa.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	20	154	2,160	180	87	344	108	37	24	17	14
2	28	24	132	1,210	130	68	330	99	33	22	22	14
3	24	24	135	621	115	700	303	95	33	20	143	14
4	23	22	278	428	107	1,390	1,300	88	34	24	33	13
5	24	28	212	387	100	1,230	791	84	168	25	22	12
6	24	36	177	397	95	862	544	88	53	30	19	12
7	24	38	161	573	91	471	444	80	44	25	17	13
8	25	33	135	615	88	316	344	75	40	27	17	12
9	23	39	128	439	86	278	274	71	40	22	33	17
10	23	41	98	372	84	183	244	69	55	20	33	17
11	21	50	81	312	82	195	1,350	71	56	20	27	13
12	19	53	79	232	80	189	591	66	41	20	27	13
13	21	135	77	225	79	151	439	59	56	25	22	12
14	16	192	80	240	78	308	387	61	36	25	27	13
15	21	97	117	212	76	229	413	69	33	24	23	13
16	23	90	439	192	75	215	392	63	31	21	23	18
17	23	80	270	168	74	215	316	59	29	17	27	23
18	23	101	295	168	73	287	262	56	31	16	24	16
19	30	120	212	162	72	255	215	48	77	17	19	15
20	27	125	840	148	71	218	199	53	43	25	27	14
21	19	162	1,080	151	71	236	183	50	38	24	17	13
22	31	778	621	135	70	382	165	50	31	17	17	13
23	45	460	407	348	70	256	168	48	31	18	17	13
24	32	282	278	255	69	208	165	45	29	16	23	16
25	33	222	287	225	69	180	159	53	25	14	23	14
26	38	192	183	225	68	189	140	48	24	14	19	15
27	31	240	186	186	68	997	143	43	53	19	17	16
28	29	192	174	493	67	680	135	43	44	16	19	16
29	28	192	174	334		372	122	43	27	14	27	43
30	28	192	174	260		326	112	39	25	16	16	40
31	21		306	200		316		56		27	17	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					45	16	25.8	0.155		0.18		
November					778	20	142	.855		.95		
December					1,080	77	256	1.54		1.78		
January					2,160	135	399	2.34		2.70		
February					160	67	84.6	.510		.53		
March					1,390	67	385	2.32		2.68		
April					1,350	112	366	2.20		2.46		
May					108	38	63.3	.381		.44		
June					168	24	42.2	.254		.28		
July					30	14	20.8	.125		.14		
August					148	16	26.1	.167		.18		
September					43	12	16.2	.098		.10		
The year					2,160	12	162	.916		12.42		

Clarion River near Piney, Pa.

Location.- At hydroelectric plant of Clarion River Power Co. 2½ miles upstream from Piney, Clarion County, and 3 miles southwest of Clarion.

Drainage area.- 951 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; October 1924 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 10 years (1924-34), 1,499 second-feet.

Remarks.- Discharge computed from power-house records. Part of monthly table corrected for storage. Records furnished by Clarion River Power Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	261	62	564	3,820	1,650	1,580	1,200	875	295	52	29	55
2	1,490	62	1,240	5,760	1,570	631	3,040	760	455	52	43	180
3	1,520	62	62	4,000	1,350	2,230	2,740	591	136	218	675	29
4	1,430	62	1,550	3,380	317	2,360	4,450	722	62	237	185	29
5	1,480	62	1,130	2,780	1,120	2,570	6,130	1,000	202	52	29	29
6	62	62	894	3,050	1,010	3,380	5,070	271	62	52	29	29
7	62	62	801	2,640	765	3,420	5,190	528	304	344	295	308
8	62	62	1,190	5,140	702	2,970	3,140	574	52	52	29	29
9	62	62	1,130	4,060	575	2,070	2,980	583	392	686	297	29
10	62	62	62	3,690	678	682	3,140	636	200	741	109	29
11	62	62	341	3,150	62	62	3,680	832	137	629	94	29
12	62	62	62	2,840	873	760	6,030	1,790	218	685	29	29
13	62	62	329	2,600	284	1,270	6,430	163	99	663	322	29
14	335	62	242	677	573	1,900	5,680	432	160	67	372	313
15	62	62	1,040	1,780	570	2,130	3,620	463	52	44	254	29
16	243	62	1,500	1,200	663	1,850	3,210	579	536	659	351	118
17	62	62	368	1,240	492	1,780	2,960	592	137	732	358	357
18	62	62	2,730	771	62	788	2,500	500	52	930	264	542
19	62	62	2,810	955	384	1,700	2,460	627	416	922	168	298
20	62	62	1,870	1,430	542	1,520	2,860	156	367	631	135	337
21	315	62	3,890	333	211	1,630	1,540	450	366	611	29	195
22	62	62	3,880	588	62	1,620	424	510	432	29	131	47
23	62	1,020	3,540	1,160	297	1,540	1,720	520	196	29	29	29
24	62	1,520	2,070	937	514	1,070	1,540	482	52	29	426	139
25	62	620	2,670	1,440	62	503	1,270	537	70	29	83	333
26	62	711	2,610	1,620	313	1,630	1,200	440	252	29	29	248
27	62	266	1,830	886	116	2,560	1,430	157	52	110	29	153
28	62	1,400	1,590	851	671	7,090	712	534	52	29	128	310
29	62	1,400	1,430	2,960		4,560	273	486	138	29	81	447
30	62	62	1,360	1,110		4,230	767	62	495	29	29	29
31	62		644	1,400		3,860		303		29	376	
Month		Observed			Gain or loss in storage (Equivalent mean)	Corrected for storage						
		Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches				
October		1,520	62	274	-150	124	0.130	0.15				
November		1,520	62	279	+166	445	.468	.52				
December		3,890	62	1,465	-13	1,452	1.53	1.76				
January		5,760	333	2,211	+14	2,225	2.34	2.70				
February		1,650	62	589	+1	590	.620	.66				
March		7,090	62	2,127	-77	2,060	2.16	2.49				
April		6,430	273	2,913	+63	2,976	3.13	3.49				
May		1,790	62	553	+1	554	.583	.67				
June		536	52	215	-9	206	.217	.24				
July		930	29	304	-185	119	.125	.14				
August		675	29	175	-8	187	.176	.20				
September		542	29	159	+28	187	.197	.22				
The year		7,090	29	942	-15	927	.975	13.23				

Redbank Creek at St. Charles, Pa.

Location.- Chain gage at industrial-railroad bridge at St. Charles, Clarion County.
Zero of gage is 976.24 feet above mean sea level.

Drainage area.- 528 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; October 1909 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 21 years (1910-14, 1915-16, 1918-34), 877 second-feet.

Extremes.- Maximum discharge during year, 5,060 second-feet Dec. 21 (gage height, 5.85 feet, from graph based on gage readings); minimum, 30 second-feet July 30 (gage height, 0.86 foot).
1909-34: Maximum discharge, about 21,000 second-feet Dec. 14, 1927; maximum gage height, 14.0 feet (affected by ice) Mar. 12, 1920; minimum discharge, 10 second-feet Aug. 9, 1910 (gage height, 0.71 foot).

Remarks.- Records fair except those estimated for periods of ice effect, Dec. 12-16, 20-31, Jan. 31 to Mar. 3, which are poor. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	59	202	1,870	410	140	1,270	258	84	108	59	74
2	49	52	182	2,180	330	200	1,270	227	90	86	81	68
3	49	52	187	1,590	290	2,000	1,170	227	81	90	148	56
4	46	52	248	1,120	280	2,730	2,280	216	77	101	173	49
5	49	52	382	1,120	230	2,320	2,590	213	70	81	126	46
6	46	72	337	936	210	1,940	1,340	210	68	87	92	49
7	40	81	279	2,260	200	1,220	1,700	202	77	103	66	46
8	46	81	239	3,840	190	810	1,370	186	70	98	50	40
9	46	94	210	2,590	180	522	1,220	166	57	115	75	38
10	49	96	121	1,940	170	434	960	186	62	128	62	43
11	50	92	115	1,420	160	407	1,780	360	124	94	62	46
12	61	113	145	1,070	155	361	3,170	351	128	97	126	49
13	56	163	142	852	150	434	2,450	258	118	83	216	54
14	49	342	140	852	146	770	1,820	239	131	294	682	61
15	49	296	144	770	140	687	1,700	239	164	202	330	49
16	43	153	180	554	140	622	1,320	231	106	108	216	79
17	52	246	1,040	482	146	687	1,180	220	86	81	173	123
18	49	264	2,000	351	155	731	990	206	77	62	167	192
19	52	246	1,540	407	150	622	810	179	238	56	118	170
20	61	231	1,370	356	141	622	731	160	462	56	96	123
21	64	262	4,080	318	138	587	657	146	382	50	79	96
22	66	337	2,590	382	135	522	554	146	275	42	56	90
23	70	522	1,820	554	133	407	522	140	382	43	66	81
24	66	407	1,370	554	131	434	522	140	434	40	103	79
25	66	305	1,220	554	129	382	492	140	347	38	189	70
26	70	258	1,070	522	128	492	407	126	246	50	176	70
27	66	262	554	314	128	2,370	382	123	250	34	137	74
28	66	254	382	653	130	3,560	342	115	166	35	108	74
29	61	254	360	1,590		1,620	314	108	131	35	94	282
30	70	235	320	762		1,320	288	103	121	31	90	522
31	62		400	500		1,170		96		49	81	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	70	40	55.8	0.106	0.12
November	522	52	197	0.375	.42
December	4,020	115	751	1.42	1.64
January	3,640	314	1,067	2.02	2.33
February	410	128	179	.339	.35
March	3,350	140	998	1.89	2.18
April	3,170	288	1,203	2.28	2.54
May	360	98	191	.362	.42
June	462	57	170	.322	.36
July	294	31	85.1	.157	.18
August	682	50	138	.261	.30
September	522	38	96.4	.185	.20
The year	4,020	31	430	.814	11.04

Mahoning Creek near Dayton, Pa.

Location.- Chain gage at Independence Bridge, 1½ miles northeast of Dayton, Armstrong County.

Drainage area.- 321 square miles.

Records available.- October 1920 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1916 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 14 years (1920-34), 547 second-feet.

Extremes.- Maximum discharge during year, 4,140 second-feet Dec. 19 (gage height, 5.90 feet, from graph based on gage readings); minimum, 30 second-feet Sept. 11 (gage height, 1.86 feet).

1916-34: Maximum gage height (estimated), 9.6 feet Feb. 20, 1918 (discharge not determined); minimum discharge, 8.0 second-feet Oct. 17, 1928 (gage height, 1.40 feet).

Remarks.- Records good except those estimated for periods of ice effect Dec. 11-18, 29-31, Jan. 30 to Mar. 3, which are poor. Slight regulation at low stages from small power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	51	161	1,630	200	95	674	202	65	96	175	53
2	65	51	139	1,750	180	150	674	191	57	96	120	46
3	55	53	146	1,360	160	1,200	638	183	49	126	85	46
4	55	55	183	674	150	1,990	896	183	82	168	60	42
5	60	69	227	601	140	1,630	1,260	176	67	139	51	38
6	74	82	257	794	135	1,520	1,110	171	51	117	46	35
7	51	96	236	836	130	1,060	970	161	61	126	40	35
8	67	113	206	860	125	495	924	161	55	107	35	35
9	79	107	183	836	120	360	794	150	65	96	36	33
10	74	96	168	794	115	271	836	218	85	101	51	33
11	69	96	158	753	112	231	1,020	276	171	87	209	32
12	60	101	150	674	109	198	1,110	236	330	79	248	42
13	55	366	145	601	106	176	1,110	214	226	88	175	53
14	47	674	140	674	103	210	1,020	198	133	214	139	67
15	46	520	145	533	100	198	880	214	96	153	107	87
16	46	388	175	495	100	206	714	198	87	113	113	314
17	51	319	366	457	101	183	638	183	285	77	107	924
18	46	266	1,040	404	104	168	527	183	1,720	60	101	714
19	47	257	2,820	366	100	191	482	191	1,660	53	82	674
20	65	223	2,930	340	97	218	434	191	654	62	67	422
21	55	304	1,630	340	94	253	399	214	324	51	53	304
22	55	335	1,310	330	92	257	366	236	236	47	46	183
23	62	304	1,160	330	90	266	345	191	231	40	36	139
24	69	276	970	360	86	276	324	171	214	36	38	113
25	74	244	794	377	86	257	285	161	240	33	67	90
26	69	214	587	330	84	350	262	146	248	33	87	74
27	65	231	451	314	82	928	248	126	199	36	77	69
28	60	202	388	372	80	1,260	223	113	157	44	77	133
29	55	179	365	428		1,110	210	101	123	60	74	404
30	51	168	350	310		924	206	85	107	65	67	1,270
31	47		450	230		753		72		164	62	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				79	46	59.3	0.186		0.21			
November				674	51	215	.870		.75			
December				2,930	139	595	1.85		2.13			
January				1,750	230	615	1.92		2.21			
February				200	80	114	.555		.37			
March				1,990	95	561	1.75		2.02			
April				1,260	206	653	2.03		2.26			
May				276	72	177	.651		.64			
June				1,720	49	269	.838		.94			
July				214	33	99.3	.278		.32			
August				248	36	88.1	.274		.32			
September				1,270	32	213	.664		.74			
The year				2,930	32	305	.950		12.91			

Crooked Creek near Ford City, Pa.

Location.- Chain gage at highway bridge $3\frac{1}{2}$ miles south of Ford City, Armstrong County, and 5 miles above confluence with Allegheny River.

Drainage area.- 280 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; October 1909 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 23 years (1910-13, 1914-34), 438 second-feet.

Extremes.- Maximum discharge recorded during year, 3,960 second-feet Aug. 24 (gage height, 7.85 feet); maximum gage height, 15.5 feet Mar. 4 (from graph based on gage readings, affected by ice); minimum, 4.0 second-feet June 18 (gage height, 0.80 foot).

1909-34: Maximum discharge, about 16,500 second-feet June 29, 1924 (gage height, 13.1 feet, from graph based on gage readings); maximum gage height, that of Mar. 4, 1934; minimum recorded discharge, 0.1 second-foot Sept. 11, 25, 26, 1932.

Remarks.- Records fair. Discharge estimated for periods of ice effect, Nov. 15-17, Dec. 13-15, 27-31, Jan. 30 to Mar. 16. Probably slight regulation from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	17	56	1,920	390	40	490	81	35	17	80	109
2	50	16	47	1,140	310	70	400	73	30	19	80	88
3	38	17	37	605	250	1,000	360	72	24	21	76	84
4	29	14	66	560	210	3,500	905	67	22	17	178	77
5	25	19	226	560	180	2,000	1,410	65	20	18	88	68
6	29	36	206	500	150	1,500	905	57	18	32	84	64
7	26	80	169	1,550	125	1,000	2,160	51	17	26	57	59
8	23	74	137	2,240	100	800	1,340	52	9.6	28	80	58
9	23	62	110	1,340	85	600	850	37	14	27	142	59
10	17	53	85	800	74	450	560	42	9.0	40	152	59
11	21	45	74	560	66	350	750	72	22	41	1,720	51
12	14	50	70	400	58	300	960	80	18	43	1,340	43
13	10	100	64	341	55	260	750	69	12	43	605	48
14	9.7	213	60	341	52	240	605	56	19	74	400	440
15	8.4	160	80	286	49	240	560	56	15	63	308	700
16	7.7	130	2,000	226	47	250	440	72	10	50	1,050	380
17	9.7	120	2,320	184	45	276	400	73	7.5	38	1,140	960
18	9.7	145	2,480	100	43	342	308	52	4.5	27	605	520
19	34	166	1,550	128	41	342	260	50	276	25	261	324
20	24	166	960	78	40	380	208	39	208	27	276	233
21	19	178	3,010	123	39	308	196	31	88	24	162	173
22	17	160	1,480	123	38	276	173	64	56	23	100	152
23	25	148	750	105	37	208	173	360	56	21	142	113
24	19	123	269	125	36	152	173	152	67	22	1,960	103
25	15	95	1,410	123	36	152	142	104	43	21	2,740	103
26	20	74	905	110	36	184	120	84	32	18	1,020	87
27	17	78	750	95	35	360	120	62	30	14	440	90
28	19	78	500	123	35	1,480	109	54	26	10	360	83
29	22	70	300	500		850	91	48	25	53	246	260
30	19	64	280	800		605	85	40	19	59	173	2,320
31	21		400	500		480		41		74	113	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	62	7.7	22.1	0.079	0.09
November	213	14	91.7	.328	.37
December	3,010	37	673	2.40	2.77
January	2,240	78	535	1.91	2.20
February	390	35	95.1	.340	.35
March	3,500	40	613	2.19	2.52
April	2,160	65	553	1.90	2.12
May	350	31	72.8	.260	.30
June	276	4.5	41.1	.147	.16
July	74	10	32.7	.117	.13
August	2,740	50	519	1.85	2.13
September	2,320	43	264	.943	1.05
The year	3,500	4.5	293	1.05	14.19

Stony Creek at Johnstown, Pa.

Location.- Wire-weight gage at Poplar Street Bridge, at Johnstown, Cambria County, 1½ miles above confluence with Little Conemaugh River. Zero of gage is 1,154.0 feet above mean sea level. Chain gage at same site and datum used prior to July 24, 1934.

Drainage area.- 467 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; July 1913 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 20 years (1914-34), 778 second-feet.

Extremes.- Maximum discharge during year, 7,580 second-feet Jan. 7 (gage height, 8.9 feet, from graph based on gage readings); minimum, 30 second-feet July 12 (gage height, 0.96 foot); minimum daily discharge, 35 second-feet July 11, 12, 1913-34: Maximum discharge, about 23,000 second-feet Mar. 29, 1924 (gage height, 16.9 feet, from graph based on gage readings); minimum (estimated), 5 second-feet Sept. 8, 1923; minimum daily discharge recorded, 13 second-feet Oct. 25, 1930.

Remarks.- Records good except those below 70 second-feet and those estimated for periods of ice effect, Dec. 9-15, Feb. 7 to Mar. 3, which are poor. Diurnal regulation at low stages. Water supply for Cambria plant of Bethlehem Steel Co. diverted from Quemanoning Reservoir not included in records except in part of monthly table. Record of monthly diversion furnished by Manufacturers Water Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	54	123	1,640	624	160	870	219	83	49	100	100
2	85	57	114	1,480	524	220	760	207	81	48	85	89
3	78	54	114	990	500	2,500	596	198	72	49	326	85
4	74	50	177	930	432	4,640	2,030	195	46	104	325	87
5	87	60	272	1,260	389	5,190	2,670	189	63	54	64	87
6	71	106	206	1,720	328	3,360	1,560	166	61	52	111	79
7	71	119	177	4,810	290	1,690	2,260	166	63	48	85	68
8	71	150	150	5,220	260	1,260	1,890	147	56	56	72	66
9	74	114	140	2,890	240	815	1,480	134	77	51	606	68
10	74	116	130	1,890	220	705	1,120	161	91	41	519	76
11	71	110	120	1,330	200	623	1,190	207	108	35	551	72
12	64	150	120	990	190	519	1,400	172	98	35	650	63
13	59	191	120	1,050	180	494	1,120	139	85	522	596	118
14	57	221	150	930	175	596	1,050	134	74	2,360	596	132
15	57	238	220	733	170	705	1,120	172	66	1,050	380	192
16	54	254	1,340	650	165	760	1,120	299	59	760	1,580	435
17	85	191	2,710	500	161	623	1,120	213	59	358	2,660	776
18	93	191	2,550	410	157	732	870	163	96	142	1,260	338
19	97	221	1,330	432	153	623	760	139	893	132	544	242
20	67	272	990	348	150	544	678	124	470	91	424	204
21	66	221	1,050	309	147	494	596	120	280	76	299	145
22	60	272	1,050	368	144	446	494	120	147	93	232	127
23	62	290	870	500	141	380	519	129	201	108	226	106
24	67	221	733	598	138	358	446	124	169	93	280	106
25	64	191	815	573	135	318	358	118	134	66	380	89
26	54	177	733	650	133	358	358	120	89	63	266	89
27	51	163	678	573	131	917	299	104	81	82	204	139
28	54	150	524	1,020	130	1,620	273	93	76	675	183	111
29	52	137	410	1,480		1,190	245	91	70	229	145	533
30	54	137	500	1,190		930	219	89	63	129	124	1,640
31	54		815	815		815		87		142	115	
Month		Observed			Diverson (mean)		Corrected for diversion					
		Maximum	Minimum	Mean			Mean	Per square mile	Run-off in inches			
October		97	51	66.5		31.9	100	0.214	0.25			
November		290	50	163		27.3	190	.407	.45			
December		2,710	114	627		44.8	672	1.44	1.66			
January		5,220	309	1,235		68.9	1,304	2.79	3.22			
February		624	130	236		59.4	295	.632	.66			
March		5,190	160	1,129		87.0	1,216	2.60	3.00			
April		2,670	219	852		80.9	1,063	2.28	2.54			
May		299	87	153		81.8	235	.503	.58			
June		893	46	134		58.8	193	.413	.46			
July		2,360	35	251		16.3	267	.572	.66			
August		2,660	64	451		14.6	466	.998	1.15			
September		1,640	63	215		40.8	256	.548	.61			
The year		5,220	35	473		51.0	524	1.12	15.24			

Kiskiminetas River at Avonmore, Pa.

Location.- Chain gage at highway bridge at Avonmore, Westmoreland County. Zero of gage
Zero of gage is 805.64 feet above mean sea level.

Drainage area.- 1,723 square miles.

Records available.- June 1907 to September 1913, October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; May 1907 to September 1934 in reports of U. S. Geological Survey; May 1907 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 27 years (1907-34), 2,978 second-feet.

Extremes.- Maximum discharge recorded during year, 20,300 second-feet Sept. 30 (gage height, 14.90 feet); minimum, 294 second-feet July 27 (gage height, 2.82 feet).
1907-34: Maximum gage height (estimated), 30.8 feet Mar. 19, 1908 (discharge not determined); minimum discharge recorded, 60 second-feet Sept. 18-27, 1908 (gage height, 1.6 feet).

Remarks.- Records fair except those estimated for periods of ice effect, Dec. 12-15, 28-31, Jan. 30 to Mar. 4, which are poor. Slight regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	620	305	765	14,200	3,500	700	3,560	1,100	495	435	785	870
2	525	305	728	6,820	2,900	850	3,440	1,100	435	408	560	705
3	495	305	690	4,900	2,400	3,000	2,880	1,050	435	408	1,500	668
4	440	305	765	3,850	2,050	13,000	4,650	1,000	408	630	2,330	668
5	415	325	1,400	3,850	1,800	16,900	11,300	960	408	528	1,480	595
6	415	390	1,450	5,460	1,630	14,000	7,480	915	408	435	870	595
7	415	688	1,180	7,820	1,480	7,970	9,940	828	380	365	595	560
8	415	688	1,100	14,400	1,540	5,480	8,670	785	455	370	495	595
9	415	620	930	10,400	1,210	4,040	6,660	785	408	408	3,330	528
10	468	588	888	6,820	1,100	3,210	5,200	745	380	380	3,840	528
11	440	525	765	5,180	1,030	2,770	4,800	1,050	580	335	7,920	495
12	390	495	700	4,100	970	2,330	5,910	1,000	630	316	5,500	465
13	390	805	640	3,500	920	2,330	4,930	828	465	1,360	4,040	663
14	368	1,180	580	3,610	880	3,440	4,160	785	435	8,000	3,680	2,290
15	325	1,270	700	3,150	850	3,680	4,410	785	380	4,320	2,440	3,400
16	325	849	4,280	2,720	820	3,210	4,160	960	375	2,120	3,590	3,200
17	325	2,320	8,410	2,600	790	2,880	4,160	1,140	340	1,420	9,680	6,290
18	440	2,500	16,800	2,000	760	2,990	3,680	915	345	960	5,580	3,630
19	495	2,400	9,880	2,100	740	2,990	3,210	785	2,480	745	3,450	2,220
20	468	1,910	6,590	1,910	720	2,770	2,990	745	3,120	705	2,550	1,720
21	415	1,450	13,100	1,720	700	2,550	2,550	668	1,480	630	2,020	1,320
22	390	1,360	7,990	1,630	690	2,330	2,330	668	870	528	1,420	1,050
23	368	1,720	5,460	1,720	680	2,020	2,120	795	1,820	408	1,230	870
24	368	1,450	4,100	2,720	670	1,620	1,920	915	1,720	408	3,330	785
25	368	1,270	5,320	2,300	660	1,620	1,620	705	1,050	375	6,700	745
26	345	1,020	4,500	2,300	650	1,720	1,720	668	785	312	3,800	668
27	325	1,100	3,610	2,300	640	2,650	1,520	630	705	303	2,440	785
28	325	972	3,000	2,380	630	7,630	1,420	630	595	1,820	1,920	785
29	305	930	2,600	6,770	5,760	1,320	1,320	560	560	1,670	1,620	3,000
30	305	845	2,500	6,000	4,410	1,140	1,140	528	528	785	1,230	17,000
31	305		4,000	4,500		3,560		528		1,550	1,050	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	620	305	400	0.232	0.27
November	2,500	305	1,023	.594	.66
December	16,800	580	3,723	2.16	2.49
January	14,400	1,630	4,653	2.69	3.10
February	3,500	630	1,186	.688	.72
March	16,900	700	4,336	2.62	2.90
April	11,300	1,140	4,135	2.40	2.68
May	1,140	528	824	.478	.55
June	3,120	340	781	.453	.51
July	8,000	303	1,078	.626	.72
August	9,680	495	2,935	1.70	1.96
September	17,000	465	1,923	1.12	1.25
The year.	17,000	303	2,260	1.31	17.61

Blacklick Creek at Blacklick, Pa.

Location.- Chain gage at highway bridge at Gratton, a quarter of a mile northwest of Blacklick, Indiana County.

Drainage area.- 390 square miles.

Records available.- August 1904 to September 1913, October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1904 to December 1905, January 1907 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 27 years (1907-34), 660 second-feet.

Extremes.- Maximum discharge recorded during year, 9,400 second-feet Mar. 3 (gage height, 8.57 feet); minimum, 33 second-feet July 25 (gage height, 2.12 feet).
1904-34: Maximum discharge recorded, about 21,000 second-feet Sept. 3, 1912 (gage height, 12.90 feet); minimum, 6 second-feet Sept. 12, 18-27, 1908 (gage height, 1.88 feet).

Remarks.- Records fair except those estimated for periods of ice effect, Dec. 13, 14, 29-31, Feb. 9 to Mar. 3, and for days of missing gage-height record, Apr. 10-19, which are poor. Slight diurnal regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	58	158	1,790	861	140	861	198	82	91	115	190
2	143	60	135	1,610	670	200	734	186	62	91	88	154
3	102	58	132	1,130	430	3,000	595	173	67	99	692	146
4	96	49	306	861	430	5,040	1,590	169	62	115	400	135
5	173	49	455	1,330	394	3,100	1,920	158	65	93	202	115
6	85	112	348	1,230	342	2,480	1,440	154	56	85	132	109
7	85	154	290	2,500	311	1,380	2,640	143	60	80	99	96
8	74	139	251	2,940	246	995	1,920	132	77	99	77	99
9	128	118	228	1,920	210	693	1,380	125	69	88	533	109
10	96	112	146	1,550	190	593	1,100	135	106	72	273	91
11	88	91	165	1,040	181	528	1,180	173	139	60	1,950	82
12	74	194	146	775	175	449	1,300	158	96	56	1,040	74
13	72	233	135	734	169	474	1,100	135	85	93	775	150
14	65	497	210	818	164	775	1,000	128	72	228	586	1,160
15	54	320	554	631	159	557	1,100	146	62	106	365	1,000
16	56	186	2,300	557	155	631	1,100	194	60	69	1,280	1,600
17	60	266	3,430	449	152	593	1,000	135	56	56	1,490	2,340
18	122	332	4,910	337	149	693	800	128	56	47	775	1,080
19	112	417	2,190	424	146	564	650	132	1,840	44	461	693
20	99	376	1,660	242	143	593	522	106	643	47	608	522
21	74	353	3,770	295	140	528	522	106	256	56	337	382
22	74	442	2,190	388	138	494	461	109	202	45	251	311
23	72	461	1,380	461	136	355	455	274	697	44	290	256
24	74	311	1,040	528	134	285	405	190	417	45	2,050	246
25	74	266	1,920	508	132	348	342	158	246	35	2,150	202
26	74	228	1,130	501	131	311	300	132	194	37	995	190
27	74	271	818	417	130	1,370	290	122	165	49	631	202
28	65	224	615	623	129	2,190	276	102	139	359	535	228
29	62	194	470	800		1,230	233	93	122	165	394	2,740
30	62	165	600	1,040		950	206	93	102	93	300	3,640
31	60		1,800	995		818		88		206	233	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	173	54	87.0	0.223	0.26
November	497	49	225	.577	.84
December	4,910	132	1,093	2.80	3.23
January	2,940	242	949	2.43	2.80
February	861	129	241	.618	.64
March	5,040	140	1,044	2.68	3.09
April	2,840	206	921	2.36	2.63
May	274	88	144	.368	.45
June	1,840	56	212	.544	.61
July	359	35	92.1	.236	.27
August	2,150	77	648	1.66	1.91
September	3,640	74	611	1.57	1.75
The year.	5,040	35	525	1.35	18.26

Loyalhanna Creek at New Alexandria, Pa.

Location.- Chain gage at highway bridge at New Alexandria, Westmoreland County. Zero of gage is 917.26 feet above mean sea level.

Drainage area.- 285 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1931, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1913 to July 1923, November 1925 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 11 years (1919-22, 1928-34), 438 second-feet.

Extremes.- Maximum discharge recorded during year, 3,430 second-feet Aug. 16 (gage height, 6.78 feet); maximum gage height recorded, 8.07 feet Mar. 3 (affected by ice); minimum, 28 second-feet Oct. 18, Nov. 1, 2 (gage height, 1.80 feet).
1913-23, 1925-34: Maximum discharge, about 10,400 second-feet Oct. 20, 1927 (gage height, 12.65 feet, from graph based on gage readings); minimum, 2.4 second-feet Oct. 3, 1927 (gage height, 1.46 feet).

Remarks.- Records fair. Discharge estimated for periods of ice effect, Dec. 12-15, '29, 30, Feb. 6 to Mar. 3. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	30	87	820	348	112	525	118	75	48	172	112
2	73	33	82	788	348	140	472	121	66	50	136	102
3	66	35	78	552	280	3,000	446	115	64	71	503	92
4	66	30	99	498	238	3,330	1,540	115	60	142	446	89
5	64	71	148	757	209	2,480	2,130	115	56	87	280	84
6	62	152	162	608	185	1,710	1,330	110	52	60	152	62
7	64	217	142	1,870	170	1,190	2,300	102	44	50	121	75
8	56	145	130	1,880	160	852	1,330	97	46	65	100	78
9	52	87	124	1,120	155	580	1,050	89	48	60	1,910	66
10	62	78	94	788	150	472	788	152	66	52	1,480	56
11	56	115	78	608	146	421	757	202	64	44	1,090	58
12	48	115	73	525	142	302	665	124	56	46	608	71
13	52	94	70	552	139	280	552	99	50	1,450	2,100	82
14	50	145	68	498	136	302	580	159	62	1,630	989	155
15	55	159	150	446	133	421	552	159	48	1,380	446	116
16	30	152	1,890	396	150	525	608	183	44	666	2,450	258
17	56	179	2,470	302	127	525	525	133	44	348	1,760	209
18	62	258	2,370	258	124	472	472	118	79	179	852	162
19	58	280	1,330	258	122	396	396	110	650	115	472	133
20	50	217	1,710	187	120	396	325	105	198	400	325	110
21	50	185	1,480	152	118	372	325	97	82	136	236	102
22	42	179	953	190	116	325	302	169	130	99	194	92
23	46	169	696	525	114	258	250	142	124	80	175	87
24	54	145	525	446	112	217	238	102	105	73	348	78
25	54	124	726	421	110	206	183	102	89	66	552	75
26	46	107	552	372	109	492	169	92	73	60	396	71
27	48	97	372	348	108	1,400	172	84	84	54	238	64
28	50	97	258	421	107	1,190	148	80	48	283	198	62
29	50	107	220	421		884	142	75	50	133	165	529
30	48	97	210	372		580	130	60	50	99	145	2,120
31	44		580	348		525		71		302	127	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	78	30	53.9	0.203	0.23
November	280	30	128	.483	.54
December	2,470	88	579	2.18	2.51
January	1,690	152	556	2.10	2.42
February	348	107	159	.600	.62
March	3,330	112	786	2.97	3.42
April	2,300	130	648	2.45	2.73
May	202	60	116	.438	.50
June	650	44	90.2	.340	.38
July	1,630	44	269	1.02	1.18
August	2,450	100	618	2.33	2.69
September	2,120	56	182	.687	.77
The year.	3,330	30	361	1.32	17.99

Tygart River near Dailey, W. Va.

Location.- Staff gage at Burnt Bridge, 1,000 feet above Stalnaker Run and 1 mile north-east of Dailey, Randolph County.

Drainage area.- 194 square miles.

Records available.- April 1915 to September 1934.

Average discharge.- 19 years, 360 second-feet.

Extremes.- Maximum discharge recorded during year, 5,900 second-feet Mar. 3 (gage height, 11.93 feet); minimum, 1.7 second-feet July 26, Sept. 12, 15 (gage height, 0.24 foot).
1915-34: Maximum discharge recorded, 9,980 second-feet Feb. 4, 1932 (gage height, 16.4 feet); no flow Sept. 12 to Nov. 30, 1930.

Remarks.- Records good.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	23	213	1,010	250	275	335	178	54	61	3.3	6.2
2	31	23	174	1,530	201	238	250	157	46	72	7.2	5.0
3	30	22	153	850	172	3,810	201	142	33	47	45	4.6
4	26	22	225	870	155	4,170	194	128	30	56	107	4.0
5	26	23	290	970	128	4,610	225	107	38	26	44	3.7
6	20	39	262	810	91	1,640	194	94	60	18	30	3.3
7	23	71	535	1,580	117	1,050	187	86	74	12	20	3.2
8	16	73	335	1,230	125	1,180	201	77	79	20	15	2.5
9	16	58	262	810	123	890	190	66	61	16	12	2.3
10	14	58	201	535	142	610	178	83	201	14	10	2.1
11	14	52	174	395	157	482	196	1,280	172	96	8.6	1.9
12	14	62	169	290	125	335	360	500	213	41	7.9	1.7
13	14	86	149	250	165	350	650	305	201	30	6.5	2.1
14	12	136	183	238	172	850	535	225	174	24	6.5	1.8
15	13	144	180	201	183	570	465	380	115	17	6.0	1.7
16	11	121	275	180	730	465	465	570	66	13	21	39
17	16	140	1,530	146	610	430	448	350	55	9.6	119	250
18	23	213	810	146	430	448	395	238	49	8.2	74	91
19	30	570	570	151	565	465	335	199	106	6.8	40	52
20	23	275	1,970	132	305	448	275	153	138	5.2	27	33
21	20	213	1,330	113	305	482	250	128	79	4.8	19	27
22	21	262	730	112	275	412	201	192	55	4.0	14	23
23	45	380	430	159	290	350	187	140	172	4.0	12	29
24	59	305	320	213	213	275	174	165	146	3.3	11	18
25	51	180	250	196	225	290	138	225	106	2.2	19	14
26	39	151	225	192	335	570	107	163	45	1.8	15	11
27	34	157	201	199	290	1,010	180	119	38	2.3	18	29
28	32	146	190	213	262	1,970	305	117	45	2.8	14	24
29	31	168	153	320		1,010	250	82	42	3.5	11	24
30	26	194	192	262		570	213	80	38	4.0	9.0	123
31	26		262	262		395		60		3.7	7.2	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				59	11	25.2	0.130		0.15			
November				570	22	146	.753		.84			
December				1,970	149	417	2.15		2.48			
January				1,580	112	460	2.37		2.73			
February				730	91	248	1.28		1.33			
March				4,610	238	989	5.10		5.88			
April				650	107	276	1.42		1.58			
May				1,280	80	219	1.13		1.30			
June				213	30	91.0	.469		.52			
July				96	1.8	19.7	.102		.12			
August				119	3.3	24.5	.126		.16			
September				250	1.7	27.8	.143		.15			
The year				4,610	1.7	246	1.27		17.24			

Tygart River at Belington, W. Va.

Location.- Chain gage at highway bridge at Belington, Barbour County, a quarter of a mile above Mill Creek. Zero of gage is 1,679.89 feet above mean sea level.

Drainage area.- 390 square miles.

Records available.- June 1907 to September 1934.

Average discharge.- 27 years, 815 second-feet. (Average for 26 years published in Water-Supply Paper 743 in error; correct value, 822 second-feet)

Extremes.- Maximum discharge recorded during year, 9,450 second-feet Mar. 4 (gage height, 14.87 feet); minimum, 6.1 second-feet Sept. 14 (gage height, 1.97 feet).
1907-34: Maximum discharge recorded, about 20,100 second-feet Mar. 13, 1917 (gage height, 21.48 feet); minimum, 0.1 second-foot Sept. 13, 1930 (gage height, 1.58 feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	60	556	1,460	655	605	845	532	125	86	20	39
2	92	55	486	3,110	580	630	655	464	100	76	23	29
3	128	55	420	2,320	464	4,680	532	398	86	153	121	22
4	88	52	580	1,400	420	9,360	486	356	69	94	336	18
5	76	59	845	1,400	356	7,740	556	317	62	66	224	17
6	69	298	905	2,240	356	5,940	556	284	62	52	148	16
7	62	556	1,600	2,320	242	2,470	556	282	259	42	94	13
8	59	442	1,200	3,190	252	3,030	655	220	248	38	65	11
9	52	336	790	2,160	377	2,390	630	204	159	55	55	12
10	48	306	580	1,460	204	1,600	556	180	135	50	26	10
11	46	262	486	1,020	256	1,340	556	234	302	44	26	9
12	40	273	377	790	317	965	2,390	1,080	336	252	26	8.5
13	41	377	336	680	356	965	1,950	590	398	735	32	7.5
14	41	532	398	630	336	2,630	1,400	420	298	298	26	6.7
15	32	464	377	556	356	1,890	1,200	377	201	153	24	6.7
16	35	336	1,740	509	790	1,400	1,020	1,810	148	90	168	11
17	46	310	5,130	509	1,080	1,270	965	1,080	109	59	2,390	128
18	50	708	3,780	442	790	1,270	845	735	90	44	556	336
19	76	1,810	2,020	442	790	1,200	762	532	112	30	276	159
20	68	1,140	2,160	377	845	965	762	398	262	25	162	94
21	80	735	3,780	336	605	1,020	680	317	204	22	104	66
22	53	655	2,090	317	630	845	556	276	133	16	74	51
23	84	965	1,270	398	580	762	498	336	193	16	53	42
24	298	735	845	735	532	630	420	256	287	14	52	38
25	204	532	708	630	580	580	377	231	231	12	210	48
26	143	420	605	655	605	845	317	356	135	10	306	34
27	109	464	580	762	680	1,530	420	306	96	8	150	94
28	96	420	442	790	605	4,590	1,080	246	509	29	100	58
29	80	509	420	965		2,870	905	214	280	26	72	50
30	72	580	655			1,600	655	177	135	28	56	195
31	68		556	532		1,080		150		18	44	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	298	32	80.9	0.208	0.24
November	1,810	52	482	1.24	1.38
December	5,130	336	1,176	3.02	3.48
January	5,190	317	1,090	2.80	3.25
February	1,080	204	522	1.34	1.40
March	9,360	580	2,220	5.69	6.56
April	2,390	317	792	2.03	2.27
May	1,810	150	430	1.10	1.27
June	509	62	192	.492	.55
July	735	8	85.2	.218	.25
August	2,390	20	194	.497	.57
September	336	6.7	54.3	.139	.16
The year	9,360	6.7	613	1.57	21.56

Tygart River at Fetterman, W. Va.

Location.- Water-stage recorder at highway bridge at Fetterman, Taylor County, three-quarters of a mile above Otter Creek. Zero of gage is 957.86 feet above mean sea level.

Drainage area.- 1,340 square miles.

Records available.- June 1907 to September 1934.

Average discharge.- 27 years (1907-34), 2,570 second-feet.

Extremes.- Maximum discharge recorded during year, 28,700 second-feet Mar. 4 (gage height, 17.18 feet); minimum, 29 second-feet July 27 (gage height, 2.92 feet).
1907-34: Maximum discharge recorded, about 57,600 second-feet July 25, 1912 (gage height, 29.1 feet); minimum, 1.1 second-feet Oct. 21, 1930 (gage height, 2.23 feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	280	243	1,690	3,900	1,910	778	3,020	1,880	402	301	127	188
2	473	225	1,540	6,290	2,000	767	2,380	1,560	343	209	115	156
3	418	198	1,360	6,820	1,580	12,200	1,900	1,360	294	172	121	127
4	372	183	1,720	4,520	1,420	26,400	1,900	1,210	250	301	465	109
5	322	183	2,420	4,880	1,530	23,900	2,360	1,070	231	260	1,160	95
6	262	388	2,520	7,360	1,220	18,200	2,100	934	209	188	624	82
7	214	1,240	3,810	15,300	922	9,210	1,880	833	183	148	402	73
8	188	1,540	4,080	13,800	789	7,000	1,980	734	177	134	280	69
9	163	1,280	2,930	8,260	1,460	6,820	2,020	642	380	130	203	63
10	148	1,120	2,120	5,230	550	4,880	1,800	586	336	109	156	57
11	137	962	1,700	3,730	489	4,080	1,680	690	294	109	180	52
12	127	866	1,390	2,840	523	3,280	4,170	1,500	481	209	262	47
13	130	899	1,100	2,310	568	3,280	6,470	1,510	671	343	219	42
14	127	1,280	1,030	2,120	532	7,360	4,880	1,100	910	811	183	41
15	121	1,680	1,060	1,880	550	7,000	3,900	966	745	514	148	44
16	112	1,440	2,660	1,720	934	5,230	3,280	1,660	532	315	1,110	59
17	145	1,110	19,800	1,620	1,500	4,280	3,020	2,930	402	209	4,880	106
18	343	1,470	17,000	1,470	1,630	3,900	2,660	2,000	322	148	3,370	109
19	308	3,900	8,830	1,360	1,470	3,550	2,310	1,640	280	115	1,440	336
20	274	3,900	8,080	1,260	1,320	3,110	2,140	1,260	301	98	769	308
21	243	2,660	12,800	1,100	1,160	2,660	1,910	1,010	514	82	514	225
22	209	2,030	7,720	956	1,130	2,450	1,660	822	489	67	356	167
23	188	2,210	4,520	1,070	1,170	2,140	1,440	769	402	59	268	134
24	243	2,310	3,110	1,580	1,020	1,910	1,290	767	550	50	250	109
25	899	1,780	2,490	1,950	800	1,740	1,110	680	833	45	336	95
26	671	1,430	2,240	2,140	767	2,420	946	671	559	38	1,510	115
27	514	1,430	2,240	2,380	833	5,410	1,110	767	410	38	1,100	130
28	418	1,460	2,210	2,660	822	12,400	2,380	680	308	274	614	106
29	365	1,440	1,880	2,660		10,600	2,930	577	514	280	425	465
30	315	1,640	1,860	2,220		5,760	2,330	514	481	141	308	1,680
31	280		1,950	1,850		3,810		457		112	237	
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	899					112	291	0.217		0.85		
November	3,900					183	1,414	1.06		1.18		
December	19,800					1,030	4,189	3.13		3.61		
January	16,300					958	3,782	2.82		3.25		
February	2,000					469	1,093	.816		.85		
March	26,400					767	6,661	4.97		5.73		
April	6,470					946	2,431	1.81		2.02		
May	2,930					457	1,090	.813		.94		
June	910					177	427	.319		.56		
July	611					38	194	.145		.17		
August	4,880					115	714	.533		.61		
September	1,880					41	186	.139		.16		
The year	26,400					38	1,887	1.41		19.13		

Monongahela River at Charleroi, Pa.

Location.- Water-stage recorder 1,100 feet upstream from dam at Lock 4, at Charleroi, Washington County. Zero of gage is 735.36 feet above mean sea level.

Drainage area.- 5,213 square miles.

Records available.- March 1886 to March 1905, October 1933 to September 1934.

Extremes.- Maximum discharge during year (estimated), 116,000 second-feet Mar. 4 (gage height, 14.35 feet); minimum, 386 second-feet Sept. 16 (gage height, 2.26 feet); minimum daily discharge, 443 second-feet Sept. 16.
1886-1905, 1933-34: Maximum discharge (estimated), 207,000 second-feet July 11, 1888 (gage height, 42.0 feet, on lower gage at old lock downstream); minimum not determined.

Remarks.- Records fair except those for high stages and those estimated for period of ice effect, Feb. 13 to Mar. 4, which are poor. Discharge also estimated for days of recorder failure, Sept. 2, 3, 10-12. Regulation at low stages from operation of locks upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,580	1,210	3,810	11,700	7,120	1,000	11,300	4,850	1,400	846	1,510	1,040
2	1,270	1,140	5,120	24,900	6,910	1,500	9,020	4,560	1,560	1,140	1,170	719
3	1,480	1,270	3,450	23,500	5,950	6,000	7,990	4,180	1,250	993	1,420	620
4	1,600	1,280	2,790	19,100	3,280	70,000	18,700	3,420	863	970	1,920	560
5	1,600	916	5,290	17,000	3,370	100,000	27,100	3,030	842	903	1,690	521
6	1,380	1,820	8,270	21,100	4,490	69,200	17,300	2,770	1,160	1,220	1,720	508
7	1,380	2,490	8,660	36,300	3,720	39,800	17,000	2,540	1,120	744	2,020	482
8	1,170	3,010	9,600	69,300	3,380	24,000	10,700	2,540	829	590	1,600	469
9	1,360	4,670	8,280	40,700	2,700	18,700	8,190	2,180	916	508	1,380	456
10	988	4,200	4,520	24,000	1,820	16,100	8,780	2,100	1,120	523	1,120	482
11	988	2,830	4,220	16,600	1,530	13,000	8,190	2,050	829	890	744	469
12	812	2,300	4,630	13,000	1,360	9,710	13,900	2,450	959	1,170	744	793
13	812	2,820	4,850	9,850	1,260	10,200	18,000	3,070	1,140	3,000	655	665
14	812	3,620	4,630	5,840	1,190	14,700	16,100	2,860	1,290	7,370	825	495
15	812	4,490	4,060	6,020	1,120	22,700	13,800	3,680	1,290	3,170	1,330	169
16	812	4,910	4,550	7,240	1,050	17,200	10,700	3,620	1,720	1,430	1,990	443
17	988	3,670	21,600	6,440	1,020	13,500	12,400	5,560	1,080	1,560	7,680	514
18	1,210	3,630	63,900	6,180	990	10,600	11,100	5,660	1,100	1,420	6,810	2,920
19	1,190	5,750	37,800	6,020	960	10,200	9,230	5,710	2,160	1,120	7,330	1,740
20	1,900	8,980	22,700	4,630	940	11,800	8,860	2,860	1,920	952	3,240	1,360
21	1,440	9,720	30,600	3,200	920	9,320	6,990	2,800	2,390	535	2,330	1,040
22	1,180	6,800	29,700	3,140	900	8,740	4,600	2,770	2,100	508	1,970	829
23	1,100	7,870	18,000	4,580	890	9,620	4,720	2,830	1,720	469	1,600	916
24	1,170	9,040	13,800	6,740	880	6,380	4,850	2,210	1,290	482	1,440	581
25	1,080	6,540	9,450	7,400	870	4,140	3,920	2,500	1,190	710	1,380	495
26	806	3,820	7,320	7,900	860	5,350	3,660	2,360	1,920	680	1,670	547
27	502	2,950	8,600	7,830	850	16,500	3,880	1,760	1,890	534	2,530	560
28	646	4,630	8,370	7,470	840	45,000	5,260	1,890	1,530	1,180	2,610	590
29	1,120	5,520	7,400	7,590		40,600	5,670	2,020	988	2,140	1,940	912
30	1,510	4,640	5,780	8,190		24,900	4,760	1,920	778	1,720	1,640	5,130
31	1,230		5,390	7,520		16,800		1,210		1,890	1,650	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,900	502	1,137	0.218	0.25
November	9,720	916	4,215	.80 ¹	.90
December	63,900	2,790	12,170	2.33	2.69
January	69,300	3,140	14,230	2.73	3.15
February	7,120	840	2,185	.419	.44
March	100,000	1,000	21,620	4.13	4.76
April	27,100	3,660	10,220	1.98	2.19
May	5,860	1,210	3,015	.573	.67
June	2,390	778	1,345	.253	.29
July	7,370	469	1,337	.253	.30
August	7,680	655	2,172	.417	.48
September	5,130	443	911	.17 ⁵	.20
The year	100,000	443	6,260	1.20	16.32

Middle Fork at Midvale, W. Va.

Location.- Staff gage a third of a mile above Midvale station, on Coal & Coke Railway, Randolph County, and $1\frac{1}{2}$ miles below Laurel Creek.

Drainage area.- 122 square miles.

Records available.- May 1915 to September 1934.

Average discharge.- 19 years, 288 second-feet.

Extremes.- Maximum discharge recorded during year, 4,870 second-feet Mar. 3 (gage height, 10.87 feet); minimum (estimated), 1.0 second-foot July 27 (gage height, about 0.95 foot).

1915-34: Maximum gage height, 18.1 feet Feb. 4, 1932 (discharge not determined); no flow Sept. 15-25, 1930.

Floods of 1888 and 1912 reached gage height of about 18 feet.

Remarks.- Records good, except those estimated July 25-27, Aug. 23, 24, Sept. 15, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	44	244	360	256	244	450	220	48	42	6.8	13
2	50	42	210	695	222	280	400	209	39	134	10	12
3	44	40	222	580	161	4,170	198	173	35	54	295	9.7
4	34	39	293	420	188	2,910	198	153	30	40	106	7.5
5	28	42	293	545	167	2,140	209	138	25	26	35	7.1
6	27	222	420	580	153	1,190	177	106	30	20	26	6.0
7	23	222	655	820	140	795	198	93	110	14	18	5.3
8	22	199	480	775	120	875	220	89	43	12	14	5.3
9	20	159	360	615	142	635	209	72	35	30	11	4.9
10	18	140	268	480	151	485	198	64	92	20	11	3.8
11	17	127	235	360	142	432	245	232	71	15	13	3.6
12	16	151	155	280	151	340	1,000	155	117	25	14	3.0
13	20	188	167	244	199	325	715	122	120	21	11	2.6
14	23	268	167	244	131	755	555	113	78	12	9.7	2.6
15	20	244	159	188	140	555	485	198	65	14	8.0	3.0
16	15	188	1,720	178	332	485	415	555	46	11	72	5.3
17	19	188	2,210	163	199	520	355	400	38	7.5	355	6.4
18	41	480	1,480	129	222	520	282	295	37	6.4	138	7.5
19	28	655	775	147	233	450	245	220	165	5.3	72	12
20	20	480	865	129	244	400	232	177	106	3.8	35	11
21	18	346	820	115	178	325	209	136	62	3.4	26	8.0
22	17	450	655	111	244	295	177	125	48	3.0	20	6.8
23	332	420	405	159	222	258	161	115	134	2.8	15	7.5
24	222	332	319	199	210	232	144	100	134	2.1	200	10
25	136	255	268	210	188	209	127	134	84	1.7	209	9.7
26	95	222	280	233	244	310	113	122	55	1.5	129	8.6
27	79	244	280	293	188	355	220	101	45	1.0	52	38
28	65	188	280	306	233	1,050	415	92	37	5.0	33	11
29	58	222	210	319		795	355	81	33	5.3	25	124
30	53	268	233	233		485	270	69	23	6.0	19	209
31	46		210	293		385		56		13	16	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					332	15	53.0	0.434		0.50		
November					655	39	235	1.93		2.15		
December					2,210	155	495	1.06		4.88		
January					820	111	336	2.75		3.17		
February					332	120	192	1.57		1.64		
March					4,170	209	749	6.14		7.08		
April					1,000	113	306	2.51		2.80		
May					555	56	159	1.30		1.50		
June					165	23	66.1	.542		.60		
July					134	1.0	19.6	.162		.18		
August					355	6.8	64.6	.530		.61		
September					209	2.8	18.8	.154		.17		
The year					4,170	1.0	225	1.84		25.08		

Buckhannon River at Hall, W. Va.

Location.- Staff gage a quarter of a mile above highway bridge at Hall, Barbour County, and 1 mile above Pecks Run.

Drainage area.- 277 square miles.

Records available.- June 1907 to May 1909, April 1915 to September 1934.

Average discharge.- 19 years (1915-34), 602 second-feet.

Extremes.- Maximum discharge recorded during year, 7,540 second-feet Mar. 4 (gage height, 9.80 feet); minimum, 4.6 second-feet July 27 (gage height, 1.62 feet).
1915-34: Maximum discharge recorded, about 12,000 second-feet Mar. 14, 1916 (gage height, 14.7 feet); minimum, 0.2 second-foot Oct. 23, 27, 1930.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	86	526	759	526	158	618	425	67	54	29	58
2	141	78	444	665	444	190	480	358	58	53	26	46
3	125	78	389	1,500	319	4,440	398	311	51	69	176	38
4	132	78	572	960	327	7,100	327	284	46	63	863	31
5	103	78	665	1,500	262	5,370	350	226	46	54	264	27
6	84	230	712	1,650	217	3,500	311	179	49	42	141	24
7	76	526	1,400	3,190	186	1,760	327	176	46	36	89	19
8	69	434	1,100	2,680	169	1,860	462	162	44	36	63	19
9	60	368	816	1,560	145	1,550	407	141	54	30	49	15
10	56	311	618	1,100	119	1,100	342	128	51	22	193	14
11	53	264	480	853	122	1,050	350	186	92	31	179	12
12	51	239	407	665	109	759	1,100	425	176	92	148	11
13	49	243	287	572	106	853	1,350	282	358	56	92	8.0
14	49	373	258	526	138	1,860	1,100	217	327	53	58	8.0
15	46	462	276	444	162	1,460	902	212	197	48	46	8.0
16	46	389	1,300	381	252	1,100	759	618	152	39	389	13
17	56	334	5,370	350	471	1,000	665	665	112	34	1,760	24
18	98	572	4,120	311	462	902	572	526	95	23	816	32
19	98	1,200	1,960	276	282	853	480	407	89	12	327	69
20	98	960	2,670	252	230	712	444	299	138	14	186	60
21	74	618	3,080	226	264	618	407	217	155	12	125	42
22	65	572	1,450	208	252	526	342	190	103	12	84	29
23	60	816	1,000	239	243	480	299	179	165	10	71	25
24	480	665	712	425	226	462	243	165	462	8.0	76	56
25	511	480	618	398	201	407	217	141	165	7.2	665	54
26	230	407	618	462	179	480	186	162	141	6.8	665	42
27	179	471	853	572	186	853	264	165	98	5.6	264	31
28	155	453	759	759	169	2,980	816	125	78	19	165	27
29	135	480	665	712	169	1,960	712	103	71	18	119	39
30	119	526	618	572	1,200	526	86	65	56	56	69	311
31	103		572	462	853		76		42	69		
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	480			46			113			0.408	0.47	
November	1,200			78			426			1.54	1.72	
December	5,370			258			1,140			4.12	4.75	
January	3,190			208			807			2.91	3.36	
February	526			106			242			.874	.91	
March	7,100			158			1,561			5.64	6.50	
April	1,350			186			525			1.90	2.12	
May	665			76			252			.910	1.05	
June	462			44			125			.461	.50	
July	92			5.6			34.2			.123	.14	
August	1,760			26			267			.964	1.11	
September	311			8.0			39.7			.143	.16	
The year	7,100			5.6			464			1.68	22.79	

West Fork River at Butcherville, W. Va.

Location.- Chain gage on trolley bridge between Weston and Clarksburg, a quarter of a mile above Butcherville, Lewis County.

Drainage area.- 181 square miles.

Records available.- April 1915 to September 1934.

Average discharge.- 19 years, 306 second-feet.

Extremes.- Maximum discharge recorded during year, 5,320 second-feet Jan. 7 (gage height, 18.56 feet); minimum, 0.8 second-foot July 25, 26 (gage height, 3.42 feet). 1915-34: Maximum discharge recorded, 7,590 second-feet Mar. 13, 1918, Jan. 2, 1919 (gage height, 24.0 feet); no flow in October 1919, September, October and December 1922 (caused by either diversion or impounding at small dams upstream). Maximum stage known, about 27 feet in 1888. Dam below gage, since washed out, may have increased height of this flood.

Remarks.- Records fair, except those estimated Nov. 6, Dec. 25, Jan. 1-4, Feb. 8, July 27, Sept. 7, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	10	125	600	150	49	288	125	6.2	6.5	26	23
2	18	8.9	96	600	125	52	197	96	5.2	8.0	43	12
3	16	7.8	96	450	103	4,310	141	83	4.2	7.5	207	9.9
4	16	7.2	300	350	84	2,840	118	72	3.4	6.2	590	7.2
5	16	9.7	247	1,060	74	2,470	118	64	2.8	5.6	217	7.5
6	15	50	287	1,020	64	1,640	133	57	3.4	3.8	76	5.2
7	11	300	590	5,150	58	660	197	48	2.8	2.6	62	5.0
8	7.8	188	334	2,340	56	1,100	278	40	2.1	2.0	30	4.8
9	6.5	135	197	780	55	820	207	32	2.8	1.5	25	4.0
10	5.4	110	125	455	45	520	150	28	5.6	1.3	24	3.1
11	4.9	83	103	289	34	410	159	52	11	1.6	22	2.4
12	5.4	64	90	217	34	346	590	46	36	12	82	2.1
13	7.0	59	73	197	38	395	410	38	43	26	67	2.1
14	5.4	74	74	178	42	660	323	36	42	15	40	1.8
15	4.5	84	72	159	84	740	237	41	30	5.0	20	2.6
16	4.2	96	2,380	141	358	520	197	84	14	3.7	289	5.4
17	52	90	3,810	125	237	346	159	71	7.5	2.5	1,310	22
18	60	323	1,560	110	178	257	125	60	8.0	1.7	346	18
19	45	485	625	103	150	227	103	45	11	1.6	141	14
20	33	300	2,470	84	125	197	90	33	5.2	1.4	82	11
21	24	178	1,800	72	96	168	79	26	3.8	1.4	52	8.0
22	18	118	860	64	83	141	73	22	2.8	1.6	33	6.2
23	18	153	312	96	75	118	74	26	278	1.6	32	4.4
24	20	110	247	159	64	110	70	24	188	1.2	27	3.4
25	18	84	315	141	56	197	54	15	62	1.0	900	2.6
26	19	77	382	159	56	425	45	12	31	.9	382	2.3
27	17	159	825	141	61	1,390	141	19	22	.9	159	1.8
28	16	217	440	334	53	2,420	440	16	18	334	90	2.1
29	16	237	323	289		740	257	13	11	103	60	3.6
30	17	198	268	237		334	168	9.9	7.0	24	38	520
31	13		289	188		323		7.5		31	28	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	60		4.2		17.8		0.098		0.11			
November	485		7.2		133		.735		.82			
December	3,810		72		682		3.44		3.97			
January	5,150		64		525		2.90		3.34			
February	358		34		94.1		.620		.54			
March	4,310		49		804		4.44		5.12			
April	590		45		187		1.03		1.15			
May	125		7.5		43.3		.239		.88			
June	278		2.1		29.0		.160		.18			
July	334		.9		19.9		.110		.13			
August	1,310		20		177		.978		1.13			
September	520		1.8		23.9		.132		.15			
The year	5,150		.9		225		1.25		16.92			

West Fork River at Clarksburg, W. Va.

Location.- Water-stage recorder at dam of Clarksburg water works, three-quarters of a mile south of Clarksburg, Harrison County.

Drainage area.- 384 square miles.

Records available.- March 1923 to September 1934.

Average discharge.- 11 years, 582 second-feet.

Extremes.- Maximum discharge during year, 12,200 second-feet Mar. 3 (gage height, 6.45 feet); no flow over dam July 23-28.

1923-34: Maximum discharge, 16,300 second-feet May 12, 1924 (gage height, 7.76 feet); no flow over dam several days during 1925, 1930-32, 1934.

Remarks.- Records good. Table of daily discharge shows only flow over dam. Water diverted for water supply of Clarksburg included in part of monthly table. There are four storage reservoirs between Clarksburg and Weston. Water was drawn from storage July 23-28. Gage-height record and record of pumpage furnished by Clarksburg Water Board.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	21	327	1,660	237	62	558	214	14	10	24	36
2	179	24	250	1,720	225	85	424	168	7.2	10	24	24
3	130	24	214	1,080	196	4,430	320	182	5.1	2.4	40	21
4	72	14	462	664	168	7,770	281	135	5.1	1.1	307	14
5	45	24	601	1,160	152	4,100	287	125	3.5	1.1	275	7.2
6	36	90	470	2,060	141	3,140	294	115	1.6	.6	130	7.2
7	36	403	673	7,100	120	1,540	327	90	1.1	.8	72	3.5
8	32	327	673	6,940	110	1,410	388	67	.8	1.1	40	2.4
9	21	244	432	2,740	90	1,460	403	58	.8	1.1	17	2.4
10	17	208	287	1,010	61	1,110	313	72	.8	1.6	10	1.6
11	14	168	244	628	67	1,070	300	90	.5	24	110	1.1
12	14	130	225	462	67	791	747	95	2.4	45	208	.8
13	17	115	174	388	76	780	930	76	3.5	40	95	.8
14	17	120	157	353	76	2,510	712	58	2.4	45	49	.6
15	21	163	157	320	90	1,870	517	67	14	32	36	.5
16	14	166	1,400	267	266	1,040	410	76	24	14	319	2.4
17	36	182	6,940	262	417	770	353	141	17	3.5	2,030	2.4
18	152	256	4,920	237	300	575	281	141	10	1.1	761	2.4
19	168	791	1,590	214	244	470	231	95	10	.6	287	21
20	110	550	2,220	202	174	388	208	72	5.1	.5	152	10
21	85	327	3,970	168	152	307	191	53	3.5	.3	95	7.2
22	67	268	1,500	152	141	287	157	67	7.2	.2	58	5.1
23	45	268	683	185	130	268	152	90	219	0	.53	3.5
24	32	256	432	300	110	250	130	115	287	0	115	2.4
25	36	208	447	287	90	256	105	85	168	0	284	1.6
26	40	179	558	281	85	995	90	62	90	0	660	1.6
27	32	237	854	353	81	3,000	120	45	40	0	262	1.1
28	24	381	844	470	100	6,260	605	32	24	.2	152	.5
29	28	477	542	462		2,200	439	24	10	152	95	117
30	28	447	396	320		985	287	24	7.2	85	67	673
31	24		609	225		673		21		45	45	

Month	Observed			Corrected for diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	179	14	52.4	56.4	.147	0.17
November	791	14	235	239	.622	.69
December	6,940	157	1,073	1,077	2.80	3.25
January	7,100	152	1,055	1,059	2.75	3.16
February	417	67	150	154	.401	.42
March	7,770	62	1,640	1,644	4.28	4.93
April	930	90	352	356	.927	1.03
May	214	21	87.9	92.2	.240	.28
June	287	.5	32.8	37.5	.098	.11
July	152	0	16.7	21.5	.056	.06
August	2,030	10	221	225	.586	.68
September	673	.5	32.5	36.8	.096	.11
The year	7,770	0	417	421	1.10	14.89

West Fork River at Enterprise, W. Va.

Location.- Water-stage recorder 150 feet below highway bridge at Enterprise, Harrison County and three-quarters of a mile above Bingaman Creek. Zero of gage is 869.91 feet above mean sea level.

Drainage area.- 750 square miles.

Records available.- June 1907 to September 1918, October 1932 to September 1934.

Extremes.- Maximum discharge during year, 18,200 second-feet Jan. 7 (gage height, 17.33 feet); minimum, 3.4 second-feet July 27 (gage height, 0.98 foot).
1907-18, 1932-34: Maximum discharge recorded, 19,400 second-feet Nov. 16, 1913 (gage height, 18.8 feet); minimum, that of July 27, 1934.
Flood of 1888 reached a stage of about 33 feet, referred to present gage datum.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	86	601	4,190	1,050	220	1,300	395	56	103	79	88
2	146	84	460	3,660	678	236	1,020	332	45	98	48	74
3	318	70	390	2,340	515	7,100	792	288	41	56	88	56
4	179	63	684	1,500	430	14,100	1,080	260	33	38	149	45
5	122	79	990	2,120	332	8,000	1,020	236	24	26	425	38
6	93	272	870	3,860	252	6,320	900	220	26	17	240	34
7	79	540	900	13,000	232	3,440	960	202	24	15	143	27
8	72	612	1,050	12,900	213	2,260	990	173	20	16	98	52
9	67	475	755	4,430	256	2,420	960	152	19	20	65	38
10	59	390	540	2,100	192	2,020	752	149	17	24	43	28
11	48	322	450	1,360	164	1,940	782	210	19	65	34	23
12	48	304	390	960	152	1,680	1,820	206	26	628	220	27
13	54	232	336	810	173	1,400	2,100	179	63	182	185	28
14	59	228	300	755	182	3,990	1,740	173	52	146	114	27
15	59	256	300	700	216	3,550	1,330	268	34	101	86	26
16	52	292	1,600	662	465	2,180	1,020	272	45	63	1,480	43
17	91	296	11,400	806	1,080	1,620	870	248	52	38	5,250	81
18	185	332	10,000	515	990	1,330	684	252	48	21	1,640	56
19	296	1,160	3,340	465	634	1,080	575	202	70	16	606	50
20	210	1,020	3,520	405	505	900	520	161	52	13	318	63
21	155	678	6,690	340	455	728	450	128	31	10	192	52
22	128	520	3,170	309	350	628	390	117	30	9.6	134	38
23	114	490	1,580	425	309	606	368	228	210	11	112	31
24	106	450	1,050	680	256	555	336	224	490	7.5	213	31
25	103	391	960	628	248	555	288	185	284	4.7	495	33
26	96	332	1,120	700	252	1,360	248	161	173	4.0	870	23
27	93	381	1,250	755	254	5,620	272	134	112	28	530	27
28	91	555	1,440	840	224	11,400	665	112	81	117	288	30
29	84	728	1,080	930		4,790	810	91	54	103	192	319
30	81	728	1,160	870		2,260	530	79	64	179	146	2,390
31	79		1,880	1,620		1,640		70		125	112	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				318	48	112	0.149		0.17			
November				1,160	63	412	.549		.61			
December				11,400	300	1,925	2.67		2.96			
January				13,000	309	2,110	2.81		3.24			
February				1,080	152	395	.527		.55			
March				14,100	220	3,088	4.12		4.75			
April				2,100	248	853	1.14		1.27			
May				395	70	197	.263		.30			
June				490	17	76.5	.102		.11			
July				628	4.0	73.7	.098		.11			
August				3,250	34	406	.541		.62			
September				2,390	23	129	.172		.19			
The year.				14,100	4.0	823	1.10		14.88			

Buffalo Creek at Barrackville, W. Va.

Location.- Chain gage at highway bridge at Barrackville, Marion County, 1,700 feet above mouth of Finchs Run.

Drainage area.- 115 square miles.

Records available.- June 1907 to December 1908, May 1915 to June 1924, August 1932 to September 1934.

Extremes.- Maximum discharge recorded during period Aug. 6 to Sept. 30, 1932, 143 second-foot Aug. 18 (gage height, 7.88 feet); minimum discharge, about 0.1 second-foot Sept. 3, 8-10, 16, 17, 20; minimum gage height, 0.77 foot, Sept. 3.
Maximum discharge recorded during year ending Sept. 30, 1933, 5,480 second-foot Mar. 14 (gage height, 12.22 feet); minimum discharge, 0.5 second-foot Oct. 1-5; minimum gage height, 0.60 foot, June 25.
Maximum discharge recorded during year ending Sept. 30, 1934, 3,100 second-foot Mar. 27 (gage height, 8.13 feet); minimum discharge, 1.5 second-foot July 28, Sept. 11-14; minimum gage height, 0.76 foot, July 28, Sept. 12-13.
1907-8, 1915-24, 1932-34: Maximum discharge recorded, 6,800 second-foot Jan. 22, 1917 (gage height, 14.22 feet); no flow during greater part of Sept. to Nov., 1908.

Flood of July 1912 reached a stage of about 16 feet on present gage.

Remarks.- Records fair except those estimated, which are poor.

Discharge, in second-feet, 1932

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												0.3
2												.3
3												.1
4												.3
5												.3
6											3	.3
7											1.5	.5
8											1	.1
9											1	.1
10											.5	.1
11											.5	.3
12											1.5	.5
13											.5	.3
14											1.5	.5
15											1	.5
16											.5	.1
17											.5	.1
18											111	.3
19											86	.3
20											25	.1
21											11	.3
22											7	.3
23											5	.3
24											6	.3
25											2.5	.3
26											1.5	.5
27											1	.5
28											.3	.5
29											.3	.3
30											.2	.5
31											.3	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October												
November												
December												
January												
February												
March												
April												
May												
June												
July												
August 6-31					111	0.2	10.4	0.090		0.09		
September . . . . .					.5	.1	.29	.0025		.003		
The year												

Buffalo Creek at Barrackville, W. Va.

(Continued)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	9.5	27	370	85	101	136	*75	74	115	3	55
2	.5	11	32	262	71	101	90	*90	66	179	3	29
3	.5	37	29	179	50	86	153	105	99	355	2.5	14
4	.5	34	32	115	42	66	168	101	168	136	326	1,420
5	.5	8	26	109	50	66	153	214	274	21	55	525
6	2.5	9.5	23	103	44	44	274	845	430	11	46	143
7	2.5	14	25	88	50	52	340	430	238	33	52	71
8	4	22	21	88	50	250	134	326	95	66	69	49
9	3	490	16	158	71	300	117	*300	61	153	115	29
10	4	134	12	202	101	202	128	*630	54	147	141	20
11	3	111	340	238	136	145	355	*1,190	37	63	86	13
12	4	68	1,300	190	120	160	2,750	*1,690	37	19	39	19
13	3	65	800	122	105	1,300	490	*610	80	9	39	23
14	3	32	400	81	124	3,970	282	*910	32	7.5	63	595
15	3	20	143	68	141	3,040	168	*1,210	21	11	103	145
16	1	52	99	49	164	1,760	*430	*570	15	71	98	78
17	1.5	202	43	111	190	715	*395	*680	15	107	430	48
18	1.5	385	46	164	190	1,030	*235	*270	7	19	71	33
19	3	262	26	83	202	1,360	202	*165	7	8	43	20
20	5	326	29	55	202	2,690	*270	*105	7	7	19	25
21	7.5	120	43	46	202	2,920	*215	*260	6.5	6	11	20
22	10	65	262	715	179	980	*160	*170	4.5	5	8.5	14
23	6	49	460	430	147	385	*120	*95	4	5	7	9
24	8	40	430	312	115	225	*90	*55	3.5	5	7	9
25	7.5	22	155	202	107	190	*85	*320	2	4	7	6
26	5.5	26	134	2,230	168	190	*470	*210	168	3.5	6.5	4
27	5	19	99	595	130	164	*320	*140	49	3.5	5	5
28	7.5	23	143	400	128	168	*185	*180	25	3.5	4.5	5.5
29	10	21	160	238	160	160	*130	*135	13	3.5	4	8.5
30	9	23	214	109	128	128	*90	*90	9	3.5	4	9
31	9	935	81	81	130	130	*255			2.5	21	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				10		0.5		4.24		0.037		0.04
November				490		8		90.0		.783		.37
December				1,300		12		210		1.83		2.11
January				2,230		46		284		2.30		2.65
February				202		42		120		1.04		1.08
March				3,970		85		744		6.47		7.46
April				2,750		44		304		2.64		2.94
May				1,690		65		397		3.45		3.98
June				430		2		70.1		.610		.68
July				355		2.5		51.0		.443		.51
August				430		2.5		60.9		.530		.61
September				1,420		4		115		1.00		1.12
The year				3,970		.5		204		1.77		24.05

*Estimated.

Buffalo Creek at Barrackville, W. Va.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	5	32	34	101	14	149	22	4.5	3	3.5	4
2	5.5	4	26	57	88	14	124	13	3.5	5.5	3.5	3.5
3	3.5	4	29	525	76	2,050	92	14	3.5	5	8.5	2.5
4	4	4.5	58	166	65	2,690	113	18	3.5	3.5	30	2.5
5	4	12	80	525	54	1,360	179	14	3.5	3	14	2
6	3.5	50	76	400	37	800	149	14	3	2.5	6	2
7	3.5	60	61	2,340	30	312	132	14	3	2	5	2
8	3	46	49	675	25	202	132	12	2.5	2.5	3.5	2
9	2	34	43	460	22	92	117	14	3	2	3.5	2
10	3.5	42	39	202	18	168	101	13	2.5	3.5	3	2
11	3.5	34	29	139	15	141	136	13	3.5	83	2	1.5
12	3	39	19	103	14	90	430	13	5	179	2	2
13	3	50	21	96	22	101	326	16	6	44	2	1.5
14	3	48	23	98	18	312	300	13	6	30	2	1.5
15	3	37	68	83	15	214	262	32	5	13	2	2
16	3	39	560	83	48	179	190	60	3.5	8.5	190	3.5
17	5	50	635	83	44	153	139	49	3.5	6.5	190	4
18	8	66	370	71	33	153	99	37	4	5	*120	3
19	7	78	250	78	29	128	88	26	9.5	4	50	2.5
20	7	78	190	57	25	118	65	21	22	4	36	3.5
21	6.5	49	126	52	20	92	60	14	11	3.5	27	3
22	5	40	115	48	23	85	52	15	6	3.5	8	2.5
23	4.5	34	86	105	23	80	52	14	6	2	4.5	2.5
24	4.5	26	83	103	20	76	40	19	36	2	14	2
25	4	23	*180	238	14	60	34	14	21	2	26	2
26	4.5	21	*135	355	12	202	34	11	8	2	26	14
27	4	27	*70	312	12	1,650	30	10	6	2	18	20
28	5	29	*60	300	14	890	26	8	4.5	1.5	8.5	15
29	8.5	36	*55	238	4	370	26	6.5	4	22	6.5	92
30	5	37	*47	134		262	21	6	3	5.5	6	340
31	6		*40	117		145		5.5		4.5	6	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				7	2	4.56	0.040		0.05			
November				78	4	36.8	.320		.36			
December				635	19	118	1.05		1.19			
January				2,340	34	267	2.32		2.68			
February				101	12	32.8	.285		.30			
March				2,690	14	426	3.70		4.27			
April				430	21	123	1.07		1.19			
May				60	5.5	17.8	.155		.18			
June				36	2.5	6.87	.060		.07			
July				179	1.5	14.8	.129		.16			
August				190	2	26.7	.232		.27			
September				340	1.5	18.0	.157		.18			
The year				2,690	1.5	92.0	.800		10.89			

South Fork of Tenmile Creek at Jefferson, Pa.

Location.- Chain gage at highway bridge 1 mile southwest of Jefferson, Greene County, and 3½ miles downstream from mouth of Ruff Creek.

Drainage area.- 180 square miles.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge during year ending Sept. 30, 1932, about 4,370 second-feet Jan. 30 (gage height, 7.70 feet); minimum, 0.1 second-foot Sept. 22-30 (gage height, 0.00 foot).

Maximum gage height during year ending Sept. 30, 1933, 11.58 feet Mar. 14 (discharge not determined); minimum discharge, 0.1 second-foot Oct. 1, 2 (gage height, -0.02 foot).

Maximum gage height during year ending Sept. 30, 1934 (estimated), 12.4 feet Apr. 14 (discharge not determined); minimum discharge, 0.4 second-foot Sept. 28 (gage height, 0.00 foot).

Remarks.- Records poor. Discharge estimated for periods of ice effect, Mar. 8-16, Dec. 10-12, 14-22, 1932, Feb. 6, 7, 10-14, 17, Nov. 15-17, Dec. 27-29, 1933, Jan. 30 to Mar. 2, 1934.

Discharge, in second-feet, 1931-32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		19	422	1,950	342	41	1,520	31	8.1	4.9	6.3	1.7
2		18	230	1,600	280	36	625	26	6.0	20	4.3	1.8
3		19	136	670	325	34	435	22	6.0	24	3.6	1.5
4		13	136	435	500	75	268	20	5.4	12	2.9	1.7
5		13	136	310	435	230	205	29	4.4	48	6.0	1.8
6		12	96	1,370	340	205	193	28	3.4	48	3.8	1.6
7		11	89	915	280	170	159	26	2.2	36	2.7	1.6
8		13	58	470	340	110	136	20	2.5	49	1.6	1.3
9		13	197	340	230	78	193	14	2.5	36	1.6	1.1
10		19	400	242	218	50	147	29	2.5	19	3.6	1.1
11		13	925	181	193	43	136	126	2.3	12	48	1.0
12		12	1,160	168	181	41	168	276	3.1	6.6	12	.8
13		15	2,360	168	136	39	147	370	3.4	4.6	7.4	.8
14		38	1,500	126	106	38	147	218	4.1	3.9	5.7	.7
15		35	742	126	92	38	116	205	3.4	3.1	4.3	.6
16		29	435	170	97	50	94	136	25	119	2.8	.6
17		27	370	136	115	717	83	91	13	103	1.9	.4
18		27	205	218	96	763	66	61	16	20	295	.4
19		24	158	205	75	370	63	45	13	13	219	.3
20		24	147	170	63	280	52	36	5.4	9.6	101	.2
21		24	115	147	49	580	49	29	4.4	5.7	18	.2
22		63	126	126	56	960	45	24	3.4	3.2	9.9	.1
23		115	230	244	83	585	40	22	3.1	2.5	7.8	.1
24		126	321	625	44	370	33	15	3.4	1.9	6.3	.1
25		115	585	340	42	255	37	13	3.4	1.8	4.9	.1
26		80	370	242	40	230	48	11	2.5	1.5	2.5	.1
27		83	255	268	38	370	46	9.6	3.1	1.6	2.1	.1
28		94	230	205	52	2,090	31	12	3.1	1.7	2.1	.1
29		82	193	193	52	2,030	31	9.9	4.4	11	1.8	.1
30	22	428	147	2,680		1,530	53	9.9	4.1	11	2.1	.1
31	21	115	750			1,610		9.6		11	1.8	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October 29-31				22	21	21.7	0.121		0.01			
November				428	11	55.6	.297		.35			
December				2,360	58	406	2.26		2.61			
January				2,680	126	509	2.83		3.26			
February				500	38	168	.933		1.01			
March				2,090	34	452	2.51		2.89			
April				1,520	31	178	.989		1.10			
May				370	9.6	63.7	.354		.41			
June				25	2.2	5.55	.031		.03			
July				119	1.6	20.7	.115		.13			
August				295	1.5	25.8	.142		.16			
September				1.8	.1	.74	.0041		.005			
The year												

South Fork of Tenmile Creek at Jefferson, Pa.

(Continued)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	2.8	15	592	205	85	205	68	75	17	3.1	2.4
2	.1	12	16	310	255	75	218	68	54	164	2.5	2.3
3	1.0	16	17	218	170	68	230	96	44	527	2.2	2.5
4	1.0	13	22	193	147	60	218	71	61	160	273	21
5	1.5	12	27	181	115	49	193	67	302	64	122	390
6	2.1	7.4	19	170	100	38	242	286	126	30	15	124
7	7.1	7.1	17	181	120	40	400	505	75	18	12	49
8	4.6	6.6	20	115	354	187	370	435	46	13	6.8	24
9	2.9	35	17	154	205	466	280	689	32	13	4.1	16
10	1.6	370	15	325	175	272	230	2,190	27	19	10	10
11	1.5	154	13	255	155	205	492	1,910	44	23	64	9.0
12	1.7	102	16	230	145	136	3,420	1,210	21	13	32	8.4
13	1.6	35	116	136	140	655	760	670	14	9.2	13	9.4
14	1.4	22	70	147	180	5,070	435	910	12	7.4	15	20
15	1.2	16	45	115	435	5,700	325	715	11	6.6	8.5	131
16	1.3	39	32	73	370	1,300	590	585	12	27	7.5	106
17	1.4	380	25	80	320	588	545	400	15	23	185	82
18	1.8	170	18	71	255	698	325	268	17	16	60	27
19	1.5	542	15	71	205	4,600	804	205	13	9.9	31	24
20	1.5	754	14	83	340	2,500	1,000	170	11	7.8	24	31
21	1.5	312	13	80	325	4,480	585	205	11	5.2	14	44
22	1.5	158	100	158	205	1,630	370	136	6.6	4.4	9.6	22
23	1.7	96	370	340	181	685	255	115	5.7	3.6	7.8	16
24	2.1	73	470	218	147	400	205	147	4.9	2.8	7.1	13
25	1.8	64	370	193	136	325	181	147	4.1	4.4	11	11
26	2.1	60	230	2,930	136	670	230	156	24	13	8.8	6.4
27	2.6	37	158	522	105	505	218	168	9.9	8.5	6.3	6.4
28	2.4	25	181	670	87	490	115	344	6.8	6.6	4.6	7.4
29	4.3	22	158	435		288	96	181	5.7	4.4	3.8	12
30	3.9	16	181	268		218	75	147	4.9	2.9	2.9	11
31	3.1		710	295		205		106		3.4	2.7	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				7.1		0.1		2.05		0.011		0.01
November				754		710		119		.661		.74
December				710		13		113		.628		.72
January				2,930		71		316		1.76		2.03
February				435		87		203		1.13		1.18
March				5,700		38		1,047		5.82		6.71
April				3,420		75		454		2.52		2.81
May				2,190		57		431		2.39		2.76
June				302		4.1		36.5		.203		.23
July				527		2.8		39.6		.220		.26
August				273		2.2		31.3		.174		.20
September				390		2.3		40.3		.224		.25
The year				5,700		.1		237		1.32		17.89

South Fork of Tenmile Creek at Jefferson, Pa.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	3.7	14	828	80	8	288	25	5.8	4.5	7.4	7.1
2	6.7	3.3	13	470	50	15	218	21	5.2	4.8	6.2	6.0
3	5.8	3.6	12	370	40	3,210	170	24	4.8	5.2	352	8.2
4	5.1	3.3	20	242	35	3,820	4,090	20	4.5	5.4	122	4.9
5	5.4	4.1	39	325	30	1,240	1,820	19	4.1	3.9	79	2.7
6	4.5	6.4	36	310	26	790	670	18	3.6	2.4	18	2.4
7	4.1	18	28	1,750	22	310	1,540	17	3.2	2.8	8.4	2.2
8	3.7	15	22	1,210	19	285	715	18	2.6	2.3	7.6	1.9
9	3.5	14	22	548	16	205	470	16	3.3	2.1	5.2	1.8
10	3.2	10	18	340	14	161	310	19	2.9	2.6	3.6	1.7
11	3.3	10	15	218	12	136	340	20	3.5	188	3.1	1.7
12	3.0	9.7	14	181	11	126	370	17	3.3	1,160	2.2	1.5
13	3.2	10	12	170	10	154	400	16	2.8	772	2.4	1.5
14	3.2	10	12	193	9	340	370	20	2.2	145	3.9	1.5
15	3.0	9	14	158	8	242	340	27	2.0	23	3.8	1.6
16	3.2	8	202	181	20	280	325	47	1.9	16	220	3.0
17	2.7	8	418	170	17	230	193	42	1.7	25	334	4.1
18	2.4	9.4	942	84	15	242	147	20	9.0	13	112	5.1
19	2.5	10	372	96	13	181	126	17	99	3.8	62	3.8
20	2.4	24	291	84	12	218	106	15	54	3.2	18	2.7
21	4.1	23	353	96	11	170	84	13	16	2.8	13	2.3
22	4.0	18	319	79	10	168	82	12	12	2.3	8.7	2.2
23	3.7	16	218	91	10	115	73	14	21	1.9	6.2	1.4
24	3.7	16	147	115	9	106	63	15	28	1.8	16	1.2
25	4.1	12	425	96	9	89	48	20	16	2.1	87	.6
26	3.8	12	280	93	9	96	40	16	9.8	2.4	100	.4
27	3.5	11	190	75	8	804	40	12	8.1	1.9	29	7.7
28	3.3	14	160	94	8	880	37	8.9	7.1	4.1	21	4.9
29	3.5	14	140	181		435	35	8.1	7.1	114	16	26
30	3.2	14	128	85		310	29	7.4	5.8	16	11	331
31	3.5		181	70		280				8.1	8.7	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October					7.1		2.4		3.82		0.021	0.02
November					24		3.3		11.3		.063	.07
December					942		12		163		.906	1.04
January					1,750		70		284		1.68	1.82
February					60		8		18.3		.102	.11
March					3,820		8		504		2.80	3.25
April					4,890		29		477		2.85	2.96
May					47		5.8		18.4		.102	.12
June					99		1.7		11.7		.065	.07
July					1,160		1.8		82.0		.456	.53
August					352		2.2		54.4		.302	.35
September					331		.4		14.7		.082	.09
The year					4,890		.4		138		.787	10.41

Youghiogheny River at Connellsville, Pa.

Location.- Water-stage recorder at Crawford Avenue Bridge, at Connellsville, Fayette County. Zero of gage is 860.13 feet above mean sea level.

Drainage area.- 1,326 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; July 1908 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 25 years (1908-18, 1919-34), 2,464 second-feet.

Extremes.- Maximum discharge during year, 25,000 second-feet Mar. 4 (gage height, 10.77 feet); minimum, 135 second-feet Oct. 31 (gage height, 0.73 foot); minimum daily discharge, 159 second-feet Oct. 31.

1908-34: Maximum discharge (revised), about 85,600 second-feet Mar. 29, 1924 (gage height, 20.5 feet, from graph based on gage readings); minimum, 11 second-feet Sept. 23, 26, 27, 1908, Oct. 18, 1910 (gage height, 0.11 foot).

Remarks.- Records excellent except those estimated for periods of ice effect, Dec. 13-14, Dec. 29 to Jan. 1, Jan. 31 to Feb. 8, and for period of missing gage-height record, Feb. 9 to Mar. 14, which are fair. Regulation from operation of hydroelectric plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	374	219	989	5,000	1,800	500	3,290	962	435	279	370	327
2	282	255	810	8,580	1,500	1,000	2,940	899	423	358	287	286
3	313	173	717	5,760	1,250	3,500	2,440	863	452	219	471	255
4	304	162	853	4,230	1,050	18,000	6,480	854	455	238	1,150	211
5	290	223	1,420	4,700	900	12,000	12,300	828	406	250	546	266
6	227	310	1,350	7,370	825	9,000	7,150	768	355	176	322	243
7	298	734	1,190	16,200	750	6,000	6,220	726	358	185	255	236
8	416	491	1,140	16,500	700	4,500	5,360	658	320	210	264	250
9	396	732	1,020	10,100	650	3,700	4,130	610	264	360	602	388
10	243	626	881	6,560	610	3,100	3,390	641	420	285	1,410	291
11	320	492	744	4,830	570	2,600	3,110	969	470	532	872	230
12	329	559	504	3,650	540	2,100	3,940	1,010	364	594	742	250
13	327	955	370	3,020	510	1,900	4,230	819	438	1,380	1,060	211
14	292	1,380	650	2,940	490	4,000	4,130	717	429	4,090	1,750	228
15	285	1,220	962	2,600	470	3,600	4,330	1,060	336	2,510	1,550	248
16	309	750	4,530	2,300	450	3,290	4,430	1,900	284	1,020	5,950	409
17	253	650	8,580	2,160	430	3,200	4,530	1,690	260	658	13,400	518
18	354	1,050	12,700	1,770	420	3,020	3,240	1,310	378	524	5,140	971
19	410	2,240	7,280	1,960	410	2,850	3,200	1,130	2,200	410	2,450	566
20	400	2,020	5,140	1,710	400	2,600	2,760	1,120	2,280	306	1,550	380
21	313	1,650	7,430	1,300	390	2,300	2,370	899	1,050	303	1,250	280
22	282	1,480	5,570	1,360	380	2,020	2,020	819	688	354	944	262
23	203	1,500	4,040	2,140	370	1,770	1,830	917	628	206	724	417
24	225	1,210	3,200	3,470	365	1,480	1,710	802	916	217	754	344
25	306	1,120	3,840	2,940	360	1,480	1,490	708	657	280	1,060	227
26	325	935	3,560	2,850	355	1,480	1,310	726	504	248	836	242
27	298	926	2,630	2,760	350	2,910	1,250	953	378	283	606	226
28	259	690	1,670	2,620	345	6,440	1,280	717	342	604	529	259
29	259	863	1,400	4,130		5,140	1,240	573	336	740	459	542
30	170	890	1,350	2,950		3,940	1,050	559	294	531	401	3,300
31	159		2,000	2,200		3,200		484		418	342	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	416	159	297	0.224	0.26
November	2,240	162	692	.673	.75
December	12,700	370	2,865	2.16	2.49
January	18,500	1,300	4,599	3.47	4.00
February	1,800	345	630	.475	.49
March	18,000	500	3,955	2.98	3.44
April	12,300	1,050	3,591	2.71	3.02
May	1,900	494	991	.672	.77
June	2,280	260	571	.431	.48
July	4,090	176	805	.456	.53
August	13,800	255	1,571	1.18	1.36
September	3,930	211	460	.347	.39
The year	18,500	169	1,757	1.33	17.98

Youghiogheny River at Sutersville, Pa.

Location.- Chain gage at highway bridge at Sutersville, Westmoreland County. Zero of gage is 733.14 feet above mean sea level.

Drainage area.- 1,715 square miles.

Records available.- October 1931 to September 1934 in reports of U. S. Geological Survey; June 1915 to September 1929, June 1931 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 12 years (1920-29, 1931-34), 2,833 second-feet.

Extremes.- Maximum gage height during year (estimated), 23.0 feet Mar. 4 (discharge not determined because of ice); minimum discharge, 206 second-feet Nov. 5 (gage height, 2.67 feet); minimum gage height, 2.40 feet July 25; minimum daily discharge, 220 second-feet Nov. 5.

1915-29, 1931-34: Maximum discharge, about 88,200 second-feet Mar. 30, 1924 (gage height, 27.5 feet, from graph based on gage readings); minimum gage height, 1.98 feet July 10, 1918 (discharge not determined).

Remarks.- Records fair except those for high stages and those estimated for periods of ice effect, Dec. 29-31, Feb. 1 to Mar. 4, which are poor. Diurnal regulation from operations at hydroelectric plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	526	230	992	8,350	2,000	550	3,890	1,220	562	384	506	479
2	444	306	992	8,440	1,650	1,100	3,690	1,120	506	354	454	479
3	379	354	825	5,800	1,350	4,000	3,100	1,070	506	406	686	429
4	451	241	786	4,250	1,150	20,000	5,470	1,020	562	343	764	429
5	417	220	1,220	4,210	1,050	15,300	14,100	1,020	479	364	885	343
6	360	354	1,710	16,800	950	15,700	8,680	975	506	364	592	406
7	306	492	1,420	13,200	870	8,480	8,480	865	429	286	429	384
8	444	1,080	1,320	22,700	800	5,780	7,100	802	429	324	384	384
9	512	1,080	1,220	11,400	740	4,600	5,340	764	429	324	1,420	406
10	444	866	1,080	6,650	700	3,490	4,500	764	429	406	2,300	454
11	329	746	950	5,010	660	3,100	4,090	1,020	533	474	1,500	454
12	424	526	663	3,890	630	2,550	4,290	1,220	479	662	1,440	364
13	417	861	437	3,360	600	2,010	4,920	1,070	479	1,070	1,760	406
14	417	1,370	678	3,190	570	4,240	4,500	930	533	4,290	2,910	406
15	385	1,590	1,170	3,020	550	4,710	4,710	930	506	3,490	1,980	429
16	398	1,220	2,090	2,700	530	3,890	4,710	1,830	406	1,700	5,240	802
17	417	875	6,650	2,540	510	3,690	5,130	2,050	384	802	17,700	609
18	300	1,240	14,100	2,100	490	3,690	4,290	1,630	945	624	7,560	1,350
19	471	1,810	8,160	2,100	470	3,490	3,690	1,380	1,220	533	3,490	975
20	526	2,540	5,480	1,960	460	3,290	3,290	1,170	2,910	454	2,380	624
21	471	1,960	6,950	1,590	450	2,910	3,100	1,270	1,630	406	1,760	506
22	417	1,710	5,890	1,590	440	2,730	2,550	1,020	1,020	406	1,320	429
23	366	1,710	4,440	1,830	430	2,380	2,380	1,020	885	406	1,120	406
24	289	1,540	3,530	3,190	420	2,050	2,050	1,070	802	305	1,270	506
25	306	1,270	3,530	3,190	410	1,760	1,980	865	1,070	305	1,630	429
26	391	1,270	3,890	2,700	400	1,960	1,700	802	624	343	1,500	384
27	411	1,120	3,190	2,860	390	3,140	1,500	865	562	343	975	429
28	391	1,080	2,100	2,540	390	6,910	1,560	1,070	454	506	764	384
29	341	992	1,800	3,820		6,220	1,560	726	429	726	726	1,040
30	341	992	1,700	3,300		4,710	1,380	624	429	726	624	4,080
31	246		3,500	2,560		4,090		624		624	533	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	526	246	397	0.231	0.27
November	2,540	220	1,055	.615	.69
December	14,100	437	2,989	1.74	2.01
January	22,700	1,690	5,195	3.03	3.49
February	2,000	390	716	.417	.43
March	20,000	550	4,853	2.83	3.26
April	14,100	1,380	4,264	2.49	2.78
May	2,060	624	1,060	.618	.71
June	2,910	384	705	.411	.46
July	4,290	289	754	.428	.49
August	17,700	384	2,147	1.25	1.44
September	4,080	343	640	.373	.42
The year	22,700	220	2,078	1.21	16.45

Casselman River at Markleton, Pa.

Location.- Chain gage at highway bridge at Markleton, Somerset County, 2 miles southwest of Casselman and 7 miles below mouth of Coxes Creek.

Drainage area.- 382 square miles.

Records available.- August to September 1913, October 1920 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1913 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 14 years (1920-34), 600 second-feet.

Extremes.- Maximum discharge during year, 9,900 second-feet Aug. 16 (gage height, 8.7 feet, from graph based on gage readings); minimum, 27 second-feet July 9 (gage height, 1.70 feet).

1913-34: Maximum gage height, 12.17 feet Mar. 29, 1924 (discharge not determined); minimum discharge, 11 second-feet Aug. 13, 1930 (gage height, 1.52 feet).

Remarks.- Records fair except those for high stages and those estimated for periods of ice effect, Nov. 16-18, Dec. 11-15, 28-31, Jan. 18-20, Jan. 31 to Mar. 3, which are poor. Slight regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	47	178	2,520	370	100	960	260	98	51	42	51
2	117	46	148	2,160	320	150	848	238	93	47	37	44
3	82	46	145	1,300	280	1,500	705	220	80	43	124	41
4	77	42	233	970	250	2,880	2,580	229	70	61	114	41
5	68	46	361	1,680	230	3,440	2,640	204	61	50	74	38
6	61	101	265	1,980	210	2,470	1,690	196	86	41	48	36
7	55	197	237	6,520	190	1,800	1,800	185	61	35	34	32
8	61	175	208	4,460	170	960	1,300	170	53	32	30	34
9	83	132	191	2,290	160	705	1,080	162	61	28	406	37
10	58	112	117	1,800	150	635	885	156	121	31	372	35
11	60	105	105	1,210	140	533	885	279	78	31	182	32
12	51	215	100	1,000	135	440	1,120	220	80	29	177	31
13	51	289	95	1,000	130	533	1,080	174	82	1,040	263	30
14	48	273	105	848	125	1,160	1,040	160	90	1,870	416	34
15	46	148	200	740	120	670	1,120	384	65	605	247	41
16	38	135	1,690	635	116	740	1,120	502	51	284	4,450	369
17	73	129	2,860	411	112	705	1,120	332	43	177	2,800	564
18	108	280	2,720	370	109	740	922	260	57	118	810	202
19	92	572	1,400	350	106	635	810	220	1,410	88	510	124
20	68	393	1,450	320	103	566	740	204	590	80	357	88
21	60	342	1,790	332	101	502	670	174	256	76	251	65
22	60	356	1,150	384	99	470	566	170	177	63	189	54
23	52	304	890	635	97	411	600	185	234	54	156	50
24	51	233	740	566	96	357	502	174	236	42	210	41
25	60	201	1,060	566	95	411	440	166	130	36	229	32
26	55	175	810	635	94	470	384	220	98	36	149	31
27	50	151	510	533	93	1,010	357	177	82	34	110	49
28	47	208	450	635	92	1,800	357	142	70	224	93	68
29	46	211	400	1,040		1,210	302	127	65	118	84	116
30	43	201	370	600		1,000	265	118	56	68	68	1,210
31	43		850	450		848		102		51	61	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	117	38	61.7	0.162	0.19
November	572	42	195	.510	.57
December	2,860	95	704	1.84	2.12
January	6,520	320	1,255	3.29	3.79
February	370	92	155	.401	.42
March	3,440	100	947	2.48	2.86
April	2,640	265	963	2.52	2.81
May	502	102	210	.550	.63
June	1,410	43	158	.414	.46
July	1,870	28	179	.469	.54
August	4,450	30	422	1.10	1.27
September	1,210	30	121	.317	.35
The year	6,520	28	451	1.18	16.01

Big Piney Run near Salisbury, Pa.

Location.- Water-stage recorder an eighth of a mile above Little Piney Run, a quarter of a mile north of Maryland-Pennsylvania State line, and 2½ miles southeast of Salisbury, Somerset County.

Drainage area.- 24.5 square miles.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge during year, about 968 second-feet Jan. 7 (gage height, 5.1 feet); minimum, 0.4 second-foot Aug. 8, 9 (gage height, 1.09 feet).
1932-34: Maximum discharge, about 1,420 second-feet Mar. 14, 1933 (gage height, 6.1 feet); minimum, 0.25 second-foot Sept. 13, 20-22, 1932. Minima do not include about 0.1 second-foot diverted above gage as explained under "Remarks."

Remarks.- Records excellent except those above 150 second-feet, those for period Oct. 1 to Nov. 23, and those estimated Feb. 27 to Mar. 2, which are fair. Records, except last three columns of monthly table, do not include water diverted 3 miles above gage through pumps to city of Frostburg, Md.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	1.2	5.2	145	32	6.0	82	15	3.7	3.3	0.6	1.1
2	11	1.1	4.7	131	27	7.0	53	14	3.1	2.9	.7	1.2
3	4.2	1.1	5.5	85	23	87	46	14	2.5	2.6	3.1	1.4
4	3.1	1.1	17	62	20	80	227	15	2.3	2.8	1.9	1.0
5	2.7	1.3	15	120	18	154	205	12	2.3	2.6	.8	.8
6	2.1	7.0	14	140	15	106	134	11	2.1	2.3	.6	.9
7	1.8	12	12	645	14	72	116	9.9	2.0	1.7	.6	1.1
8	2.1	8.5	10	310	13	55	84	8.4	1.8	1.6	.6	1.6
9	2.1	5.5	8.0	158	11	45	66	8.0	2.3	1.4	8.2	1.7
10	1.8	4.9	6.7	102	7.7	38	53	8.7	3.7	1.8	5.5	1.0
11	1.6	4.4	6.1	71	7.7	31	53	15	2.0	2.0	2.2	.9
12	1.5	12	7.3	54	9.1	35	56	9.5	6.1	4.6	1.3	1.1
13	1.4	11	7.7	47	10	38	52	8.0	6.2	6.4	4.9	.9
14	1.3	9.8	6.1	41	9.5	39	54	8.4	2.5	2.0	5.6	.9
15	1.1	8.0	6.7	34	9.9	38	54	13	2.3	4.7	4.4	2.0
16	.9	8.5	74	27	15	30	68	13	2.2	2.8	62	48
17	6.3	8.0	196	20	9.1	28	67	10	1.7	2.5	48	31
18	4.9	15	162	21	7.0	30	56	9.5	27	2.2	21	14
19	2.6	19	95	20	9.5	26	53	9.1	157	2.0	13	9.5
20	2.0	16	84	16	8.0	25	49	8.0	43	1.7	8.0	6.4
21	1.8	14	76	16	9.1	24	39	7.3	26	2.0	5.2	4.7
22	1.7	15	58	16	6.4	24	34	7.3	18	1.6	4.1	4.3
23	1.8	12	48	20	7.0	16	34	7.3	18	1.2	3.1	3.5
24	2.1	9.5	39	18	7.0	20	28	6.1	12	1.0	2.9	2.8
25	1.7	7.7	52	18	8.7	20	24	12	8.7	.9	2.8	2.3
26	1.4	6.7	35	21	5.5	24	21	9.5	6.4	1.1	2.5	3.5
27	1.2	7.0	29	19	5.0	79	22	7.3	5.2	.9	2.1	7.7
28	1.2	7.0	35	26	5.0	128	20	6.1	4.7	6.2	1.8	4.3
29	1.6	8.0	28	34		96	17	5.2	3.9	1.7	1.8	45
30	1.2	6.4	26	36		74	15	5.2	3.1	.9	1.5	109
31	1.5		58	41		66		4.3		.9	1.3	
Month	Observed			Corrected for diversion								
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches						
October	11	0.9	2.45	2.80	0.114	0.13						
November	19	1.1	8.29	8.67	.354	.40						
December	196	4.7	39.6	39.7	1.62	1.87						
January	645	16	81.1	81.2	3.31	3.82						
February	32		11.8	12.0	.490	.61						
March	134		49.1	49.2	2.01	2.32						
April	227	15	62.1	62.2	2.54	2.83						
May	15	4.3	9.58	9.65	.394	.45						
June	137	1.7	12.1	12.3	.502	.58						
July	20	.9	2.91	3.19	.130	.15						
August	62	.6	7.16	7.54	.308	.36						
September	109	.8	10.5	10.3	.441	.49						
The year	645	.6	24.8	25.0	1.02	13.89						

Laurel Hill Creek at Ursina, Pa.

Location.- Chain gage at highway bridge at Ursina, Somerset County.

Drainage area.- 121 square miles.

Records available.- August to September 1913, October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1913 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 18 years (1916-34), 272 second-feet.

Extremes.- Maximum discharge during year, 4,920 second-feet Aug. 16 (gage height, 6.6 feet, from graph based on gage readings); minimum, 8.5 second-feet July 12 (gage height, 1.67 feet); minimum daily discharge, 12 second-feet July 11, 12.

1913-34: Maximum gage height, 9.30 feet Mar. 29, 1924 (discharge not determined); no flow Aug. 22, 1917, Feb. 15, 1919; minimum daily discharge recorded, 1 second-foot Aug. 22, Sept. 1, 1917.

Remarks.- Records fair except those estimated for periods of ice effect, Nov. 16-18, 27, Dec. 11-15, 28, 29, Jan. 17-19, Feb. 1 to Mar. 3, which are poor. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	20	85	1,160	270	50	539	87	38	26	35	43
2	28	21	74	900	210	70	295	81	35	24	22	38
3	25	22	72	500	170	600	248	81	30	21	75	32
4	24	23	127	381	150	2,310	1,490	72	28	32	90	24
5	23	23	156	665	130	2,440	1,440	69	24	30	50	26
6	19	64	120	630	120	1,600	700	57	21	21	27	21
7	18	80	114	2,120	110	815	738	63	20	17	20	26
8	22	55	101	1,490	102	500	595	52	17	16	16	22
9	21	48	91	895	96	375	424	38	24	16	470	28
10	23	39	80	565	90	290	360	55	30	16	394	22
11	24	61	72	414	85	244	376	138	24	12	131	20
12	19	80	68	305	80	230	397	84	28	12	124	16
13	18	120	66	280	76	196	360	75	26	562	184	26
14	18	156	72	276	72	453	381	69	20	1,230	432	26
15	16	107	170	222	68	285	392	188	18	488	360	27
16	14	92	1,300	192	65	324	563	230	16	152	2,120	52
17	24	88	2,030	170	62	314	494	164	15	113	2,270	138
18	36	200	2,190	155	59	324	402	145	51	84	804	38
19	28	324	924	145	56	290	344	117	664	57	430	38
20	24	180	596	142	54	257	295	117	340	47	300	30
21	23	124	665	145	52	225	248	100	154	57	189	22
22	22	176	482	160	50	209	222	87	90	43	152	22
23	22	172	365	271	48	188	205	156	138	30	117	18
24	22	131	285	355	47	142	172	113	87	27	168	17
25	24	110	532	285	46	176	145	104	60	20	116	26
26	21	98	355	314	45	178	134	84	47	17	145	24
27	19	93	248	276	44	593	131	72	35	20	10	28
28	21	91	215	310	43	739	120	60	32	146	75	40
29	20	104	200	616		453	104	57	27	52	72	335
30	20	94	196	469		344	87	55	27	30	52	686
31	19		350	381		262		47		27	50	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	36	14	22.1	0.183	0.21
November	324	20	99.9	.826	.92
December	2,190	66	400	3.31	3.82
January	2,120	142	490	4.05	4.67
February	270	43	89.3	.738	.77
March	2,440	50	499	4.12	4.75
April	1,490	87	407	3.36	3.75
May	230	38	94.1	.778	.90
June	664	16	71.5	.591	.66
July	1,230	12	111	.917	1.06
August	2,270	16	312	2.58	2.97
September	686	16	63.7	.526	.59
The year	2,440	12	223	1.84	25.07

Turtle Creek at Trafford, Pa.

Location.- Chain gage at highway bridge at Blackburn railroad station half a mile north-east of Trafford, Westmoreland County, and 7 miles above confluence with Monongahela River.

Drainage area.- 54.8 square miles.

Records available.- October 1920 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; July 1914 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 14 years (1920-34), 76.3 second-feet.

Extremes.- Maximum discharge recorded during year (estimated), 2,510 second-feet Aug. 9 (gage height, 6.00 feet); minimum, 0.7 second-foot several times during June and July (gage height, 0.24 foot).

1914-34: Maximum gage height (estimated), 8.5 feet Mar. 15, 1933 (discharge not determined); minimum discharge, 0.1 second-foot Oct. 8, 7, 1922 (gage height, 0.10 foot).

Remarks.- Records poor. Discharge estimated for periods of ice effect, Nov. 15-21, 27, Dec. 10-15, 28-31, Jan. 30 to Mar. 3, Mar. 11, 12. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	5.5	8.6	202	110	9	109	23	2.0	5.5	3.1	17
2	13	5.9	8.6	142	75	9	89	23	1.7	2.2	2.3	16
3	8.6	6.3	9.2	91	62	10	74	20	1.4	1.5	44	13
4	9.2	5.1	33	76	50	963	618	19	1.4	2.0	12	11
5	9.2	4.2	26	115	40	235	394	18	2.4	1.2	5.1	10
6	8.0	18	24	94	32	158	216	16	2.4	1.4	3.1	8.0
7	6.3	15	18	524	25	91	359	14	1.1	1.2	2.2	8.0
8	5.5	12	19	318	23	63	219	16	1.1	11	1.7	7.6
9	5.1	10	15	187	20	49	152	15	1.0	3.6	513	7.2
10	4.6	10	12	131	17	45	120	13	1.4	1.4	97	6.3
11	4.2	9.8	10	104	15	43	199	17	2.2	1.2	621	6.3
12	4.6	9.8	9	78	13	43	140	9.8	1.1	1.4	182	6.7
13	4.6	7.6	9	81	12	58	111	9.2	.8	3.1	225	23
14	3.8	14	10	72	11	86	102	66	1.0	165	113	64
15	3.3	10	25	64	11	60	91	150	.7	30	60	38
16	2.9	9	319	68	10	80	84	20	1.0	12	239	121
17	9.8	10	516	58	10	68	72	14	.8	6.3	214	82
18	8.0	15	372	62	10	80	66	9.2	1.6	3.3	94	45
19	7.6	24	165	55	10	60	64	7.6	24	2.9	60	32
20	6.3	23	383	47	9	70	56	5.5	3.8	25	41	24
21	6.7	21	320	48	9	64	47	5.5	2.2	15	31	19
22	4.6	19	150	47	9	55	45	14	2.4	7.6	31	16
23	6.7	15	98	53	9	40	47	8.6	21	2.2	29	12
24	7.6	13	76	47	9	50	43	6.3	3.6	1.5	312	10
25	6.3	10	91	43	9	46	39	8.6	2.6	1.2	229	10
26	5.1	12	81	30	9	41	41	5.1	1.4	.8	105	8.0
27	5.9	8	58	34	9	196	36	3.6	7.2	.8	63	29
28	5.9	11	48	40	9	203	29	3.1	2.6	8.0	48	18
29	4.2	10	42	63		115	26	4.2	5.2	1.5	36	917
30	4.2	11	40	100		89	24	3.6	21	1.0	27	611
31	5.1		100	150		83		2.2		17	22	
Month						Maximum	Minimum	Mean	Per square mile	Run-off in inches		
October						17	2.9	6.58	0.120	0.14		
November						24	4.2	11.8	.215	.24		
December						516	8.6	99.9	1.82	2.10		
January						524	30	104	1.90	2.19		
February						110	9	22.9	.418	.44		
March						963	9	105	1.92	2.21		
April						618	24	124	2.26	2.52		
May						150	2.2	17.8	.325	.37		
June						24	.7	4.07	.074	.08		
July						165	1.8	10.9	.199	.23		
August						621	1.7	11.2	2.04	2.35		
September						917	6.3	73.2	1.34	1.50		
The year.						963	.7	58.0	1.06	14.37		

Mahoning River near Berlin Center, Ohio

Location.- Water-stage recorder at highway bridge in T. 1 N., R. 5 W., $1\frac{1}{2}$ miles west of Berlin Center and about $1\frac{1}{2}$ miles below mouth of Mill Creek. Zero of gage is 966.15 feet above mean sea level.

Drainage area.- 247 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 4,220 second-feet Sept. 8 (gage height, 8.61 feet); minimum, 1.9 second-feet July 29 (gage height, 0.47 foot).
1931-34: Maximum discharge, 4,920 second-feet Mar. 14, 1933 (gage height, 9.40 feet); minimum, that of July 29, 1934.

Remarks.- Records good except that estimated Oct. 1, and those estimated for periods of ice effect, Nov. 14-17, Dec. 11-15, 26-31, Jan. 3-5, 16-25, Jan. 29 to Mar. 14, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	12	22	99	57	20	210	28	10	15	4.8	5.7
2	8.0	13	19	196	49	22	205	25	9.7	11	6.4	5.4
3	6.8	13	20	83	40	580	161	27	9.2	8.4	18	5.4
4	6.0	12	24	46	35	1,640	1,970	28	8.4	8.0	39	4.5
5	6.0	13	34	54	33	1,460	3,150	28	6.0	7.5	21	4.2
6	5.7	17	32	60	32	680	1,390	26	16	8.4	9.7	4.0
7	5.4	26	26	86	31	320	700	25	21	11	6.0	265
8	5.7	27	22	231	30	150	438	25	30	11	4.8	1,700
9	6.4	24	19	188	28	77	240	27	16	14	9.2	446
10	6.8	22	17	123	28	58	161	32	11	11	11	120
11	6.4	21	16	93	28	52	231	35	11	11	6.8	46
12	6.4	20	16	68	28	46	442	44	6.0	11	5.4	28
13	6.4	24	15	52	27	45	316	45	6.4	13	5.4	17
14	6.4	24	15	57	27	150	374	46	6.4	16	5.1	13
15	5.7	23	16	63	26	364	406	53	5.4	14	7.1	9.2
16	6.4	23	108	52	28	205	270	55	5.4	8.8	11	125
17	9.0	22	205	40	25	161	202	45	5.4	6.4	30	228
18	9.4	21	202	33	25	161	146	41	7.1	6.4	27	100
19	9.7	21	167	28	24	136	106	38	8.8	5.7	14	45
20	8.4	26	86	24	24	112	66	34	21	5.7	8.4	27
21	8.0	29	81	22	24	156	64	28	18	4.5	6.0	18
22	10	34	91	21	23	183	57	24	16	4.0	6.8	14
23	12	39	64	21	23	123	66	22	41	4.5	5.7	11
24	22	35	49	35	22	77	74	20	55	3.5	7.5	8.8
25	20	27	43	33	22	52	60	17	33	3.0	10	7.5
26	16	24	37	31	21	58	48	18	21	3.0	24	6.8
27	13	23	33	29	21	752	41	16	16	3.3	16	6.0
28	11	23	31	30	20	968	38	15	19	3.0	12	5.7
29	12	24	28	64		562	33	14	21	2.2	6.8	236
30	12	21	28	79		273	30	14	19	2.8	7.1	313
31	12		33	68		219		12		4.5	6.8	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	22	5.4	9.16	0.037	0.04
November	39	12	22.8	.092	.10
December	205	15	51.6	.209	.24
January	231	21	68.0	.275	.32
February	57	20	28.5	.115	.12
March	1,640	20	318	1.29	1.49
April	3,150	30	390	1.68	1.76
May	55	12	29.3	.119	.14
June	55	6.4	16.0	.065	.07
July	16	2.2	7.79	.032	.04
August	39	4.8	11.6	.047	.05
September	1,700	4.0	128	.518	.68
The year.	3,150	2.2	90.0	.364	4.95

Mahoning River at Pricetown, Ohio

Location.- Water-stage recorder in T. 2 N., R. 5 W., about half a mile southwest of Pricetown and a quarter of a mile south of line between Mahoning and Trumbull Counties. Zero of gage is 905.50 feet above mean sea level.

Drainage area.- 276 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge during year, 3,720 second-feet Apr. 5 (gage height, 9.93 feet); minimum, 4.9 second-feet Jan. 16 (gage height, 1.21 feet); minimum daily discharge, 5.4 second-feet Mar. 6-11.
1929-34: Maximum discharge, 5,510 second-feet Mar. 15, 1934 (gage height, 12.92 feet); minimum, that of Jan. 16, 1934; minimum daily discharge, 5.4 second-feet Feb. 10-26, 1931, and Mar. 6-11, 1934.

Remarks.- Records good. Discharge estimated because of ice Dec. 28 to Jan. 1, and Feb. 9, 10. Flow regulated by storage in Milton Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	25	23	30	9.8	34	236	35	31	29	39	39
2	161	25	22	31	9.8	31	42	37	31	29	40	39
3	371	25	22	31	9.8	23	81	35	29	29	40	39
4	198	25	22	20	9.2	21	636	35	29	28	39	39
5		25	22	6.9	8.6	15	3,300	35	29	28	39	39
6	22	25	22	6.9	8.6	5.4	2,170	37	29	28	39	39
7	22	25	22	6.4	8.6	5.4	1,030	37	29	27	39	83
8	22	25	22	6.4	8.0	5.4	686	37	29	27	39	168
9	22	25	24	6.4	8.0	5.4	612	37	29	27	42	161
10	23	25	26	5.9	8.0	5.4	337	37	29	31	42	101
11	23	25	25	5.9	27	5.4	296	37	29	29	42	59
12	22	25	25	8.0	54	10	410	37	29	28	42	59
13	22	24	26	8.6	37	22	420	37	29	28	40	57
14	23	24	26	8.6	17	22	417	37	29	29	40	57
15	23	24	26	8.0	16	22	417	37	29	28	40	57
16	23	24	26	7.4	16	22	413	35	29	27	42	57
17	42	24	25	8.6	16	22	218	35	29	27	42	57
18	148	24	52	8.6	16	21	91	34	29	31	42	56
19	148	24	102	8.6	15	21	91	33	29	33	40	56
20	78	24	257	8.6	15	21	89	32	29	39	39	54
21	17	24	348	8.6	31	21	87	32	29	40	39	54
22	18	24	166	8.6	44	21	93	32	29	40	39	56
23	20	24	80	8.0	44	40	102	32	29	39	39	56
24	24	24	32	8.0	30	71	164	31	29	39	40	56
25	24	24	32	8.0	20	71	239	31	29	39	39	56
26	24	24	31	8.6	20	171	245	31	29	39	39	56
27	24	23	31	8.6	26	336	239	31	29	40	39	56
28	24	23	30	8.6	35	417	239	31	29	40	40	56
29	24	23	30	9.2		420	137	31	29	39	42	57
30	24	23	30	9.2		420	37	31	29	40	40	57
31	24		30	10		420		31		40	39	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				371		17		54.3				
November				25		23		24.3				
December				348		22		55.5				
January				32		5.9		10.6				
February				54		8.0		20.4				
March				420		5.4		88.6				
April				3,300		37		452				
May				37		31		34.2				
June				31		28		29.1				
July				40		27		32.6				
August				42		39		40.1				
September				168		39		62.5				
The year				3,300		5.4		74.9				

Mahoning River at Warren, Ohio

Location.- Water-stage recorder at dam 200 feet below crossing of Erie Railroad (Shenango Branch) in Warren, Trumbull County. Zero of gage is 867.16 feet above mean sea level.

Drainage area.- 599 square miles.

Records available.- October 1924 to September 1934.

Average discharge.- 10 years, 521 second-feet.

Extremes.- Maximum discharge during year, 3,990 second-feet Apr. 5 (gage height, 5.64 feet); minimum mean daily discharge, 17 second-feet July 22.
1924-34: Maximum discharge, 10,500 second-feet Feb. 27, 1929 (gage height, 7.2 feet); minimum mean daily discharge, 6 second-feet Oct. 19, 1930.

Remarks.- Records fair. Discharge estimated because of ice effect Feb. 1 to Mar. 2. Water diverted past right end of dam by Ohio Public Service Co. is included in records. City of Warren diverted a mean of 4.30 second-feet for municipal supply, which is not included in records. Slight regulation caused by operator of Milton Reservoir above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	22	42	105	130	33	563	59	46	49	42	31
2	28	25	48	233	96	33	291	59	32	42	46	44
3	202	36	48	227	88	204	253	59	41	45	48	54
4	283	31	53	126	69	1,280	1,020	58	54	34	55	65
5	86	36	57	91	55	1,940	3,400	55	41	48	57	54
6	31	28	67	80	47	1,420	3,610	26	44	42	59	48
7	25	29	67	95	40	737	1,780	47	33	29	47	53
8	25	27	48	126	37	369	822	56	34	35	46	1,120
9	25	30	53	140	35	202	519	53	32	47	468	1,180
10	31	27	51	112	33	160	414	63	29	39	246	432
11	28	30	54	91	29	160	209	64	35	46	126	192
12	28	30	51	76	31	171	464	60	39	41	85	128
13	25	30	54	69	33	171	415	62	35	45	88	95
14	25	41	45	73	36	171	400	77	33	40	84	91
15	28	46	51	80	35	202	431	69	35	70	88	117
16	25	38	64	73	26	220	384	60	35	62	84	180
17	28	30	96	66	25	191	304	61	20	47	68	322
18	79	25	92	57	25	202	135	58	38	42	62	232
19	139	39	118	54	24	214	100	45	56	35	62	143
20	134	39	184	48	24	181	88	44	75	36	73	111
21	52	45	294	37	25	181	70	50	50	24	62	103
22	27	55	282	43	32	220	67	56	36	17	60	78
23	18	71	163	51	36	214	70	46	41	45	54	77
24	31	65	100	51	36	171	78	50	34	49	54	86
25	38	50	79	68	35	160	135	52	41	45	65	88
26	33	48	83	64	34	148	148	45	52	46	70	79
27	31	42	66	64	33	408	143	41	69	44	59	69
28	25	45	80	73	33	764	135	59	77	32	51	77
29	33	42	73	85		666	126	44	64	47	47	133
30	32	51	66	130		561	63	39	55	52	58	377
31	35		66	144		572		53		51	58	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				283	18	53.8						
November				71	22	38.4						
December				294	42	86.6						
January				233	37	91.4						
February				130	24	42.1						
March				1,940	33	398						
April				3,610	63	555						
May				77	26	53.9						
June				77	20	43.5						
July				70	17	42.7						
August				468	42	83.0						
September				1,180	31	195						
The year				3,610	17	140						

Mahoning River at Youngstown, Ohio

Location.- Water-stage recorder 400 feet above Bridge Street Bridge, at Youngstown, Mahoning County. Zero of gage is 826.53 feet above mean sea level.

Drainage area.- 899 square miles.

Records available.- October 1921 to September 1934. May 1903 to July 1906 at station 4½ miles downstream.

Average discharge.- 13 years (1921-34), 795 second-feet.

Extremes.- Maximum discharge during year, 5,340 second-feet Apr. 6 (gage height, 7.11 feet); minimum daily discharge (estimated), 40 second-feet July 21.

1921-34: Maximum discharge, 14,000 second-feet Dec. 14, 1927 (gage height, 12.7 feet); minimum, 28 second-feet Aug. 14, 1930 (gage height, 1.80 feet); minimum daily discharge, 30 second-feet Aug. 16, 1930.

Maximum known stage, 26.5 feet Mar. 28, 1913.

Remarks.- Records good. Water diverted for municipal water supply above station. Flow is slightly regulated at Milton Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	64	74	155	180	80	946	140	60	64	80	59
2	57	51	67	273	147	86	662	123	59	64	92	64
3	76	51	78	390	116	499	474	120	60	60	134	64
4	319	47	96	263	105	1,780	1,530	110	60	60	78	76
5	223	57	65	270	91	2,580	4,270	105	60	56	83	62
6	75	67	88	298	80	2,640	5,200	105	64	59	76	58
7	48	67	83	281	76	1,980	3,560	105	59	58	67	59
8	48	64	80	252	74	1,370	1,980	88	54	58	67	672
9	59	62	76	270	67	830	1,340	85	50	72	1,970	1,940
10	57	67	71	261	67	651	1,060	96	47	62	716	724
11	55	64	83	230	74	355	703	72	58	71	428	356
12	55	78	69	196	69	243	1,040	52	56	63	256	210
13	56	80	71	166	62	200	1,160	74	56	66	196	116
14	52	80	67	151	96	213	1,100	78	56	64	166	107
15	48	85	69	144	85	256	1,150	78	54	88	147	116
16	54	83	83	144	83	332	1,060	76	47	110	162	257
17	58	69	115	130	71	361	904	78	41	72	127	400
18	46	69	135	116	74	370	570	80	54	66	105	398
19	98	76	126	107	83	384	390	69	64	55	105	248
20	154	80	214	102	74	338	314	76	78	58	133	173
21	124	78	358	91	60	351	298	76	88	40	95	137
22	80	88	428	88	71	398	298	71	79	50	88	127
23	67	96	277	96	98	384	298	64	83	70	80	113
24	60	102	217	78	102	298	298	64	62	77	96	107
25	53	88	166	102	105	320	320	69	64	71	102	102
26	54	88	151	113	99	303	390	62	90	74	93	99
27	58	106	111	113	88	739	370	67	118	68	96	107
28	53	142	99	146	83	1,230	325	71	93	58	88	91
29	53	83	93	128		1,190	325	69	91	73	76	465
30	58	78	91	182		1,020	235	62	78	78	69	713
31	56		99	184		977		60		71	62	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					319	46	77.6					
November					142	47	77.0					
December					428	67	126					
January					390	78	178					
February					180	60	88.6					
March					2,640	80	733					
April					5,200	235	1,086					
May					140	52	82.1					
June					118	41	66.1					
July					110	40	66.3					
August					1,970	62	198					
September					1,940	58	274					
The year					5,200	40	254					

Beaver River at Wampum, Pa.

Location.- Staff gage at highway bridge at Wampum, Lawrence County. Chain gage at same site and datum used prior to Oct. 3, 1933.

Drainage area.- 2,235 square miles.

Records available.- June to September 1914, August 1932 to September 1934.

Extremes.- Maximum discharge during year, 17,300 second-feet Aug. 9 (gage height, 11.7 feet, from graph based on gage readings); minimum, 100 second-feet Oct. 16 (gage height, 1.80 feet).
1914, 1932-34: Maximum discharge recorded, about 30,800 second-feet Mar. 15, 1933 (gage height, 16.06 feet); minimum, 74 second-feet July 30, 1933 (gage height, 1.70 feet); minimum daily discharge, 97 second-feet July 22, Aug. 23, 1933.

Remarks.- Records fair. Discharge estimated for periods of ice effect, Dec. 27, 28, Feb. 7, 8. Regulation from storage in Pymatuning Reservoir and from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	143	151	533	1,070	662	179	2,390	543	169	233	351	248
2	147	170	596	2,400	629	234	2,240	446	163	203	240	233
3	147	162	533	2,720	596	2,260	1,960	417	163	182	229	210
4	154	151	596	2,090	564	7,980	4,120	417	151	166	509	206
5	427	151	564	1,860	473	7,800	7,120	388	182	151	316	225
6	285	213	596	1,540	416	7,600	7,500	372	266	129	257	206
7	170	236	533	1,860	400	5,450	6,000	335	274	157	210	196
8	126	213	596	2,090	350	3,800	3,980	335	196	221	225	237
9	126	213	564	1,970	320	3,320	2,840	311	186	172	7,680	1,270
10	132	213	533	1,640	300	1,960	2,100	321	182	148	6,120	1,280
11	126	213	533	1,490	270	1,210	2,390	351	166	148	2,690	730
12	116	251	473	1,240	251	952	2,540	321	157	189	1,260	478
13	116	270	444	1,060	260	815	2,690	257	145	189	505	372
14	116	536	416	1,010	236	1,210	2,690	266	154	377	730	233
15	116	416	416	1,060	260	1,320	2,690	301	151	501	214	306
16	100	300	564	1,010	260	1,500	2,540	287	139	206	577	973
17	132	310	662	926	236	1,620	2,100	274	132	189	214	1,210
18	140	300	926	732	222	1,620	1,760	274	126	182	478	1,210
19	126	320	732	697	192	1,620	1,320	266	182	182	417	815
20	151	310	967	732	236	1,500	1,100	244	157	278	383	543
21	285	336	1,490	662	222	1,500	952	225	154	292	417	417
22	270	373	1,750	662	179	1,560	952	233	257	217	330	351
23	260	444	1,490	732	192	1,620	905	244	383	166	446	335
24	204	732	1,190	732	170	1,260	952	206	233	139	478	346
25	192	662	1,100	806	162	1,000	815	206	189	157	290	292
26	162	732	967	662	151	1,000	860	189	239	157	478	266
27	151	732	900	662	151	3,750	860	189	753	160	388	292
28	151	732	810	732	140	5,100	730	189	417	163	383	311
29	140	732	697	967		3,720	690	189	297	154	372	1,240
30	140	596	596	697		2,770	690	172	301	139	311	2,250
31	151	596	596	697		2,390		163		497	274	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				427	100	168	0.075		0.09			
November				732	151	366	.184		.18			
December				1,750	416	754	.337		.39			
January				2,720	662	1,200	.537		.62			
February				662	140	304	.136		.14			
March				7,980	179	2,568	1.15		1.33			
April				7,500	690	2,349	1.05		1.17			
May				543	163	288	.129		.15			
June				753	126	222	.099		.11			
July				497	129	201	.090		.10			
August				7,980	210	970	.434		.50			
September				2,250	196	578	.259		.29			
The year				7,980	100	834	.373		5.07			

West Branch of Mahoning River near Newton Falls, Ohio

Location.- Water-stage recorder in T. 3 N., R. 6 W., 2½ miles southwest of Newton Falls and about 6 miles above mouth.

Drainage area.- 97.8 square miles.

Records available.- June 1926 to September 1934.

Extremes.- Maximum discharge during year, 1,490 second-feet Apr. 4 (gage height, 7.94 feet); minimum, 3.3 second-feet July 24-27 (gage height, 0.95 foot).
1926-34: Maximum discharge, 3,540 second-feet Dec. 1, 1927 (gage height, 11.1 feet); minimum, that of July 24-27, 1934.

Remarks.- Records fair. Discharge estimated because of ice effect Dec. 25-29, Jan. 16-19, Jan. 29 to Mar. 3, Mar. 6-12.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	9.5	14	47	17	8	70	15	7.2	7.9	4.5	6.5
2	7.2	7.9	14	82	18	8	69	14	7.2	7.2	5.1	6.5
3	7.2	8.7	14	47	15	280	57	14	6.5	7.2	15	6.5
4	7.2	7.9	17	29	14	1,110	944	13	6.5	6.5	14	5.8
5	7.2	7.9	21	26	13	822	1,010	13	6.5	5.8	7.9	5.8
6	7.2	9.5	18	29	12	380	244	13	6.5	5.8	6.5	5.8
7	7.9	13	16	36	12	160	171	12	6.5	5.8	5.8	8.0
8	7.9	12	14	48	12	97	109	11	6.5	7.2	5.8	194
9	7.9	12	14	41	11	62	74	11	6.5	7.2	9.5	58
10	7.9	12	13	34	11	47	68	11	7.2	6.5	10	24
11	8.7	13	12	26	11	35	98	12	7.2	5.8	9.5	15
12	8.7	14	11	20	10	30	131	11	7.2	7.9	15	14
13	8.7	15	11	20	10	29	104	10	6.5	7.2	9.5	13
14	7.9	17	10	23	10	58	126	11	6.5	6.5	7.2	10
15	7.9	14	13	24	10	108	126	13	6.5	5.8	6.5	9.5
16	7.9	13	28	20	10	65	85	12	6.5	5.1	8.7	22
17	8.7	11	28	17	9	54	76	11	6.5	5.1	14	34
18	12	12	24	15	9	68	56	10	7.9	4.5	12	17
19	11	17	21	13	9	53	44	8.5	29	4.5	8.7	14
20	10	18	18	11	9	48	36	9.5	18	4.5	7.2	10
21	8.7	18	22	11	9	66	30	8.7	11	4.5	6.5	7.9
22	11	21	25	13	9	80	28	8.7	10	5.1	6.5	7.2
23	14	21	22	15	8	44	30	8.7	13	4.5	6.5	7.2
24	15	19	18	24	8	35	30	8.7	11	3.9	6.5	7.9
25	11	14	18	21	8	25	28	9.5	7.2	3.9	10	7.9
26	12	13	17	18	8	28	23	9.5	7.9	3.3	9.5	7.2
27	11	13	17	17	8	115	22	8.7	31	3.9	7.2	6.5
28	11	13	17	19	8	127	20	8.7	25	4.5	7.2	6.5
29	10	14	16	34		88	18	8.7	15	4.5	7.2	57
30	10	14	16	23		73	16	7.9	11	4.5	7.2	70
31	9.5		16	19		71		7.9		4.5	6.5	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				15		7.2		9.56		0.096		0.11
November				21		7.9		13.4		.137		.16
December				28		10		17.2		.176		.20
January				82		11		26.5		.271		.31
February				17		.8		10.6		.108		.11
March				1,110		8		138		1.41		1.63
April				1,010		16		131		1.34		1.50
May				16		7.9		10.7		.109		.13
June				31		6.5		10.4		.106		.12
July				7.9		3.3		5.52		.066		.06
August				15		4.5		8.43		.086		.10
September				194		5.8		22.2		.227		.25
The year.				1,110		3.3		33.7		.345		4.67

Eagle Creek at Phalanx Station, Ohio

Location.— Water-stage recorder at highway bridge 1 mile north of Phalanx Station, Trumbull County, and 2 miles below Tinker Creek. Zero of gage is 887.42 feet above mean sea level.

Drainage area.— 97.0 square miles.

Records available.— June 1928 to August 1934 (discontinued).

Extremes.— Maximum discharge during period, 1,640 second-feet Mar. 5 (gage height, 9.37 feet); minimum, 1.0 second-foot July 22, 23, 30 (gage height, 1.68 feet); minimum daily discharge, 1.3 second-foot July 30.
1928-34: Maximum discharge, 3,240 second-feet Dec. 1, 1927 (gage height, 12.2 feet); minimum, 0.9 second-foot July 18, 1933; minimum daily discharge, 1.3 second-foot July 16, 1933, and July 30, 1934.

Remarks.— Records fair. Discharge estimated because of ice effect Jan. 29 to Feb. 7, Feb. 26 to Mar. 2. Discharge estimated Apr. 18 to June 19. Flow at low stages regulated by milldam several miles upstream.

Discharge, in second-feet, 1928-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	11	21	86	40	5.7	75	13	7.0	9.2	5.1	
2	9.5	18	11	213	30	3.6	75	13	7.0	6.4	6.6	
3	6.1	14	9.9	82	24	111	69	13	6.5	11	11	
4	8.0	14	20	24	20	850	208	10	8.0	2.6	15	
5	6.8	3.5	24	19	17	1,520	589	11	3.1	4.8	9.5	
6	3.7	23	18	24	14	804	245	11	9.0	9.0	9.1	
7	4.0	14	17	29	12	334	134	13	9.0	7.2	7.8	
8	4.7	21	16	43	11	124	92	10	13	6.5	6.5	
9	13	9.0	8.6	35	11	81	71	10	11	8.0	42	
10	6.0	23	10	28	10	67	62	13	13	7.9	40	
11	9.1	19	9.6	19	4.8	63	73	11	13	9.6	18	
12	6.3	11	7.6	14	16	54	118	11	10	7.4	12	
13	6.4	25	17	14	1.9	52	64	10	7.0	11	12	
14	9.9	29	7.6	15	14	69	78	14	7.0	24	16	
15	5.2	22	17	18	3.7	75	62	11	11	25	14	
16	9.0	19	36	16	5.6	70	74	13	4.6	18		
17	10	18	43	14	4.7	67	70	13	5.4	6.3		
18	5.5	26	36	9.0	3.7	74	43	11	11	12		
19	2.9	13	31	11	4.0	71	36	10	27	4.2		
20	6.2	23	23	7.1	5.0	64	32	10	17	8.2		
21	13	26	34	8.0	5.0	72	27	9.0	14	9.6		
22	7.4	45	44	9.0	4.0	79	27	10	8.9	1.8		
23	20	47	29	10	4.6	61	28	7.0	11	6.6		
24	15	29	18	17	4.8	52	29	9.0	10	3.2		
25	13	25	18	14	4.4	49	27	9.0	11	6.6		
26	11	11	18	12	4.3	49	22	10	8.2	1.7		
27	4.2	20	13	12	4.1	84	20	9.0	14	4.8		
28	20	16	19	16	3.9	115	19	9.0	16	9.8		
29	1.8	20	8.4	80		86	19	9.0	12	2.0		
30	14	9.0	13	180		74	18	7.0	9.8	1.3		
31	5.4		13	120		74		11		6.0		
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	20					1.8	8.47	0.087		0.10		
November	47					3.5	20.1	.207		.23		
December	44					7.6	19.7	.203		.23		
January	213					7.1	37.6	.388		.45		
February	40					1.9	10.3	.106		.11		
March	1,520					3.6	173	1.78		2.05		
April	589					18	84.9	.575		.98		
May	14					7.0	10.6	.109		.13		
June	27					3.1	10.6	.108		.12		
July	25					1.5	8.09	.083		.10		
August 1-15	42					5.1	15.0	.155		.09		
September												
The year												

Mosquito Creek at Niles, Ohio

Location.- Water-stage recorder at dam in Niles, Trumbull County. Zero of gage is 857.26 feet above mean sea level.

Drainage area.- 139 square miles.

Records available.- June 1929 to September 1934.

Extremes.- Maximum discharge during year, 661 second-feet Mar. 7 (gage height, 3.19 feet); no flow on numerous days.

1929-34: Maximum discharge, 1,880 second-feet Mar. 16, 1933 (gage height, 4.30 feet); no flow Aug. 25 to Sept. 2, 1933, and several days in June and July 1934.

Remarks.- Records fair below and good above 50 second-feet. Discharge estimated because of ice effect Feb. 16 to Mar. 2.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	0.2	0.1	3.1	11	28	1.0	126	16	1.0	0.1	0.1	1.8		
2	.2	.1	3.1	26	26	2.0	117	16	.9	0	.1	1.8		
3	.2	.1	4.0	39	14	61	108	13	.8	0	.5	1.8		
4	.2	.1	7.7	64	9.3	174	216	11	.8	0	.5	1.4		
5	.2	.1	7.7	117	7.7	251	312	7.7	.7	0	.4	1.2		
6	.2	.2	6.3	158	6.3	416	312	7.7	.6	0	.3	1.0		
7	.2	.2	5.0	101	6.3	616	298	6.3	.5	0	.2	1.5		
8	.2	.2	9.3	67	5.0	589	251	4.0	.4	0	.2	7.7		
9	.2	.2	9.3	70	4.0	393	148	4.0	.4	0	.30	5.0		
10	.2	.2	7.7	78	3.1	305	78	5.0	.3	0	154	6.3		
11	.2	.2	6.3	31	2.4	122	70	3.1	.3	0	144	5.0		
12	.2	.2	4.0	64	2.4	70	100	2.4	.2	0	81	4.0		
13	.2	.2	2.4	46	2.4	48	117	2.4	.2	0	58	2.4		
14	.1	.2	2.4	31	2.4	45	135	3.1	.2	.1	42	3.1		
15	.1	.2	3.1	28	2.4	45	140	3.1	.1	.2	33	3.1		
16	.1	.3	4.0	28	2.0	70	112	2.4	.1	.5	26	11		
17	.2	.3	4.0	26	2.0	89	93	2.4	.1	.5	18	16		
18	.2	.3	4.0	24	2.0	97	70	2.4	0	.5	13	16		
19	.2	.3	7.7	22	2.0	97	54	1.4	.1	.4	9.3	11		
20	.2	.3	22	16	2.0	93	45	1.4	.1	.4	14	6.3		
21	.1	.3	31	13	1.5	97	33	1.4	0	.4	7.7	3.1		
22	.2	.4	28	11	1.5	93	28	1.8	0	.4	6.3	2.4		
23	.2	.4	24	7.7	1.5	89	28	1.4	0	.3	5.0	2.4		
24	.2	.4	36	7.7	1.5	89	26	1.8	0	.3	6.3	2.4		
25	.2	.4	39	13	1.5	104	26	2.4	0	.2	6.3	2.4		
26	.2	1.1	26	20	1.0	70	26	1.8	0	.2	4.0	2.4		
27	.2	9.3	13	22	1.0	112	24	1.4	.2	.2	5.0	4.0		
28	.2	7.7	11	22	1.0	148	22	1.2	.2	.2	6.3	2.4		
29	.2	6.3	9.3	22	1.4	144	20	1.2	.2	.1	4.0	20		
30	.2	4.0	6.3	26	1.5	153	18	1.2	.1	.1	3.1	33		
31	.2		6.3	28	1.5	153		1.0		.1	2.4			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					0.2		0.1		0.187		0.0013		0.001	
November					9.3		.1		1.14		.0062		.009	
December					39		2.4		11.4		.082		.09	
January					158		7.7		41.6		.299		.34	
February					28		1.0		5.08		.037		.04	
March					616		1.0		158		1.12		1.29	
April					312		18		105		.755		.84	
May					16		1.0		4.24		.031		.04	
June					1.0		0		.283		.0020		.002	
July					0		0		.168		.0012		.001	
August					154		.1		23.6		.170		.20	
September					33		1.0		6.13		.044		.05	
The year					616		0		29.8		.214		2.90	

Meander Creek at Mineral Ridge, Ohio

Location.- Water-stage recorder in T. 3 N., R. 3 W., Trumbull County, three-eighths of a mile above highway bridge 1 mile northwest of Mineral Ridge. Zero of gage is 854.81 feet above mean sea level.

Drainage area.- 84.9 square miles.

Records available.- August 1929 to September 1934. May 1926 to September 1929 at Ohlstown, 5 miles upstream.

Discharge.- Maximum discharge during year, 184 second-feet Sept. 30 (gage height, 4.80 feet); no flow Aug. 18-20 (ponding water above new concrete control).
1929-34: Maximum discharge, 2,050 second-feet Mar. 14, 1933 (gage height, 7.38 feet); no flow Aug. 18-20, 1934 (ponding water above new concrete control).

Remarks.- Records good after Aug. 21 and poor prior thereto. Staff gage readings used Oct. 1 to Nov. 15. Readings on temporary staff gage used July 10 to Aug. 11. Discharge estimated Jan. 30 to Feb. 5, Feb. 9 to Mar. 18, Aug. 12-16. Discharge estimated because of ice Feb. 6-8. Water is diverted at Mineral Ridge Dam, above gage, by Mahoning Valley Sanitary District for municipal water supply.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*1.4	0.3	0.7	0.7	0.6		0.7	0.4	1.0	1.1	0.8	1.2
2	1.4	.3	.7	.8			.6	.4	1.0	1.2	.6	.65
3	1.4	.3	.7	.6			.8	.6	1.0	.9	.7	.82
4	1.2	.3	.8	.5			1.4	.4	.9	1.0	.7	.70
5	1.2	*.3	.8	.6			1.2	.4	1.3	1.0	*.6	.62
6	1.0	.3	.7	.8	.5		1.0	.5	1.3	.9	.6	.65
7	1.0	1.3	.8	.7	.5		1.0	.7	.9	1.0	.5	.78
8	*1.1	1.2	.6	.7	.5		1.0	.5	.9	1.0	.5	15.8
9	1.2	1.4	.7	.8			1.5	.4	1.0	.8	.2	66
10	1.0	1.3	.7	.8		0.7	10	1.7	1.2	.7	.9	74
11	1.0	1.2	.7	.7			7.2	.7	1.1	1.0	.7	94
12	.9	*1.2	.6	.8			15	.5	1.2	.8	.7	39
13	.8	1.3	.8	.7			29	1.8	1.0	.8	.6	2.9
14	.7	1.4	.6	.8			22	.8	1.0	.7	.5	2.6
15	*1.0	1.3	.9	.7			25	.5	1.2	*.7	.5	2.6
16	1.2	.7	.7	.7			20	.6	1.1	.7	.5	4.7
17	1.0	.5	1.4	.6			16	.5	1.1	.6	.3	30
18	*.9	.7	1.0	.7	.5		12	.6	1.1	.6	C	30
19	*.8	.7	.6	.6		.5	9.2	.8	1.1	.6	C	18.6
20	.7	.7	.7	.7		.7	5.2	.7	1.2	.5	C	12.4
21	.8	.7	.9	.6		.6	3.4	.8	1.2	.5	.03	9.5
22	*.7	.7	.7	.7		1.8	6.6	1.0	1.3	*.8	.08	11.0
23	.6	.7	.8	.7		.8	17	1.0	1.3	.6	.19	6.4
24	.6	.6	.7	.7		.7	5.4	.7	1.3	.5	.33	2.1
25	.6	.6	.7	.5		.6	1.0	.8	1.4	.4	.53	1.6
26	.4	.7	.6	.6		.7	20	.8	1.5	.5	.62	2.0
27	.4	.6	.7	.7		1.0	2.1	.7	1.6	.7	.56	6.4
28	.4	.8	.8	.7		.8	.5	.9	1.1	.6	.68	2.4
29	*.4	.7	.7	.7		.7	.8	1.0	1.0	*.5	1.2	56
30	.4	.8	.5	.6		.7	.7	1.0	1.0	.5	2.1	144
31	.3		.7	.6		.6		1.0		.8	1.1	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	1.4	0.3	0.85									
November	1.4	.3	.79									
December	1.4	.5	.73									
January	.8	.5	.67									
February		.52	.52									
March		.74	.74									
April	29	.6	7.91									
May	1.8	.4	.75									
June	1.6	.9	1.14									
July	1.2	.4	.73									
August	8.2	0	.812									
September	144	.62	21.3									
The year	144	0	3.05									

*Interpolated.

Pymatuning Reservoir at Pymatuning Dam, Pa.

Location.- Water-stage recorder in gate house at Pymatuning Dam, Crawford County, 1½ miles northwest of Jamestown. Zero of gage is at mean sea level.

Drainage area.- 158 square miles.

Records available.- October 1933 to September 1934.

Extremes.- Maximum water-surface elevation during year, 995.85 feet May 7; minimum, 975.70 feet Oct. 15, 16, 19.

Remarks.- Records excellent. Readings on staff gage used throughout year, because water was below inlet to well for water-stage recorder. Reservoir used to regulate flow in Shenango River. Elevation of spillway is 1,008.0 feet. Total capacity of reservoir is 8,640,000,000 cubic feet.

Elevation, in feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75.88	75.75	78.90	82.92	84.80	85.97	92.98	95.64	95.34	94.74	93.87	94.65
2	75.79	75.72	78.70	84.55	84.92	85.99	93.09	95.62	95.34	94.74	93.82	94.69
3	75.77	75.76	78.44	84.55	85.05	86.21	93.18	95.62	95.31	94.72	93.95	94.66
4	75.76	75.74	79.06	84.75	85.16	87.14	93.66	95.60	95.35	94.72	93.90	94.64
5	75.76	75.72	80.08	85.06	85.25	88.12	93.97	95.60	95.28	94.63	93.94	94.62
6	75.77	75.72	80.48	85.25	85.32	89.08	94.16	95.60	95.30	94.60	93.83	94.66
7	75.76	75.74	80.78	85.26	85.38	89.62	94.33	95.74	95.28	94.67	93.78	94.66
8	75.75	75.76	80.97	85.29	85.38	90.08	94.41	95.60	95.16	94.65	93.70	94.68
9	75.75	75.77	80.92	85.24	85.38	90.25	94.48	95.53	95.13	94.64	94.38	94.68
10	75.75	75.66	80.64	85.16	85.38	90.40	94.49	95.52	95.16	94.50	94.62	94.69
11	75.75	75.68	80.23	84.94	85.38	90.46	94.64	95.59	95.15	94.44	94.92	94.67
12	75.75	75.90	79.60	84.62	85.38	90.52	94.82	95.55	95.12	94.46	94.85	94.64
13	75.76	75.05	79.10	84.38	85.40	90.55	94.90	95.51	95.09	94.48	94.84	94.60
14	75.76	76.26	78.60	84.16	85.45	90.74	95.01	95.59	95.05	94.49	94.88	94.63
15	75.71	76.48	78.14	83.83	85.45	90.88	95.12	95.60	95.02	94.51	94.88	94.68
16	75.71	76.34	78.83	83.54	85.45	90.98	95.22	95.52	95.00	94.48	94.92	94.74
17	75.74	76.22	79.62	83.10	85.57	91.13	95.30	95.50	94.97	94.41	94.95	94.74
18	75.73	76.22	80.40	82.52	85.71	91.34	95.35	95.58	94.55	94.41	94.92	94.74
19	75.70	76.26	81.18	82.00	85.71	91.42	95.42	95.50	95.10	94.30	94.88	94.72
20	75.74	76.34	81.96	81.22	85.74	91.52	95.48	95.52	95.01	94.35	94.96	94.70
21	75.77	76.59	82.48	79.70	85.79	91.65	95.45	95.49	94.98	94.30	94.86	94.67
22	75.76	78.28	83.10	78.62	85.81	91.86	95.45	95.52	95.06	94.34	94.85	94.70
23	75.77	78.74	83.33	78.95	85.84	92.02	95.40	95.48	94.99	94.24	94.86	94.79
24	75.79	78.50	83.55	80.34	85.86	92.08	95.48	95.51	94.94	94.17	94.84	94.72
25	75.80	79.06	83.58	81.22	85.89	92.14	95.58	95.50	94.93	94.14	94.82	94.68
26	75.79	79.44	83.42	82.02	85.92	92.21	95.44	95.50	94.90	94.10	94.78	94.63
27	75.80	79.59	82.85	82.62	85.94	92.35	95.64	95.46	94.84	94.08	94.76	94.60
28	75.80	79.45	82.30	83.25	85.96	92.54	95.54	95.45	94.80	94.06	94.79	94.61
29	75.79	79.18	81.86	83.92	85.92	92.68	95.55	95.42	94.80	93.99	94.76	94.72
30	75.79	79.04	81.29	84.25	85.92	92.78	95.58	95.42	94.83	93.89	94.73	94.77
31	75.77		80.98	84.52		92.87		95.38		93.96	94.70	

Note.- Add 900.00 feet to obtain elevations above mean sea level.

Shenango River at Pymatuning Dam, Pa.

Location.- Water-stage recorder 500 feet below mouth of Sugar Run, 550 feet below Pymatuning Dam, Crawford County, and $1\frac{1}{2}$ miles northwest of Jamestown. Zero of gage is 970.00 feet above mean sea level.

Drainage area.- 167 square miles.

Records available.- June to September 1934.

Extremes.- Maximum discharge during period, 298 second-feet Aug. 9 (gage height, 5.20 feet); minimum, 0.4 second-foot July 2, 3 (gage height, 3.27 feet).

Remarks.- Records good. Discharge estimated June 1-5. Records include discharge of Sugar Run. Regulation from storage in Pymatuning Reservoir. Corrections for storage in Pymatuning Reservoir not included in records except in part of monthly table. No corrections made for evaporation and seepage losses from reservoir.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									24	0.5	55	1.0
2									24	.4	55	.9
3									24	6.4	38	12.6
4									24	14.9	57	22
5									24	14.9	75	32
6									24	14.0	58	43
7									24	37	55	43
8									24	44	56	24
9									24	44	98	2.5
10									24	44	8.2	13.4
11									24	45	4.0	32
12									15.2	45	2.8	32
13									1.2	45	2.2	46
14									7.7	44	1.8	50
15									24	44	1.5	37
16									23	45	2.0	83
17									22	45	4.3	34
18									21	45	1.8	5.4
19									2.2	46	1.4	3.8
20									18.8	45	1.2	3.1
21									55	45	13.2	2.8
22									56	45	55	2.4
23									55	46	55	2.3
24									55	46	55	29
25									55	46	55	52
26									55	49	55	32
27									55	54	45	1.6
28									49	54	29	1.5
29									27	55	28	7.0
30									.8	55	28	6.4
31										55	11.8	

Month	Observed			Gain or loss in storage (equivalent mean)	Corrected for storage		
	Maximum	Minimum	Mean		* Mean	Per square * mile	Run-off in * inches
October							
November							
December							
January							
February							
March							
April							
May							
June	55	0.8	28.7	-65.7	-40.0	-0.240	-0.27
July	55	.4	39.4	-81.4	-42.0	-.251	-.29
August	98	1.2	32.6	+70.9	104	.623	.72
September	83	.9	21.9	+10.8	32.7	.196	.22
The year							

*Figures with minus sign indicate amount by which evaporation and seepage from reservoir exceeded natural flow.

BEAVER RIVER BASIN

Shenango River near Jamestown, Pa.

Location.- Chain gage at Frye Bridge, 2 miles downstream from Jamestown, Mercer County.
Zero of gage is 955.00 feet above mean sea level.

Drainage area.- 181 square miles.

Records available.- October 1920 to September 1921, October 1931 to May 1934 (discontinued) in reports of U. S. Geological Survey; December 1919 to May 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 13 years (1920-33), 224 second-feet.

Extremes.- Maximum discharge recorded during period, 886 second-feet Jan. 1 (gage height, 4.74 feet); minimum, 2.9 second-feet May 21, 24, 26, 29 (gage height, 1.06 feet).

1919-34: Maximum gage height (estimated), 9.6 feet Mar. 13, 1920 (discharge not determined); minimum discharge, 1.3 second-feet Aug. 20, 1923.

Maximum stage known, 14.2 feet Mar. 26, 27, 1913 (discharge not determined).

Remarks.- Records fair except those estimated for periods of ice effect, Nov. 16-19, Dec. 11-14, Jan. 28 to Mar. 9, Mar. 28, 29, which are poor. Regulation from storage in Pymatuning Reservoir and from mill operations at Jamestown. Corrections for storage in Pymatuning Reservoir not included in records except in part of monthly table. No corrections made for evaporation and seepage losses from reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.6	12	235	641	7	10	40	4.8				
2	7.0	12	211	509	7	15	43	4.8				
3	6.0	11	204	673	6	50	34	5.2				
4	6.0	12	169	478	6	260	170	4.8				
5	6.6	8.8	161	333	6	80	67	4.5				
6	6.0	13	180	346	6	60	47	4.5				
7	6.0	13	187	388	6	40	40	4.0				
8	5.5	19	195	346	5	30	25	4.1				
9	5.2	21	191	333	5	20	19	3.7				
10	5.2	23	173	294	5	14	17	4.3				
11	4.8	22	150	245	5	13	44	4.1				
12	6.0	25	130	294	5	10	46	3.8				
13	5.2	34	120	294	5	20	35	3.8				
14	5.2	40	110	294	5	64	37	4.8				
15	5.0	38	68	270	5	57	38	4.5				
16	5.0	37	103	282	5	32	27	4.3				
17	5.2	38	131	235	5	32	21	3.5				
18	5.8	40	167	246	5	52	16	3.9				
19	6.3	42	200	209	5	34	12	3.8				
20	5.8	47	235	200	5	30	8.8	3.7				
21	6.3	62	282	246	5	41	8.8	3.2				
22	8.8	205	282	161	5	57	13	3.2				
23	10	246	282	176	5	45	10	3.2				
24	10	202	294	46	5	19	9.5	2.9				
25	12	224	282	19	5	11	8.8	3.2				
26	12	282	282	19	4	19	7.0	3.0				
27	12	294	270	13	4	75	7.0	3.2				
28	12	282	307	12	4	60	5.8	3.0				
29	8.8	246	270	11		34	4.5	5.0				
30	12	246	224	10		32	4.7	27				
31	12		213	8		33		27				

Month	Observed			Gain or loss in storage (equivalent mean)	Corrected for storage		
	Maximum	Minimum	Mean		Mean*	Per square* mile	Run-off in* inches
October	12	4.8	7.40	0	7.40	0.041	0.05
November	294	8.8	93.2	+6.79	100	1.552	1.62
December	307	88	204	+74.2	278	1.54	1.78
January	673	8	246	+123	369	2.04	2.35
February	7	4	5.21	+46.7	51.9	2.87	2.30
March	260	10	44.2	+386	430	2.38	2.74
April	170	4.5	28.9	+277	306	1.69	1.89
May	27	2.9	5.44	-23.5	-18.1	-1.00	-1.12
June							
July							
August							
September							
The year							

*Figures with minus sign indicate amount by which evaporation and seepage from Pymatuning Reservoir exceeded natural flow.

Shenango River at Sharon, Pa.

Location.- Water-stage recorder at Chestnut Street Bridge, at Sharon, Mercer County.
Zero of gage is 840.00 feet above mean sea level.

Drainage area.- 608 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; August 1909 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 24 years (1910-34), 694 second-feet.

Extremes.- Maximum discharge during year, 5,870 second-feet Mar. 8 (gage height, 9.82 feet); minimum, 7.0 second-feet Oct. 14 (gage height, 1.85 feet).
1909-34: Maximum discharge (estimated), 25,200 second-feet Mar. 26, 1913 (gage height, 18.1 feet); minimum, 6.5 second-feet Sept. 22, 1932 (gage height, 1.85 feet).

Remarks.- Records poor. Discharge estimated for periods of ice effect, Nov. 17, 18, Dec. 13-15, 25-31, Jan. 19, 20, Feb. 1 to Mar. 3, and for periods of missing gage-height record, Dec. 10-12, Jan. 7, 10-18. Regulation from power operations and from storage in Pymatuning Reservoir upstream. Corrections for storage in Pymatuning Reservoir not included in records except in part of monthly table. No corrections made for evaporation and other natural losses from reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	26	454	1,040	500	48	716	125	40	42	62	46
2	41	23	424	2,550	400	50	720	116	44	25	71	48
3	35	24	403	1,800	320	100	676	107	44	20	144	36
4	18	27	415	1,640	260	770	1,250	98	43	18	119	29
5	15	31	476	1,280	210	1,880	1,410	88	136	19	62	28
6	12	34	445	1,180	180	3,180	1,070	85	56	18	69	32
7	8.6	35	428	1,100	130	1,800	982	79	47	19	86	35
8	8.2	44	418	1,390	115	1,260	872	73	40	19	62	95
9	24	46	362	1,190	100	955	657	62	34	31	2,640	88
10	25	53	328	1,070	92	750	490	64	30	73	1,530	60
11	19	58	290	928	85	467	480	64	39	50	672	39
12	12	60	240	770	80	374	701	62	59	47	292	35
13	8.2	73	200	681	76	277	716	60	37	58	227	36
14	8.6	105	170	740	73	419	716	64	34	46	176	58
15	17	144	210	706	70	579	770	75	25	36	122	144
16	13	107	263	662	67	613	681	77	20	45	97	224
17	11	95	424	560	65	637	555	69	18	69	78	484
18	9.0	105	449	485	63	716	441	64	23	43	64	265
19	15	120	598	450	61	667	362	58	47	41	58	110
20	15	132	637	460	59	564	302	50	47	58	48	71
21	14	154	1,010	503	57	598	253	46	31	36	39	55
22	20	274	1,130	490	55	745	227	45	23	35	36	45
23	19	867	872	454	53	706	256	41	52	43	36	36
24	23	588	820	667	52	478	253	37	76	41	73	32
25	26	598	795	374	51	415	230	35	64	40	97	53
26	26	552	696	362	49	390	214	38	62	42	93	62
27	30	603	445	354	48	1,070	182	33	69	43	82	69
28	27	536	428	339	47	1,340	144	34	67	48	80	48
29	23	490	400	686		928	154	33	69	50	64	327
30	25	467	370	390		770	139	31	59	60	50	50
31	20	440	574			740		30		75	45	

Month	Observed			Gain or loss in storage (equivalent mean)	Corrected for storage		
	Maximum	Minimum	Mean		*Mean	Per square * mile	Run-off in * inches
October	41	8.2	19.2	0	19.2	0.032	0.04
November	667	23	212	+6.8	219	.360	.40
December	1,130	170	486	+74.2	560	.921	1.06
January	2,550	339	833	+123	956	1.57	1.81
February	500	47	121	+46.7	168	.276	.29
March	3,190	48	763	+386	1,169	1.92	2.21
April	1,410	139	554	+277	831	1.37	1.53
May	125	39	62.6	-23.5	39.1	-.064	-.07
June	136	19	47.8	-68.7	-20.9	-.034	-.04
July	80	18	42.2	-81.4	-39.2	-.054	-.07
August	2,640	36	238	+70.9	309	.508	.59
September	484	28	100	+10.8	111	.183	.20
The year	3,190	8.2	294	68.8	363	.597	8.09

*Figures with minus sign indicate amount by which evaporation and seepage from Pymatuning Reservoir exceeded natural flow.

Shenango River at New Castle, Pa.

Location.- Chain gage at West Washington Street Bridge, at New Castle, Lawrence County.
Zero of gage is 787.00 feet above mean sea level.

Drainage area.- 792 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; January 1910 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 24 years (1910-34), 881 second-feet.

Extremes.- Maximum discharge during year, 4,930 second-feet Aug. 9 (gage height, 6.2 feet, from graph based on gage readings); minimum, 13 second-feet July 6 (gage height, 0.52 foot).

1910-34: Maximum discharge (estimated), 39,800 second-feet Mar. 28, 1913 (gage height, 17.82 feet); minimum, 6.0 second-feet Aug. 14, 1930.

Remarks.- Records poor. Discharge estimated for periods of faulty gage-height record, Nov. 9-12, Dec. 8, Sept. 15-21, and for periods of ice effect, Dec. 30, 31, Feb. 2 to Mar. 5, Mar. 8, 9, 13, 14. Regulation from storage in Pymatuning Reservoir and from power and diversion operations upstream. Water supply for city of New Castle diverted above station and corrections for storage not included in records except in part of monthly table. No corrections made for evaporation and other natural losses from Pymatuning Reservoir. Record of monthly diversion furnished by City of New Castle Water Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	25	465	558	658	56	830	122	36	63	100	74
2	28	22	407	1,460	540	60	830	114	31	52	60	69
3	40	23	496	1,470	400	100	755	109	30	33	114	57
4	41	20	402	1,740	300	600	1,080	105	40	32	136	53
5	33	23	436	1,540	230	1,700	1,030	112	44	21	96	46
6	26	26	407	1,150	200	3,000	1,450	105	120	14	74	48
7	25	35	390	1,150	170	2,520	1,160	100	83	16	60	53
8	21	36	370	1,240	140	1,900	990	87	49	15	64	41
9	24	37	358	1,440	120	1,300	830	85	57	21	2,550	111
10	16	40	331	1,150	102	910	589	68	49	20	3,640	122
11	14	48	358	1,060	95	755	620	73	34	44	1,280	105
12	16	53	262	730	89	558	620	68	28	64	690	83
13	20	77	212	694	85	480	755	63	27	56	383	68
14	18	58	172	694	81	510	755	58	50	64	288	52
15	18	154	196	730	78	558	755	68	29	54	213	140
16	18	95	276	624	75	620	685	63	25	49	213	320
17	20	97	465	590	72	620	685	66	26	46	162	600
18	21	102	407	590	69	652	620	69	23	57	133	410
19	28	99	465	436	66	755	529	63	29	60	114	310
20	38	110	590	526	64	620	383	63	18	62	89	240
21	33	124	768	526	62	620	339	46	21	112	85	160
22	28	150	1,340	496	60	620	339	53	44	60	83	105
23	22	336	1,850	436	58	589	264	52	48	43	114	87
24	20	558	1,240	465	59	589	297	42	49	38	114	68
25	24	558	768	496	56	620	270	42	73	50	149	74
26	22	624	658	385	55	445	197	41	62	44	156	69
27	23	590	526	380	55	1,040	213	44	100	40	117	102
28	25	590	436	353	54	2,410	185	39	98	43	107	96
29	25	568	407	331		1,970	169	32	74	49	122	181
30	26	436	390	684		910	166	34	62	74	91	162
31	23		500	590				56		173	76	

Month	Observed			Storage and diversion (equivalent mean)	Corrected for diversion and storage		
	Maximum	Minimum	Mean		*Mean	*For square mile	Run-off in * inches
October.	41	14	24.7	6.8	31.5	0.040	0.05
November	624	20	191	13.6	205	.259	.29
December	1,850	172	527	80.9	608	.768	.89
January.	1,740	331	798	130	928	1.17	1.35
February	658	54	146	54.1	200	.253	.26
March	3,000	56	933	394	1,327	1.68	1.94
April	1,450	166	614	284	898	1.13	1.26
May	122	32	68.5	-16.3	52.2	.066	.08
June	120	18	48.6	-60.6	-12.0	-.015	-.02
July.	173	14	50.6	-74.1	-23.5	-.030	-.03
August	3,640	60	377	77.9	455	.574	.66
September	600	41	137	17.6	155	.196	.22
The year	3,640	14	329	75.9	405	.511	6.95

*Figures with minus sign indicate amount by which evaporation and seepage from Pymatuning Reservoir exceeded natural flow.

Sugar Run at Pymatuning Dam, Pa.

Location.- Staff gage above concrete control at highway bridge at Pymatuning Dam, Crawford County, a quarter of a mile above mouth and $1\frac{1}{4}$ miles northwest of Jamestown. Zero of gage is 984.59 feet above mean sea level.

Drainage area.- 9.34 square miles.

Records available.- March to September 1934.

Extremes.- Maximum discharge during period, about 220 second-feet Aug. 9 (gage height, 2.44 feet); no flow at times during summer.

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							10.7	1.3	0.4		C	0.1
2							9.9	1.3	.3		C	.2
3							8.7	1.1	.3		C	.1
4							68	1.1	.2		C	.1
5							17.9	1.1	.2		C	.1
6												
7							12.2	1.1	.2		C	0
8							9.9	1.0	.2		C	0
9							6.5	.9	.2		C	.5
10						16.4	4.7	.9	.1		Sl	.7
						8.1	4.1	.9	.2		6.3	.4
11						4.5	10.7	1.0	.2		1.7	.2
12						2.6	13.2	.8	.2		.9	.2
13						12.9	9.3	.8	.1		.8	.2
14						46	10.7	1.2	.1		.6	9.1
15						17.3	8.1	1.3	.1		.4	14.2
16						18.5	6.5	1.0	.1		.6	21
17						13.3	5.1	.9	0		.8	8.8
18						13.4	4.1	.8	0		.5	2.5
19						5.2	3.4	.7	.6		.4	1.4
20						5.4	2.9	.6	.4		.2	1.1
21						24	2.6	.6	.2		.2	.9
22						19.8	2.6	.6	.2		.2	.8
23						6.5	3.4	.6	.2		.2	.7
24						3.7	3.1	.6	.2		.4	.6
25						3.6	2.9	.6	.1		1.0	.5
26						6.6	2.4	.6	.1		.4	.5
27						26	2.4	.5	.1		.3	.4
28						30	2.3	.4	0		.4	.4
29						8.2	1.9	.4	0		.3	5.3
30						8.7	1.4	.4	0		.2	3.6
31						9.3		.4			.2	
Month						Maximum	Minimum	Mean	Per square mile	Run-off in inches		
October												
November												
December												
January												
February												
March 9-31						45	2.6	13.4	1.43		1.22	
April						68	1.4	8.39	.808		.90	
May						1.3	.4	.82	.086		.10	
June . . . . .						.6	0	.17	.018		.02	
July						0	0	0	0	0	0	
August						51	0	2.19	.234		.27	
September						21	0	2.49	.267		.30	
The year												

Note.- No flow during July.

Little Shenango River at Greenville, Pa.

Location.- Water-stage recorder 1,500 feet downstream from Williamson Crossing Bridge, 1 mile northeast of Greenville, Mercer County, and 2 miles upstream from mouth. Prior to June 21, 1934, staff gage with different datum at a site 1 mile downstream was used.

Drainage area.- 104 square miles (105 square miles at former site).

Records available.- November 1919 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 14 years (1914-18, 1920-22, 1923-34), 139 second-feet.

Extremes.- Maximum discharge during year, 1,440 second-feet (from graph based on gage readings) Jan. 2; maximum gage height, 4.65 feet Mar. 4 (affected by ice); minimum discharge, 2.9 second-feet July 31 (gage height, 0.58 foot).
1919-23, 1925-34: Maximum discharge recorded, 3,220 second-feet Dec. 1, 1927, May 3, 1929; maximum gage height, 9.60 feet (affected by ice) Feb. 28, 1926; minimum discharge, 2.0 second-feet Aug. 21, 1923.

Remarks.- Records fair except those estimated for periods of ice effect, Dec. 28-31, Jan. 18-21, Jan. 31 to Mar. 4, which are poor. Some regulation at low stages from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	8.5	64	900	270	21	201	46	9.6	8.8	3.1	7.2
2	6.8	11	49	1,230	180	25	207	42	9.6	9.5	3.6	7.5
3	6.5	8.5	66	517	130	400	196	44	9.6	8.4	11	7.5
4	5.8	7.3	127	154	90	1,100	401	37	8.5	6.9	13	7.2
5	5.4	7.3	137	140	70	1,160	508	33	27	7.2	7.6	6.9
6	5.4	11	105	219	58	658	223	29	22	7.5	5.7	10
7	5.4	12	82	287	50	287	193	28	17	7.2	4.8	7.6
8	5.0	20	66	397	45	248	179	25	10	7.8	4.6	17
9	5.8	18	59	262	41	213	118	23	8.5	7.8	372	12
10	5.0	13	48	219	37	130	98	21	15	7.5	372	9.2
11	5.0	12	37	144	34	111	140	16	13	6.9	77	7.2
12	7.0	19	32	116	32	96	210	13	11	6.9	37	7.2
13	7.6	32	30	114	31	77	179	13	11	7.5	25	8.9
14	6.5	71	29	120	30	144	201	27	9.0	7.2	21	12
15	6.8	43	44	125	29	144	232	30	7.9	6.9	21	31
16	6.5	34	179	111	28	144	179	32	7.3	6.4	22	145
17	6.8	28	130	96	27	187	137	25	6.8	4.6	21	152
18	7.0	29	168	76	26	134	111	21	6.3	4.9	15	61
19	6.8	43	109	73	25	116	90	19	9.0	5.0	14	36
20	10	50	118	72	24	120	77	17	8.5	4.8	12	28
21	9.6	73	207	74	24	173	73	14	8.9	4.8	16	20
22	13	257	246	64	23	273	71	13	33	4.8	11	18
23	18	180	152	162	22	109	78	13	16	4.2	11	43
24	22	78	120	142	22	60	84	13	12	4.0	14	49
25	17	75	150	118	21	64	73	13	8.5	4.8	15	25
26	13	66	107	132	21	80	71	13	8.1	3.6	11	18
27	9.6	86	67	103	20	433	60	13	10	3.8	10	16
28	8.2	77	60	187	20	418	60	11	16	3.6	9.7	14
29	7.9	86	54	397		219	54	10	11	3.6	9.7	40
30	7.6	77	50	462		196	49	12	8.1	3.2	8.5	116
31	7.3		70	350		198		10		3.1	7.5	
Month	Maximum			Minimum			Mean			Foot square mile	Run-off in inches	
October	22			5.0			8.44			0.080	0.09	
November	257			7.3			51.1			.487	.54	
December	248			29			95.6			.910	1.05	
January	1,230			72			245			2.33	2.69	
February	270			20			51.1			.487	.51	
March	1,160			21			280			2.38	2.74	
April	508			49			148			1.41	1.57	
May	46			10			21.8			.208	.24	
June	33			6.3			11.9			.114	.13	
July	9.5			3.1			5.91			.057	.07	
August	372			3.1			38.3			.368	.42	
September	152			6.9			31.4			.302	.34	
The year	1,230			5.1			80.3			.767	10.39	

Pymatuning Creek near Orangeville, Pa.

Location.- Water-stage recorder 2 miles upstream from confluence with Shenango River, 3 miles southeast of Orangeville, Mercer County, and 3 miles north of Sharpsville. Prior to June 19, 1934, chain gage at a site 1,500 feet downstream with datum 0.62 foot higher was used.

Drainage area.- 169 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 16 years (1914-22, 1926-34), 208 second-feet.

Extremes.- Maximum gage height recorded during year, 7.60 feet Mar. 6 (discharge not determined because of ice); minimum, 0.9 second-foot Oct. 7, 11 (gage height, 0.43 foot).

1914-23, 1925-34: Maximum gage height (estimated), 8.9 feet Mar. 13, 1920 (discharge not determined); minimum discharge, 0.5 second-foot Sept. 25, 1933.

Maximum stage known, about 15.8 feet, at former site, Mar. 26, 1913 (discharge not determined).

Remarks.- Records fair except those estimated for periods of ice effect, Nov. 16, 17, Dec. 12-15, Dec. 27 to Jan. 1, Jan. 18-21, Jan. 31 to Mar. 9, which are poor. Some diurnal regulation from operation of mills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	4.8	56	65	130	16	198	28	5.2	2.0	1.5	4.6
2	6.7	5.5	64	299	100	18	188	25	4.8	1.8	3.2	4.7
3	2.4	5.9	69	500	75	60	198	22	4.2	1.8	4.9	3.9
4	1.1	5.5	64	695	50	400	360	21	3.8	2.0	1.6	3.5
5	1.0	7.2	59	500	40	1,000	385	20	3.5	2.0	1.5	3.3
6	1.0	11	65	335	36	1,300	440	18	5.2	2.0	1.5	3.1
7	1.0	9.6	81	198	32	910	500	17	3.8	1.8	1.5	3.1
8	1.0	12	81	198	29	760	410	14	2.7	2.1	1.8	9.6
9	1.0	11	65	219	27	620	219	14	3.1	1.8	474	7.1
10	1.0	12	40	198	26	530	118	16	2.8	1.8	213	5.5
11	1.0	14	33	168	25	206	126	14	3.1	1.8	131	5.8
12	1.1	17	23	118	24	187	178	14	2.7	1.8	100	6.9
13	1.1	20	15	102	23	68	198	14	2.7	1.8	110	7.4
14	6.1	22	11	95	22	142	230	18	2.4	2.4	89	6.6
15	2.3	28	16	88	21	168	208	20	2.4	2.0	58	7.0
16	1.3	24	29	95	20	188	178	18	2.2	1.6	47	21
17	1.7	23	48	73	19	188	142	18	2.2	1.5	25	24
18	2.0	24	88	68	19	198	118	17	2.5	2.1	13	18
19	2.0	26	142	66	18	198	95	16	6.0	1.5	16	14
20	2.0	28	159	70	18	169	78	14	4.1	2.1	14	14
21	2.0	29	159	60	17	159	63	11	3.7	2.0	11	12
22	2.8	34	168	42	17	208	54	9.6	4.5	1.6	8.5	9.6
23	3.8	68	188	67	16	241	50	9.1	6.9	1.8	6.9	7.8
24	2.7	134	188	81	16	188	51	8.6	5.0	1.6	8.2	6.0
25	2.8	150	150	81	16	159	54	9.1	3.9	2.0	9.2	5.0
26	3.1	142	95	88	15	102	49	7.6	3.5	2.0	6.9	4.3
27	2.7	102	72	88	15	232	48	7.6	3.5	2.2	5.8	4.3
28	3.5	69	60	121	15	263	41	6.7	3.3	2.1	6.0	5.2
29	3.8	63	45	389		252	33	7.2	3.1	2.0	5.5	28
30	4.2	55	37	385		252	31	6.7	2.4	3.0	4.7	36
31	4.5		33	250		219		5.5		2.1	4.3	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	8.6	1.0	2.62	0.016	0.02
November	150	4.3	38.6	.228	.25
December	198	11	77.5	.459	.53
January	695	42	187	1.11	1.28
February	130	15	31.5	.186	.19
March	1,300	16	308	1.82	2.10
April	500	31	168	.994	1.11
May	28	5.5	14.4	.085	.10
June	6.9	2.2	3.64	.022	.02
July	3.0	1.5	1.94	.011	.01
August	474	1.5	44.6	.264	.30
September	36	3.1	9.71	.057	.06
The year	1,300	1.0	74.6	.441	5.97

Connoquenessing Creek at Hazen, Pa.

Location.- Chain gage at highway bridge at Hazen, Beaver County, half a mile upstream from mouth of Brush Creek.

Drainage area.- 356 square miles.

Records available.- October 1919 to September 1921, October 1931 to September 1934 in reports of U. S. Geological Survey; June 1915 to September 1934 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 15 years (1919-34), 477 second-feet.

Extremes.- Maximum discharge during year, 6,520 second-feet Aug. 9 (gage height, 9.38 feet); minimum, 8.6 second-feet July 30 (gage height, 0.84 foot).
1915-34: Maximum gage height, 16.66 feet June 29, 1924 (discharge not determined); minimum discharge, 6.6 second-feet Sept. 12, 1932 (gage height, 0.84 foot).

Remarks.- Records fair. Discharge estimated for periods of ice effect, Nov. 15-20, Dec. 11-15, 29-31, Jan. 30 to Mar. 2, Mar. 10-12, and for Jan. 20. Some regulation from operation of mills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	12	30	788	230	70	791	99	27	25	130	68
2	14	13	30	860	200	80	659	94	26	22	56	72
3	13	14	30	566	170	3,920	566	85	23	23	428	57
4	12	33	33	422	150	3,640	2,790	83	21	25	250	47
5	12	21	39	396	130	1,780	2,680	79	17	26	133	40
6	12	25	46	507	118	1,000	1,610	70	14	28	68	39
7	11	40	39	1,660	108	628	1,300	64	16	32	42	40
8	12	41	36	2,370	99	412	1,930	60	16	56	32	42
9	12	36	30	1,300	91	318	724	57	14	36	2,800	60
10	12	29	28	860	84	290	551	58	15	28	2,020	42
11	12	26	27	566	82	270	989	111	15	22	655	37
12	11	26	26	422	81	250	1,000	83	14	32	470	34
13	16	32	25	386	80	237	826	63	15	175	390	51
14	14	41	25	422	83	628	724	66	14	122	340	214
15	12	36	27	327	95	391	628	104	13	94	230	318
16	12	31	53	282	83	417	596	97	12	53	440	320
17	12	29	169	241	81	356	507	79	13	37	390	690
18	10	27	300	178	79	478	422	61	13	36	272	390
19	10	27	226	210	77	351	375	56	36	34	192	295
20	11	30	305	222	75	422	322	48	68	29	210	169
21	16	42	843	233	73	422	287	43	36	40	192	128
22	16	45	566	241	71	412	270	49	29	21	128	102
23	16	46	332	196	70	327	258	45	26	17	458	79
24	18	36	274	210	69	278	241	47	25	15	502	70
25	21	33	249	168	68	258	210	42	23	13	365	63
26	19	30	222	145	67	262	171	39	22	12	295	57
27	17	37	185	122	66	1,880	152	36	36	11	210	59
28	16	36	155	160	66	2,020	136	32	61	11	166	85
29	14	36	142	393		1,070	120	29	40	9.8	132	298
30	12	32	139	300		895	106	27	35	1	95	865
31	12		180	250		826		26		646	85	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				21		10		13.6		0.038		0.04
November				46		12		31.4		.088		.10
December				843		25		156		.438		.60
January				2,370		122		497		1.40		1.61
February				230		66		97.7		.274		.28
March				3,920		70		793		2.23		2.57
April				2,790		106		698		1.96		2.19
May				111		26		62.3		.175		.20
June				68		12		24.4		.069		.08
July				646		9.8		56.2		.158		.16
August				2,800		32		393		1.10		1.27
September				865		34		161		.452		.50
The year.				3,920		9.8		250		.702		9.52

Slippery Rock Creek at Wurtensburg, Pa.

Location.- Chain gage at highway bridge at Wurtensburg, Lawrence County, 1 mile upstream from mouth. Zero of gage is 812.48 feet above mean sea level.

Drainage area.- 406 square miles.

Records available.- October 1918 to September 1920, October 1931 to September 1934 in reports of U. S. Geological Survey; January 1912 to September 1934 in reports of Pennsylvania Department of Forests and Waters. Records prior to October 1922 obtained at a site half a mile upstream.

Average discharge. 21 years (1912-32, 1933-34), 548 second-feet.

Extremes.- Maximum gage height recorded during year, 10.38 feet Aug. 9 (discharge not determined); minimum discharge recorder, 17 second-feet July 24, 26 (gage height, 1.98 feet); minimum daily discharge, 21 second-feet July 24.
1912-34: Maximum gage height (estimated), 11.8 feet at present gage Dec. 14, 1927 (discharge not determined); minimum discharge, 11 second-feet Sept. 8, 1925; minimum daily discharge, 16 second-feet Sept. 8, 1925.

Remarks.- Records fair. Discharge estimated for periods of ice effect, Nov. 15-19, Dec. 12-14, 28-31, Jan. 31 to Mar. 2, and for Sept. 16. Regulation from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	49	83	740	230	61	518	143	48	89	372	109
2	39	49	98	1,110	200	75	518	133	49	72	126	91
3	61	48	83	677	170	1,380	472	128	56	59	416	83
4	49	48	136	567	150	3,260	1,270	112	49	61	319	74
5	36	51	249	351	130	2,610	1,290	107	98	80	202	46
6	37	61	193	351	118	1,490	950	107	52	140	131	34
7	34	65	153	784	108	804	708	98	52	149	56	52
8	29	74	126	1,490	97	495	542	93	39	124	78	70
9	29	91	114	1,030	87	333	450	91	51	96	7,000	59
10	32	76	98	620	84	234	351	87	46	66	4,600	63
11	38	74	65	472	82	207	784	156	51	61	1,440	70
12	34	86	57	351	80	216	950	146	59	138	840	63
13	31	83	49	298	79	266	738	109	61	156	677	148
14	34	156	45	333	80	370	648	121	44	174	542	196
15	29	110	42	298	82	472	648	131	59	112	370	119
16	39	96	292	265	79	542	567	112	37	83	370	219
17	32	85	666	249	76	495	472	96	36	57	429	190
18	32	75	573	234	74	450	389	89	34	42	315	168
19	38	66	429	202	72	495	333	89	52	39	265	150
20	35	59	351	179	70	472	315	89	98	45	265	121
21	38	128	1,000	163	68	429	281	61	91	65	165	112
22	49	121	799	185	66	429	249	70	66	48	174	93
23	51	131	450	249	64	429	281	68	93	23	219	80
24	52	119	333	298	63	409	281	68	102	21	265	68
25	41	96	333	249	62	333	265	66	72	30	351	56
26	44	98	298	210	61	252	249	57	76	23	249	44
27	42	91	219	185	60	1,710	234	56	568	31	179	72
28	41	93	200	207	60	1,730	179	59	450	29	166	76
29	31	83	190	265		900	166	54	207	29	160	252
30	41	74	185	315		677	168	56	140	43	133	648
31	44		400	250		567		70		694	105	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	61	29	38.9	0.096	0.11
November	136	48	83.8	.206	.23
December	1,000	42	268	.660	.76
January	1,490	163	425	1.05	1.21
February	230	60	94.7	1.233	1.24
March	3,260	61	729	1.80	2.08
April	1,390	158	512	1.26	1.47
May	156	54	94.3	.232	.27
June	568	34	97.2	.239	.27
July	694	21	92.8	.229	.26
August	7,000	78	678	1.67	1.92
September	648	34	121	.298	.33
The year.	7,000	21	272	.670	9.09

Little Beaver Creek near East Liverpool, Ohio

Location.- Water-stage recorder at Grimms Bridge, 4 miles above mouth of creek and 4 miles northeast of East Liverpool, Columbiana County.

Drainage area.- 505 square miles.

Records available.- May 1915 to September 1934.

Average discharge.- 19 years, 488 second-feet.

Extremes.- Maximum discharge during year, 8,070 second-feet Apr. 4 (gage height, 10.48 feet); minimum, 18 second-feet July 30 (gage height, 1.80 feet).
1915-34: Maximum discharge, 20,000 second-feet Mar. 15, 1933 (gage height, 15.01 feet); minimum, 12 second-feet Aug. 22, 23, 1918, Aug. 13, 1930, Sept. 13-20, 1932; minimum gage height, 1.53 feet Aug. 13, 1930.
Highest known flood reached gage height of about 20 feet.

Remarks.- Records excellent except those estimated because of ice effect, Nov. 15-17, Dec. 11-15, 25-31, Jan. 18-21, 25-27, Jan. 31 to Mar. 4, Mar. 10-12, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	54	140	281	150	30	572	134	38	103	90	50
2	31	34	120	354	120	30	535	129	35	54	63	45
3	28	40	92	233	95	1,900	466	124	33	38	191	40
4	27	38	73	197	85	3,850	4,740	117	31	125	186	35
5	27	38	88	208	75	1,940	4,510	108	101	59	98	34
6	25	52	90	199	68	1,270	2,140	103	79	46	56	32
7	26	65	68	503	60	586	1,620	98	53	69	41	29
8	27	64	60	896	54	351	1,060	83	37	156	33	34
9	29	57	53	601	50	243	791	76	33	106	628	144
10	29	54	47	454	45	230	636	75	32	67	708	122
11	30	52	40	337	43	230	936	90	30	52	590	68
12	30	50	32	257	40	230	1,040	97	32	44	490	52
13	28	56	36	235	40	233	766	82	34	38	360	44
14	28	67	40	251	38	500	716	84	29	160	290	40
15	28	52	45	223	37	410	716	108	28	157	201	42
16	27	45	142	206	36	403	586	108	24	79	504	55
17	28	48	235	190	35	366	492	91	21	51	407	322
18	29	52	344	150	34	426	407	78	21	35	254	197
19	32	57	251	125	34	324	355	70	30	34	171	122
20	32	64	202	115	33	305	314	63	31	69	124	87
21	32	64	328	110	33	366	283	61	30	62	90	65
22	34	65	270	124	32	395	260	65	28	51	71	55
23	42	67	197	136	32	268	260	62	27	35	61	171
24	52	65	158	131	31	241	251	55	42	27	90	115
25	48	59	120	120	31	203	215	52	36	24	142	66
26	44	54	95	110	30	228	194	49	32	21	136	52
27	39	103	80	95	30	2,340	183	48	48	21	92	45
28	35	125	70	133	30	2,080	171	45	54	20	73	50
29	34	152	64	321		1,220	156	42	61	19	112	319
30	34	148	65	257		791	144	40	116	19	79	446
31	33		70	190		636		38		69	59	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	52	25	32.3	0.064	0.07
November	152	34	64.1	.127	.14
December	344	32	119	.236	.27
January	896	95	250	.495	.57
February	150	30	50.8	.101	.11
March	3,850	30	750	1.45	1.67
April	4,740	144	850	1.68	1.87
May	134	38	79.9	.158	.18
June	116	21	40.8	.081	.09
July	160	19	61.6	.122	.14
August	708	33	209	.414	.48
September	446	29	99.3	.197	.22
The year.	4,740	19	216	.426	5.81

Yellow Creek at Hammondsville, Ohio

Location.- Chain gage at highway bridge 0.2 mile southwest of Hammondsville, Jefferson County, and 1,000 feet above North Fork.

Drainage area.- 169 square miles.

Records available.- May 1915 to September 1934.

Average discharge.- 19 years, 197 second-feet.

Extremes.- Maximum discharge recorded during year, 5,200 second-feet Mar. 3 (gage height, 10.0 feet); minimum, 0.4 second-foot July 29 (gage height, 1.37 feet).
1915-34: Maximum discharge recorded, 7,710 second-feet June 17, 1920 (gage height, 13.2 feet); minimum, 0.2 second-foot Sept. 11, 12, 1932.
Highest known flood reached a stage of about 16 feet.

Remarks.- Records fair. Discharge estimated because of ice effect Nov. 16-18, Dec. 12-14, 27-31, Jan. 17-21, Jan. 29 to Mar. 2, Mar. 11, 12.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	12	24	502	110	23	348	46	10	12	0.8	11
2	22	10	21	308	90	23	220	41	9.7	8.1	.6	9.7
3	19	10	55	240	80	4,600	235	45	8.9	5.2	86	7.4
4	16	8.0	68	161	70	1,200	3,250	42	8.1	3.6	32	7.4
5	14	16	71	196	60	475	3,050	38	7.0	4.0	13	6.4
6	12	38	72	171	54	365	2,030	35	15	11	8.1	5.2
7	11	45	48	705	49	295	1,140	38	9.3	26	4.4	4.7
8	16	41	38	862	45	178	790	34	7.4	37	1.0	7.4
9	14	32	34	475	42	104	418	31	6.7	32	15	18
10	13	26	30	308	39	98	382	41	6.0	16	1.6	10
11	14	24	26	254	36	96	348	41	6.7	66	46	8.1
12	12	22	25	232	34	98	312	34	6.0	99	58	6.0
13	12	24	25	258	32	101	265	30	5.5	37	365	4.7
14	12	30	32	232	31	110	250	32	4.4	19	102	5.5
15	11	33	45	182	30	124	250	42	3.6	14	35	4.9
16	9.5	30	267	116	29	166	250	38	3.6	10	104	21
17	12	33	425	110	28	166	235	32	3.2	7.4	144	88
18	11	36	308	105	27	154	205	26	4.0	5.7	45	41
19	11	45	244	100	26	135	205	26	11	4.7	29	13
20	12	37	265	95	25	124	178	23	17	4.9	30	11
21	10	32	129	90	24	205	144	20	10	3.6	28	8.9
22	16	39	32	83	24	166	133	20	7.8	2.7	21	7.0
23	29	43	23	98	23	144	112	23	14	2.0	10	5.5
24	21	35	29	87	23	154	96	26	21	1.5	15	4.9
25	18	30	50	79	23	178	84	21	12	1.1	113	4.4
26	14	30	45	71	23	475	76	18	8.9	.8	96	3.8
27	14	25	41	63	23	1,550	70	16	35	.7	51	3.6
28	14	30	38	96	23	690	59	14	26	.5	20	4.7
29	12	26	37	240		418	54	13	17	.5	18	15
30	11	21	38	180		348	51	12	18	.8	18	32
31	11		50	140		280		11		2.0	13	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	29	9.5	14.5	0.085	0.10
November	45	8.0	28.3	.170	.19
December	425	21	85.6	.507	.58
January	862	63	221	1.31	1.51
February	110	23	40.1	.237	.25
March	4,600	23	427	2.53	2.92
April	3,230	51	507	3.00	3.35
May	46	11	29.3	.173	.20
June	35	3.2	10.8	.064	.07
July	99	.5	14.2	.054	.10
August	365	.6	45.1	.291	.34
September	86	3.6	12.7	.075	.08
The year	4,600	.5	120	.710	9.69

Captina Creek at Armstrongs Mills, Ohio

Location.- Chain gage in NE $\frac{1}{4}$ sec. 10, T. 5 N., R. 4 W., at highway bridge half a mile east of Armstrongs Mills, Belmont County, and two-thirds of a mile below Anderson Run.

Drainage area.- 135 square miles.

Records available.- August 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 4,050 second-feet Jan. 7 (gage height, 8.00 feet); no flow July 25-27.
1928-34: Maximum discharge recorded, 8,190 second-feet Mar. 14, 1933 (gage height, 11.65 feet); no flow at times during 1929, 1930, 1932, 1934.

Remarks.- Records good except those for high water and those estimated because of ice, Nov. 15-18, Dec. 11-15, 28-30, Jan. 18-20, Jan. 29 to Mar. 2, Mar. 11-13, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	7.6	25	503	55	10	155	27	6.2	8.8	4.6	7.3
2	19	8.8	24	280	45	10	126	30	5.4	7.2	4.2	6.9
3	16	10	99	196	40	1,540	100	27	4.6	3.5	237	6.1
4	14	8.2	161	161	36	1,540	483	24	4.2	2.0	119	5.8
5	12	10	85	326	32	464	293	23	4.2	1.5	20	5.2
6	12	64	61	222	29	409	309	23	3.5	1.3	11	4.9
7	11	32	49	2,700	27	206	1,300	22	6.2	1.5	5.4	4.9
8	12	22	41	640	25	130	483	18	8.2	14	3.8	14
9	10	21	36	375	23	116	309	17	6.2	9.4	3.8	15
10	12	18	25	250	22	82	233	34	14	5.8	2.9	8.3
11	12	18	23	184	20	88	640	27	8.2	123	2.6	5.5
12	11	16	22	143	19	96	375	20	5.4	86	2.3	5.2
13	10	16	22	148	18	110	309	19	3.6	127	3.5	4.9
14	8.6	24	22	146	17	206	247	19	2.9	14	2.3	16
15	7.0	25	23	122	16	165	192	39	1.3	8.2	2.3	8.6
16	6.4	22	1,140	150	15	152	165	37	1.7	5.0	2,490	6.5
17	6.4	20	1,480	97	14	148	138	23	.9	3.8	169	17
18	12	18	765	86	14	192	111	20	1.5	3.5	89	11
19	9.5	36	310	74	13	146	110	17	2.0	2.0	42	6.9
20	8.2	34	326	64	13	109	82	14	2.0	1.5	25	5.2
21	6.4	26	392	72	12	128	73	13	2.6	1.1	18	4.9
22	7.6	43	250	88	12	116	67	17	2.3	.7	14	4.0
23	11	37	172	106	12	66	69	16	2.6	.4	12	4.6
24	19	31	184	66	11	69	54	14	3.8	.1	200	4.0
25	13	28	375	67	11	73	45	12	3.5	0	72	4.3
26	9.5	27	209	74	11	86	44	11	2.6	0	39	4.0
27	8.9	32	172	64	10	1,080	44	10	2.3	0	23	4.6
28	7.6	30	160	77	10	887	44	8.2	3.8	944	18	4.0
29	7.6	30	150	358		309	28	8.8	6.7	27	14	382
30	6.4	27	180	150		233	28	8.2	24	11	11	320
31	6.4		295	90		178		7.2		6.7	8.8	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				23	6.4	10.8	0.080		0.09			
November				64	7.6	24.7	.163		.20			
December				1,480	22	235	1.74		2.01			
January				2,700	64	261	1.93		2.23			
February				55	10	20.8	.154		.16			
March				1,540	10	285	2.11		2.43			
April				1,300	28	222	1.64		1.83			
May				39	7.2	19.5	.144		.17			
June				24	.9	45.8	.036		.04			
July				944	0	118	.339		.39			
August				2,490	2.3	30.1	.874		1.01			
September				382	4.0		.223		.25			
The year				2,700	0	107	.793		10.81			

Middle Island Creek at Little, W. Va.

Location.- Chain gage at highway bridge at Little, Tyler County. Zero of gage is 631.32 feet above mean sea level.

Drainage area.- 458 square miles.

Records available.- May 1915 to September 1922, October 1928 to September 1934.

Extremes.- Maximum discharge recorded during the year, 9,500 second-feet Mar. 4 (gage height, 13.76 feet); minimum, 6.8 second-feet June 13 (gage height, 1.96 feet), 1915-22, 1928-34: Maximum discharge recorded, 18,200 second-feet Jan. 22, 1917 (gage height, 22.22 feet); no flow during part of 1922 and Sept. 1 to Nov. 4, Nov. 7-10, 1930.
Maximum stage known, about 33.5 feet during August 1875.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	15	240	3,040	230	54	420	93	26	37	13	36
2	41	15	184	2,950	212	51	355	73	24	26	12	30
3	37	15	144	1,170	240	3,760	272	70	20	20	19	25
4	32	17	137	645	163	9,300	233	63	19	15	11	21
5	30	18	288	890	137	4,800	420	57	16	12	13	20
6	26	22	290	1,690	134	3,300	450	58	13	12	30	17
7	23	71	260	4,040	107	1,390	610	55	13	15	13	15
8	23	184	240	5,750	100	820	680	46	11	18	20	20
9	21	181	205	1,620	115	610	480	46	11	17	17	25
10	23	144	163	890	78	750	370	44	10	15	15	19
11	21	126	126	575	61	715	450	48	8.1	71	13	20
12	18	100	112	420	61	540	1,030	48	8.1	450	12	18
13	17	86	95	340	52	480	1,030	66	7.2	193	12	14
14	15	67	80	330	57	1,540	855	80	7.2	71	34	20
15	17	61	78	345	64	1,320	750	77	8.1	51	64	34
16	16	58	480	330	64	855	540	395	8.1	48	1,030	51
17	17	52	3,380	340	100	645	420	260	9.1	35	2,380	26
18	15	50	5,280	296	144	575	316	174	11	25	680	18
19	18	52	1,170	264	115	480	268	126	15	19	304	15
20	30	184	890	235	137	395	230	98	27	13	174	12
21	24	223	4,040	198	95	320	202	67	16	12	100	13
22	21	157	1,100	170	86	276	177	63	13	19	67	17
23	27	126	610	205	82	244	154	134	134	16	54	17
24	29	144	395	610	102	230	134	252	645	31	233	18
25	25	160	890	450	70	205	117	167	280	16	420	18
26	23	126	610	645	66	345	102	98	134	44	340	17
27	20	112	480	680	60	3,760	88	77	91	46	240	17
28	18	109	370	540	55	5,460	88	55	86	42	137	14
29	15	191	395	480		1,540	98	44	57	78	91	26
30	17	256	420	370		820	102	36	51	24	61	1,320
31	16		350	395		540		31		16	45	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					55	15	23.5	0.051		0.06		
November					266	15	104	1.227		.25		
December					5,280	73	757	1.65		1.90		
January					5,750	170	997	2.18		2.51		
February					240	52	107	.234		.24		
March					9,300	51	1,488	3.25		3.75		
April					1,030	88	381	.832		.93		
May					395	31	96.8	.211		.24		
June					645	7.2	59.3	.129		.14		
July					450	12	48.8	.107		.12		
August					2,380	12	218	.476		.55		
September					1,320	12	64.4	.141		.16		
The year					9,300	7.2	366	.799		10.65		

Little Muskingum River at Fay, Ohio

Location.- Staff gage in SE $\frac{1}{4}$ sec. 10, T. 3 N., R. 7 W., 300 feet above Buckeye Pipe Line Co.'s pumping station and 1 mile northwest of Fay. Zero of gage is 612.71 feet above mean sea level.

Drainage area.- 259 square miles.

Records available.- May 1915 to September 1922, October 1925 to September 1934.

Average discharge.- 16 years, 355 second-feet.

Extremes.- Maximum discharge recorded during year, about 5,420 second-feet Mar. 4 (gage height, 14.20 feet); minimum, 0.1 second-foot Oct. 28, 31, Nov. 1.
1915-22, 1925-34: Maximum discharge, about 13,400 second-feet Mar. 14, 1933 (gage height, 23.28 feet, from flood marks); minimum, 0.02 second-foot Aug. 11-14, 1930, June 26-27, 1932.

Remarks.- Records fair. Discharge estimated because of ice effect Dec. 12, 27-31, Jan. 28 to Mar. 2. Discharge estimated Apr. 15 to May 19.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	.1	2.6	1,240	50	14	217	46	11	20	22	31
2	5.1	.2	2.6	860	45	14	190	43	10	19	25	25
3	4.2	.3	2.6	445	40	1,860	154	40	8.9	17	321	22
4	3.6	.6	4.4	446	35	5,340	136	38	6.8	13	205	19
5	3.6	.8	5.4	388	32	3,070	190	36	6.8	7.1	92	17
6	3.6	1.5	5.4	362	30	1,550	508	34	6.8	5.3	45	14
7	3.6	1.5	5.4	2,800	28	574	642	32	6.8	4.4	29	12
8	3.6	1.5	7.2	2,540	26	339	446	31	6.8	38	20	15
9	3.1	1.5	7.2	508	24	246	314	29	6.8	13	17	36
10	2.3	.8	7.2	362	22	236	268	28	6.8	9.8	14	25
11	2.3	.8	5.4	338	21	226	338	50	6.8	13	14	18
12	2.3	.8	4.0	314	20	290	416	40	6.8	64	20	14
13	1.7	1.5	3.3	290	19	676	362	30	6.8	38	15	12
14	1.3	4.4	2.6	290	18	860	362	30	6.1	19	11	12
15	1.3	4.4	3.3	268	17	574	320	29	5.1	13	9.8	10
16	1.3	3.3	190	208	16	476	270	60	5.1	9.8	1,080	10
17	1.2	2.6	1,430	190	16	446	240	57	3.6	7.5	1,200	9.8
18	1.0	2.6	2,360	154	16	368	200	45	5.1	5.7	183	9.0
19	.9	1.5	974	136	15	338	180	30	6.1	5.3	92	9.0
20	.5	1.5	1,390	120	15	279	150	23	5.1	4.4	46	9.0
21	.4	1.5	712	120	15	246	130	22	5.1	4.4	34	9.0
22	.3	1.5	290	91	14	217	115	46	5.1	5.3	25	9.0
23	.3	1.5	217	136	14	190	100	88	123	82	59	7.5
24	.2	1.5	226	208	14	181	90	52	59	19	1,810	7.5
25	.2	1.9	290	246	14	208	80	32	36	13	1,680	7.5
26	.1	3.3	190	163	14	268	70	23	24	9.8	450	7.5
27	.3	3.9	170	128	14	1,010	65	17	42	7.5	143	7.5
28	.3	2.6	160	105	14	2,450	60	16	97	2,260	82	7.5
29	.2	2.6	135	86		1,240	55	14	50	423	59	9.0
30	.2	2.6	120	70		574	50	14	26	61	48	109
31	.1		160	60		508		14		42	36	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					5.1	0.1	1.75	0.0066		0.008		
November					4.4	.1	1.84	.0071		.008		
December					2,360	2.6	293	1.13		1.30		
January					2,800	60	441	1.70		1.96		
February					50	14	22.1	.085		.09		
March					5,340	14	803	3.10		3.57		
April					642	50	224	.865		.97		
May					88	14	35.1	.136		.16		
June					123	3.6	20.0	.077		.09		
July					2,260	4.4	105	.405		.47		
August					1,810	9.8	254	.981		1.13		
September					109	7.5	17.0	.066		.07		
The year.					5,340	.1	187	.722		9.83		

Tuscarawas River at Clinton, Ohio

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 32, T. 14 N., R. 10 W., 100 feet below highway bridge at Clinton and 1 mile above mouth of Chippewa Creek.

Drainage area.- 165 square miles.

Records available.- May 1926 to September 1934.

Extremes.- Maximum discharge during year, 814 second-feet Apr. 5 (gage height, 8.39 feet); minimum, 12 second-feet Dec. 2 (gage height, 2.20 feet).
1926-34: Maximum discharge, 2,660 second-feet Mar. 15, 1933 (gage height, 13.53 feet); minimum, 10 second-feet Nov. 6, 1928.

Remarks.- Records fair. Discharge estimated because of ice effect Jan. 29-31 and because of missing gage-height record Feb. 6-12. Ohio Canal diverts small amount of water from Tuscarawas River at Portage Lakes, 3 miles south of Akron. Part of diverted water flows into Cuyahoga River Basin. Flow slightly regulated at headwaters.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	23	18	50	33	27	49	40	32	43	33	28
2	29	21	18	43	34	30	48	40	31	45	40	30
3	29	22	20	36	30	210	43	40	30	45	187	26
4	29	20	23	30	26	384	360	41	29	41	59	28
5	27	20	23	37	26	368	788	40	32	53	41	32
6	27	23	20	37	25	244	569	38	32	69	38	38
7	27	24	20	36	25	101	296	38	32	48	40	58
8	26	22	22	37	24	65	144	38	29	48	40	144
9	29	22	20	37	24	50	98	38	37	46	39	69
10	31	23	19	35	24	43	78	38	31	47	46	50
11	30	20	20	33	25	39	104	38	32	45	58	49
12	28	22	20	31	25	37	108	36	32	52	41	45
13	27	20	21	32	26	38	95	34	30	55	38	43
14	26	25	20	35	29	52	105	37	29	40	40	45
15	27	23	25	36	30	46	105	39	30	34	90	51
16	26	20	34	36	27	45	90	38	29	34	101	140
17	27	21	27	32	27	46	90	37	29	36	62	83
18	26	20	29	30	27	48	72	34	44	34	46	63
19	24	20	27	29	29	46	65	32	50	34	38	54
20	21	22	29	32	37	45	52	29	36	57	36	51
21	23	23	36	29	27	44	48	33	34	42	37	46
22	30	34	31	29	29	46	44	38	43	36	35	46
23	26	29	30	37	27	34	48	40	54	35	36	41
24	24	26	28	34	27	33	49	41	31	38	40	41
25	23	25	29	34	26	27	48	42	32	36	37	43
26	22	24	27	34	27	40	44	36	65	36	29	40
27	21	26	27	34	39	95	42	31	76	38	31	43
28	20	25	27	34	27	64	41	34	47	35	34	41
29	20	24	21	34		55	36	41	42	30	33	144
30	20	20	21	34		48	38	34	46	29	29	85
31	23		27	33		48		33		34	29	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				31		20		25.6		0.155		0.18
November				34		20		23.0		.139		.16
December				36		18		24.6		.148		.17
January				50		29		34.5		.209		.24
February				39		24		27.9		.169		.18
March				384		27		80.6		.488		.66
April				788		36		127		.770		.86
May				42		29		37.0		.224		.26
June				65		29		37.5		.227		.25
July				69		29		41.8		.253		.29
August				167		28		47.2		.286		.33
September				144		26		56.6		.343		.38
The year				788		18		46.9		.264		3.86

Tuscarawas River near Dover, Ohio

Location.- Water-stage recorder in T. 9 N., R. 2 W., at highway bridge $2\frac{1}{2}$ miles north-east of Dover and 3 miles above mouth of Sugar Creek. Zero of gage is 861.51 feet above mean sea level.

Drainage area.- 1,398 square miles.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 1,365 second-feet.

Extremes.- Maximum discharge during year, 11,600 second-feet Apr. 5 (gage height, 9.45 feet); maximum gage height, 10.9 feet Mar. 4 (ice jam); minimum daily discharge (estimated), 150 second-feet Feb. 20-23.
1923-34: Maximum discharge, 22,500 second-feet Mar. 16, 1933 (gage height, 13.33 feet); minimum daily discharge, 68 second-feet Aug. 5, 1933.

Remarks.- Records good except those below 300 second-feet prior to Mar. 5 and those estimated because of ice effect, Nov. 18-19, Dec. 11-15, 26-31, Jan. 16-21, Jan. 30 to Mar. 4, Mar. 11-13, which are fair. Small amount of water diverted into Cuyahoga River Basin by Ohio Canal at Portage Lakes. No appreciable flow in Ohio Canal at this gaging station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	224	158	219	664	320	160	1,340	498	288	347	309	314
2	213	158	219	1,030	280	370	1,250	486	272	314	267	331
3	208	158	219	705	260	1,950	1,120	486	256	293	1,590	409
4	191	158	242	551	240	7,700	4,690	480	261	251	1,300	363
5	186	158	276	568	220	6,000	10,600	474	314	261	619	325
6	180	213	288	622	210	4,000	9,380	456	363	309	409	288
7	174	236	276	817	200	2,150	5,980	428	369	414	331	277
8	196	236	247	1,640	190	1,250	3,880	414	298	403	288	890
9	208	236	230	1,530	180	884	2,500	403	304	352	267	1,500
10	208	213	213	1,180	170	724	1,860	420	277	309	261	749
11	202	213	200	903	170	660	1,980	414	288	298	398	546
12	213	213	180	697	170	570	2,560	409	293	468	731	438
13	208	213	160	644	160	630	2,100	397	261	403	1,960	374
14	196	224	170	705	160	996	1,860	386	251	397	1,700	358
15	208	213	180	636	160	1,160	1,920	414	246	336	612	341
16	174	200	582	607	160	932	1,640	403	241	426	1,080	1,240
17	219	190	885	537	160	892	1,490	386	231	369	1,640	2,270
18	208	190	1,260	470	160	908	1,300	363	309	288	1,020	1,420
19	196	200	876	460	160	908	1,120	347	1,010	261	689	836
20	180	219	689	430	150	812	998	320	619	256	546	612
21	196	259	666	370	150	892	892	320	456	267	486	504
22	213	270	607	374	150	989	828	331	386	293	420	466
23	247	300	502	400	150	868	828	320	516	261	360	426
24	270	306	467	426	150	661	812	314	598	246	480	397
25	230	276	406	426	150	612	724	314	426	236	528	368
26	213	264	350	393	150	605	675	309	363	201	504	369
27	196	230	320	393	150	2,280	633	309	870	216	420	347
28	202	242	290	360	160	3,760	698	293	834	226	363	347
29	202	253	280	362		2,980	660	293	492	197	369	740
30	164	242	300	360		1,920	522	272	386	236	347	1,700
31	168		390	330		1,440		293		272	325	
Month	Maximum				Minimum		Mean		Per square mile		Run-off in inches	
October	270				158		203		0.145		0.17	
November	306				158		221		.158		.18	
December	1,260				160		393		.281		.32	
January	1,640				330		632		.462		.52	
February	320				150		181		.129		.13	
March	7,700				160		1,634		1.17		1.35	
April	10,600				522		2,221		1.59		1.77	
May	498				272		379		.271		.31	
June	1,010				231		403		.288		.32	
July	468				197		303		.217		.25	
August	1,960				261		672		.481		.55	
September	2,270				277		651		.466		.52	
The year.	10,600				160		659		.471		6.39	

Tuscarawas River at Newcomerstown, Ohio

Location.- Water-stage recorder in T. 5 N., R. 3 W., at highway bridge three-quarters of a mile east of Newcomerstown. Zero of gage is 785.03 feet above mean sea level.

Drainage area.- 2,432 square miles.

Records available.- September 1921 to September 1934.

Average discharge.- 13 years, 2,325 second-feet.

Extremes.- Maximum discharge during year, 14,800 second-feet Apr. 6 (gage height, 8.33 feet); minimum, 195 second-feet July 29, 31.
1921-34: Maximum discharge, 32,900 second-feet Mar. 17, 1933 (gage height, 13.55 feet); minimum, 120 second-feet Aug. 7, 1930.
Flood of March 1913 reached stage of about 21.5 feet, present gage datum (estimated discharge, 130,000 second-feet).

Remarks.- Records good except those estimated because of ice effect, Nov. 16-19, Dec. 26-30, Jan. 29 to Mar. 4, Mar. 10-13, which are fair. Small amount of water is diverted into Cuyahoga River Basin by Ohio Canal at Portage Lakes. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	495	271	370	905	650	450	3,120	858	320	493	250	300
2	405	275	380	1,950	620	1,000	2,620	834	310	401	320	310
3	345	271	340	2,060	600	1,950	2,320	802	295	350	565	345
4	318	267	336	1,560	580	6,580	3,240	756	275	350	2,320	390
5	322	265	440	1,530	560	11,100	10,100	742	260	1,940	1,410	340
6	295	295	495	1,460	540	10,100	14,100	728	325	1,940	665	290
7	295	350	490	1,900	520	6,190	11,900	679	469	1,940	440	280
8	295	322	420	3,390	500	3,380	7,560	630	401	517	380	300
9	287	370	395	3,880	480	2,100	5,120	617	345	457	315	2,050
10	279	365	355	3,190	460	1,610	3,800	553	350	370	290	1,310
11	295	308	365	2,500	440	1,260	3,320	578	320	370	511	728
12	295	300	340	1,550	420	1,060	4,220	556	290	380	756	565
13	295	304	304	1,560	400	1,060	3,800	565	275	644	874	445
14	265	365	322	1,460	390	1,410	3,320	529	260	630	3,190	365
15	271	351	322	1,460	370	2,220	3,250	565	250	505	1,980	360
16	263	310	517	1,530	360	2,000	3,120	566	235	380	1,260	541
17	271	290	1,510	1,280	350	1,830	2,740	578	230	541	2,440	2,800
18	336	290	2,500	1,080	350	1,830	2,500	535	270	412	2,220	2,440
19	313	300	2,740	940	340	1,940	2,160	499	802	330	1,360	1,360
20	295	331	2,160	870	340	1,780	1,940	423	1,050	305	818	802
21	279	380	1,800	787	330	1,780	1,790	396	644	270	658	658
22	304	450	1,700	787	330	2,000	1,610	406	505	255	547	517
23	331	484	1,460	787	320	2,000	1,610	412	523	290	469	475
24	380	462	1,160	774	320	1,560	1,610	401	802	270	493	604
25	360	480	1,040	748	310	1,310	1,410	396	661	240	604	396
26	355	350	940	748	310	1,260	1,260	380	497	230	624	335
27	313	410	880	748	310	2,790	1,260	390	948	210	505	355
28	287	360	820	722	310	7,540	1,070	370	1,660	210	445	320
29	287	375	800	706		6,680	1,010	345	1,040	200	396	451
30	275	365	780	690		5,720	922	340	624	210	380	1,510
31	267		780	670		4,370		320		210	350	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	495	263		495	263		312			0.128		0.15
November	405	265		405	265		340			.140		.16
December	345	304		2,740	304		879			.361		.42
January	318	670		3,880	670		1,423			.585		.67
February	322	310		650	310		422			.174		.18
March	11,100	1,060		11,100	1,060		3,167			1.30		1.50
April	14,100	922		14,100	922		3,586			1.47		1.64
May	858	320		858	320		540			.222		.26
June	1,660	230		1,660	230		507			.208		.23
July	1,940	200		1,940	200		511			.210		.24
August	3,190	250		3,190	250		895			.368		.42
September	2,800	280		2,800	280		731			.301		.34
The year	14,100	200		14,100	200		1,112			.457		6.21

Muskingum River at Dresden, Ohio

Location.- Water-stage recorder at highway bridge half a mile east of Dresden, Muskingum County, and half a mile below Wakatomika Creek. Zero of gage is 693.15 feet above mean sea level.

Drainage area.- 5,982 square miles.

Records available.- September 1921 to September 1934.

Average discharge.- 13 years, 5,897 second-feet.

Extremes.- Maximum discharge during year, 21,800 second-feet Mar. 6 (gage height, 14.91 feet); maximum gage height, 16.80 feet Mar. 4 (ice jam); minimum daily discharge (estimated), 490 second-feet July 29.

1921-34: Maximum discharge, 63,300 second-feet Mar. 23, 1927 (gage height, 28.0 feet); minimum, 335 second-feet June 25, 1925 (gage height, 2.73 feet).

Maximum known stage, 46.0 feet on present gage, determined from high-water mark, occurred in March 1913 (estimated discharge, 180,000 second-feet).

Remarks.- Records good except those estimated because of ice effect, Dec. 27-31 and Jan. 27 to Mar. 4, and those estimated because of changes in wickets at Dam 11, June 12 to July 5 and July 12 to Aug. 5, which are fair. Occasional slight regulation at Dam 11, 7 miles below gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,690	665	960	2,620	1,200	790	9,300	2,090	698	1,500	570	698
2	1,210	656	940	4,120	1,200	780	7,090	1,970	707	1,400	620	626
3	1,000	647	930	5,430	1,170	3,600	5,760	1,910	689	1,300	1,020	795
4	880	638	910	4,640	1,140	14,200	5,160	1,850	635	1,200	1,200	980
5	810	638	940	3,980	1,130	19,500	9,630	1,730	610	1,100	2,700	806
6	770	701	1,130	4,120	1,100	21,500	16,800	1,730	601	1,020	2,030	680
7	740	800	1,310	5,300	1,070	17,300	18,100	1,610	626	872	1,200	618
8	720	850	1,210	7,610	1,040	11,700	15,800	1,610	743	891	844	793
9	730	910	1,100	9,300	1,020	7,640	13,000	1,440	788	1,050	725	1,600
10	750	950	1,020	8,540	1,000	5,020	10,300	1,380	770	970	626	2,220
11	750	920	940	7,270	980	3,900	8,350	1,350	725	910	743	1,490
12	730	860	880	5,750	970	3,200	8,350	1,330	680	1,000	779	1,070
13	710	840	810	4,640	960	3,140	8,730	1,350	620	1,100	1,050	900
14	701	840	800	3,980	960	3,340	7,810	1,330	560	1,600	2,600	788
15	656	840	830	3,840	950	4,170	7,270	1,330	540	1,500	2,090	734
16	647	820	1,060	3,700	940	4,880	7,090	1,330	550	1,400	3,870	1,630
17	656	840	2,760	3,490	930	4,600	6,400	1,310	570	1,300	5,020	2,540
18	674	770	6,110	3,210	920	4,450	5,760	1,280	600	1,000	5,160	3,140
19	720	850	7,990	2,860	920	4,600	5,160	1,250	760	840	4,030	2,410
20	710	900	7,270	2,660	910	4,310	4,600	1,130	1,400	720	2,870	1,670
21	683	920	6,070	2,460	910	4,310	4,170	1,010	2,000	650	1,970	1,290
22	692	1,020	5,130	2,260	900	4,600	3,760	960	1,500	610	1,400	1,100
23	750	1,120	4,400	2,260	880	4,880	3,620	940	1,700	560	1,080	960
24	930	1,210	3,660	2,340	860	4,170	3,470	910	1,800	520	1,050	872
25	940	1,190	3,140	2,410	840	3,400	3,270	891	1,700	500	1,140	770
26	910	1,140	2,930	2,340	830	3,140	3,000	882	1,500	520	1,030	752
27	850	1,100	2,500	2,100	820	4,870	2,740	872	1,600	500	1,070	725
28	770	1,050	2,100	1,800	800	13,500	2,600	834	3,500	520	1,020	716
29	730	1,020	1,800	1,500		14,400	2,410	815	4,000	490	834	1,170
30	720	980	1,700	1,300		13,000	2,220	779	2,000	520	788	2,200
31	692		2,000	1,200		11,500		779		540	725	
Month	Maximum					Minimum		Mean		Per square mile	Run-off in inches	
October	1,690					647		804		0.134	0.15	
November	1,210					638		890		.149	.17	
December	7,990					810		2,427		.406	.47	
January	9,300					1,200		3,836		.641	.74	
February	1,200					800		977		.163	.17	
March	21,500					780		7,238		1.21	1.39	
April	18,100					2,220		7,051		1.18	1.32	
May	2,090					779		1,287		.215	.25	
June	4,000					540		1,172		.196	.22	
July	1,600					490		923		.154	.18	
August	5,160					570		1,673		.280	.32	
September	3,140					618		1,225		.205	.23	
The year	21,500					490		2,470		.413	5.61	

Muskingum River at McConnellsville, Ohio

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 11, T. 10 N., R. 12 W., above Dam 7, at McConnellsville. Zero of gage is at elevation of crest of dam, 650.31 feet above mean sea level.

Drainage area.- 7,411 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 6,798 second-feet.

Extremes.- Maximum discharge during year, 23,000 second-feet Mar. 6 (gage height, 5.77 feet); minimum, 485 second-feet July 29 (gage height, 0.11 foot), 1921-34: Maximum discharge, 80,700 second-feet Mar. 19, 1933 (gage height, 12.29 feet); minimum, about 218 second-feet Aug. 25, 1930 (gage height, -0.65 foot). Maximum stage known, 33.5 feet, present gage datum, Mar. 27 1913 (estimated discharge, 200,000 second-feet).

Remarks.- Records excellent except those for low water and those estimated because of ice effect, Dec. 27 to Jan. 1, Jan. 28 to Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,160	657	1,230	3,300	1,500	920	10,800	2,550	895	2,040	628	772
2	1,690	857	1,130	4,250	1,450	920	8,380	2,390	819	1,620	1,260	729
3	1,270	876	1,130	5,620	1,420	4,300	6,700	2,320	800	1,400	1,440	672
4	1,130	857	1,250	5,460	1,390	12,200	5,790	1,990	819	1,300	1,250	933
5	1,030	876	1,210	5,000	1,350	19,400	6,770	2,020	772	1,380	2,880	971
6	971	1,070	1,270	5,000	1,320	23,000	14,700	2,070	743	1,150	2,890	838
7	857	1,150	1,420	7,990	1,300	20,600	20,000	1,990	743	1,050	1,870	757
8	857	1,130	1,600	10,600	1,260	14,700	18,200	1,830	786	1,030	1,250	686
9	971	1,150	1,440	10,600	1,230	9,950	15,200	1,740	971	1,110	871	708
10	914	1,110	1,340	10,200	1,200	6,540	12,200	1,760	1,030	1,150	838	1,950
11	876	1,130	1,360	8,600	1,180	4,840	9,950	1,870	1,010	1,090	743	1,900
12	876	1,090	1,150	6,900	1,160	3,820	9,050	1,640	800	1,190	819	1,420
13	857	1,090	1,070	5,460	1,150	3,650	9,720	1,580	686	1,250	933	1,110
14	800	1,070	990	4,840	1,150	4,250	8,820	1,620	677	1,990	1,170	952
15	729	1,070	990	4,540	1,140	4,540	7,960	1,670	567	1,690	3,540	819
16	786	990	2,250	4,400	1,130	5,460	7,740	1,600	628	1,510	6,000	1,220
17	800	914	3,220	4,100	1,120	5,300	7,100	1,420	597	1,580	7,790	2,570
18	757	857	7,740	3,820	1,100	5,150	6,320	1,550	676	1,210	5,460	3,050
19	772	971	9,060	3,570	1,090	5,460	5,790	1,490	1,230	1,090	4,690	2,810
20	800	1,170	8,380	3,160	1,090	5,300	5,150	1,400	2,090	857	3,570	1,950
21	757	1,230	7,740	3,050	1,080	5,300	4,690	1,340	2,190	757	2,550	1,550
22	772	1,320	6,140	2,850	1,070	5,300	4,250	1,230	1,600	686	1,800	1,400
23	895	1,440	5,150	2,830	1,050	5,460	4,100	1,170	1,870	648	1,490	1,170
24	952	1,490	4,400	2,810	1,030	5,150	3,960	1,130	1,850	577	1,340	1,050
25	1,050	1,510	3,960	2,860	1,000	4,250	3,680	1,110	1,900	533	1,270	933
26	1,050	1,510	3,570	2,660	980	3,960	3,460	1,050	1,530	567	1,270	819
27	1,030	1,420	3,000	2,680	960	7,300	3,290	1,010	1,720	541	1,150	800
28	933	1,340	2,500	2,400	940	13,700	3,050	1,050	5,480	622	1,190	757
29	857	1,300	2,100	2,000		16,200	2,830	990	4,540	517	1,070	1,530
30	914	1,270	2,000	1,600		14,700	2,700	952	2,830	557	833	3,600
31	895		2,300	1,400		13,200		952		608	757	
Month	Maximum					Minimum	Mean			Per square mile	Run-off in inches	
October	2,160					729	968			0.131	0.15	
November	1,510					857	1,137			.153	.17	
December	9,050					990	2,970			.401	.46	
January	10,600					1,400	4,970			.650	.73	
February	2,320					940	1,173			.158	.16	
March	23,000					920	8,220			1.11	1.28	
April	20,000					2,700	7,745			1.05	1.17	
May	2,550					952	1,564			.211	.24	
June	5,460					567	1,425			.192	.21	
July	2,040					517	1,073			.145	.17	
August	7,790					622	2,094			.283	.33	
September	3,600					672	1,548			.182	.20	
The year	23,000					517	2,879			.388	5.27	

Sandy Creek at Sandyville, Ohio

Location.- Water-stage recorder in sec. 8, T. 10 N., R. 1 W., 100 feet below highway bridge half a mile south of Sandyville.

Drainage area.- 481 square miles.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 521 second-feet.

Extremes.- Maximum discharge during year, 7,110 second-feet Apr. 5 (gage height, 8.82 feet); minimum, 27 second-feet Oct. 29 (gage height, 0.99 foot).
1923-34: Maximum discharge, 15,300 second-feet Feb. 28, 1929; minimum, 26 second-feet Sept. 22, 1932 (gage height, 0.98 foot).

Remarks.- Records good below and fair above 1,000 second-feet. Discharge estimated because of ice effect Dec. 11-14 and Jan. 29 to Mar. 1.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	83	94	306	140	79	499	165	71	86	62	96
2	56	76	83	372	134	113	476	163	72	90	82	78
3	65	77	82	248	126	1,170	419	156	58	87	366	72
4	80	78	130	192	120	3,360	3,270	150	72	80	244	80
5	82	96	110	226	115	2,060	5,740	142	74	90	116	78
6	82	113	116	249	108	1,150	2,460	128	108	128	102	76
7	80	99	105	340	105	566	1,610	128	104	108	78	79
8	77	98	98	687	100	372	1,080	119	78	120	72	758
9	90	96	94	593	98	265	769	122	76	92	70	494
10	78	94	80	472	95	229	622	119	66	96	72	180
11	91	90	90	362	94	186	838	132	84	96	194	131
12	80	80	85	254	93	192	973	118	70	94	403	99
13	73	102	85	273	91	208	741	110	66	91	434	107
14	76	95	85	290	90	555	710	128	64	82	498	86
15	65	94	104	272	88	420	728	139	60	80	291	101
16	83	84	408	272	86	354	589	128	74	152	582	640
17	116	91	405	224	84	302	828	113	67	78	486	804
18	89	88	597	166	84	330	436	104	181	72	326	466
19	76	80	346	178	82	288	398	94	416	64	204	262
20	78	108	264	154	80	278	350	80	142	80	189	182
21	78	104	289	150	79	324	312	102	95	68	146	152
22	102	132	270	150	78	352	301	96	97	58	126	128
23	105	117	206	174	76	244	306	87	194	60	116	114
24	97	106	189	179	75	219	296	89	115	62	190	98
25	90	98	182	160	74	188	255	80	108	43	190	103
26	84	86	170	156	74	258	235	92	122	62	136	112
27	82	106	137	150	74	1,450	224	78	178	68	108	96
28	88	96	153	164	74	1,600	212	83	114	57	109	92
29	65	98	139	157		995	187	74	105	54	99	395
30	76	84	134	162		628	172	74	120	62	90	726
31	82		142	148		532		80		82	78	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				116	65	83.7	0.174	0.20				
November				132	76	95.0	.198	.22				
December				597	80	177	.368	.42				
January				687	148	255	.530	.61				
February				140	74	93.5	.194	.20				
March				3,360	79	621	1.29	1.49				
April				5,740	172	858	1.78	1.99				
May				165	74	112	.233	.27				
June				416	58	108	.225	.25				
July				152	43	82.0	.170	.20				
August				522	62	200	.416	.48				
September				804	72	229	.476	.53				
The year.				5,740	43	243	.505	6.86				

Nimishillen Creek at North Industry, Ohio

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 35, T. 10 N., R. 8 W., just below railroad bridge and 1 mile southeast of North Industry. Zero of gage is 970.77 feet above mean sea level.

Drainage area.- 175 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 151 second-feet.

Extremes.- Maximum discharge during year, about 1,820 second-feet Apr. 4 (gage height, 5.68 feet); minimum, 3.6 second-feet Sept. 2.
1921-34: Maximum discharge, about 4,000 second-feet Feb. 26, 1929 (gage height, 9.9 feet); minimum, that of Sept. 2, 1934.

Remarks.- Records good except those above 1,500 second-feet and those estimated because of ice effect, Feb. 18 to Mar. 1, which are fair. Slight regulation by steel mills at Canton, about 4 miles above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	31	33	119	43	27	121	52	22	36	22	24
2	34	31	30	97	42	79	112	54	24	30	115	17
3	34	31	51	67	37	870	106	46	20	36	291	17
4	36	27	45	57	35	799	1,330	48	27	22	51	19
5	35	63	43	75	36	395	831	47	20	100	31	21
6	37	37	38	75	36	248	382	41	74	44	26	23
7	39	34	35	112	38	136	319	38	21	69	24	190
8	29	34	35	133	37	95	197	45	22	40	23	447
9	33	32	32	103	36	75	149	36	25	27	23	98
10	36	30	31	89	38	62	128	48	23	30	27	40
11	36	35	35	71	34	58	275	37	22	63	242	34
12	36	30	32	65	34	65	210	40	23	33	66	30
13	34	33	32	67	33	81	132	34	22	24	177	26
14	32	32	35	69	33	231	204	51	20	22	54	30
15	31	36	83	69	37	126	181	38	24	177	112	41
16	56	27	247	70	36	99	144	39	20	63	213	534
17	42	29	204	55	32	86	126	37	24	27	92	232
18	36	33	197	52	31	91	104	37	280	25	50	95
19	35	28	95	48	31	82	93	30	273	28	47	58
20	35	34	95	47	30	81	85	29	73	40	50	46
21	33	51	93	42	30	96	78	36	40	24	32	40
22	56	43	75	41	30	92	78	32	120	22	33	37
23	39	40	62	57	29	57	63	28	163	23	36	34
24	37	33	61	49	29	59	75	33	92	25	68	34
25	34	34	47	48	28	44	64	33	49	33	40	34
26	34	31	50	48	28	123	67	34	135	27	31	31
27	34	35	44	47	28	534	61	23	78	46	30	30
28	34	34	44	53	27	214	61	28	52	30	31	28
29	26	34	41	50		143	82	28	67	25	30	265
30	31	30	43	46		126	50	26	61	40	26	171
31	30		58	39		121		29		26	24	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	56	26	35.8	0.205	0.24
November	63	27	34.4	.197	.22
December	247	30	66.0	.377	.43
January	133	39	66.1	.378	.44
February	45	27	35.5	.191	.20
March	870	27	174	.994	1.15
April	1,330	50	193	1.13	1.26
May	54	23	37.3	.213	.25
June	280	20	63.5	.363	.40
July	177	22	40.5	.231	.27
August	291	22	68.3	.390	.45
September	534	17	90.9	.519	.58
The year.	1,330	17	75.8	.433	5.89

Stillwater Creek at Uhrichsville, Ohio

Location.- Staff gage at waterworks pumping station 1 mile south of Uhrichsville and Dennison, Tuscarawas County. Zero of gage is 839.23 feet above mean sea level.

Drainage area.- 367 square miles.

Records available.- July 1922 to September 1934.

Average discharge.- 12 years, 422 second-feet.

Extremes.- Maximum discharge during year, 2,630 second-feet Mar. 5, 6 (gage height, 5.40 feet); minimum, 2.1 second-feet July 28-30 (gage height, 1.22 feet).
1922-34: Maximum discharge, about 7,430 second-feet Dec. 16, 1927 (gage height, 11.8 feet); no flow July 31 to Nov. 17, 1930, Sept. 24-25, 1932; minimum gage height, -0.55 foot Aug. 21, 1930.

Remarks.- Records fair prior to May 20, when flashboards were placed on dam below gage; poor thereafter. Discharge estimated Dec. 27-31, Jan. 15-20, Jan. 28 to Feb. 28, May 18-21. Municipal water supply for Dennison and Uhrichsville diverted at gage not included in records except in part of monthly table. Gage-height record and record of diversions furnished by Dennison Water Supply Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	47	75	88	120	182	654	100	6.0	8.1	3.8	6.6
2	44	47	75	67	110	355	611	92	6.0	7.3	6.6	6.0
3	34	41	75	67	110	1,340	418	92	6.0	5.1	7.3	4.1
4	34	54	75	83	100	2,240	482	83	6.0	3.4	11	2.8
5	26	54	75	174	96	2,560	568	83	5.1	2.4	36	2.7
6	21	75	116	215	90	2,630	840	67	4.4	2.2	13	2.7
7	26	116	116	568	85	1,760	890	60	19	3.6	7.3	2.4
8	21	133	88	1,160	80	376	654	54	7.3	7.3	10	2.6
9	19	67	75	1,340	75	354	790	41	6.0	10	7.3	2.7
10	21	60	67	1,050	70	313	742	34	6.0	25	7.3	3.0
11	21	54	60	742	68	272	654	34	6.0	14	7.3	4.7
12	21	54	60	568	65	272	504	30	6.0	8.9	7.3	4.4
13	19	54	60	397	62	223	568	26	6.0	163	10	4.1
14	26	54	44	376	58	334	568	44	5.1	139	11	3.8
15	30	54	47	340	56	439	525	47	5.1	68	11	3.8
16	30	54	697	320	54	418	482	47	5.1	19	51	4.4
17	30	54	1,050	300	52	418	397	34	5.1	13	363	3.8
18	34	47	1,100	280	50	439	355	26	5.1	11	471	3.8
19	50	79	940	260	48	418	292	18	5.1	11	498	3.4
20	54	112	840	240	46	376	292	14	5.1	11	237	3.4
21	71	133	654	223	45	418	272	11	5.1	5.5	39	2.8
22	92	120	504	210	43	460	223	14	5.1	6.6	8.9	3.4
23	108	116	439	202	42	397	198	14	3.8	4.7	8.9	5.1
24	92	108	397	198	40	292	219	14	5.1	4.4	51	4.4
25	83	92	292	182	38	252	198	14	7.3	3.2	36	3.8
26	57	92	231	174	37	219	141	14	7.3	2.7	11	3.6
27	47	92	210	170	37	840	149	14	5.1	2.4	8.9	3.4
28	47	83	180	160	37	1,760	108	11	72	2.2	10	3.8
29	41	75	160	140		2,120	108	11	41	2.1	11	68
30	47	67	130	130		2,180	92	7.3	14	2.1	7.3	222
31	47		110	120		1,400		6.0		3.0	7.3	

Month	Observed			Diverion (mean)	Corrected for diversion		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	108	19	43.5	1.9	45.4	0.124	0.14
November	133	41	76.3	1.9	78.2	.213	.24
December	1,100	44	291	2.0	293	.798	.92
January	1,340	67	340	2.0	342	.932	1.07
February	120	37	64.8	2.2	67.0	2.135	1.19
March	2,630	182	840	2.2	842	2.229	2.64
April	890	92	433	2.1	435	1.19	1.33
May	100	6.0	37.3	2.1	39.4	.107	.12
June	72	3.8	9.71	2.2	11.9	.032	.04
July	163	2.1	18.4	2.2	20.6	.056	.06
August	498	3.8	63.7	2.1	65.8	.179	.21
September	222	2.4	13.2	1.8	15.0	.041	.05
The year	2,630	2.1	188		2.1	190	7.01

Black Fork at Loudonville, Ohio

Location.- Chain gage in NW $\frac{1}{4}$ sec. 1, T. 19 N., R. 16 W., at highway bridge at Loudonville, $1\frac{1}{2}$ miles below mouth of Big Run. Zero of gage is 928.46 feet above mean sea level.

Drainage area.- 342 square miles.

Records available.- May 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,750 second-feet Mar. 3 (gage height, 7.56 feet); minimum, 29 second-feet Aug. 7, 8 (gage height, 2.28 feet).
1931-34: Maximum discharge recorded, 3,500 second-feet Mar. 21, 1933 (gage height, 9.96 feet); minimum, that of Aug. 7, 8, 1934.

Remarks.- Records good except those estimated because of ice effect, Jan. 30 to Feb. 2, Feb. 9-11, 20, Feb. 24 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	50	75	147	83	58	366	94	49	66	36	33
2	69	50	73	165	88	64	310	91	48	50	55	69
3	58	51	75	199	89	1,430	245	91	45	47	37	78
4	56	50	80	165	88	996	258	86	42	44	34	49
5	56	51	79	154	88	760	510	86	46	40	33	41
6	55	64	79	152	84	892	600	83	68	37	31	36
7	54	59	79	165	82	892	632	81	57	38	29	41
8	55	58	79	176	77	600	632	73	55	52	29	162
9	64	61	75	188	71	324	540	76	59	37	31	70
10	61	62	72	188	67	232	366	75	69	38	31	49
11	51	64	72	165	65	170	338	72	49	39	36	42
12	50	64	65	141	64	146	284	69	45	102	35	40
13	49	64	67	130	70	146	284	69	45	52	49	36
14	49	64	67	132	70	182	284	72	42	41	116	36
15	47	61	69	128	69	182	284	75	40	36	74	36
16	47	54	134	136	65	219	258	70	40	36	88	49
17	54	56	130	126	69	219	271	66	40	35	80	38
18	54	65	188	114	64	245	245	64	108	35	55	36
19	51	73	147	118	65	219	206	62	112	34	45	36
20	49	70	145	110	64	219	182	60	66	33	41	35
21	49	70	139	99	64	232	158	57	52	34	38	35
22	79	120	116	93	87	284	144	59	57	33	38	35
23	77	102	110	114	70	245	141	60	112	31	37	35
24	64	97	106	110	64	194	159	60	74	30	38	36
25	67	91	101	110	59	163	128	66	55	30	40	35
26	62	89	97	110	54	194	120	60	76	30	37	35
27	55	88	88	104	55	570	118	56	118	35	34	35
28	54	82	82	102	56	450	108	55	112	49	34	36
29	51	80	80	112		480	102	52	108	37	36	194
30	50	79	75	100		450	98	52	102	36	32	70
31	50		84	88		422		50		37	33	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					79	47	55.7	0.163		0.19		
November					120	50	69.6	.204		.23		
December					188	65	94.5	.276		.32		
January					199	88	134	.392		.45		
February					89	54	70.2	.205		.21		
March					1,430	58	363	1.12		1.29		
April					632	98	278	.813		.91		
May					94	50	69.3	.203		.23		
June					118	40	66.4	.194		.22		
July					102	30	41.1	.120		.14		
August					116	29	43.3	.127		.15		
September					194	33	52.3	.153		.17		
The year					1,430	29	113	.330		4.51		

Mohican River at Greer, Ohio

Location.— Water-stage recorder in NW¼ sec. 10, T. 8 N., R. 10 W., 3,000 feet below highway bridge at Greer, Knox County. Zero of gage is 872.91 feet above mean sea level.

Drainage area.— 942 square miles.

Records available.— September 1921 to September 1934.

Average discharge.— 13 years, 887 second-feet.

Extremes.— Maximum discharge during year, 5,840 second-feet Mar. 4 (gage height, 5.77 feet); maximum stage, 10.70 feet Mar. 3 (backwater from ice jam); minimum, 68 second-feet Sept. 26 (gage height, 1.29 feet).

1921-34: Maximum discharge recorded, 15,400 second-feet Mar. 21, 1927 (gage height, 12.7 feet); minimum, that of Sept. 26, 1934.

Maximum known stage, 27.0 feet during flood of March 1913 (discharge estimated, 55,000 second-feet).

Remarks.— Records good except those estimated because of ice effect, Nov. 17-21, Dec. 13-15, 28, 29, Jan. 18-21, Jan. 31 to Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	133	159	466	150	130	1,010	237	109	247	125	90
2	130	130	159	570	140	200	887	232	112	226	104	566
3	123	133	155	481	140	3,400	747	227	109	187	138	267
4	123	133	166	400	130	5,050	1,100	223	107	180	238	190
5	123	144	170	393	130	3,170	3,820	218	107	155	128	140
6	123	155	170	472	120	2,190	2,720	214	118	158	109	130
7	126	163	166	472	120	1,580	2,000	204	152	145	98	670
8	133	159	163	612	120	1,190	1,620	191	128	230	93	360
9	140	155	159	560	110	747	1,310	186	132	158	90	230
10	144	163	155	510	110	532	983	182	148	155	98	180
11	144	163	144	418	110	446	998	171	138	138	166	138
12	140	163	112	364	100	438	1,050	167	115	378	155	107
13	137	170	110	334	100	430	935	163	112	214	370	98
14	140	170	120	356	98	438	911	175	112	158	457	90
15	144	163	150	334	96	487	935	182	107	141	234	98
16	133	124	630	327	94	503	839	178	104	145	513	141
17	148	120	540	296	92	579	815	171	104	148	345	107
18	155	120	960	270	90	650	702	163	441	115	222	98
19	144	130	540	250	88	588	598	156	758	109	169	87
20	144	150	400	230	87	532	512	148	263	101	141	82
21	144	170	371	220	86	588	454	141	166	98	125	80
22	184	214	327	214	84	804	422	138	148	95	115	80
23	245	234	284	255	82	650	415	135	403	97	109	80
24	192	205	260	277	81	487	393	135	255	85	112	77
25	170	196	260	250	80	400	357	145	169	80	125	77
26	159	188	229	250	80	452	324	141	280	80	109	73
27	148	188	145	234	80	1,930	512	135	1,540	97	98	73
28	148	174	140	240	80	1,520	286	128	882	125	104	77
29	140	166	140	186		1,330	264	125	391	109	104	417
30	137	163	156	161		1,160	248	132	303	133	90	324
31	137		214	150		1,090		118		242	82	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	245	123	147	0.156	0.18
November	234	120	161	.171	.19
December	960	110	253	.269	.31
January	612	150	340	.361	.42
February	150	60	103	.109	.11
March	5,050	130	1,090	1.16	1.34
April	3,820	248	933	.990	1.10
May	237	118	170	.180	.21
June	1,540	104	267	.283	.32
July	378	60	152	.161	.19
August	513	82	167	.177	.20
September	670	73	174	.185	.21
The year	5,050	73	331	.351	4.78

Walhonding River at Pomerene, Ohio

Location.- Water-stage recorder at highway bridge at Pomerene, Coshocton County, a third of a mile above Honey Run. Zero of gage is 805.53 feet above mean sea level.

Drainage area.- 1,488 square miles.

Records available.- September 1921 to September 1934. December 1910 to March 1913 published as "Mohican River at Pomerene".

Average discharge.- 13 years (1921-34), 1,455 second-feet.

Extremes.- Maximum discharge during year, 8,470 second-feet Mar. 4 (gage height, 7.30 feet); maximum stage, 9.96 feet Mar. 3 (backwater from ice jam); minimum, 105 second-feet Sept. 23, 24 (gage height, 1.12 feet).
1921-34: Maximum discharge, 27,800 second-feet Feb. 28, 1929 (gage height, 15.5 feet); minimum, 101 second-feet Aug. 30, 1925 (gage height, 1.04 feet).
Flood of March 1913 reached a stage of 21.8 feet, determined by leveling to high-water mark (discharge estimated, 80,000 second-feet).

Remarks.- Records good except those estimated because of ice effect, Nov. 17-21, Dec. 11-14, 28-30, Jan. 14-18, Jan. 28 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	239	226	244	688	320	200	1,400	368	193	315	277	141
2	230	226	234	1,140	300	400	1,270	362	190	305	197	168
3	213	226	230	888	290	4,980	1,090	357	179	248	193	501
4	205	222	244	730	280	7,100	2,320	341	170	248	249	260
5	201	226	248	730	270	4,810	3,520	331	176	227	230	193
6	205	248	252	910	260	3,510	3,370	315	170	204	163	170
7	213	257	248	991	260	2,250	2,670	310	179	212	160	170
8	222	262	239	1,260	240	1,660	2,320	287	186	264	143	769
9	234	248	234	1,120	230	1,140	1,720	287	179	260	146	555
10	234	248	230	991	220	834	1,360	278	183	208	124	273
11	230	244	220	830	220	640	1,310	273	190	235	222	204
12	226	239	210	702	210	559	1,720	256	166	490	302	179
13	222	248	190	654	210	567	2,810	248	160	675	227	166
14	209	252	220	620	200	608	1,540	260	153	341	634	183
15	209	252	252	600	200	726	1,390	273	150	248	336	156
16	209	222	635	580	190	717	1,290	278	147	208	678	170
17	205	220	1,010	560	190	775	1,180	260	144	223	1,010	166
18	222	220	1,980	530	180	901	1,060	252	204	186	426	160
19	222	230	1,260	502	180	890	945	248	1,380	166	282	160
20	213	250	888	455	180	765	824	231	446	160	235	156
21	209	270	800	448	180	785	726	231	256	150	190	144
22	230	292	760	388	180	1,050	650	219	216	144	183	153
23	308	314	618	402	180	968	640	216	502	141	173	124
24	319	319	534	510	180	707	624	208	408	144	176	119
25	270	292	486	462	180	583	552	208	264	130	166	138
26	257	275	478	432	180	544	499	219	223	136	170	136
27	248	275	388	395	180	2,660	478	208	1,610	122	163	153
28	239	266	370	370	180	2,920	446	212	1,560	130	183	138
29	230	252	360	360		1,980	414	193	559	156	160	168
30	226	244	350	350		1,660	391	212	391	150	150	718
31	226		376	330		1,610		179		480	141	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	319		201		230		0.155		0.18			
November	319		220		282		.169		.19			
December	1,980		190		477		.321		.37			
January	1,260		530		643		.432		.50			
February	320		180		216		.145		.15			
March	7,100		200		1,594		1.07		1.23			
April	3,520		391		1,344		.903		1.01			
May	368		179		262		.176		.20			
June	1,610		144		365		.245		.27			
July	675		122		236		.159		.18			
August	1,010		124		259		.174		.20			
September	769		119		228		.153		.17			
The year.	7,100		119		511		.343		4.65			

Kokosing River near Millwood, Ohio

Location.- Water-stage recorder in sec. 3, T. 6 N., R. 10 W., at highway bridge $2\frac{1}{2}$ miles southeast of Millwood.

Drainage area.- 472 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 472 second-feet.

Extremes.- Maximum discharge during year, 3,300 second-feet Mar. 3 (gage height, 7.88 feet); maximum stage, 10.1 feet Mar. 3 (backwater from ice jam); minimum, 34 second-feet Aug. 10, Sept. 6, 7 (gage height, 3.06 feet).

1921-34: Maximum discharge recorded, 16,500 second-feet Mar. 20, 1927 (gage height, 12.0 feet at former site); minimum, 33 second-feet Aug. 17, 26, 1932 (gage height, 3.08 feet).

Flood of March 1913 reached a stage corresponding to 22.0 feet on present gage (estimated discharge, 28,000 second-feet).

Remarks.- Records good except those estimated because of ice, Nov. 18-20, Dec. 11-14, Feb. 1 to Mar. 1, Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	76	84	334	100	61	421	130	60	64	80	41
2	80	74	76	506	95	109	395	124	58	60	60	41
3	76	72	78	294	90	2,640	342	122	54	56	70	41
4	74	72	93	230	86	2,100	350	120	53	60	64	41
5	74	74	93	303	62	1,480	404	115	54	53	48	42
6	72	102	93	390	78	1,020	395	112	54	54	42	38
7	74	95	91	453	74	500	605	110	53	58	41	39
8	76	89	86	632	70	331	531	105	51	91	39	62
9	82	86	82	476	67	244	395	103	56	83	36	62
10	82	84	76	371	64	217	327	103	62	70	36	53
11	76	80	71	290	62	178	462	100	56	114	133	51
12	74	82	67	247	60	168	623	91	51	340	146	44
13	72	89	68	243	58	170	495	89	48	402	65	44
14	71	86	70	266	56	207	456	94	46	160	72	41
15	67	84	78	247	54	224	475	105	46	103	53	41
16	71	78	243	243	52	220	430	98	42	80	498	42
17	74	76	442	223	51	231	374	91	41	68	384	44
18	76	78	1,100	182	50	275	316	87	221	58	155	46
19	72	81	488	171	49	258	279	85	248	54	98	46
20	71	85	312	157	48	220	244	80	94	51	76	42
21	71	91	312	144	47	248	224	78	68	49	64	42
22	80	100	299	144	46	327	214	76	66	46	54	44
23	109	100	226	171	45	258	227	70	254	41	51	44
24	106	95	189	219	45	207	210	70	108	42	53	44
25	93	93	179	182	45	181	184	72	76	41	51	44
26	89	89	171	168	45	278	168	70	76	38	51	41
27	82	91	153	157	45	1,350	163	68	281	39	48	39
28	78	86	126	157	45	992	150	66	142	44	46	42
29	74	84	118	136		611	140	64	98	44	42	35
30	80	78	114	121		480	134	62	76	42	42	127
31	76		138	116		443		62		252	42	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				109	67	78.6	0.167	0.19				
November				102	72	85.0		.20				
December				1,100	67	197		.46				
January				632	116	257		.63				
February				100	45	61.0		.13				
March				2,640	61	524	1.11	1.28				
April				623	134	338		.80				
May				130	62	91.0		.22				
June				281	41	89.8		.21				
July				402	38	88.9		.22				
August				488	56	89.0		.22				
September				127	38	48.4		.11				
The year				2,640	38	163		4.67				

Killbuck Creek at Killbuck, Ohio

Location.- Chain gage in SW $\frac{1}{4}$ sec. 6, T. 8 N., R. 7 W., at highway bridge at Killbuck, Holmes County. Black Creek enters from right one-eighth of a mile above gage. Zero of gage is 788.05 feet above mean sea level.

Drainage area.- 466 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,680 second-feet Mar. 4 (gage height, 13.34 feet); minimum, 29 second-feet July 29 (gage height, 2.06 feet).
1931-34: Maximum discharge recorded, 3,650 second-feet May 14, 1933 (gage height, 14.64 feet); minimum, 24 second-feet Aug. 14, 1932 (gage height, 1.96 feet).

Remarks.- Records good except those for periods of ice effect, Nov. 16-18, Dec. 12-14, 27-30, Jan. 29 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	49	57	216	105	70	336	118	45	80	49	35
2	45	48	54	194	105	90	321	111	44	69	44	156
3	45	47	58	148	105	2,190	276	104	40	62	559	52
4	43	47	69	134	98	2,470	623	104	40	55	148	42
5	42	48	73	201	92	1,410	1,140	97	40	52	62	38
6	42	71	65	201	82	1,220	1,290	90	40	73	47	35
7	42	66	60	261	74	719	1,640	84	40	61	41	37
8	43	61	58	291	68	336	1,360	83	38	66	40	479
9	52	60	57	231	65	216	953	61	42	54	40	111
10	51	60	55	201	63	201	591	76	45	50	40	66
11	48	59	54	164	61	231	655	75	40	54	75	51
12	47	58	54	148	60	306	655	70	38	52	52	46
13	46	59	56	148	64	178	527	66	36	56	575	42
14	45	60	58	156	68	306	495	78	36	48	527	39
15	44	61	63	141	66	246	495	83	35	44	148	141
16	45	61	463	134	64	231	431	73	34	216	399	1,090
17	48	61	261	118	66	216	415	69	36	62	246	156
18	48	62	431	104	68	321	336	64	50	47	111	90
19	48	62	216	104	70	216	291	62	336	40	72	62
20	46	60	171	90	68	216	261	59	104	38	60	58
21	46	62	148	90	67	246	231	58	58	37	52	53
22	56	76	134	97	65	276	216	57	47	38	47	48
23	84	73	118	126	63	201	231	55	383	36	45	52
24	63	67	111	111	62	171	216	53	126	34	46	63
25	56	63	111	97	59	148	178	57	66	33	45	46
26	52	63	97	104	54	186	164	54	58	31	42	43
27	52	66	93	97	59	1,020	164	52	1,070	32	40	42
28	50	62	93	97	63	793	148	50	495	36	39	43
29	50	61	93	100	479	134	50	171	32	39	336	
30	49	60	105	105	383	126	48	126	31	38	291	
31	49		118	106	361		46		261	36		

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	84	42	49.2	0.106	0.12
November	75	47	60.4	.130	.15
December	463	54	118	.253	.29
January	291	90	146	.313	.36
February	105	54	71.6	.154	.16
March	2,470	70	502	1.08	1.25
April	1,640	126	496	1.06	1.18
May	118	46	71.8	.164	.18
June	1,070	34	125	.268	.30
July	261	31	60.6	.130	.15
August	575	36	123	.264	.30
September	1,090	35	128	.275	.31
The year	2,470	31	163	.350	4.75

Wills Creek at Birds Run, Ohio

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 19, T. 4 N., R. 4 W., 200 feet below mouth of Birds Run at Birds Run, Guernsey County. Zero of gage is 740.98 feet above mean sea level.

Drainage area.- 730 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 4,330 second-feet Mar. 5 or 8 (gage height, 18.15 feet); minimum, 8.3 second-feet July 30, Aug. 2 (gage height, 1.55 feet).
1928-34: Maximum discharge, 8,450 second-feet Mar. 17, 1933 (gage height, 23.08 feet); minimum, 2.2 second-feet Sept. 25, 28, 1932 (gage height, 1.45 feet).
Maximum stage known, 27.0 feet, present gage datum, March 1913 (estimated discharge, 15,000 second-feet).

Remarks.- Records good except those estimated because of ice effect, Dec. 11-13, 30, Jan. 15-18, Jan. 29 to Feb. 28, and those estimated Mar. 1-7, June 29 to July 25, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	30	75	604	180	200	1,770	142	38	30	10	27
2	105	29	68	1,510	160	900	894	135	34	25	11	26
3	76	29	58	1,340	150	2,200	610	131	19	20	166	18
4	60	29	81	822	150	3,900	504	128	17	18	1,060	27
5	47	37	152	654	140	4,250	846	124	23	15	614	27
6	40	34	250	966	130	4,200	990	116	27	13	203	24
7	34	33	187	1,340	120	3,100	1,040	112	22	20	82	37
8	33	70	136	2,420	120	2,360	2,160	104	17	30	44	27
9	32	88	109	2,840	110	1,220	2,450	97	15	40	32	22
10	37	68	88	2,480	100	544	2,030	89	13	50	29	12
11	35	54	80	1,840	98	454	1,250	88	11	100	32	17
12	32	47	66	1,060	92	454	1,160	111	12	250	23	21
13	31	42	60	654	86	444	1,510	135	12	500	23	25
14	29	41	55	566	82	467	1,060	109	22	400	28	27
15	26	40	54	500	78	990	870	90	22	150	38	18
16	23	37	197	460	76	1,010	750	84	19	100	215	37
17	30	35	1,560	410	72	798	610	94	15	70	1,280	22
18	29	36	2,660	370	70	726	524	122	14	40	1,620	38
19	36	38	3,050	349	66	750	444	101	24	30	1,160	39
20	38	38	2,810	331	64	702	396	79	17	30	634	39
21	34	58	2,030	261	62	728	349	66	22	25	220	32
22	32	72	1,520	265	60	822	306	60	22	25	97	28
23	37	75	1,010	273	58	702	306	54	32	25	66	27
24	51	73	632	297	54	484	306	50	19	20	54	15
25	50	80	524	289	52	358	273	47	13	20	48	28
26	48	76	632	242	50	358	221	45	29	19	124	40
27	41	77	588	242	49	1,090	194	43	95	12	150	27
28	41	69	376	235	48	3,050	188	37	204	17	79	28
29	37	70	289	220		3,710	174	39	120	15	53	94
30	29	76	280	200		3,740	156	35	50	10	40	399
31	34		306	190		3,150		29		11	32	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	164	88	23	44.2	0.061	0.07						
November	105	29	52.9	0.072								
December	3,050	54	645	0.894								
January	2,840	190	782	1.07								
February	180	48	92.0	1.26								
March	4,250	200	1,544	2.12								
April	2,450	156	805	1.10								
May	142	29	87.0	.119								
June	204	11	33.3	.046								
July	500	10	68.7	.094								
August	1,620	10	267	.366								
September	599	12	41.3	.057								
The year.	4,250	10	376	.615								6.98

Licking River at Toboso, Ohio

Location.-- Water-stage recorder at highway bridge at Toboso, Licking County, 3 miles below mouth of Rock Fork. Zero of gage is 744.84 feet above mean sea level.

Drainage area.-- 672 square miles.

Records available.-- September 1921 to September 1934.

Average discharge.-- 13 years, 635 second-feet.

Extremes.-- Maximum discharge during year, 6,090 second-feet Mar. 3 (gage height, 9.30 feet); minimum, 46 second-feet Aug. 11 (gage height, 1.14 feet).
1921-34: Maximum discharge recorded, 17,000 second-feet Feb. 26, 1929 (gage height, 17.9 feet); minimum, 34 second-feet Jan. 1, 1931.
Flood of March 1913 reached a stage of 20.0 feet, present gage datum (estimated discharge, 20,000 second-feet).

Remarks.-- Records good except those estimated because of ice effect, Nov. 17-19, Dec. 11-13, Jan. 28 to Feb. 5, Feb. 8 to Mar. 1, and those estimated Dec. 17 to Jan. 22, which are fair. Flow slightly regulated at Buckeye Lake, on South Fork of Licking River.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	87	94	350	110	50	398	142	69	129	49	62
2	110	87	90	560	100	163	351	159	69	123	151	59
3	94	87	94	400	98	4,780	310	136	67	101	146	57
4	90	87	98	260	92	3,610	294	132	64	87	98	57
5	90	94	98	340	87	1,540	271	129	74	84	74	57
6	87	129	94	410	83	1,050	275	126	61	79	67	55
7	87	117	90	700	80	768	351	126	113	93	59	75
8	90	106	90	1,500	76	428	402	116	90	96	57	94
9	94	98	87	800	73	314	334	110	123	84	53	62
10	90	94	83	500	70	275	275	110	123	79	53	57
11	87	94	90	350	68	237	339	107	90	79	77	56
12	87	90	78	290	66	218	491	104	78	195	74	59
13	83	90	78	270	64	222	402	96	71	614	64	59
14	83	94	80	280	62	275	364	98	67	332	62	57
15	77	94	87	270	60	314	351	104	64	186	61	65
16	74	87	161	260	59	286	330	104	62	149	2,200	209
17	87	84	350	240	57	282	302	101	59	113	1,940	81
18	83	82	1,200	220	56	457	271	93	84	96	439	64
19	83	86	600	200	54	491	241	87	370	87	250	62
20	80	90	400	190	53	486	222	87	215	79	178	57
21	80	98	340	180	52	486	207	84	126	74	139	67
22	94	113	350	180	50	491	197	81	167	71	113	64
23	125	110	300	227	49	340	204	79	504	64	104	55
24	106	102	280	232	48	275	193	79	297	64	138	53
25	98	98	220	206	47	244	182	61	162	69	119	53
26	94	102	200	185	47	273	175	79	133	59	93	53
27	90	106	190	169	47	1,390	168	76	627	71	84	57
28	87	102	180	160	47	1,730	155	76	589	59	79	59
29	87	98	170	140		708	149	74	246	55	71	501
30	90	94	160	130		536	142	71	155	53	69	323
31	87		160	120		451		69		53	64	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	125	74	90.9	0.135	0.16
November	129	82	96.7	.144	.16
December	1,200	79	212	.315	.36
January	1,500	120	333	.496	.57
February	110	47	66.2	.099	.10
March	4,780	50	747	1.11	1.28
April	491	142	278	.414	.46
May	142	69	99.9	.149	.17
June	627	89	168	.250	.28
July	614	53	115	.171	.20
August	2,200	49	233	.347	.40
September	501	53	90.6	.135	.15
The year	4,780	47	213	.317	4.29

Little Kanawha River at Glenville, W. Va.

Location.- Chain gage at highway bridge at Glenville, Gilmer County, 0.3 mile below Sycamore Creek. Zero of gage is 697.79 feet above mean sea level.

Drainage area.- 385 square miles.

Records available.- June 1915 to September 1922 (gage heights only); December 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,790 second-feet Jan. 7 (gage height, 23.85 feet); minimum, 6.0 second-feet Sept. 28; minimum gage height, 1.60 feet July 28, 27.

1915-22, 1929-34: Maximum gage height recorded, 31.7 feet Mar. 13, 1918 (discharge not determined). No flow part of September, October 1930, September, October 1932.

Remarks.- Records good. Discharge estimated May 13.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	39	287	1,100	295	152	615	345	40	243	97	30
2	131	36	238	1,100	280	189	460	278	35	92	104	25
3	164	33	204	855	220	6,590	375	243	32	57	1,100	22
4	104	32	615	695	210	6,050	317	210	28	40	775	20
5	71	35	442	1,510	180	4,120	317	190	27	32	278	15
6	59	238	390	1,720	152	2,810	360	172	37	24	164	13
7	48	495	1,140	8,240	128	1,390	360	139	41	20	97	11
8	41	350	775	4,450	121	2,620	408	124	34	18	72	10
9	35	250	495	1,550	100	1,510	360	110	32	15	55	9.5
10	31	182	345	960	61	1,390	281	97	31	14	350	8.9
11	28	147	274	666	66	1,260	317	117	51	72	535	7.8
12	26	117	226	500	76	1,220	1,390	200	181	232	181	7.4
13	24	110	173	430	107	1,020	1,220	155	495	139	132	24
14	24	117	156	400	88	2,230	855	110	317	76	81	20
15	24	156	156	340	107	1,470	695	110	181	47	67	9.8
16	26	147	4,460	268	708	1,020	495	425	117	39	1,030	8.6
17	215	139	5,630	251	500	815	460	485	81	29	2,100	18
18	139	287	3,490	200	385	655	560	330	72	21	696	22
19	86	695	1,430	189	355	615	304	243	72	16	235	38
20	65	460	4,290	170	268	575	278	172	67	12	161	29
21	55	345	3,400	152	200	495	254	147	72	10	100	20
22	47	274	1,220	136	200	442	232	110	56	9.0	70	16
23	42	287	735	144	210	408	210	97	62	8.6	57	12
24	45	262	535	355	161	390	161	86	81	7.9	45	9.8
25	52	215	695	295	128	442	164	86	117	7.4	636	8.0
26	76	182	735	370	136	1,340	159	76	72	6.5	335	7.0
27	65	274	1,600	540	144	2,350	304	81	52	6.5	130	7.2
28	55	360	975	540	170	5,210	815	72	46	375	94	6.4
29	49	330	695	400		1,850	575	58	44	200	76	20
30	46	315	535	280		1,060	408	49	43	104	57	708
31	41		535	243		735		44		132	42	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	215	24	63.0	0.164	0.19
November	695	32	230	.597	.67
December	5,830	156	1,196	3.11	3.58
January	8,240	136	936	2.43	2.80
February	708	66	207	.538	.66
March	6,590	152	1,681	4.37	5.04
April	1,390	159	451	1.17	1.30
May	495	44	167	.434	.60
June	495	27	87.2	.226	.25
July	375	6.5	67.9	.176	.20
August	2,100	42	326	.847	.98
September	708	6.4	38.8	.101	.11
The year.	8,240	6.4	459	1.19	16.18

Little Kanawha River at Grantsville, W. Va.

Location.- Chain gage at highway bridge at Grantsville, Calhoun County.

Drainage area.- 913 square miles.

Records available.- December 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 22,000 second-feet Jan. 7 (gage height, 29.42 feet); minimum, 12 second-feet July 27 (gage height, 6.23 feet).
1928-34: Maximum discharge recorded, 31,900 second-feet Jan. 30, 1932 (gage height, 35.82 feet); no flow Sept. 10 to Nov. 16, 1930.

Remarks.- Records good except those estimated Oct. 1-4, 6-8, 15, 22, Oct. 25 to Nov. 21, Nov. 26 to Dec. 16, which are poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	80	630	3,130	478	395	1,280	640	66	73	278	87
2	250	80	575	2,910	590	680	1,000	545	51	246	390	64
3	400	70	475	1,960	522	11,600	790	455	43	136	1,060	55
4	650	65	410	1,480	478	16,800	615	410	39	93	1,810	44
5	478	65	1,230	1,720	375	10,400	568	330	34	54	945	35
6	375	70	885	3,130	375	7,610	690	278	30	41	478	40
7	300	475	780	16,300	315	3,610	945	278	29	34	262	45
8	225	990	2,280	17,700	278	5,630	890	231	47	32	168	38
9	185	660	1,560	4,410	355	4,090	790	194	54	26	121	35
10	58	500	990	2,260	315	3,450	640	170	61	28	158	28
11	54	565	690	1,540	180	3,130	840	197	102	87	1,810	22
12	50	295	550	1,210	155	2,020	2,120	246	262	370	945	18
13	47	235	450	935	206	2,140	2,380	278	522	545	500	17
14	44	220	350	880	295	5,450	1,810	205	590	278	330	31
15	44	235	310	780	245	3,690	1,390	186	330	136	740	42
16	44	310	310	612	880	2,380	1,060	228	199	78	3,370	51
17	197	295	8,920	522	1,150	1,780	945	840	136	64	5,130	52
18	315	280	11,700	478	830	1,540	740	568	112	50	2,080	43
19	248	575	3,450	435	730	1,210	640	350	116	34	880	44
20	177	1,390	8,400	395	730	1,100	545	262	129	24	545	66
21	131	920	10,400	355	590	1,040	478	222	114	20	375	64
22	115	500	3,050	295	435	830	432	180	100	21	251	54
23	100	680	1,660	295	500	780	390	158	89	16	188	47
24	87	545	1,160	612	590	730	330	145	82	14	174	40
25	85	415	1,320	730	500	935	295	136	89	14	155	34
26	105	390	1,390	680	415	2,840	246	127	132	14	295	38
27	150	365	3,450	935	395	6,350	370	112	110	12	635	35
28	125	550	2,200	1,100	500	14,500	1,690	98	87	73	415	29
29	110	720	1,430	1,040		5,210	1,160	93	64	478	186	37
30	100	660	1,160	730		2,440	890	85	48	350	144	355
31	90		1,160	500		1,690		73		312	106	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				650	44	176	0.193		0.22			
November				1,390	65	433	.474		.53			
December				11,700	310	2,365	2.59		2.99			
January				17,700	295	2,228	2.44		2.81			
February				1,160	155	478	.524		.55			
March				18,800	395	4,131	4.52		5.21			
April				2,380	245	899	.984		1.10			
May				840	73	268	.294		.34			
June				590	29	129	.141		.16			
July				545	12	121	.133		.15			
August				5,130	106	804	.881		1.02			
September				355	17	52.9	.058		.06			
The year				18,800	12	1,018	1.12		15.14			

Hocking River at Enterprise, Ohio

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 5, T. 14 N., R. 17 W., at highway bridge at Enterprise, Hocking County. Buck Run enters on right 4 miles above gage. Prior to Oct. 24, 1933, chain gage with same datum at same location. Zero of gages is 723.60 feet above mean sea level.

Drainage area.- 460 square miles.

Records available.- May 1931 to September 1934.

Extremes.- Maximum discharge during year, 2,960 second-feet Mar. 3 (gage height, 8.59 feet); minimum, 32 second-feet Sept. 7, 8, 10 (gage height, 0.90 foot).
1931-34: Maximum discharge recorded, 9,730 second-feet Mar. 15, 1933 (gage height, 15.22 feet); minimum, 12 second-feet Aug. 19, 1932 (gage height, 0.60 foot).

Remarks.- Records good except those estimated because of ice effect, Dec. 13-15, 28-29, Jan. 30 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	54	82	643	130	55	328	139	60	334	51	37
2	76	56	80	423	126	80	291	133	87	170	50	37
3	69	57	91	325	123	2,380	256	129	54	133	69	36
4	62	57	122	300	120	2,510	240	124	53	172	54	35
5	58	97	116	523	115	1,320	242	122	53	97	44	37
6	57	183	100	438	112	728	540	118	199	79	41	36
7	54	124	91	1,660	110	498	1,600	111	80	76	40	33
8	62	98	86	1,520	100	394	1,150	102	71	150	39	33
9	62	86	82	745	93	316	626	97	101	90	38	34
10	60	77	79	546	91	322	468	102	128	76	76	34
11	54	71	82	438	90	262	618	133	82	75	53	35
12	54	71	65	379	88	267	594	111	60	537	50	37
13	51	72	62	370	87	286	468	97	51	157	41	37
14	46	79	60	379	84	480	408	96	45	111	38	39
15	44	77	58	344	83	483	352	111	45	84	35	37
16	46	64	770	379	81	408	330	120	43	69	1,320	385
17	71	68	964	325	78	359	302	104	42	69	598	160
18	48	79	1,230	272	75	367	270	96	65	59	150	60
19	46	82	508	272	72	356	251	88	111	53	97	45
20	46	79	825	243	70	336	225	79	69	52	73	41
21	48	82	864	224	68	408	216	78	51	48	64	202
22	58	98	468	222	66	379	215	76	46	50	59	89
23	72	100	359	243	64	294	220	69	349	49	66	55
24	66	93	322	224	61	272	197	66	126	42	89	46
25	58	84	322	222	59	254	174	69	65	40	84	44
26	54	86	291	224	57	280	170	68	50	39	57	46
27	52	93	222	211	56	697	170	65	1,220	70	45	59
28	52	93	200	209	55	864	157	64	833	73	43	64
29	51	91	180	155		514	145	64	218	100	42	379
30	52	89	198	140		423	139	63	440	54	40	720
31	54		352	135		367		60		142	39	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	86	44	57.1	0.124	0.14
November	183	54	84.7	.184	.21
December	1,230	60	301	.654	.75
January	1,660	135	411	.893	1.03
February	130	55	86.2	.187	.19
March	2,510	55	547	1.19	1.37
April	1,600	139	379	.824	.92
May	139	60	95.3	.207	.24
June	1,220	42	162	.352	.39
July	537	39	108	.235	.27
August	1,320	35	116	.252	.29
September	720	33	97.7	.212	.24
The year.	2,510	33	205	.446	6.04

Hocking River at Athens, Ohio

Location.- Water-stage recorder at Mill Street Bridge, three-quarters of a mile east of business section of Athens, Athens County. Zero of gage is 815.59 feet above mean sea level.

Drainage area.- 944 square miles.

Records available.- May 1915 to September 1934.

Average discharge.- 19 years, 988 second-feet.

Extremes.- Maximum discharge during year, 8,250 second-feet Mar. 4 (gage height, 15.04 feet); minimum, 46 second-feet Sept. 8 (gage height, 2.45 feet).
1915-34: Maximum discharge recorded, 25,000 second-feet Apr. 18, 1922 (gage height, 21.8 feet); minimum, 9 second-feet Oct. 11, 1930 (gage height, 2.18 feet).
Maximum known stage, from high-water mark, 28.7 feet in January 1907.

Remarks.- Records good except those estimated because of ice effect, Dec. 11-15, 29-30, Jan. 31 to Mar. 1, which are fair. Staff-gage readings by Weather Bureau used June 24 to July 24. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	167	76	107	1,050	230	100	865	255	94	626	236	62
2	138	79	98	1,120	230	121	735	247	89	431	130	62
3	118	79	98	761	220	1,690	638	247	85	287	190	58
4	107	79	116	612	210	6,930	594	240	83	247	143	56
5	100	81	154	780	210	5,270	657	228	78	236	101	54
6	96	102	151	1,030	205	2,360	1,800	217	66	177	83	54
7	92	192	129	3,370	200	1,450	3,340	210	197	148	72	54
8	89	151	116	5,030	190	1,060	3,950	197	121	171	66	56
9	92	121	110	2,060	170	832	1,780	184	116	207	62	51
10	92	102	102	1,260	160	832	1,220	187	143	148	60	54
11	89	96	96	995	150	690	1,260	210	184	174	76	51
12	89	87	90	832	146	613	1,780	217	124	442	81	52
13	83	94	85	748	144	716	1,260	184	96	474	72	67
14	77	89	84	742	143	1,350	1,030	171	81	217	64	242
15	76	96	90	702	141	1,550	665	190	74	160	58	66
16	77	92	555	657	140	1,150	774	240	72	132	170	167
17	77	61	1,740	676	140	962	709	210	68	111	1,510	411
18	79	83	3,730	554	135	898	613	180	72	98	472	216
19	77	89	1,660	511	132	930	682	160	76	96	210	114
20	76	96	1,060	481	128	865	527	148	116	72	148	65
21	74	94	2,070	424	126	832	475	140	96	72	121	74
22	77	98	1,220	398	123	865	442	129	78	85	104	172
23	87	105	832	435	118	722	431	134	268	76	96	137
24	94	107	657	447	112	613	426	124	415	72	150	96
25	92	107	683	393	106	594	375	116	197	72	175	162
26	83	100	612	424	104	780	337	116	118	64	124	197
27	81	102	517	424	100	4,050	332	108	125	66	96	92
28	77	105	388	403	100	5,100	323	106	2,380	98	81	85
29	74	105	340	388		1,900	287	101	1,580	157	76	258
30	81	105	350	260		1,220	271	96	670	148	70	1,090
31	77		414	240		995		96		491	66	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	167	74	89.9	0.095	0.11
November	192	76	99.8	.106	.11
December	3,730	84	595	.630	.73
January	5,030	240	910	.964	1.11
February	230	100	154	.163	.17
March	6,930	100	1,550	1.64	1.89
April	3,950	271	956	1.01	1.13
May	255	96	174	.184	.21
June	2,360	68	266	.282	.31
July	626	64	195	.207	.24
August	1,510	58	167	.177	.20
September	1,090	51	146	.155	.17
The year.	6,930	51	445	.471	6.39

South Fork of New River near Jefferson, N. C.

Location.— Chain gage at highway bridge a quarter of a mile below mouth of Bear Creek and 4 miles southeast of Jefferson, Ashe County.

Drainage area.— 207 square miles.

Records available.— October 1924 to September 1926, July 1928 to September 1934.

Extremes.— Maximum discharge recorded during year, 3,220 second-feet Apr. 10 (gage height, 4.70 feet); minimum, 111 second-feet Feb. 28 (gage height, 1.04 feet).
1924-26, 1928-34: Maximum discharge recorded, 6,660 second-feet, estimated, Aug. 16, 1928 (gage height, 7.55 feet); minimum, 65 second-feet Sept. 9, 1925 (gage height, 0.80 foot).

Remarks.— Records good below 1,000 second-feet and fair above. Small regulation caused by operation of old gristmills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	174	171	134	154	154	309	528	352	272	254	232	272
2	182	174	138	189	174	502	475	352	236	228	220	254
3	182	196	134	204	185	1,000	708	328	232	245	272	228
4	174	220	147	224	216	1,040	376	323	268	189	645	220
5	167	240	147	245	236	1,140	376	314	323	196	332	220
6	160	328	134	276	204	774	376	304	400	220	230	216
7	160	240	154	352	192	528	376	295	585	196	235	204
8	160	204	167	400	208	450	376	276	450	376	844	254
9	160	174	141	290	171	450	1,720	268	425	400	470	304
10	147	178	122	250	167	376	2,380	268	376	323	379	228
11	150	174	134	224	182	319	1,280	268	352	528	231	204
12	154	174	134	212	167	300	844	268	300	450	238	224
13	150	171	134	228	160	304	741	245	295	376	238	224
14	147	167	141	212	204	281	676	260	286	528	332	245
15	154	154	141	196	189	240	585	276	240	319	338	323
16	160	157	134	182	164	245	645	309	228	281	332	1,610
17	884	160	141	178	157	228	676	276	224	228	235	882
18	376	204	134	160	160	228	920	258	585	228	376	502
19	216	167	122	178	154	220	708	240	615	615	376	400
20	169	154	212	174	160	352	615	240	328	290	370	314
21	189	154	216	167	174	400	556	250	263	236	245	276
22	254	157	157	167	178	304	502	268	232	224	232	268
23	254	160	164	167	164	319	475	376	216	212	228	245
24	245	154	138	167	154	309	450	281	212	185	272	240
25	224	154	134	167	154	615	450	245	220	220	708	250
26	196	144	157	160	528	676	425	220	196	182	832	323
27	182	134	178	160	425	1,610	400	216	204	232	430	400
28	182	141	167	160	141	2,600	376	216	263	323	332	268
29	182	141	134	147	141	1,090	376	254	212	272	379	425
30	174	131	120	141	141	774	352	352	204	425	281	376
31	167		141	131		585		328		328	270	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	884	147	209	1.01	1.16
November	328	131	176	.850	.95
December	216	120	146	.705	.81
January	400	131	202	.976	1.13
February	528	141	197	.952	.99
March	2,600	220	596	2.88	3.32
April	2,380	352	658	3.18	3.55
May	376	216	281	1.56	1.67
June	615	196	308	1.49	1.66
July	528	182	300	1.45	1.67
August	882	220	362	1.75	2.02
September	1,610	204	347	1.68	1.87
The year	2,600	120	316	1.53	20.70

New River near Galax, Va.

Location.- Water-stage recorder at highway bridge at Old Town, $3\frac{1}{2}$ miles southwest of Galax, Carroll County.

Drainage area.- 1,131 square miles.

Records available.- November 1929 to September 1934.

Extremes.- Maximum discharge during year, 14,800 second-feet Mar. 28 (gage height, 5.18 feet); minimum, 288 second-feet Feb. 20 (gage height, 0.53 foot).
1929-34: Maximum discharge, 22,000 second-feet (revised) Oct. 17, 1932 (gage height, 8.54 feet); minimum, 247 second-feet July 9, 1930.
Flood of Oct. 2, 1929, reached a stage of about 9 feet, from flood mark (discharge, about 38,000 second-feet).

Remarks.- Records excellent except those estimated Dec. 12-17 and those estimated because of ice, Jan. 29 to Feb. 6, Feb. 27 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	527	599	575	662	400	750	2,160	1,210	1,020	828	857	743
2	551	599	587	799	400	1,600	1,820	1,170	872	1,290	977	730
3	551	611	575	900	450	6,820	1,590	1,160	770	900	814	669
4	553	702	611	756	500	6,140	1,420	1,100	743	857	1,080	635
5	553	730	623	702	600	4,640	1,290	1,090	842	814	2,320	611
6	539	857	611	730	700	3,810	1,260	1,040	1,160	730	1,190	648
7	527	946	623	799	799	2,530	1,170	1,040	1,440	962	898	623
8	539	814	648	1,070	770	2,060	1,120	1,040	1,550	900	2,110	611
9	527	689	648	1,100	648	2,210	2,090	992	1,240	1,390	2,250	662
10	504	635	587	915	500	1,890	7,690	962	1,120	1,780	1,280	702
11	515	599	563	828	504	1,550	4,990	946	1,020	1,800	1,020	635
12	504	587	560	770	563	1,280	3,300	962	962	1,500	1,040	623
13	527	587	560	770	611	1,160	2,580	930	872	1,480	1,020	702
14	527	599	570	799	473	1,070	2,230	888	857	1,170	1,090	648
15	504	623	570	743	553	977	1,930	915	799	1,020	1,020	886
16	494	587	580	676	648	900	1,860	1,120	730	930	992	6,050
17	1,090	515	580	635	648	872	2,260	1,050	676	814	1,100	4,870
18	1,630	599	587	599	599	842	4,000	1,010	770	784	1,140	2,690
19	1,070	648	662	599	553	828	3,540	946	2,180	946	1,140	1,820
20	730	635	930	587	526	962	3,060	886	1,690	1,300	1,010	1,420
21	635	599	1,100	599	462	1,210	2,560	842	1,120	915	872	1,190
22	587	599	930	575	553	1,170	2,210	930	900	743	756	1,120
23	635	599	799	587	611	1,080	1,810	1,010	799	702	716	1,040
24	716	599	730	635	515	1,100	1,820	1,220	784	648	756	977
25	770	599	716	635	587	1,680	1,970	930	872	587	857	930
26	702	599	716	599	851	3,210	1,670	799	743	941	1,310	1,100
27	611	575	828	599	1,600	4,730	1,520	743	662	1,040	1,070	982
28	575	563	857	823	1,000	12,500	1,440	730	662	1,160	1,160	992
29	587	575	743	450		6,470	1,370	770	676	2,580	930	1,070
30	575	575	716	450		3,690	1,260	915	784	1,280	814	1,290
31	599		635	450		2,690		1,070		962	756	
Month	Maximum			Minimum			Mean			Per square mile		
October	1,630	494	644	0.569	0.66							
November	946	515	635	.561	.63							
December	1,100	580	678	.599	.69							
January	1,100	450	668	.617	.71							
February	1,600	400	630	.557	.58							
March	12,500	750	2,659	2.35	2.71							
April	7,690	1,120	2,303	2.04	2.28							
May	1,220	730	981	.867	1.00							
June	2,180	662	977	.864	.98							
July	2,580	587	1,089	.963	1.11							
August	2,320	716	1,127	.996	1.15							
September	6,050	611	1,256	1.11	1.24							
The year	12,500	400	1,142	1.01	13.72							

New River at Ivanhoe, Va.

Location.- Water-stage recorder at Ivanhoe, Wythe County, 2½ miles above mouth of Cripple Creek.

Drainage area.- 1,329 square miles.

Records available.- December 1929 to September 1934.

Extremes.- Maximum discharge during year, 19,200 second-feet Mar. 28 (gage height, 10.32 feet); minimum, 228 second-feet Jan. 26 (gage height, 1.27 feet); minimum daily discharge, 384 second-feet Feb. 1.
1929-34: Maximum discharge, 25,800 second-feet Oct. 17, 1932 (gage height, 12.44 feet); minimum, 92 second-feet Sept. 8, 1930 (gage height, 0.89 feet); minimum daily discharge, 184 second-feet July 28, 1930.

Remarks.- Records excellent. Flow regulated by power plants at Bylesby, 3 miles above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	463	692	583	861	384	886	2,640	1,460	1,020	720	1,130	812
2	794	602	592	1,080	388	1,890	2,030	1,510	927	1,570	1,280	586
3	700	644	770	760	638	6,780	1,690	1,200	858	1,140	1,080	914
4	750	676	718	830	557	6,320	1,610	1,290	862	706	1,040	806
5	502	928	485	746	644	5,090	1,600	1,340	922	1,060	2,280	650
6	556	1,020	748	676	877	3,950	1,040	856	1,200	1,030	1,550	645
7	764	1,250	725	908	599	3,070	1,500	1,280	1,510	976	974	716
8	424	880	660	1,490	883	2,190	1,370	1,270	1,860	706	1,680	972
9	620	952	786	1,090	734	2,680	2,100	1,070	1,330	1,410	2,710	502
10	598	698	447	1,070	524	2,360	7,470	1,170	1,450	2,060	1,360	856
11	564	588	702	898	410	1,490	6,740	812	1,050	1,960	1,120	614
12	524	529	728	835	646	1,650	3,630	1,090	1,140	1,740	841	435
13	532	708	483	748	768	1,480	3,440	910	1,100	1,640	1,660	623
14	711	821	580	798	538	1,360	2,360	1,090	891	1,280	1,540	832
15	432	482	646	868	564	1,190	2,200	1,060	870	968	1,710	701
16	501	608	894	785	633	796	2,060	1,180	635	1,220	1,310	7,930
17	1,120	600	556	676	802	1,070	2,700	1,030	632	1,100	1,230	6,780
18	1,670	665	610	786	605	976	4,560	1,040	1,130	1,180	649	3,670
19	1,300	456	773	682	666	1,100	4,250	1,110	1,810	906	1,800	2,340
20	953	852	1,060	634	663	823	3,360	704	1,840	1,960	1,090	1,840
21	598	680	1,170	710	502	1,400	2,900	943	1,410	725	1,040	1,460
22	414	668	1,060	694	704	1,510	2,380	1,220	990	1,190	831	1,300
23	854	854	686	687	656	1,540	2,390	1,130	890	877	948	1,060
24	860	476	701	720	652	1,420	1,960	1,070	554	770	1,020	1,560
25	774	606	632	693	625	1,260	2,400	1,230	880	758	1,140	858
26	800	848	920	638	748	2,900	2,100	868	1,000	552	1,230	1,120
27	837	546	1,300	646	1,850	4,950	1,810	709	856	1,560	1,880	1,450
28	718	524	670	567	1,130	14,700	1,420	752	969	1,440	1,400	1,240
29	644	662	645	514		6,020	1,820	851	545	2,760	1,090	965
30	622	521	604	585		4,140	1,640	1,080	660	2,270	880	1,440
31	686		469	498		3,130		1,350		1,110	865	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,870	414	719	0.541	0.62
November	1,250	466	702	.528	.59
December	1,300	447	723	.544	.63
January	1,490	498	777	.585	.67
February	1,850	384	693	.521	.54
March	14,700	796	2,906	2.19	2.52
April	7,470	1,040	2,632	1.98	2.21
May	1,510	704	1,086	.817	.94
June	1,810	545	1,062	.799	.89
July	2,760	552	1,269	.955	1.10
August	2,710	649	1,302	.980	1.13
September	7,930	435	1,520	1.14	1.27
The year	14,700	384	1,285	.967	15.11

New River at Allisonia, Va.

Location.- Water-stage recorder a quarter of a mile below Big Reed Island Creek and half a mile above Allisonia, Pulaski County.

Drainage area.- 2,193 square miles.

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge during year, 24,700 second-feet Mar. 28 (gage height, 6.48 feet); minimum, 554 second-feet Feb. 21 (gage height, 0.72 foot); minimum daily discharge, 857 second-feet Nov. 28.

1929-34: Maximum stage, 11.14 feet Oct. 2, 1929 (discharge not determined); minimum discharge, 412 second-feet Sept. 7, 1930 (gage height, 0.47 foot); minimum daily discharge, 453 second-feet Sept. 6, 1930.

Remarks.- Records excellent except those estimated Dec. 24, 25, Dec. 29 to Jan. 11, Feb. 25 to Mar. 2, Mar. 4-9, Apr. 3-6, 7, 8, 15-17, which are fair. Flow regulated by operation of power plants at Bylesby.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	696	909	766	1,050	710	1,400	3,800	1,920	1,620	1,160	1,600	891
2	906	919	977	1,350	709	3,100	3,440	2,110	1,550	1,910	1,800	1,100
3	999	920	972	1,250	766	10,100	2,800	1,620	1,230	1,670	1,520	1,040
4	958	1,040	814	1,150	1,010	10,400	2,600	1,800	1,110	1,200	1,650	1,130
5	879	1,120	1,040	1,150	1,000	8,400	2,500	1,760	1,540	1,310	2,250	976
6	802	1,330	842	1,300	948	6,500	1,880	1,450	1,730	1,400	2,320	970
7	816	1,350	975	1,400	973	5,100	2,300	1,640	2,120	1,530	1,150	1,110
8	895	1,320	995	2,100	1,130	3,600	2,200	1,660	2,150	925	1,990	1,480
9	732	1,150	966	1,400	1,070	4,400	3,160	1,440	2,140	1,730	2,690	1,150
10	851	1,130	990	1,450	1,050	3,260	8,470	1,460	1,800	2,880	2,140	897
11	843	872	776	1,250	842	2,610	8,580	1,390	1,450	2,670	1,220	1,080
12	838	871	1,060	1,230	816	2,500	5,600	1,390	1,470	2,340	1,280	827
13	806	860	794	1,030	978	2,070	4,280	1,260	1,570	2,060	1,990	862
14	830	956	808	1,130	977	2,010	3,850	1,290	1,340	1,700	2,110	864
15	832	1,060	858	1,270	886	1,670	3,200	1,500	1,320	1,260	1,760	1,130
16	792	707	1,350	1,090	878	1,330	3,000	1,730	1,010	1,630	2,120	10,100
17	1,310	844	762	1,030	1,010	1,120	6,000	1,720	888	1,090	1,630	10,100
18	2,100	868	892	948	962	1,430	7,180	1,360	1,390	1,400	880	5,350
19	1,580	932	933	1,020	976	1,840	6,540	1,440	2,550	1,140	1,870	3,710
20	1,410	1,000	1,500	838	765	1,610	5,110	1,410	2,580	1,920	1,580	2,590
21	846	798	1,710	972	662	2,440	4,270	1,100	2,010	1,400	1,510	2,110
22	799	904	1,430	964	820	2,360	5,640	1,610	1,430	1,690	1,140	1,580
23	984	937	1,500	960	1,050	2,120	3,330	1,670	1,150	1,080	1,170	1,670
24	956	1,120	1,050	1,040	1,060	1,990	2,900	1,410	1,150	1,140	1,810	1,870
25	1,100	798	900	1,020	1,000	2,640	3,250	1,690	997	1,050	2,130	1,480
26	962	852	1,070	828	1,200	3,990	2,700	1,280	1,200	928	2,180	1,450
27	1,050	1,120	1,410	932	3,000	8,080	2,360	998	1,260	1,580	2,520	1,740
28	876	657	1,510	958	1,900	20,600	2,250	1,080	1,170	1,470	1,980	1,440
29	955	842	1,000	760	11,000	2,370	2,180	879	879	3,490	1,680	1,590
30	826	952	950	738	6,670	6,670	2,020	1,490	854	3,700	1,250	1,840
31	855	950	880		5,190			1,920		1,640	1,190	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					2,100	696	970	0.442		0.51		
November					1,350	657	972	.443		.49		
December					1,710	762	1,051	.479		.55		
January					2,100	738	1,113	.508		.59		
February					3,000	662	1,041	.475		.49		
March					20,600	1,120	4,562	2.08		2.40		
April					8,580	1,880	3,853	1.76		1.96		
May					2,110	998	1,506	.687		.79		
June					2,580	854	1,489	.679		.76		
July					3,700	926	1,674	.763		.88		
August					2,690	880	1,745	.796		.92		
September					10,100	827	2,138	.975		1.09		
The year					20,600	657	1,846	.842		11.43		

New River at Eggleston, Va.

Location.- Water-stage recorder at highway bridge at Eggleston, Giles County.

Drainage area.- 2,945 square miles.

Records available.- October 1914 to September 1934.

Average discharge.- 20 years, 3,750 second-feet.

Extremes.- Maximum discharge during year, 29,200 second-feet Mar. 28 (gage height, 12.71 feet); minimum, 632 second-feet Jan. 31 (gage height, 2.37 feet); minimum daily discharge, 834 second-feet Jan. 31.

1914-34: Maximum discharge recorded, about 152,000 second-feet July 16, 1916 (gage height, 39.5 feet); minimum, 580 second-feet July 21, 1926 (gage height, 2.2 feet); minimum daily discharge, 635 second-feet July 20, 21, Sept. 28, 1926. Flood of 1878 reached a stage of about 40 feet.

Remarks.- Records excellent except those estimated for periods of ice effect, Feb. 10, 11, 14, Feb. 20 to Mar. 3, which are fair. Flow regulated at all but high stages by operation of power plants at Byllesby, 73 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,110	1,150	1,190	1,250	1,100	2,800	6,310	2,720	2,570	1,130	2,140	1,470
2	970	1,190	1,020	1,370	1,030	2,200	5,270	2,550	1,940	1,520	2,440	1,240
3	1,040	1,210	1,190	1,730	972	5,500	4,240	2,550	1,920	2,560	2,400	1,540
4	1,300	1,250	1,240	1,610	1,070	19,700	3,700	2,170	1,650	1,950	2,150	1,260
5	1,190	1,400	1,150	1,480	1,310	13,000	3,410	2,260	1,520	1,580	2,020	1,440
6	1,180	1,530	1,310	1,450	1,240	9,350	3,250	2,280	2,060	1,650	3,040	1,240
7	980	1,740	1,080	1,660	1,300	6,650	2,590	1,870	2,610	1,790	2,360	1,250
8	1,030	1,910	1,300	1,800	1,280	5,730	2,850	2,130	2,880	1,700	1,600	1,480
9	1,200	1,530	1,300	2,700	1,390	6,020	2,800	2,080	2,580	1,280	2,300	1,720
10	879	1,480	1,250	1,780	1,400	5,970	7,930	1,880	2,420	2,300	3,330	1,480
11	1,060	1,440	1,280	1,850	1,300	4,730	12,300	1,930	2,230	3,400	2,220	1,230
12	1,070	1,180	962	1,600	1,100	3,180	8,100	1,960	1,880	3,060	1,520	1,400
13	1,080	1,150	1,310	1,620	1,050	3,240	5,850	1,880	1,810	2,680	1,720	1,100
14	1,040	1,090	1,120	1,400	1,200	2,850	5,300	1,700	1,950	2,700	3,440	1,300
15	1,020	1,290	1,040	1,490	1,270	2,670	3,980	1,840	1,650	1,960	2,780	1,400
16	1,160	1,350	1,160	1,560	1,110	2,310	3,740	1,970	1,620	1,560	2,480	5,270
17	1,060	936	1,630	1,430	1,180	1,910	5,100	2,230	1,340	1,860	2,260	18,300
18	1,740	1,090	1,080	1,510	1,290	1,880	10,100	2,200	1,280	1,410	1,900	8,410
19	2,490	1,180	1,240	1,200	1,260	2,080	9,170	1,840	2,270	1,750	1,290	5,600
20	1,910	1,250	1,570	1,340	1,200	3,210	7,720	1,900	3,560	1,550	2,420	3,880
21	1,700	1,200	2,560	1,160	1,100	3,290	6,120	1,870	2,810	2,520	1,690	3,060
22	1,200	1,160	2,150	1,240	1,000	3,760	5,180	1,520	2,250	1,880	1,760	2,530
23	1,120	1,200	1,360	1,250	1,000	3,450	4,260	2,090	1,740	1,980	1,460	2,240
24	1,170	1,250	1,640	1,250	1,300	3,180	4,220	2,090	1,470	1,390	1,640	1,940
25	1,320	1,400	1,230	1,270	1,300	3,230	3,870	1,880	1,460	1,480	2,400	2,360
26	1,380	1,030	1,170	1,280	1,300	3,840	3,960	2,050	1,220	1,350	3,000	1,670
27	1,240	1,200	1,550	1,140	1,600	8,040	3,470	1,670	1,480	1,540	2,580	1,840
28	1,350	1,400	1,990	1,200	3,200	25,300	3,110	1,370	1,530	2,530	2,770	2,180
29	1,200	982	1,390	1,220		18,600	2,640	1,420	1,440	3,030	2,200	1,960
30	1,240	1,070	1,270	1,090		10,700	2,850	1,680	1,310	5,560	1,840	2,020
31	1,140		1,200	834		7,210		2,500		3,610	1,540	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,490			879			1,245			0.423	0.49	
November	1,910			936			1,275			.433	.48	
December	2,560			962			1,369			.465	.54	
January	2,700			834			1,438			.498	.56	
February	3,200			972			1,281			.435	.45	
March	25,300			1,880			6,275			2.13	2.46	
April	12,300			2,590			5,113			1.74	1.94	
May	2,720			1,370			1,999			.679	.78	
June	3,560			1,220			1,948			.661	.74	
July	5,650			1,130			2,138			.725	.84	
August	3,440			1,280			2,216			.752	.87	
September	18,300			1,100			2,787			.946	1.06	
The year	25,300			834			2,429			.825	11.21	

New River at Glenlyn, Va.

Location.- Water-stage recorder at steam power plant of Appalachian Electric Power Co. a quarter of a mile southeast of Glenlyn, Giles County, and a third of a mile above East River.

Drainage area.- 3,768 square miles.

Records available.- August 1927 to September 1934.

Extremes.- Maximum daily discharge during year (estimated), 32,000 second-feet Mar. 28; minimum discharge (estimated), 950 second-feet Jan. 31; minimum daily discharge, 1,100 second-feet Oct. 3.

1927-34: Maximum stage, 16.75 feet Oct. 3, 1929 (discharge not determined); minimum discharge, 770 second-feet Sept. 8, 1930 (gage height, 2.10 feet); minimum daily discharge, 820 second-feet Sept. 8, 1930.

Remarks.- Records excellent except those estimated for Jan. 28-31, Mar. 24 to Apr. 7, which are fair. Flow regulated at all but high stages by operation of power plants at Bylesby, 98 miles upstream. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,300	1,300	1,460	1,470	1,150	3,840	8,100	3,500	2,920	1,620	2,840	1,790
2	1,200	1,370	1,300	1,460	1,320	3,200	6,800	3,360	2,810	1,950	2,850	1,710
3	1,100	1,420	1,330	2,020	1,210	5,750	5,400	3,260	2,400	2,460	3,120	1,580
4	1,410	1,350	1,420	2,130	1,200	28,700	4,700	3,180	2,140	2,820	2,860	1,360
5	1,370	1,540	1,560	1,800	1,500	27,600	4,400	2,980	2,000	2,350	2,660	1,920
6	1,370	1,510	1,540	1,900	1,400	18,500	4,300	3,060	2,300	1,770	2,850	1,740
7	1,220	1,830	1,360	2,040	1,500	11,000	3,700	2,760	3,280	2,170	3,190	1,560
8	1,200	2,030	1,540	2,160	1,620	11,000	3,880	2,440	3,640	2,180	2,360	1,540
9	1,300	2,120	1,600	2,960	1,430	12,800	3,930	2,760	3,320	1,940	2,150	2,090
10	1,160	1,660	1,540	2,540	1,780	9,880	9,260	2,450	3,080	1,910	3,300	2,060
11	1,160	1,680	1,580	2,400	1,600	7,240	15,300	2,430	2,660	3,640	3,160	1,620
12	1,220	1,390	1,300	2,320	1,310	5,530	12,100	2,800	2,370	3,580	2,440	1,600
13	1,280	1,340	1,370	2,020	1,300	4,900	8,460	2,220	2,180	3,460	2,070	1,340
14	1,280	1,250	1,510	2,000	1,280	4,420	7,500	2,140	2,220	3,240	3,040	1,520
15	1,230	1,450	1,290	1,880	1,740	3,960	5,920	2,060	2,250	2,760	3,440	1,560
16	1,300	1,580	1,420	1,780	1,340	3,530	5,420	2,240	1,880	2,160	3,150	5,200
17	1,240	1,250	1,500	1,840	1,440	3,200	7,040	2,410	1,770	1,860	3,680	21,200
18	1,540	1,260	1,750	1,720	1,520	2,740	15,300	2,680	1,500	1,980	2,470	11,700
19	2,500	1,400	1,390	1,560	1,560	3,120	13,300	2,440	2,760	1,920	2,400	6,790
20	2,560	1,540	2,220	1,640	1,290	5,030	11,200	2,450	4,440	2,190	1,950	4,860
21	2,080	1,340	2,720	1,610	1,400	6,200	10,800	2,270	3,720	2,080	2,790	3,740
22	1,740	1,630	3,100	1,460	1,320	6,240	7,360	1,730	2,990	3,000	2,000	3,190
23	1,300	1,440	2,520	1,560	1,280	5,290	6,130	2,270	2,440	1,900	1,980	2,730
24	1,150	1,520	2,200	1,690	1,500	4,300	5,680	2,590	2,160	2,080	1,980	2,680
25	1,540	1,690	1,440	1,540	1,560	4,300	5,350	2,400	1,850	1,680	2,620	2,240
26	1,560	1,380	1,540	1,680	1,280	5,500	5,420	2,420	1,480	1,580	3,400	2,640
27	1,460	1,350	1,480	1,510	2,020	10,500	4,910	2,360	1,700	1,660	3,760	1,900
28	1,500	1,660	1,980	1,360	3,000	32,000	4,450	1,900	1,850	2,840	3,300	2,270
29	1,580	1,370	2,270	1,420	24,000	3,970	1,680	1,750	3,710	2,960	2,500	2,500
30	1,380	1,230	1,560	1,220	13,500	3,780	1,940	2,040	5,400	2,460	2,680	2,580
31	1,320		1,460	1,100	9,200		2,360		5,010	2,040		
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,560			1,100			1,437			0.381	0.44	
November	2,120			1,230			1,497			.397	.44	
December	3,100			1,290			1,685			.447	.52	
January	2,960			1,100			1,795			.476	.55	
February	3,000			1,150			1,494			.396	.41	
March	32,000			2,740			9,708			2.58	2.97	
April	15,300			3,700			7,132			1.89	2.11	
May	3,500			1,680			2,491			.661	.76	
June	4,440			1,480			2,465			.654	.73	
July	5,400			1,580			2,545			.675	.76	
August	3,760			1,960			2,751			.750	.84	
September	21,200			1,340			3,380			.897	1.00	
The year	32,000			1,100			3,208			.851	11.55	

New River near Hinton, W. Va.

Location.— Staff gage at site of Packs Ferry, 2 miles above Greenbrier River and $3\frac{1}{4}$ miles south of Hinton, Summers County. Zero of gage is 1,368.045 feet above mean sea level.

Drainage area.— 4,560 square miles.

Records available.— December 1923 to September 1934.

Average discharge.— 11 years (1923-34), 5,130 second-feet

Extremes.— Maximum discharge recorded during year, 48,400 second-feet Mar. 5 (gage height, 12.80 feet); minimum, 970 second-feet Oct. 11 (gage height, 2.15 feet).
1923-34: Maximum gage height, 17.2 feet Oct. 3, 1929 (discharge not determined); minimum discharge, 610 second-feet Aug. 27, 1925 (gage height, 1.80 feet).
Floods of Apr. 21, May 23, 1901, reached a stage of about 24.2 feet on present gage. Flood of 1878 probably reached a higher stage.

Remarks.— Records good. Some regulation at low stages by power plants above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,160	1,300	1,300	1,680	1,230	1,380	10,700	4,210	2,810	1,750	3,730	2,080
2	1,300	1,300	1,450	1,910	1,160	4,990	8,580	4,210	2,610	1,910	3,250	1,910
3	1,160	1,450	1,230	2,000	1,300	11,100	7,300	3,970	2,250	2,080	3,730	1,680
4	1,160	1,450	1,300	2,610	1,160	41,700	6,100	3,730	2,250	3,250	3,490	1,750
5	1,450	1,600	1,450	2,250	1,160	45,700	5,530	3,490	2,080	2,810	3,250	1,600
6	1,450	1,750	1,600	2,080	1,600	29,700	4,990	3,250	2,000	1,910	2,610	1,830
7	1,450	1,830	1,680	2,000	1,450	18,500	4,990	3,250	3,030	1,600	4,210	1,600
8	1,030	2,080	1,450	2,250	1,380	24,200	4,450	3,030	3,970	1,910	3,030	1,600
9	1,160	2,250	1,620	2,810	1,300	16,600	5,530	3,030	3,970	2,080	2,250	1,750
10	1,380	1,680	1,680	3,730	1,300	13,900	10,700	2,810	3,490	2,250	2,810	1,910
11	1,030	1,750	1,680	3,030	1,230	9,260	19,100	2,610	3,030	3,030	3,970	1,750
12	1,160	1,750	1,450	2,080	1,380	8,580	16,600	3,030	3,030	4,210	3,030	1,300
13	1,300	1,450	1,160	2,080	1,300	6,400	11,900	2,810	2,250	3,730	2,080	1,750
14	1,300	1,450	1,450	2,080	1,450	5,800	9,620	2,810	2,250	3,250	2,250	1,300
15	1,230	1,230	1,380	1,750	1,520	5,260	7,940	2,610	2,250	3,250	4,450	1,600
16	1,230	1,600	1,160	1,910	1,600	4,720	7,000	2,810	1,910	2,080	3,970	3,250
17	1,450	1,600	1,450	1,830	1,520	3,970	7,940	2,810	1,910	1,750	3,490	22,600
18	1,160	1,160	1,910	1,680	1,600	3,490	19,000	3,030	1,910	2,080	3,730	13,100
19	2,250	1,300	1,450	1,600	1,850	3,970	17,600	3,030	2,160	1,830	2,810	7,940
20	3,030	1,450	3,250	1,450	1,600	9,980	16,200	2,610	2,490	2,000	2,250	6,100
21	2,000	1,450	3,490	1,600	1,600	10,300	12,300	2,610	3,490	1,830	2,430	4,450
22	1,910	1,380	3,730	1,450	1,450	7,000	10,300	2,430	3,730	2,430	2,250	3,970
23	1,600	1,380	2,810	1,750	1,300	6,700	8,580	2,250	2,810	1,910	1,910	3,490
24	1,300	1,450	2,250	1,680	1,300	6,100	6,700	2,810	2,250	2,080	2,080	3,030
25	1,300	1,600	1,910	1,600	1,450	8,580	6,700	3,030	1,910	1,910	1,750	2,810
26	1,450	1,600	1,600	1,600	1,230	9,980	6,100	2,430	1,910	1,750	3,970	2,810
27	1,600	1,230	1,680	1,600	1,600	13,900	5,800	2,810	1,520	1,600	5,530	2,000
28	1,450	1,300	2,160	1,450	1,600	39,700	5,530	2,250	1,830	2,160	3,970	2,250
29	1,450	1,600	2,430	1,300		34,600	4,720	1,750	1,910	3,970	3,970	2,810
30	1,380	1,160	1,910	1,300		18,500	4,210	1,910	1,910	4,450	3,030	3,030
31	1,450		1,680	1,300		13,100		2,250		6,700	2,430	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	3,030			1,030			1,443			0.316	0.36	
November	2,250			1,160			1,519			.333	.37	
December	3,730			1,230			1,827			.401	.46	
January	3,730			1,300			1,917			.420	.48	
February	1,830			1,160			1,414			.310	.32	
March	45,700			1,380			14,120			3.10	3.57	
April	19,000			4,210			9,057			1.99	2.22	
May	4,210			1,750			2,893			.634	.73	
June	3,970			1,520			2,551			.555	.62	
July	6,700			1,600			2,556			.563	.65	
August	5,530			1,750			3,152			.691	.80	
September	22,600			1,300			3,635			.797	.89	
The year.	45,700			1,030			3,856			.846	11.47	

New River at Caperton, W. Va.

Location.- Water-stage recorder at suspension footbridge at Caperton, Fayette County.
Zero of gage is 938.00 feet above mean sea level.

Drainage area.- 6,830 square miles.

Records available.- November 1928 to September 1934.

Extremes.- Maximum discharge during year, 114,000 second-feet Mar. 5 (gage height, 20.24 feet); minimum, 1,110 second-feet Oct. 12, 13 (gage height, 1.92 feet).
1928-34: Maximum discharge, about 121,000 second-feet (revised) Oct. 3, 1929 (gage height, 21.10 feet); minimum, 818 second-feet Oct. 8, 11, 1930.

Remarks.- Records good. Discharge estimated Mar. 13-26, July 4-9, Aug. 23-29, Sept. 12-30. Power plants on New River in Virginia cause some regulation at low stages.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,350	1,470	1,600	2,940	1,710	4,060	16,600	5,740	2,740	2,070	5,340	2,300
2	1,340	1,430	1,620	3,700	1,620	6,340	13,700	5,210	3,360	1,930	3,700	2,000
3	1,400	1,440	1,780	6,870	1,750	27,600	11,200	4,950	3,360	2,140	3,620	1,860
4	1,290	1,650	1,740	6,410	1,780	81,900	9,600	4,820	2,640	2,560	5,210	1,700
5	1,270	1,550	1,860	5,740	1,860	109,000	8,620	4,660	2,460	2,960	4,310	1,670
6	1,640	1,710	2,380	4,560	2,000	81,900	7,780	4,310	2,380	2,820	3,700	1,740
7	1,430	1,790	2,840	5,080	2,140	43,400	7,500	4,310	2,460	2,380	3,360	1,860
8	1,460	2,070	2,640	7,780	2,140	43,400	6,950	3,940	3,470	2,070	3,700	1,690
9	1,210	2,140	2,460	11,200	2,070	54,100	7,220	3,470	4,060	2,250	2,840	1,640
10	1,260	2,300	2,650	8,620	2,000	33,900	11,600	3,820	3,820	2,980	2,300	1,930
11	1,410	1,860	2,300	6,540	2,070	21,800	19,400	3,680	3,680	2,550	3,360	2,000
12	1,160	1,860	2,220	6,470	1,930	15,100	23,100	3,470	3,150	4,820	3,700	1,920
13	1,300	1,750	2,070	4,820	1,830	11,200	17,800	3,580	2,940	4,440	3,040	1,640
14	1,320	1,620	1,780	4,060	1,860	10,700	14,200	3,580	2,550	3,940	2,380	1,680
15	1,300	1,560	2,000	3,820	1,790	9,800	12,000	3,820	2,650	3,360	3,210	1,460
16	1,270	1,500	1,860	3,470	2,220	8,730	9,800	4,440	2,550	3,150	5,210	1,680
17	1,470	1,690	1,790	3,150	2,220	7,630	10,200	4,690	2,220	2,380	4,440	7,940
18	1,660	1,740	2,070	3,040	2,300	6,840	25,700	5,740	2,140	1,930	4,180	21,500
19	1,390	1,620	3,600	2,740	2,460	6,260	31,100	5,210	2,220	2,070	2,840	11,200
20	2,220	1,640	8,900	2,460	2,460	13,900	25,100	4,660	3,140	1,760	2,840	7,760
21	2,640	1,690	9,500	2,380	2,220	19,800	20,000	4,810	5,210	2,070	2,250	5,840
22	2,140	1,860	9,500	2,460	2,300	17,000	15,600	3,820	4,440	1,860	3,470	4,770
23	2,000	1,930	7,080	2,220	2,220	14,500	12,400	3,150	3,700	3,040	2,540	4,000
24	1,620	1,860	5,470	2,300	1,860	12,300	10,200	3,260	3,040	2,000	2,290	3,270
25	1,470	1,860	4,440	2,300	2,000	13,100	9,200	3,680	2,380	2,220	2,110	2,960
26	1,440	2,070	3,940	2,220	2,220	15,700	8,620	3,360	2,070	1,720	2,260	2,670
27	1,600	2,070	3,940	2,300	2,070	21,200	8,340	3,040	1,930	1,860	3,800	2,850
28	1,600	1,750	3,470	2,220	3,760	65,100	7,360	3,040	1,780	2,000	5,360	2,170
29	1,500	1,860	3,470	2,140		66,700	6,680	2,640	2,000	3,420	4,000	2,450
30	1,690	1,930	3,470	2,000		36,100	6,000	2,300	1,930	4,690	3,470	3,010
31	1,480		2,550	1,690		23,100		2,460		6,410	2,840	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,640			1,160			1,617			0.222	0.26	
November	2,300			1,430			1,769			.259	.29	
December	9,500			1,600			3,448			.505	.58	
January	11,200			1,690			4,055			.594	.68	
February	3,750			1,620			2,106			.308	.32	
March	109,000			4,060			29,070			4.26	4.91	
April	31,100			6,000			13,120			1.92	2.14	
May	5,740			2,300			3,960			.580	.67	
June	5,210			1,730			2,876			.421	.47	
July	6,410			1,720			2,769			.405	.47	
August	5,360			2,110			3,480			.510	.59	
September	21,300			1,460			3,692			.541	.60	
The year	109,000			1,160			6,027			.882	11.98	

Kanawha River at Kanawha Falls, W. Va.

Location.- Water-stage recorder three-quarters of a mile below Kanawha Falls, Fayette County, and 2 miles below Gauley Bridge. Zero of gage is 622.78 feet above mean sea level, U. S. Geological Survey datum.

Drainage area.- 8,300 square miles.

Records available.- March 1877 to September 1916, October 1918 to September 1927, October 1928 to September 1934. Records at Lock 2 available for 1917, 1918, and 1928.

Average discharge.- 57 years (1877-1934), 13,000 second-feet.

Extremes.- Maximum discharge during year, 168,000 second-feet Mar. 5 (gage height, 21.43 feet); minimum, 930 second-feet Oct. 10 (gage height, -0.62 foot).
1877-1934: Maximum discharge, about 270,000 second-feet Sept. 14, 1878 (gage height, 37.8 feet); minimum, 640 second-feet Aug. 15, 1930 (gage height, -0.95 foot).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	1,720	3,140	4,960	2,640	5,510	20,900	7,500	3,140	2,050	5,940	2,640
2	1,660	1,650	3,470	8,500	3,040	6,700	17,300	7,010	3,680	2,280	4,430	2,280
3	1,650	1,620	3,470	9,930	3,040	47,600	14,200	6,540	3,810	2,280	4,050	2,120
4	1,620	1,650	3,700	10,300	2,930	71,700	11,500	6,090	3,140	2,540	7,170	1,910
5	1,550	1,780	4,820	9,020	2,830	153,000	10,100	5,940	2,830	3,140	6,240	1,910
6	1,780	1,780	5,090	8,000	3,040	107,000	9,370	5,230	2,730	2,930	4,820	1,720
7	1,720	2,050	8,330	9,550	3,140	54,800	8,840	5,090	2,730	2,450	4,050	2,050
8	1,650	3,200	7,340	14,200	2,930	52,400	8,330	4,820	3,680	2,120	4,180	1,910
9	1,470	2,640	5,510	18,500	2,930	64,500	8,330	4,180	4,560	2,280	3,700	1,780
10	1,300	2,830	5,090	13,700	2,450	41,900	11,900	4,300	4,560	2,830	2,930	1,840
11	1,550	2,540	4,430	11,100	2,450	29,300	19,700	4,960	4,050	2,930	3,140	2,120
12	1,410	2,280	3,930	8,330	2,830	20,900	25,100	6,390	3,580	3,930	4,300	2,050
13	1,360	2,280	3,360	7,170	2,640	16,700	22,100	5,510	3,360	4,560	3,810	1,650
14	1,460	2,050	3,040	6,240	2,450	14,200	17,900	5,230	3,040	3,810	3,040	1,840
15	1,440	2,280	3,140	5,800	2,540	13,700	15,700	5,370	2,930	3,700	2,930	1,620
16	1,410	2,280	3,250	5,090	3,140	11,900	13,200	6,540	2,830	3,470	4,050	1,910
17	1,520	2,280	3,700	4,690	3,810	10,300	13,200	7,340	2,640	2,830	9,850	9,780
18	1,720	2,280	5,510	4,430	3,810	9,740	26,400	7,500	2,360	2,280	7,660	23,300
19	1,720	2,360	6,850	3,930	4,050	9,740	34,200	7,340	2,360	2,120	5,510	12,300
20	2,360	3,580	21,900	3,700	4,050	19,100	29,300	6,390	2,640	1,910	4,300	8,500
21	3,140	3,250	23,300	3,470	3,700	25,700	25,100	5,510	4,690	2,050	3,360	6,390
22	2,540	3,250	17,900	3,360	3,580	21,500	19,700	5,090	5,090	2,050	3,580	5,230
23	2,460	3,470	13,200	3,250	3,580	18,500	15,700	4,690	4,300	2,450	3,140	4,300
24	2,200	3,930	9,370	3,250	3,040	15,700	13,200	4,050	3,680	2,360	2,830	3,580
25	2,050	3,250	7,340	3,360	2,930	16,200	11,500	4,430	2,730	2,120	2,830	3,250
26	1,780	3,040	7,170	3,360	3,250	19,700	10,100	4,300	2,450	1,910	3,360	2,830
27	1,980	3,250	8,160	3,250	3,810	26,300	9,930	3,930	2,360	1,910	4,690	3,140
28	1,980	2,830	6,700	3,470	4,430	79,600	9,370	3,930	1,840	1,980	6,090	2,840
29	1,840	2,730	6,090	3,470		80,500	9,370	3,470	2,050	3,360	4,560	2,830
30	1,840	2,930	5,510	3,360		42,600	8,330	3,040	2,120	6,230	4,050	3,810
31	1,840		4,690	2,730		28,100		2,830		6,390	3,250	
Month	Maximum				Minimum		Mean		Per square mile		Run-off in inches	
October	3,140				1,300		1,790		0.216		0.25	
November	3,930				1,620		2,535		.305		.34	
December	23,300				3,040		7,045		.849		.93	
January	18,500				2,730		6,564		.791		.81	
February	4,430				2,450		3,180		.383		.40	
March	153,000				5,510		36,680		4.410		5.08	
April	34,200				8,330		15,660		1.890		2.11	
May	7,500				2,830		5,308		.640		.74	
June	5,090				1,840		3,190		.384		.43	
July	6,390				1,910		2,847		.343		.40	
August	9,850				2,830		4,448		.556		.62	
September	23,300				1,620		4,104		.494		.55	
The year.	153,000				1,300		7,824		.943		12.81	

North Fork of New River at Crumpler, N. C.

Location.- Water-stage recorder a quarter of a mile below State highway bridge at Crumpler, Ashe County, and 6 miles above confluence with South Fork.

Drainage area.- 277 square miles.

Records available.- July 1928 to September 1934. August 1908 to September 1916 at site half a mile above confluence with South Fork.

Extremes.- Maximum discharge during year, 4,220 second-feet Mar. 27 (gage height, 5.17 feet); minimum, 59 second-feet Dec. 10 (gage height, 0.73 foot).
1908-16, 1928-34: Maximum discharge, about 24,000 second-feet July 15, 1916; minimum, 38 second-feet Sept. 19, 1932.

Remarks.- Records good except those above 1,500 second-feet, those for periods of ice effect, Feb. 1-3, 20, 21, and those estimated, which are fair. Probably slight regulation, caused by operation of gristmills.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	*100	112	191	100	297	615	394	209	209	*210	204
2	119	*110	109	248	110	1,280	519	388	186	186	*200	190
3	116	*120	*110	174	130	2,620	449	370	176	164	*200	176
4	102	*160	*110	147	144	1,890	400	358	180	168	*530	164
5	94	170	*110	136	178	1,320	414	*340	244	160	*290	199
6	88	248	*110	129	147	894	370	*330	357	223	*220	168
7	102	166	*110	195	163	635	346	*320	512	180	*230	166
8	96	147	*110	248	170	671	340	*300	370	*230	*620	164
9	96	122	*110	203	*160	693	1,550	*280	280	*380	*440	168
10	96	*120	88	191	*120	693	1,970	*270	292	*420	*400	148
11	102	*120	91	170	*110	486	1,200	*270	286	*450	*390	133
12	99	116	85	170	122	413	968	*270	244	*400	382	133
13	99	109	102	182	112	396	840	*250	298	*340	328	144
14	96	129	133	170	129	361	750	*250	233	*290	328	172
15	94	109	122	151	174	323	668	*260	199	*260	304	228
16	102	122	129	140	163	328	698	*270	176	*230	286	1,190
17	302	*130	133	122	140	297	854	*250	172	*200	442	616
18	170	*130	144	144	112	317	1,330	*240	522	*190	491	662
19	126	122	182	165	133	*310	1,160	*230	540	*220	370	407
20	106	112	277	136	120	*300	1,040	*220	286	*280	304	322
21	116	112	212	133	110	*500	904	*230	228	180	259	304
22	112	109	163	133	151	*420	802	*250	190	199	238	270
23	126	122	144	144	133	*430	712	*300	190	160	223	244
24	170	116	140	155	122	*420	645	218	289	156	238	233
25	136	112	136	136	174	1,320	600	194	194	133	275	223
26	112	105	182	140	969	1,200	519	180	156	152	394	218
27	102	109	257	140	493	2,330	421	180	152	400	388	238
28	109	102	216	126	272	2,790	463	172	206	*560	298	254
29	*110	109	182	*110		1,330	428	204	185	*400	244	304
30	*110	105	187	*110		944	414	298	233	*320	214	346
31	*100		163	*100		*740		280		*260	209	
Month	Maximum					Minimum		Mean	Per square mile		Run-off in inches	
October	302					88		117	0.422		0.49	
November	248					100		125	.451		.50	
December	277					88		144	.520		.60	
January	248					100		166	.563		.65	
February	969					100		184	.664		.69	
March	2,790					297		863	3.12		3.60	
April	1,970					340		746	2.69		3.00	
May	394					172		270	.975		1.12	
June	540					182		269	.935		1.04	
July	660					133		261	.942		1.09	
August	530					200		317	1.14		1.31	
September	1,190					133		276	.996		1.11	
The year	2,790					88		310	1.12		15.20	

*Estimated.

Cripple Creek near Ivanhoe, Va.

Location.- Chain gage at highway bridge 2 miles northwest of Ivanhoe, Wythe County, and $3\frac{1}{2}$ miles above mouth.

Drainage area.- 148 square miles.

Records available.- January 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 990 second-feet Mar. 28 (gage height, 3.18 feet); minimum, 19 second-feet Jan. 14 (gage height, 0.28 foot).
1930-34: Maximum discharge recorded, 1,460 second-feet Apr. 4, 1931 (gage height, 3.56 feet); minimum, 16 second-feet Sept. 20, 1932 (gage height, 0.27 foot).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	42	39	38	26	57	176	82	35	51	67	28
2	35	26	43	37	29	73	131	76	41	48	71	38
3	26	42	36	38	35	368	122	92	42	47	75	31
4	29	42	33	32	25	279	92	80	54	36	61	26
5	27	48	27	42	42	216	75	82	48	36	50	29
6	28	50	26	29	54	176	84	65	67	33	47	26
7	29	50	24	34	36	140	76	69	57	32	43	38
8	35	47	27	33	30	127	48	61	56	51	39	146
9	39	48	26	22	27	140	86	61	57	59	41	78
10	41	47	27	29	28	120	444	64	54	54	37	53
11	39	50	32	32	28	122	262	54	54	57	33	67
12	30	29	46	33	39	88	176	57	62	46	35	48
13	38	28	36	27	36	82	122	53	90	34	38	42
14	29	29	30	23	31	80	118	56	78	29	41	38
15	42	33	36	62	28	56	92	59	71	32	39	43
16	48	31	39	32	56	46	101	57	53	30	33	705
17	53	30	34	33	41	43	296	57	56	28	32	368
18	54	31	35	31	26	50	444	54	62	26	33	296
19	54	28	37	31	23	86	406	53	76	27	38	246
20	53	31	38	28	22	80	296	44	76	27	36	202
21	50	30	34	28	22	53	216	46	67	37	31	152
22	29	26	35	36	29	27	152	122	61	42	33	122
23	32	26	38	34	32	30	140	111	59	37	26	80
24	36	44	35	37	32	54	134	114	46	22	33	86
25	39	43	29	36	41	262	125	90	39	28	42	65
26	38	28	26	31	43	176	106	86	42	31	37	71
27	34	29	24	27	39	890	103	39	42	51	38	69
28	35	43	28	23	53	840	76	42	46	86	42	80
29	33	30	23	27		660	84	46	61	73	33	75
30	31	27	29	27		444	82	41	92	71	26	84
31	26		33	26		231		38		76	27	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	54		26		36.8		0.249		0.29			
November	50		26		36.3		.245		.27			
December	46		23		32.4		.219		.25			
January	62		22		32.2		.218		.25			
February	56		22		34.1		.230		.24			
March	890		27		197		1.33		1.53			
April	444		48		162		1.09		1.22			
May	122		38		66.2		.447		.52			
June	92		36		58.2		.393		.44			
July	86		22		43.3		.293		.34			
August	76		26		40.5		.274		.32			
September	706		26		114		.770		.86			
The year.	890		22		71.2		.481		6.53			

Reed Creek at Grahams Forge, Va.

Location.- Chain gage at highway bridge at Grahams Forge, Wythe County, 2½ miles below Glade Creek.

Drainage area.- 247 square miles.

Records available.- July 1908 to September 1916, February 1927 to September 1934.

Average discharge.- 15 years, 254 second-feet.

Extremes.- Maximum discharge recorded during year, 4,480 second-feet Mar. 28 (gage height, 5.20 feet); minimum, 21 second-feet Jan. 30 (gage height, 1.10 feet). 1908-16, 1927-34: Maximum stage recorded, 12.1 feet July 1st, 1916 (discharge not determined); minimum discharge, about 5 second-feet Dec. 22, 1909 (gage height, 1.17 feet).

Remarks.- Records good. Discharge estimated because of ice, Feb. 26-28. Low-water flow may be slightly affected by operation of power plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	66	61	72	59	115	377	168	86	115	88	74
2	55	64	66	88	70	126	316	148	88	101	88	66
3	55	68	72	93	57	1,050	266	142	84	96	96	68
4	64	59	70	86	59	2,090	240	142	81	81	115	68
5	64	70	68	86	66	1,600	210	139	96	74	148	96
6	53	72	70	74	66	710	202	129	158	76	104	132
7	53	70	70	81	64	433	187	123	148	70	96	81
8	64	66	70	81	68	395	180	126	118	74	86	118
9	53	64	70	84	66	940	266	115	101	120	86	120
10	57	66	68	79	61	487	670	109	96	115	76	81
11	59	66	66	76	53	331	452	118	101	112	68	72
12	66	66	59	79	61	262	337	106	93	88	61	66
13	61	61	68	72	72	227	295	109	81	81	59	64
14	68	70	68	74	57	198	253	98	86	72	61	64
15	59	68	68	72	66	169	223	106	84	68	70	91
16	59	53	68	66	68	158	219	112	76	59	81	1,340
17	81	64	68	64	66	145	632	109	70	64	81	632
18	76	76	68	66	66	142	1,340	101	81	68	109	311
19	64	68	81	64	66	145	710	88	360	70	88	206
20	64	68	118	64	51	244	522	91	172	57	74	169
21	61	66	112	68	61	452	414	93	123	57	64	162
22	61	66	86	66	64	331	354	98	106	84	55	136
23	64	68	79	64	70	276	306	136	96	79	55	118
24	66	68	66	64	53	244	276	91	88	68	558	109
25	70	72	68	61	49	285	244	96	79	59	183	68
26	64	64	79	68	70	558	214	91	72	57	136	93
27	59	68	84	72	60	1,280	194	88	70	115	118	101
28	70	70	86	66	90	3,040	190	84	64	109	109	112
29	64	68	79	57		940	169	84	59	109	91	129
30	68	72	66	22		595	152	101	74	101	93	266
31	61		68	46		487		101		96	79	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	81		53		62.6		0.253		0.29			
November	76		53		66.9		.271		.30			
December	113		59		73.8		.299		.34			
January	93		22		70.2		.284		.33			
February	90		49		63.5		.257		.27			
March	3,040		115		602		2.44		2.81			
April	1,340		152		347		1.40		1.66			
May	158		84		111		.449		.62			
June	360		59		103		.417		.47			
July	120		57		83.7		.339		.39			
August	558		55		106		.429		.49			
September	1,340		64		174		.704		.79			
The year	3,040		22		156		.632		8.56			

Bluestone River at Lilly, W. Va.

Location.- Staff gage 1,200 feet below Little Bluestone River at Lilly, Summers County.

Drainage area.- 454 square miles.

Records available.- August 1908 to September 1916, October 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 13,400 second-feet Mar. 5 (gage height, 10.50 feet); minimum, 8.0 second-feet Oct. 14 (gage height, 0.80 foot).
1908-16, 1929-34: Maximum discharge, that of Mar. 5, 1934; probably no flow Aug. 10, 1916 (gage height, 0.0 foot).

Remarks.- Records good below and fair above 2,000 second-feet.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	12	23	179	35	695	1,100	259	90	50	146	79
2	19	14	22	386	39	630	570	238	71	218	300	64
3	44	15	20	345	42	7,200	515	226	62	104	415	64
4	35	19	26	275	51	11,000	465	218	50	62	368	48
5	25	25	34	215	54	12,800	405	207	75	42	316	46
6	28	35	38	176	47	7,200	372	196	68	34	255	44
7	25	42	54	218	44	3,820	381	182	64	38	151	39
8	16	46	68	265	58	8,400	400	151	58	44	64	38
9	14	36	64	242	58	5,640	600	141	66	39	65	38
10	13	29	56	204	35	2,580	2,170	131	62	540	79	50
11	12	26	44	175	29	1,480	2,040	175	51	186	65	41
12	10	24	39	141	37	980	2,300	218	54	196	50	28
13	9	19	33	136	43	755	1,690	163	47	136	90	26
14	8	20	32	133	43	660	1,190	136	38	80	128	27
15	9	24	30	121	46	570	940	141	35	57	63	47
16	12	24	29	104	102	515	800	415	31	41	66	215
17	14	16	29	90	80	465	870	230	27	31	77	695
18	19	24	34	75	179	440	2,300	218	88	25	211	320
19	34	25	46	90	138	440	1,920	196	200	24	136	211
20	29	27	1,060	84	102	3,990	2,870	242	160	20	114	131
21	19	26	660	73	128	2,870	2,040	259	106	18	92	64
22	19	29	337	71	102	1,380	1,280	200	63	20	71	77
23	17	26	200	70	79	1,020	870	149	48	21	57	64
24	17	29	154	71	60	835	730	121	42	26	66	58
25	19	35	111	68	48	2,300	570	102	33	22	96	50
26	16	31	100	64	63	2,720	490	90	29	17	92	47
27	16	26	255	58	1,800	4,520	440	90	27	14	765	46
28	14	26	320	58	1,190	6,600	400	84	25	13	298	44
29	18	25	271	50		2,720	368	79	22	24	126	57
30	13	26	196	30		1,580	288	75	20	36	84	90
31	13	144	29			1,380		68		116	73	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					44	8	18.4	0.041		0.05		
November					46	12	26.1	.057		.06		
December					1,060	20	146	.322		.37		
January					386	29	138	.304		.35		
February					1,800	29	169	.372		.39		
March					12,800	440	3,168	6.98		8.05		
April					2,870	288	1,046	2.30		2.57		
May					415	68	174	.383		.44		
June					200	20	60.4	.133		.15		
July					540	13	73.4	.162		.19		
August					765	50	160	.352		.41		
September					695	26	94.9	.209		.23		
The year.					12,800	8	443	.976		13.26		

Greenbrier River at Buckeye, W. Va.

Location.- Chain gage at county highway bridge at Buckeye, Pocahontas County, 300 feet above Swago Creek.

Drainage area.- 540 square miles (including Swago Creek).

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 12,900 second-feet Mar. 5 (gage height, 10.43 feet); minimum, 6.4 second-feet July 25 (gage height, 1.24 feet).
1929-34: Maximum discharge recorded, about 35,800 second-feet Feb. 5, 1932 (gage height, 17.5 feet); minimum, 3.8 second-feet Aug. 13, 1930 (gage height, 1.19 feet).

Remarks.- Records good. Records include flow of Swago Creek.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	465	370	1,340	1,020	1,260	1,260	440	348	129	678	242
2	29	710	317	1,100	1,340	1,020	1,690	415	297	95	492	203
3	28	550	277	1,020	1,690	900	1,690	492	253	165	465	184
4	25	392	277	940	1,510	745	1,690	465	228	392	1,180	370
5	30	321	277	780	1,100	580	1,510	465	245	200	1,260	370
6	168	269	242	645	1,780	550	1,510	2,070	217	138	710	285
7	348	305	217	550	1,180	612	2,510	2,170	348	108	462	207
8	203	550	210	492	6,580	1,180	2,280	1,780	348	83	348	168
9	138	1,180	197	520	3,470	1,180	1,690	1,600	261	69	297	149
10	78	3,920	197	710	2,170	1,180	1,340	1,020	277	63	261	121
11	69	1,970	245	678	1,690	940	1,100	1,690	710	138	1,180	105
12	43	1,260	317	645	1,180	940	4,550	3,920	465	249	1,340	90
13	49	860	940	580	1,020	860	2,900	2,900	645	132	820	113
14	39	645	900	550	860	1,510	1,970	2,070	415	87	550	87
15	38	492	780	550	1,100	4,550	1,510	1,690	281	90	415	83
16	46	415	440	465	1,180	3,920	1,340	4,070	224	83	321	132
17	780	370	550	465	1,100	2,390	3,320	4,720	289	313	317	108
18	1,510	415	645	440	1,100	1,780	2,390	2,510	165	162	242	90
19	745	4,070	645	465	1,100	5,440	2,070	1,690	162	110	210	76
20	440	4,550	415	492	3,040	7,180	3,320	1,260	118	90	171	76
21	301	2,280	550	1,870	4,230	6,200	2,510	1,100	97	78	143	65
22	238	1,420	580	6,010	2,170	4,230	1,970	860	33	200	132	97
23	187	1,020	678	5,180	1,340	2,640	1,420	645	74	143	115	78
24	155	820	940	1,970	1,420	1,870	1,100	580	69	92	645	65
25	135	645	1,870	1,510	1,260	1,510	940	520	121	126	1,510	51
26	118	550	1,870	2,770	2,770	1,340	860	465	124	273	860	44
27	348	492	1,600	1,970	2,170	1,180	745	465	124	6,200	550	43
28	580	370	4,390	1,780	1,690	1,260	612	492	203	4,890	362	44
29	415	277	3,320	1,420		1,340	550	440	325	3,620	370	39
30	325	392	2,070	1,180		1,180	492	415	207	1,600	325	43
31	261		1,690	1,020		1,180		415		1,020	249	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,510	25	255	0.472	0.54
November	4,550	289	1,066	1.97	2.20
December	4,390	197	904	1.67	1.92
January	6,010	440	1,229	2.28	2.53
February	6,580	860	1,866	3.46	3.60
March	7,180	550	2,021	3.74	4.31
April	4,560	492	1,758	3.26	3.64
May	4,720	415	1,414	2.62	3.02
June	710	69	257	.476	.53
July	6,200	63	682	1.26	1.45
August	1,510	115	550	1.02	1.18
September	370	39	128	.237	.26
The year.	7,180	25	1,006	1.86	25.28

Note.- Records for period Mar. 20 to Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Greenbrier River at Buckeye, W. Va.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	53	30	217	1,180*	348	281	900	265	162	92	38	13		
2	41	28	197	2,070	392	214	1,100	245	135	108	35	12		
3	36	25	197	1,690	392	4,230	860	245	121	108	49	10		
4	35	28	253	1,100	348	8,470	780	238	102	83	140	10		
5	33	33	348	1,020	348	11,100	780	231	95	61	129	10		
6	35	63	321	1,180	305	5,630	710	217	92	78	78	10		
7	28	69	348	3,920	277	3,320	645	210	124	61	53	10		
8	25	87	415	4,070	245	4,550	612	174	253	51	39	12		
9	25	59	348	2,280	269	3,620	550	158	168	65	30	17		
10	28	35	285	1,600	224	2,280	520	158	126	39	24	17		
11	25	46	245	1,180	184	1,690	492	301	261	39	24	14		
12	24	35	261	860	220	1,260	580	550	194	39	23	12		
13	26	39	165	745	261	1,020	710	415	177	36	21	12		
14	28	30	257	612	245	1,100	710	370	171	33	14	25		
15	25	90	297	492	245	940	678	820	129	36	17	97		
16	26	53	269	348	293	940	820	1,510	105	30	20	1,100		
17	74	102	1,340	370	325	820	1,510	1,260	92	23	231	1,180		
18	76	118	1,180	370	301	860	2,640	940	97	18	261	392		
19	118	194	900	325	293	1,020	1,870	710	273	14	138	217		
20	65	289	3,180	325	285	1,340	1,510	550	370	14	74	140		
21	57	214	2,510	207	253	1,600	1,260	440	203	11	55	97		
22	39	245	1,510	234	234	1,420	1,020	392	140	10	36	76		
23	35	440	1,020	261	224	1,340	745	370	135	8.8	38	61		
24	33	392	780	277	203	1,100	678	293	158	8.2	29	57		
25	32	269	612	234	140	1,020	550	269	132	7.6	28	53		
26	32	231	520	277	217	1,510	465	301	92	14	25	57		
27	36	197	370	301	293	4,230	440	238	67	8.8	25	74		
28	32	149	289	293	293	6,780	415	217	61	19	25	78		
29	35	180	370	370	370	3,620	348	203	113	25	20	121		
30	28	155	281	238	238	2,070	305	197	118	71	19	3,040		
31	28		370	253		1,510		197		46	14			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					118		24		39.1		0.072		0.08	
November					440		25		131		.243		.27	
December					3,180		165		634		1.17		1.35	
January					3,920		207		925		1.71		1.97	
February					392		140		277		.513		.53	
March					11,100		214		2,609		4.83		5.57	
April					2,640		305		840		1.56		1.74	
May					1,510		158		409		.757		.87	
June					370		61		149		.276		.31	
July					108		7.6		40.6		.075		.09	
August					261		14		56.5		.105		.12	
September					3,040		10		234		.433		.48	
The year.					11,100		7.6		533		.987		13.38	

Greenbrier River at Alderson, W. Va.

Location.- Water-stage recorder 400 feet above highway bridge at Alderson, Monroe County, and half a mile above mouth of Muddy Creek. Zero of gage is 1,528.97 feet above mean sea level.

Drainage area.- 1,340 square miles.

Records available.- July 1895 to June 1908, May 1907 to September 1934.

Average discharge.- 37 years (1895-1905, 1907-34), 2,053 second-feet.

Extremes.- Maximum discharge during year, 33,800 second-feet Mar. 5 (gage height, 13.21 feet); minimum, 45 second-feet Sept. 15 (gage height, 1.72 feet).
1895-1934: Maximum discharge recorded, about 60,000 second-feet Mar. 13, 14, 1918 (gage height, 22.0 feet); minimum, 28 second-feet part of Aug. 12, Oct. 1, 2, 1930 (gage height, 1.65 feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	117	284	626	370	520	3,400	749	348	141	177	76
2	121	113	303	2,540	392	520	2,750	681	329	168	224	72
3	117	109	316	3,450	502	7,930	2,260	637	290	192	303	69
4	113	113	342	2,600	484	25,700	1,940	615	268	154	457	63
5	117	113	378	1,990	511	32,200	1,770	596	240	168	408	79
6	109	125	457	1,860	493	22,500	1,650	577	234	159	284	85
7	102	141	586	2,950	415	11,500	1,540	548	240	136	310	76
8	96	187	692	6,960	400	14,400	1,460	520	290	117	234	63
9	95	182	725	6,780	415	16,000	1,430	475	329	145	215	61
10	92	187	586	5,640	316	8,140	1,630	448	348	234	177	56
11	92	203	539	2,500	251	5,250	1,560	439	303	475	145	53
12	88	182	484	1,900	290	3,570	1,630	520	268	251	141	48
13	92	164	362	1,740	329	2,680	1,680	833	342	187	136	50
14	92	159	370	1,390	303	2,340	1,740	761	303	154	121	48
15	92	154	342	1,260	310	2,100	1,630	670	290	136	125	48
16	88	154	422	1,060	362	1,920	1,680	1,160	268	117	132	240
17	98	145	539	899	385	1,770	3,460	2,160	229	96	208	2,550
18	113	128	1,430	737	475	1,650	9,270	1,720	218	88	213	2,080
19	159	168	1,680	615	548	1,740	6,460	1,360	234	82	310	980
20	168	240	2,990	626	502	2,790	4,730	1,080	362	72	362	568
21	177	329	5,780	626	439	3,960	3,610	886	502	61	251	392
22	203	400	3,660	558	457	3,710	2,810	737	430	61	203	296
23	177	362	2,360	648	439	3,190	2,280	659	322	61	159	245
24	154	362	1,720	648	378	2,810	1,920	615	256	61	145	208
25	136	520	1,310	548	422	2,730	1,630	539	234	66	136	182
26	121	457	1,070	548	378	3,100	1,360	475	224	56	164	173
27	113	385	886	530	457	5,490	1,190	457	234	53	145	198
28	109	322	615	558	457	24,600	1,080	457	192	993	121	154
29	109	284	475	548		13,100	980	400	159	670	106	154
30	109	268	392	400		6,600	858	378	141	362	88	694
31	113		568	310		4,470		362		245	82	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	203	88	119	0.089	0.10
November	520	109	226	.169	.19
December	5,780	284	1,054	.787	.91
January	8,960	310	1,705	1.27	1.46
February	548	251	410	.306	.32
March	32,200	520	7,709	5.75	6.63
April	9,270	858	2,330	1.78	1.99
May	2,160	362	726	.542	.62
June	502	141	281	.210	.23
July	993	53	192	.143	.16
August	457	82	203	.151	.17
September	2,550	48	335	.250	.28
The year	32,200	48	1,291	.963	13.06

Gauley River at Allingdale, W. Va.

Location.- Staff gage at Baltimore & Ohio Railroad bridge a quarter of a mile south of Allingdale, Nicholas County, and just below mouth of Rockcamp Creek. Zero of gage is 2,003.28 feet above mean sea level.

Drainage area.- 248 square miles.

Records available.- July 1908 to September 1916, October 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 11,000 second-feet Mar. 5 (gage height, 10.69 feet); minimum, 9 second-feet July 27 (gage height, 0.90 foot).
1908-16, 1929-34: Maximum discharge, about 42,500 second-feet July 4, 1932 (gage height, 23.3 feet, from flood marks); minimum discharge, 1.4 second-feet Sept. 24, 25, 1930 (gage height, 0.54 foot).

Remarks.- Records good except those for period Aug. 1 to Sept. 30, which are poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	42	663	890	380	310	710	438	85	41	91	87
2	160	41	570	1,030	333	310	585	392	84	73	78	85
3	121	39	510	1,260	258	8,440	510	348	71	134	610	60
4	78	37	960	960	226	5,550	460	304	65	84	610	51
5	55	41	825	1,530	216	8,100	460	243	57	69	282	41
6	44	87	925	728	216	2,270	438	243	89	60	193	40
7	39	212	1,260	1,530	216	1,440	438	226	208	51	152	37
8	38	179	890	1,720	166	2,040	535	193	145	48	123	34
9	36	149	695	1,180	133	830	460	168	102	44	102	27
10	29	130	478	960	123	770	415	173	87	41	282	25
11	24	116	430	728	130	660	460	560	112	44	483	22
12	23	128	333	540	128	740	800	560	130	48	325	20
13	29	206	310	455	152	660	740	438	145	54	226	55
14	24	478	290	430	176	960	710	370	117	54	193	80
15	30	360	310	380	176	770	685	510	87	48	145	37
16	34	290	355	333	258	710	960	685	75	42	226	108
17	36	230	960	290	290	685	960	585	48	37	2,630	1,100
18	192	333	960	246	290	960	890	460	29	33	890	560
19	121	793	1,050	266	266	1,100	770	460	175	28	560	282
20	80	540	3,800	234	246	1,440	770	325	262	25	438	193
21	61	430	2,270	198	226	1,180	685	262	145	22	348	148
22	57	663	1,260	209	226	960	585	208	76	19	262	134
23	146	728	890	220	226	800	510	193	69	15	208	100
24	143	570	663	266	226	685	485	162	102	13	226	87
25	107	405	540	270	266	610	438	178	115	11	535	93
26	90	333	600	258	290	1,030	415	208	66	11	392	262
27	68	333	540	333	290	2,040	415	155	54	9.4	282	226
28	56	310	510	355	310	3,930	685	126	48	148	208	178
29	51	355	430	430	1,820	585	110	42	348	160	178	
30	45	478	380	455	960	510	102	40	193	128	1,050	
31	42	355	1,030		890		93		134	104		
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					192	23	67.8	0.273	0.31			
November					793	37	302	1.22	1.36			
December					3,800	290	803	3.24	3.74			
January					1,720	198	636	2.56	2.95			
February					380	123	230	.927	.97			
March					8,440	310	1,731	6.98	8.05			
April					960	415	602	2.43	2.71			
May					685	93	306	1.23	1.42			
June					262	29	97.7	.394	.44			
July					348	9.4	63.9	.258	.30			
August					2,630	78	371	1.50	1.73			
September					1,100	20	179	.722	.61			
The year					8,440	9.4	453	1.83	24.79			

Gauley River near Summersville, W. Va.

Location.— Chain gage at Brocks Bridge, 500 feet below Muddlety Creek and $2\frac{1}{2}$ miles east of Summersville, Nicholas County.

Drainage area.— 686 square miles.

Records available.— July 1908 to September 1916, November 1928 to September 1934.

Extremes.— Maximum discharge during year, about 26,900 second-feet Mar. 5 (gage height, 15.9 feet, from graph based on gage readings); minimum, 19 second-feet July 25 (gage height, 1.38 feet).
1908-16, 1928-34: Maximum discharge, about 92,000 second-feet July 4, 1932 (gage height, 28.75 feet, from flood marks); minimum, 1.3 second-feet Aug. 10, 1930 (gage height, 0.64 foot).

Remarks.— Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	161	141	1,650	2,120	1,320	1,320	2,220	1,160	240	94	£97	167
2	191	132	1,660	3,930	1,160	1,320	1,830	950	254	268	£82	134
3	254	128	1,320	3,070	950	17,200	1,480	820	213	196	700	119
4	240	123	2,320	2,420	820	19,100	1,240	760	167	201	2,220	108
5	197	128	2,420	2,020	640	22,000	1,240	640	152	134	880	92
6	150	189	2,220	2,630	520	10,600	1,090	565	167	96	£00	85
7	132	430	3,930	3,310	430	5,610	1,020	520	430	85	395	74
8	112	448	2,740	4,960	565	7,440	1,240	465	448	80	297	65
9	102	395	1,920	3,550	448	5,440	1,090	412	297	64	268	61
10	92	360	1,480	2,630	378	3,800	950	395	240	60	£26	49
11	83	327	1,240	2,020	520	2,850	1,020	1,740	226	110	760	44
12	74	297	950	1,560	500	1,920	1,740	1,740	327	139	£00	44
13	81	327	820	1,400	540	1,920	2,120	1,240	327	150	395	50
14	85	540	790	1,240	465	2,850	2,020	950	268	150	327	102
15	87	750	880	1,020	465	2,520	1,920	1,240	208	115	268	123
16	81	540	880	980	730	2,220	2,220	2,220	163	83	767	165
17	105	448	2,320	790	880	1,920	2,520	1,740	134	60	6,230	2,630
18	268	615	2,620	590	820	2,320	2,630	1,400	110	46	2,320	950
19	360	1,650	2,850	750	820	2,850	2,220	1,090	119	30	1,160	500
20	254	1,400	9,940	640	760	4,200	2,740	820	670	25	790	360
21	199	1,020	6,850	540	670	3,800	2,320	640	360	25	590	268
22	175	1,090	4,200	520	730	3,190	1,920	565	226	58	430	213
23	208	1,830	2,740	540	640	2,740	1,660	590	182	44	360	184
24	344	1,240	2,020	700	640	2,020	1,400	482	167	31	482	161
25	297	950	1,740	640	640	1,920	1,160	465	226	19	880	172
26	254	820	1,650	615	820	2,950	950	520	158	25	770	184
27	213	880	2,020	750	1,400	5,480	1,020	448	121	25	520	327
28	194	760	1,560	950	1,480	12,800	1,740	378	100	590	395	226
29	177	760	1,160	1,020		5,950	1,650	327	91	820	312	226
30	161	1,090	1,090	880		3,800	1,320	297	81	482	240	1,560
31	147		1,020	950		2,740		268		378	201	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	560	74	176	0.257	0.30
November	1,850	123	660	.962	1.07
December	9,940	790	2,284	3.33	3.84
January	4,960	520	1,600	2.33	2.69
February	1,480	378	741	1.08	1.12
March	22,000	1,320	5,381	7.84	9.04
April	2,740	950	1,656	2.41	2.69
May	2,220	268	834	1.22	1.41
June	670	81	229	.334	.37
July	820	19	151	.220	.25
August	6,230	201	799	1.16	1.34
September	2,630	44	315	.459	.51
The year.	22,000	19	1,245	1.81	24.63

Gauley River above Belva, W. Va.

Location.- Water-stage recorder half a mile above Belva, Nicholas County, and 1 mile above mouth of Twentymile Creek. Zero of gage is 669.0 feet above mean sea level.

Drainage area.- 1,340 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, 46,400 second-feet Mar. 5 (gage height, 17.30 feet); minimum, 46 second-feet July 24 (gage height, 0.82 foot).
1929-34: Maximum discharge, about 105,000 second-feet July 4, 1932 (gage height, 28.80 feet); minimum, 4.2 second-feet Oct. 11, 1930 (gage height, 0.11 foot).

Remarks.- Records good. Discharge estimated Dec. 10-12 and Jan. 30 to Feb. 7.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	246	210	1,580	2,210	1,300	1,600	3,960	1,900	422	139	530	282		
2	246	195	1,900	5,540	1,280	1,540	3,040	1,680	380	156	476	246		
3	255	187	1,660	5,000	1,240	22,000	2,490	1,480	410	350	373	202		
4	310	180	2,080	3,860	1,100	29,500	2,080	1,320	362	291	854	176		
5	325	180	2,870	3,120	920	39,100	1,900	1,180	310	300	1,650	159		
6	264	183	2,870	3,390	960	22,200	1,770	1,040	278	224	1,030	136		
7	219	232	5,570	4,560	930	13,100	1,630	948	350	159	710	123		
8	180	506	4,360	7,760	840	12,500	1,720	858	777	134	551	115		
9	159	572	3,040	6,030	804	11,000	1,760	750	635	115	434	105		
10	139	518	2,240	4,360	663	8,280	1,600	710	494	97	398	94		
11	131	476	1,800	3,300	586	6,270	1,580	1,420	398	99	380	86		
12	119	440	1,450	2,490	670	4,150	2,140	2,870	362	112	867	90		
13	116	416	1,180	2,210	742	3,580	3,390	2,020	434	325	649	90		
14	112	452	1,200	2,020	813	3,960	3,480	1,600	440	268	537	134		
15	108	804	1,180	1,770	686	4,360	3,300	1,570	380	246	452	134		
16	112	831	1,230	1,520	957	3,580	3,210	2,640	310	210	422	206		
17	116	656	2,090	1,340	1,580	3,120	3,670	2,790	255	172	6,470	1,730		
18	123	593	3,300	1,150	1,460	3,120	4,050	2,210	224	139	3,580	1,630		
19	362	1,120	3,670	1,000	1,440	3,760	4,150	1,850	195	112	1,900	930		
20	494	2,080	18,100	1,110	1,400	5,800	4,360	1,500	210	92	1,220	621		
21	362	1,590	11,900	948	1,380	6,750	4,150	1,210	710	77	912	458		
22	300	1,360	7,250	840	1,280	5,340	3,390	1,000	488	65	710	368		
23	300	1,830	3,860	867	1,180	4,670	2,790	966	362	53	565	300		
24	386	1,760	3,390	948	1,060	3,960	2,420	903	286	50	512	264		
25	482	1,380	2,640	1,010	930	3,670	2,080	768	250	80	686	242		
26	422	1,140	2,790	948	1,080	4,670	1,750	786	278	65	1,060	224		
27	350	1,070	3,580	966	1,470	6,810	1,650	759	264	62	840	237		
28	310	1,070	2,790	1,130	1,660	19,900	2,140	649	210	333	635	340		
29	276	957	2,210	1,270		11,900	2,490	565	162	1,180	500	340		
30	280	1,050	1,820	1,330		7,500	2,210	524	136	930	404	749		
31	232		1,740	1,340		5,110		476		642	330			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					494		108		252		0.188		0.22	
November					2,080		180		801		.598		.67	
December					18,100		1,180		3,463		2.58		2.97	
January					7,760		840		2,424		1.81		2.09	
February					1,660		586		1,084		.809		.84	
March					39,100		1,540		9,123		6.81		7.85	
April					4,360		1,580		2,679		2.00		2.23	
May					2,870		476		1,321		.986		1.14	
June					777		136		359		.268		.30	
July					1,180		50		254		1.75		.20	
August					6,470		330		995		.743		.86	
September					1,730		86		360		.269		.30	
The year.					39,100		50		1,941		1.45		19.67	

Williams River at Dyer, W. Va.

Location.- Water-stage recorder at Dyer, Webster County, half a mile below Craig Run.
Zero of gage is 2,193.46 feet above mean sea level.

Drainage area.- 128 square miles.

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge during year, 7,600 second-feet Mar. 4 (gage height, 9.90 feet); minimum, 4 second-feet July 26 (gage height, 0.73 foot).
1929-34: Maximum discharge, about 22,000 second-feet July 4, 1932 (gage height, about 18.45 feet, from flood marks); minimum, 1.0 second-foot Aug. 5, 1930 (gage height, 0.50 foot).

Remarks.- Records excellent except those estimated for Jan. 30 to Feb. 7, and those estimated because of ice effect, Feb. 8-28, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	25	404	700	160	267	378	209	43	20	40	34
2	52	25	518	795	190	566	327	182	38	88	56	29
3	49	24	503	496	160	4,200	282	102	30	65	375	25
4	33	25	476	385	150	4,320	265	140	25	36	235	21
5	26	25	400	410	130	4,050	262	125	25	26	122	21
6	23	102	480	464	90	1,680	237	108	53	19	90	20
7	21	104	561	973	80	1,000	262	96	63	17	62	16
8	20	83	400	830	100	1,320	282	87	49	21	57	14
9	18	65	518	530	90	760	239	71	32	20	43	14
10	16	58	253	404	80	530	217	83	29	17	235	13
11	16	53	223	324	80	394	245	396	46	16	228	11
12	16	68	160	273	80	327	394	231	49	37	136	10
13	16	112	160	261	90	345	345	135	44	26	98	10
14	20	190	182	223	90	426	345	155	35	19	73	11
15	20	133	185	182	110	339	357	353	25	15	53	15
16	17	114	302	172	130	324	521	385	20	11	1,430	736
17	78	110	445	122	130	348	500	285	17	9	1,370	484
18	114	216	434	131	130	488	571	231	16	8	413	193
19	59	360	452	136	140	534	456	190	308	7	239	114
20	44	245	2,040	106	130	760	453	152	125	5	170	76
21	36	234	1,080	102	120	576	397	122	58	5	133	58
22	35	472	605	104	110	538	339	102	39	6	102	49
23	38	394	426	133	110	441	321	88	42	6	76	42
24	50	282	345	165	110	354	285	71	59	5	118	46
25	56	225	306	148	120	327	242	85	37	4	223	63
26	51	201	279	152	150	437	209	85	27	4	140	199
27	49	190	212	180	200	2,220	267	62	22	49	100	96
28	53	170	206	190	250	1,690	339	53	24	302	74	94
29	56	198	178	200		865	279	49	23	142	58	95
30	51	324	168	190		571	239	48	17	102	48	793
31	26		226	180		441		46		57	40	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				114	16	37.6	0.294		0.54			
November				472	23	161	1.26		1.41			
December				2,040	160	404	3.16		3.64			
January				973	102	311	2.43		2.80			
February				250	80	125	.977		1.02			
March				4,320	267	1,013	7.91		9.12			
April				571	209	328	2.56		2.86			
May				396	46	149	1.16		1.34			
June				306	16	47.3	.370		.41			
July				302	4	37.5	.293		.34			
August				1,420	40	216	1.69		1.95			
September				793	10	114	.891		.99			
The year.				4,320	4	247	1.93		26.22			

Cherry River at Fenwick, W. Va.

Location.- Chain gage at highway bridge at Fenwick, Nicholas County, 1,000 feet below mouth of Laurel Creek. Zero of gage is 2,088.94 feet above mean sea level.

Drainage area.- 150 square miles.

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1933, 5,520 second-feet Jan. 21 (gage height, 9.84 feet); minimum, 7.2 second-feet Oct. 5 (gage height, 2.97 feet).

Maximum discharge recorded during year ending Sept. 30, 1934, 5,800 second-feet Mar. 5 (gage height, 10.04 feet); minimum, 3.1 second-feet Oct. 7 (gage height, 2.78 feet).

1929-34: Maximum gage height recorded, 14.58 feet July 4, 1932 (discharge not determined); minimum discharge, 0.1 second-foot Sept. 22, 1930, Sept. 13, 1932, (gage height, 2.60 feet).

Remarks.- Records fair. Discharge estimated Oct. 10, 14, 15, Nov. 29 to Dec. 4, Dec. 16, 1932, Jan. 27-29, Mar. 1, 2, Apr. 30 to May 20, Aug. 15, Sept. 27, 1933.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	682	110	780	425	500	748	283	175	358	266	66
2	9.2	590	110	590	715	400	815		126	274	285	45
3	8.9	380	100	450	650	293	885		111	1,200	748	48
4	8.0	293	100	380	590	259	815		95	502	4,010	97
5	8.9	248	95	335	425	181	650		89	282	1,420	210
6	204	194	86	248	282	197	748	867	63	184	650	69
7	115	161	79	197	335	335	1,510		60	118	380	68
8	33	156	77	207	2,450	850	995		40	81	259	46
9	22	1,330	69	358	1,420	650	748		99	68	178	28
10	24	1,780	72	530	682	502	560		650	76	148	46
11	26	885	75	450	502	380	530	814	204	150	620	26
12	17	650	241	502	314	380	1,780		143	314	560	23
13	18	380	314	402	314	380	995		146	143	475	16
14	16	278	282	335	958	2,750	715		91	109	475	36
15	15	241	234	285	1,870	3,750	530		64	278	220	37
16	38	234	150	210	1,330	1,690	475	1,290	76	425	133	115
17	1,240	293	150	220	1,070	958	590		66	270	120	79
18	715	259	175	263	850	1,330	502		54	158	97	28
19	402	1,960	175	450	850	2,650	590		44	111	89	38
20	360	1,200	140	380	1,960	2,250	475		35	88	63	46
21	266	748	136	4,400	1,600	2,250	402	224	26	77	61	36
22	181	450	187	2,950	995	1,330	358	230	22	60	53	36
23	131	314	358	1,510	715	885	282	200	18	44	45	28
24	101	285	475	885	620	650	244	178	16	38	314	17
25	81	244	682	850	682	530	293	200	52	36	161	15
26	89	220	502	1,030	1,420	425	358	224	167	111	77	12
27	748	184	530	700	815	335	335	200	230	1,030	45	12
28	402	146	2,250	530	682	402	285	210	650	1,240	60	14
29	314	125	1,150	450	425	450	259	178	1,240	1,780	153	15
30	213	120	885	380		450	220	230	850	502	122	12
31	227		780	335		602		217		475	84	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				1,240	8.0	196	1.31	1.51				
November				1,950	120	501	3.54	3.73				
December				2,250	69	347	2.31	2.66				
January				4,400	197	697	4.65	5.36				
February				2,450	282	911	6.07	6.32				
March				3,750	181	929	6.19	7.14				
April				1,780	220	623	4.15	4.63				
May					178	599	3.99	4.60				
June				1,240	16	190	1.27	1.42				
July				1,780	36	341	2.27	2.62				
August				4,010	45	399	2.66	3.07				
September				210	12	45.5	.303	.34				
The year				4,400	8.0	480	3.20	43.40				

Cherry River at Fenwick, W. Va.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	8.9	425	885	172	270	502	234	77	14	32	17
2	17	7.5	335	1,240	213	1,420	425	204	64	20	129	16
3	36	16	314	716	181	4,680	514	181	45	14	682	24
4	18	19	314	560	158	4,400	295	161	36	8.9	358	10
5	14	28	402	590	160	4,960	278	145	35	10	175	16
6	13	136	815	748	109	2,550	227	131	68	8.3	103	12
7	3.3	77	995	1,110	71	1,600	255	120	172	7.8	76	12
8	6.2	79	780	958	113	2,150	248	106	91	9.8	68	10
9	6.2	66	590	748	103	1,780	220	95	64	13	42	7.5
10	5.5	45	314	530	99	1,030	197	136	68	9.6	32	7.0
11	12	46	234	380	77	1,510	200	590	77	8.3	66	7.0
12	8.6	64	158	335	84	1,110	259	293	69	14	60	5.3
13	7.0	71	204	285	103	715	335	248	55	12	74	9.8
14	5.3	81	224	244	95	502	380	355	40	14	52	15
15	8.3	131	207	227	122	293	450	682	32	15	35	12
16	8.0	120	234	181	138	358	560	650	24	8.3	682	402
17	181	164	380	133	140	335	650	560	20	5.3	780	335
18	97	380	650	101	146	380	850	514	16	6.0	278	136
19	36	355	1,110	143	158	650	815	194	278	6.0	143	86
20	42	207	3,750	93	148	995	780	194	107	5.3	105	58
21	14	184	2,650	101	143	780	650	158	81	4.6	88	38
22	31	285	2,150	118	122	715	530	138	45	5.8	55	40
23	29	293	2,150	138	170	530	380	133	42	4.9	63	31
24	31	220	1,600	156	120	425	368	122	49	6.8	89	26
25	25	178	358	178	133	402	285	111	51	8.6	101	48
26	11	158	358	175	172	560	244	95	22	6.2	84	45
27	12	197	293	190	230	1,960	293	84	18	5.3	74	36
28	20	285	241	194	282	2,260	335	74	16	402	46	41
29	18	282	153	213		1,330	293	66	12	95	31	131
30	20	314	93	200		850	259	58	14	72	36	1,690
31	17		207	190		682		57		48	22	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	181			3.3			24.5			0.165	0.19	
November	380			7.5			149			.993	1.11	
December	3,750			93			732			4.88	5.63	
January	1,240			93			389			2.59	2.99	
February	282			71			141			.940	.98	
March	4,960			270			1,360			9.07	10.46	
April	850			197			396			2.64	2.94	
May	682			57			215			1.43	1.66	
June	278			12			58.9			.393	.44	
July	402			4.6			28.0			.187	.22	
August	780			22			150			1.00	1.15	
September	1,690			5.3			111			.740	.83	
The year.	4,960			3.3			316			2.11	28.69	

Meadow River at Nallen, W. Va.

Location.- Chain gage at highway bridge at Nallen, Fayette County, a quarter of a mile below Youngs Creek.

Drainage area.- 297 square miles.

Records available.- July 1908 to September 1916, November 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,740 second-feet Mar. 5 (gage height, 15.84 feet); minimum, 3.2 second-feet July 25 (gage height, 2.57 feet).
1908-16, 1928-34: Maximum discharge recorded, that of Mar. 5, 1934; practically no flow at times in 1930.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	24	108	610	212	264	890	212	53	11	30	14
2	30	23	101	1,250	237	293	585	190	51	9.8	34	12
3	24	21	104	1,100	216	3,260	472	159	85	9.3	48	9.8
4	17	19	108	875	190	5,740	403	150	73	7.8	264	9.0
5	15	17	116	695	169	8,540	354	141	67	6.7	179	8.6
6	14	86	650	695	169	6,840	323	132	56	6.0	90	8.1
7	13	79	965	920	169	4,870	293	124	46	4.7	64	7.6
8	12	84	785	1,400	160	3,340	308	116	100	4.0	48	7.1
9	12	83	740	1,200	141	3,100	293	124	68	6.4	34	6.4
10	10	76	650	965	132	2,140	293	132	60	7.8	28	5.8
11	8.8	72	570	740	132	1,460	278	141	49	9.0	25	5.1
12	13	62	490	530	141	990	250	150	44	9.8	22	7.4
13	13	73	264	430	141	840	237	159	42	12	19	8.3
14	12	86	212	410	169	665	200	150	36	15	16	8.6
15	11	93	200	358	141	625	224	200	27	14	15	9.8
16	16	107	237	308	141	386	338	370	21	12	46	11
17	53	116	410	278	169	508	366	403	17	9.8	88	33
18	101	116	570	224	190	490	437	354	16	8.1	108	73
19	95	116	610	212	224	472	750	278	20	6.7	82	48
20	79	124	3,430	200	250	545	890	212	42	6.0	48	31
21	53	150	2,380	179	224	508	990	169	64	5.3	36	24
22	40	179	1,400	169	190	454	940	150	40	4.8	27	19
23	36	212	1,100	169	179	420	890	124	32	4.5	24	16
24	33	224	740	169	169	370	750	116	26	3.9	22	14
25	33	224	570	159	179	338	585	108	22	4.3	27	12
26	29	212	470	150	224	370	545	101	20	6.2	27	12
27	26	190	410	159	250	1,340	437	88	17	12	24	14
28	22	169	324	169	278	2,060	278	73	11	53	22	15
29	19	150	308	124		1,910	250	68	10	64	20	19
30	19	116	264	58		1,520	237	61	9.8	68	18	124
31	22		264	212		1,190		55		36	16	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				101		8.8		29.5		0.099		0.11
November				224		17		110		.370		.41
December				3,430		101		651		2.12		2.44
January				1,400		58		487		1.64		1.89
February				278		132		184		.620		.65
March				8,540		264		1,802		6.07		7.00
April				990		200		470		1.58		1.76
May				403		55		162		.545		.63
June				100		9.8		40.8		.137		.15
July				64		3.9		13.8		.046		.05
August				264		15		50.0		.168		.19
September				124		5.1		19.8		.067		.07
The year				8,540		3.9		336		1.13		15.35

Elk River below Back Fork, at Webster Springs, W. Va.

Location.- Staff gage at West Virginia Midland Railway bridge, half a mile west of Webster Springs, Webster County, and a quarter of a mile below Back Fork.

Drainage area.- 242 square miles.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,000 second-feet Mar. 3 (gage height, 6.55 feet); minimum, 13 second-feet July 27 (gage height, 0.41 foot).
1929-34: Maximum discharge recorded, about 26,000 second-feet July 4, 1932 (gage height, 12.98 feet); minimum, 1.4 second-feet Sept. 23-25, 1930 (gage height, 0.06 foot).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	54	580	1,060	403	497	730	421	60	50	63	40
2	114	53	510	1,570	385	510	690	358	54	53	66	35
3	111	43	471	1,260	346	7,000	478	311	47	47	690	28
4	58	43	580	970	292	5,570	510	273	47	45	545	26
5	54	45	730	890	268	4,920	409	236	45	33	563	27
6	46	104	935	970	222	2,840	306	199	58	30	156	25
7	47	195	1,060	1,260	190	1,790	152	182	141	31	110	23
8	45	175	890	1,570	182	1,570	350	156	100	35	72	21
9	42	141	650	1,160	165	1,570	415	130	72	35	61	20
10	42	134	478	935	82	1,260	433	146	122	35	58	18
11	41	114	415	850	173	970	415	1,110	152	30	79	16
12	33	134	236	580	264	770	1,210	770	282	58	77	17
13	33	320	241	545	264	650	1,160	504	292	87	79	23
14	33	478	292	510	236	810	970	458	204	68	75	35
15	33	504	287	415	264	890	935	615	135	45	57	33
16	32	504	580	358	358	810	1,060	650	98	35	92	114
17	47	363	1,260	311	397	770	1,060	580	83	28	1,110	770
18	68	510	1,210	282	341	935	970	471	68	24	545	330
19	68	650	1,260	268	330	1,020	1,160	363	245	19	371	167
20	54	730	2,150	245	320	1,160	1,060	282	301	17	192	119
21	48	545	1,910	213	380	1,210	730	227	160	18	114	87
22	43	770	1,310	199	306	1,060	545	186	100	24	110	74
23	57	850	850	227	282	1,110	497	152	268	24	77	65
24	141	690	650	325	273	730	433	124	215	18	83	60
25	111	504	545	301	273	615	385	160	130	17	190	53
26	93	439	545	330	330	730	282	146	79	14	167	58
27	74	330	510	415	415	1,060	385	114	79	13	124	70
28	65	292	421	484	497	2,550	730	100	72	100	90	61
29	57	374	352	452		1,570	615	92	65	152	68	61
30	54	510	320	421		1,210	510	79	47	163	58	690
31	51		330	415		850		72		105	45	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	141	32	60.5	0.250	0.29
November	650	43	360	1.49	1.66
December	2,150	236	728	3.01	3.47
January	1,570	199	638	2.64	3.04
February	497	82	294	1.21	1.26
March	7,000	497	1,631	6.55	7.53
April	1,210	152	652	2.69	3.00
May	1,110	72	312	1.29	1.49
June	301	45	127	.525	.59
July	163	13	46.9	.194	.22
August	1,110	45	193	.798	.92
September	770	16	106	.438	.49
The year	7,000	13	427	1.76	23.96

Elk River at Queen Shoals, W. V.a

Location.-- Water-stage recorder at highway bridge at Queen Shoals, Kanawha County. Queen Shoals Creek enters on left just below bridge and above the control.

Drainage area.-- 1,140 square miles, including Queen Shoals Creek.

Records available.-- November 1928 to September 1934.

Extremes.-- Maximum discharge during year, about 25,600 second-feet Mar. 4 (gauge height, 15.43 feet); minimum, 37 second-feet July 27 (gauge height, 3.18 feet).
1928-34: Maximum discharge, about 91,300 second-feet July 5, 1932 (gauge height, 29.2 feet); minimum, 1.0 second-foot Oct. 20-22, 1930 (gauge height, 2.20 feet).

Remarks.-- Records good. Records include flow of Queen Shoals Creek.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	153	742	1,300	787	977	2,860	1,790	304	156	595	182
2	75	135	886	2,070	1,010	1,280	2,220	1,470	270	142	570	151
3	70	117	894	3,670	959	12,600	1,630	1,250	251	169	1,450	124
4	253	107	870	3,310	794	23,200	1,470	1,080	198	142	2,690	106
5	396	109	950	2,610	746	16,400	1,300	950	174	135	1,860	96
6	300	126	1,300	3,130	683	13,400	1,180	849	161	118	1,030	87
7	222	175	2,070	7,820	605	7,060	1,100	768	154	101	724	76
8	169	232	3,040	7,540	575	8,300	1,030	670	156	100	524	69
9	137	255	2,220	5,720	468	8,040	1,020	590	142	96	395	61
10	111	351	1,680	4,140	381	5,930	1,030	544	169	85	450	56
11	99	344	1,170	3,040	432	4,720	1,110	793	244	85	556	52
12	88	314	942	2,300	400	3,670	5,130	2,110	304	656	895	48
13	85	300	800	1,830	448	3,130	5,320	2,140	552	428	432	47
14	78	283	652	1,550	464	4,240	4,520	1,580	942	335	342	52
15	75	308	600	1,320	512	5,120	3,670	1,690	786	267	274	48
16	68	570	622	1,100	658	4,040	2,950	3,310	570	196	284	54
17	69	610	2,610	950	934	3,130	2,780	3,310	443	176	688	47
18	69	520	4,720	849	1,240	2,690	2,530	2,610	367	146	1,450	50
19	68	444	3,950	760	1,280	2,690	2,220	1,890	355	114	1,320	752
20	68	905	6,370	716	1,080	2,950	2,000	1,390	281	88	878	570
21	66	1,210	8,040	690	842	3,400	1,780	1,060	257	75	640	443
22	70	1,020	5,120	640	886	3,220	1,570	866	388	63	485	342
23	124	995	3,310	616	918	2,860	1,370	765	392	55	377	247
24	130	1,420	2,300	676	768	2,950	1,170	700	318	46	498	104
25	135	1,230	1,720	761	735	3,040	1,030	575	260	40	600	146
26	496	986	1,930	794	787	3,590	902	512	291	39	532	120
27	412	828	3,490	821	902	4,920	926	501	335	41	454	103
28	314	814	2,780	934	968	12,500	1,540	493	264	55	436	98
29	248	800	2,000	1,080		10,600	2,220	439	234	617	363	164
30	204	728	1,510	1,070		5,720	2,220	381	169	744	291	912
31	176		1,280	800		3,950		339		640	228	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				496	66	160	0.140	0.18				
November				1,420	107	546	.479	.53				
December				8,040	600	2,270	1.99	2.29				
January				7,820	616	2,085	1.83	2.11				
February				1,280	381	759	.666	.69				
March				23,200	977	6,145	5.39	6.21				
April				5,320	902	2,000	1.75	1.95				
May				3,310	339	1,213	1.06	1.22				
June				942	142	323	.283	.32				
July				744	39	196	.174	.20				
August				2,690	228	710	.623	.72				
September				912	47	183	.161	.18				
The year.				23,200	39	1,395	1.22	16.58				

Coal River at Ashford, W. Va.

Location.- Chain gage at highway bridge at Ashford, Boone County.

Drainage area.- 395 square miles.

Records available.- May 1930 to September 1934. June 1908 to August 1916 at site 1 mile upstream.

Extremes.- Maximum discharge recorded during year, 13,300 second-feet Mar. 3 (gage height, 15.17 feet, from flood marks); minimum, 13 second-feet July 26 (gage height, 1.48 feet).

1908-16, 1930-34: Maximum discharge recorded, about 40,700 second-feet Aug. 9, 1916 (gage height, 36.3 feet at former site); no flow Sept. 18-21, 24, Oct. 6-12, 1930.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	16	43	266	119	880	795	390	53	135	166	55
2	101	15	40	298	113	930	630	367	43	115	90	50
3	68	13	44	304	110	8,640	485	325	37	60	165	42
4	52	11	56	280	98	5,390	420	305	37	36	1,130	35
5	26	17	70	298	101	4,770	390	276	70	27	450	33
6	24	23	79	266	104	2,890	384	258	50	22	190	31
7	20	24	550	2,170	101	1,650	390	232	47	22	172	30
8	15	37	380	2,370	95	2,370	450	208	44	36	122	28
9	14	46	205	1,330	65	2,890	465	186	68	31	81	27
10	11	41	168	830	74	1,960	520	176	40	51	92	28
11	8.0	43	122	595	81	1,330	630	249	37	138	190	25
12	7.5	29	104	460	98	930	1,440	224	40	285	196	25
13	12	34	64	345	113	795	1,650	165	39	368	165	31
14	8.0	48	72	310	104	750	1,330	182	29	249	228	33
15	6.5	37	61	256	119	670	978	224	30	147	204	95
16	8.0	35	84	205	150	630	795	244	27	99	357	70
17	12	30	220	119	240	555	630	200	24	67	1,030	54
18	13	22	640	160	262	485	520	193	24	51	450	90
19	9.0	33	380	153	250	485	520	162	41	40	172	74
20	12	33	3,000	136	184	1,540	630	147	39	33	166	56
21	26	34	1,540	125	160	2,060	750	125	45	31	153	43
22	19	52	730	119	200	1,440	630	120	45	29	128	40
23	19	49	420	136	184	1,230	590	120	40	21	101	33
24	28	44	192	146	168	2,060	465	112	31	18	97	27
25	21	29	230	152	262	1,860	390	110	34	16	132	29
26	22	44	1,230	125	2,060	1,650	340	97	28	14	193	30
27	30	46	1,960	128	1,750	1,650	450	84	24	15	116	24
28	26	44	1,030	116	1,180	3,410	520	77	18	77	179	25
29	23	44	550	125		2,270	465	72	25	150	122	27
30	20	41	380	68		1,440	450	60	26	162	97	196
31	17		310	74		1,030		54		156	79	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				101		6.5		23.1		0.059		0.07
November				52		11		35.9		.086		.10
December				3,000		40		483		1.22		1.41
January				2,370		68		403		1.02		1.18
February				2,060		65		305		.773		.80
March				8,640		485		1,953		4.94		5.70
April				1,650		340		639		1.62		1.81
May				390		54		185		.468		.54
June				70		16		36.8		.093		.10
July				368		14		87.1		.221		.25
August				1,130		79		244		.618		.71
September				196		24		46.2		.117		.13
The year.				8,540		6.5		372		.942		12.80

Little Coal River at Madison, W. Va.

Location.- Chain gage at lower highway bridge at Madison, Boone County.

Drainage area.- 287 square miles.

Records available.- May 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, about 13,500 second-feet Mar. 3 (gage height, 12.32 feet, from flood marks); minimum, 6.4 second-feet July 27 (gage height, 2.53 feet).

1930-34: Maximum discharge recorded, 16,300 second-feet Jan. 30, 1932 (gage height, 13.20 feet); no flow part of the time July to October 1930.

Remarks.- Records fair. Discharge interpolated Sept. 21, 22.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	14	24	182	65	660	660	299	32	18	36	37
2	127	13	25	182	62	885	482	260	31	94	34	34
3	60	13	31	117	52	6,660	347	230	30	70	137	25
4	39	14	36	110	53	2,350	299	194	21	37	650	26
5	30	19	45	120	56	1,980	331	158	21	28	1,080	24
6	27	25	93	130	58	1,410	323	137	24	22	96	21
7	25	28	440	2,900	53	1,080	307	124	27	17	70	20
8	22	26	120	1,740	51	1,530	355	107	24	74	49	18
9	19	23	124	840	49	1,740	398	89	24	36	40	15
10	18	22	87	525	45	1,410	440	97	27	90	39	14
11	16	20	69	395	49	795	705	117	28	118	110	13
12	13	19	57	299	61	482	1,520	89	37	101	134	13
13	15	20	52	245	53	525	1,240	73	32	21	184	27
14	14	21	44	209	32	482	932	72	25	82	345	33
15	13	23	38	176	77	398	705	146	21	52	216	36
16	12	21	40	146	82	347	570	251	17	41	1,630	27
17	17	18	72	124	85	299	440	184	14	32	1,190	24
18	19	17	245	107	85	398	355	137	21	24	515	21
19	16	17	323	99	75	440	398	112	41	21	258	18
20	15	19	2,480	93	58	1,410	482	94	37	17	151	14
21	13	19	795	89	56	1,520	482	84	34	14	110	13
22	11	22	570	87	50	1,140	440	71	22	13	86	12
23	22	25	323	95	73	1,410	398	64	24	11	74	11
24	30	29	275	91	84	2,100	323	54	27	9.0	86	10
25	25	26	95	84	95	1,410	260	54	26	9.0	101	10
26	22	29	107	85	3,620	1,080	208	42	18	7.7	92	11
27	20	29	750	84	1,300	960	331	39	14	6.4	101	11
28	19	28	615	78	795	2,900	398	36	21	9.5	75	14
29	18	27	355	52		1,520	355	36	16	53	59	36
30	17	25	245	29		980	347	34	15	52	47	450
31	16		194	22		750		33		49	41	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				127	11	24.4	0.091		0.10			
November				29	13	21.7	.081		.09			
December				2,480	24	283	1.06		1.22			
January				2,900	22	308	1.15		1.35			
February				3,820	32	267	1.00		1.04			
March				6,660	299	1,328	4.97		5.73			
April				1,520	208	494	1.85		2.06			
May				299	33	114	.427		.49			
June				37	14	25.0	.094		.10			
July				118	6.4	39.6	.148		.17			
August				1,630	34	253	.948		1.09			
September				430	10	34.0	.127		.14			
The year				6,660	6.4	267	1.00		13.56			

Raccoon Creek at Adamsville, Ohio

Location.- Staff gage on line between secs. 25 and 26, T. 6 N., R. 16 W., at highway bridge at Adamsville. Zero of gage is 570.85 feet above mean sea level.

Drainage area.- 587 square miles.

Records available.- June 1915 to September 1934.

Average discharge.- 19 years, 685 second-feet.

Extremes.- Maximum discharge recorded during year, 3,750 second-feet Mar. 29 (gage height, 13.00 feet); minimum, 9.6 second-feet Oct. 25, 28, Nov. 4 (gage height, 1.78 feet).
1915-34: Maximum discharge recorded, 7,920 second-feet Apr. 21, 1920 (gage height, 21.10 feet); minimum, 1.4 second-feet Sept. 24, 1930 (gage height, 1.54 feet).
High-water marks indicate maximum stage of about 24.5 feet previous to installation of gage.

Remarks.- Records fair. Discharge estimated because of ice effect Jan. 31 to Mar. 2 and interpolated Jan. 20, May 29, July 1.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	11	23	376	118	50	856	140	44	144	425	31
2	36	11	23	599	112	50	672	129	36	97	1,170	30
3	32	11	25	552	110	974	552	121	51	77	914	25
4	27	9.6	25	462	106	3,110	462	118	35	67	310	25
5	25	11	25	418	100	3,420	397	116	30	51	379	23
6	32	15	25	418	94	3,650	418	110	25	40	178	22
7	24	15	32	2,330	84	2,750	748	104	30	42	117	21
8	21	27	37	2,330	78	1,380	1,170	95	24	37	97	24
9	19	27	44	2,410	74	974	1,100	89	24	37	75	22
10	19	23	37	1,730	68	856	748	87	24	37	119	19
11	19	23	34	1,100	65	722	623	83	24	86	75	21
12	19	27	32	647	63	552	575	95	24	216	62	18
13	19	30	27	462	60	599	672	104	25	154	49	19
14	19	22	27	418	69	774	575	112	30	101	40	19
15	19	20	25	376	58	1,140	484	108	25	79	35	22
16	17	19	397	315	57	1,140	418	127	24	49	32	37
17	17	23	2,250	255	56	856	376	183	24	44	310	39
18	14	23	1,310	225	55	647	315	204	24	40	545	35
19	25	23	1,690	215	54	599	295	150	25	33	234	24
20	20	25	1,610	204	52	552	255	118	24	32	130	24
21	16	27	1,070	194	52	506	255	100	25	27	95	32
22	15	30	1,040	183	52	506	172	87	24	26	90	30
23	13	30	800	183	50	462	245	77	24	17	51	24
24	11	32	462	183	50	418	204	60	24	17	46	24
25	9.6	32	355	194	49	376	204	58	24	17	86	24
26	10	32	295	183	49	914	172	79	24	18	64	32
27	10	32	295	172	49	2,660	172	67	25	25	178	30
28	9.6	32	275	172	49	3,110	161	55	52	35	119	29
29	13	34	215	172		3,750	161	53	117	35	71	32
30	13	31	215	129		3,340	150	51	191	25	52	39
31	13		150	120		1,690		49		77	40	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				36	9.6	19.0	0.032		0.04			
November				34	9.6	25.6	.040		.04			
December				2,250	23	415	.707		.92			
January				2,330	120	572	.974		1.12			
February				118	49	68.7	.117		.12			
March				3,750	50	1,378	2.35		2.71			
April				1,170	150	454	.773		.66			
May				204	49	101	.172		.20			
June				191	24	36.7	.063		.07			
July				216	17	57.5	.098		.11			
August				1,170	32	201	.342		.39			
September				82	18	28.1	.048		.05			
The year				3,750	9.6	283	.482		6.53			

Guyandot River at Man, W. Va.

Location.- Water-stage recorder at highway bridge at Man, Logan County, 500 feet above Buffalo Creek. Prior to July 3, 1934, chain gage with same datum at same location used.

Drainage area.- 752 square miles (including Buffalo Creek).

Records available.- December 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 30,900 second-feet Mar. 3 (gage height, 19.11 feet); minimum, 17 second-feet Oct. 18; minimum gage height, 2.89 feet June 29, 30.
1928-34: Maximum discharge recorded, 30,900 second-feet Mar. 3, 1934 (gage height, 19.11 feet); minimum, 3.0 second-feet Oct. 6, 1930 (gage height, 2.32 feet).

Remarks.- Records good. Records include flow of Buffalo Creek.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	45	61	623	177	1,560	1,500	535	91	222	306	288
2	92	41	57	770	180	2,900	1,210	505	81	420	565	239
3	103	38	61	1,040	197	24,800	975	475	73	445	1,330	196
4	107	43	79	965	194	14,000	865	475	68	239	1,960	171
5	86	49	99	540	215	14,000	760	420	69	146	1,050	168
6	69	38	335	770	200	7,110	695	395	73	96	565	143
7	49	141	965	2,480	194	4,070	662	372	86	68	346	128
8	42	215	770	2,360	153	6,700	695	330	91	81	253	120
9	48	172	515	1,660	112	9,560	662	292	66	88	254	126
10	43	134	355	1,280	86	5,840	2,320	280	68	98	263	106
11	46	114	280	965	158	4,220	2,440	420	75	766	277	101
12	46	92	212	770	136	1,860	3,780	395	88	760	338	98
13	54	86	180	710	168	1,500	3,360	445	77	695	445	120
14	27	86	156	660	172	1,210	2,370	372	68	695	1,660	158
15	20	82	139	540	197	975	1,500	445	61	263	938	158
16	18	77	169	440	230	505	1,400	372	55	180	1,160	149
17	25	71	335	395	297	598	1,210	395	45	128	2,830	143
18	42	75	515	335	355	760	1,300	342	111	93	1,600	270
19	230	67	668	315	490	830	2,670	350	158	70	830	209
20	101	57	4,000	315	395	6,730	4,680	277	126	59	535	155
21	94	54	2,240	297	297	5,000	4,220	216	140	50	445	120
22	73	64	1,200	297	297	2,440	1,610	187	106	44	330	98
23	66	66	830	280	335	2,830	1,720	190	96	44	253	86
24	79	64	595	280	253	3,780	1,300	190	66	47	1,100	77
25	96	59	568	280	381	5,000	1,050	187	53	59	1,300	70
26	99	61	2,120	245	7,090	4,070	900	184	47	50	4,750	62
27	92	65	2,740	245	3,870	3,220	865	187	48	55	4,070	62
28	77	62	1,460	245	2,000	7,110	760	114	62	196	1,610	64
29	64	62	1,040	230		4,680	630	111	34	326	900	79
30	56	64	770	215		3,090	598	96	33	566	535	395
31	50		650	127		2,080		91		420		
Month				Maximum		Minimum	Mean	Per square mile		Run-off in inches		
October				230		18	69.5	0.082		0.11		
November				215		38	79.8	.106		.12		
December				4,000		57	776	1.03		1.19		
January				2,480		127	667	.887		1.02		
February				7,090		86	672	.894		.93		
March				24,800		505	4,940	6.57		7.57		
April				4,680		598	1,627	2.16		2.41		
May				535		91	311	.414		.48		
June				158		33	76.9	.102		.11		
July				766		44	241	.320		.37		
August				4,750		253	1,068	1.42		1.64		
September				395		62	145	.193		.22		
The year.				24,800		18	896	1.19		16.17		

Guyandot River at Branchland, W. Va.

Location.- Water-stage recorder at highway bridge at Branchland, Lincoln County, 20 feet below Fourmile Creek. Zero of gage is 547.91 feet above mean sea level.

Drainage area.- 1,230 square miles.

Records available.- July 1915 to September 1922, December 1928 to September 1934.

Extremes.- Maximum discharge during year, 38,400 second-feet Mar. 4 (gage height, 35.60 feet); minimum, 48 second-feet Oct. 15 (gage height, 3.00 feet).

1915-22, 1928-34: Maximum gage height, 39.24 feet Jan. 29, 1918 (discharge not determined); minimum discharge, 3.8 second-feet Oct. 25, 1930 (gage height, 2.68 feet).

Maximum stage known, about 44 feet, probably in 1907.

Remarks.- Records good.

Discharge, in second-feet, 1953-54

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	73	87	771	264	2,690	2,850	1,040	152	182	529	517
2	52	66	87	712	246	2,530	2,220	950	141	414	493	414
3	52	62	89	748	224	18,400	1,790	880	134	493	943	335
4	84	66	94	958	237	36,500	1,480	828	127	670	1,680	277
5	110	77	105	955	245	24,500	1,400	755	141	409	1,910	242
6	113	110	124	880	250	17,800	1,480	705	134	268	1,170	216
7	113	117	340	4,090	237	8,150	1,400	649	141	190	719	207
8	89	105	818	5,650	220	6,360	1,400	600	134	167	499	250
9	73	144	787	3,470	224	12,300	1,320	541	130	174	382	174
10	64	199	561	2,220	137	10,200	1,560	499	159	178	535	155
11	56	174	409	1,480	183	5,750	2,770	529	167	159	2,610	152
12	52	152	315	1,170	190	3,700	3,780	587	199	517	1,870	141
13	51	144	268	958	199	2,770	4,950	670	190	943	1,020	155
14	49	124	224	841	186	2,300	4,350	677	199	857	1,360	248
15	48	110	203	740	211	1,990	3,240	779	141	614	1,990	259
16	49	100	199	635	242	1,750	2,380	763	120	404	2,610	220
17	52	97	325	554	237	1,560	1,910	600	110	296	5,030	203
18	54	94	535	493	259	1,400	1,680	587	127	220	3,780	190
19	56	97	728	453	340	1,320	1,910	541	182	171	1,910	224
20	54	92	2,220	420	350	2,380	3,470	451	296	137	1,170	282
21	167	92	4,480	387	355	7,990	5,340	414	259	113	818	259
22	141	89	2,460	397	350	5,280	3,940	355	228	97	635	178
23	117	94	1,320	370	325	4,170	2,690	320	259	89	535	159
24	102	97	904	370	345	5,580	2,070	292	255	77	453	130
25	92	97	705	350	325	6,280	1,640	277	203	71	1,090	113
26	97	97	1,600	355	3,300	6,750	1,360	255	144	62	1,520	102
27	94	94	3,780	345	7,940	5,040	1,440	224	124	69	5,190	94
28	100	97	3,000	325	4,480	7,060	1,480	198	141	176	3,700	89
29	100	97	1,680	296		8,910	1,320	186	141	174	1,600	167
30	87	92	1,170	242		5,970	1,170	178	110	340	574	523
31	80		880	203		3,940		167		567	677	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	167	48	80.3	0.085	0.07
November	199	62	105	.085	.09
December	4,480	87	964	.800	.92
January	5,650	203	1,026	.834	.96
February	7,840	137	786	.659	.87
March	36,500	1,320	7,513	6.11	7.04
April	5,340	1,170	2,326	1.89	2.11
May	1,040	167	533	.433	.50
June	296	110	186	.135	.15
July	943	62	300	.244	.23
August	5,190	362	1,594	1.30	1.50
September	583	89	222	.180	.20
The year	36,500	48	1,514	1.07	14.49

Levisa Fork at Paintsville, Ky.

Location.- Chain gage at highway bridge at Paintsville, Johnson County, 700 feet below mouth of Paint Creek.

Drainage area.- 2,150 square miles.

Records available.- December 1928 to September 1934. June 1915 to November 1920, at Thelma, 2 miles downstream.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1932, 50,700 second-feet Jan. 31 (gage height, 37.37 feet); minimum, 19 second-feet Sept. 19 (gage height, 1.24 feet).

Maximum discharge recorded during year ending Sept. 30, 1933, 25,900 second-feet Feb. 21 (gage height, 24.13 feet); minimum, 22 second-feet Oct. 1, 2, 4 (gage height, 1.28 feet).

Maximum discharge recorded during year ending Sept. 30, 1934, 49,100 second-feet Mar. 4 (gage height, 36.60 feet); minimum, 29 second-feet Oct. 22 (gage height, 1.38 feet).

1915-20, 1929-34: Maximum discharge, about 69,000 second-feet Jan. 29, 1918; minimum, 8.4 second-feet July 23-25, 1930.

Remarks.- Records fair.

Discharge, in second-feet, 1931-32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	254	123	510	2,370	24,000	1,430	7,670	2,130	410	1,980	123	46
2	206	141	570	3,050	7,340	1,250	7,670	2,610	350	1,260	139	47
3	168	166	810	3,950	9,440	1,130	6,000	4,310	410	910	163	43
4	143	158	710	3,320	23,200	1,490	4,400	2,960	312	1,490	203	39
5	125	146	550	2,530	35,600	5,300	3,410	2,210	254	2,370	160	40
6	113	139	470	2,210	20,100	8,330	2,780	1,770	230	6,330	181	36
7	103	127	390	2,130	8,110	6,000	2,450	1,490	200	3,950	156	39
8	101	115	330	1,910	5,400	5,000	2,130	1,250	170	3,230	170	40
9	99	105	1,010	1,700	4,900	3,950	2,050	1,190	150	1,980	173	32
10	91	97	1,700	2,610	4,700	3,050	2,690	1,190	173	1,610	141	29
11	93	93	1,840	3,230	4,040	2,370	4,220	1,310	168	1,070	125	29
12	95	87	1,840	2,450	8,770	1,910	7,120	2,530	163	810	141	32
13	85	85	14,300	1,910	15,800	1,770	5,400	5,900	430	590	148	28
14	91	79	10,100	1,560	11,100	1,630	3,950	10,300	490	610	123	27
15	103	75	12,700	1,370	6,200	1,430	3,320	6,300	590	470	113	25
16	117	72	8,440	1,250	4,310	1,510	2,690	4,040	760	550	101	24
17	103	69	3,770	1,130	4,130	2,210	2,210	2,780	910	660	89	23
18	79	68	2,290	1,070	3,500	2,690	1,910	2,050	660	530	107	21
19	77	68	1,530	1,010	3,050	2,450	1,700	2,370	570	530	117	20
20	75	66	1,370	960	2,610	2,370	1,490	1,910	610	430	109	23
21	72	63	1,130	910	2,210	2,050	1,370	1,560	810	330	97	22
22	71	60	1,310	860	2,130	5,200	1,250	1,840	590	278	89	21
23	68	57	2,370	910	2,290	5,500	1,250	1,190	470	242	82	25
24	69	54	3,230	1,130	2,780	6,300	1,130	1,070	570	218	82	25
25	80	60	1,130	1,130	2,610	4,310	1,490	910	490	203	89	30
26	85	57	5,000	1,130	2,290	3,230	2,450	810	410	209	89	32
27	77	69	3,320	2,130	1,980	4,130	5,300	760	330	203	89	32
28	72	95	2,370	3,230	1,770	26,100	4,130	710	3,680	227	82	29
29	77	111	1,910	6,900	1,650	28,600	3,140	610	3,230	197	87	28
30	93	184	1,700	34,900		14,700	2,530	550	3,860	158	66	25
31	117		1,630	49,300		8,110		510		127	54	
Month				Maximum		Minimum	Mean		Per square mile	Run-off in inches		
October				254		68	103		0.048	0.06		
November				184		54	96.3		.045	.05		
December				14,300		330	2,917		1.36	1.57		
January				49,300		860	4,653		2.16	2.49		
February				36,600		1,630	7,793		3.62	3.90		
March				28,600		1,130	5,332		2.48	2.86		
April				7,670		1,130	3,310		1.54	1.72		
May				10,300		510	2,294		1.07	1.23		
June				3,860		150	748		.348	.39		
July				6,330		127	1,076		.500	.55		
August				203		54	119		.055	.06		
September				47		20	30.4		.014	.02		
The year				49,300		20	2,358		1.10	14.93		

Levisa Fork at Paintsville, Ky.

(Continued)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	312	221	8,550	3,590	3,320	1,490	1,010	1,250	197	390	58
2	23	260	218	8,220	2,870	2,610	1,490	1,010	1,010	206	350	52
3	23	242	189	4,400	2,610	2,130	1,490	1,980	810	153	246	49
4	22	312	153	2,870	2,210	1,840	1,490	1,490	635	107	251	103
5	25	390	141	2,130	1,910	1,560	1,530	1,700	550	89	242	150
6	35	370	153	1,530	1,630	1,370	1,700	2,960	490	39	295	134
7	42	295	148	1,370	1,430	1,190	2,050	3,770	410	79	510	127
8	43	251	141	1,190	2,210	1,250	2,290	2,870	350	74	350	119
9	46	233	136	1,560	6,700	1,250	2,370	2,370	312	87	245	105
10	56	215	156	9,460	5,300	1,190	2,050	4,500	278	77	206	101
11	117	242	173	9,340	3,690	1,010	2,050	4,700	312	87	173	93
12	121	312	242	5,600	3,230	910	7,340	6,900	350	71	113	89
13	109	510	350	3,140	2,530	860	8,440	9,100	530	60	107	115
14	97	450	430	2,210	3,060	1,980	5,900	11,500	490	75	83	103
15	85	370	490	1,770	9,820	15,400	4,220	6,400	530	80	85	121
16	82	312	635	1,490	20,300	11,300	3,680	6,900	490	58	83	109
17	150	260	910	1,250	16,200	7,780	4,040	8,000	390	71	82	93
18	153	239	1,010	1,190	8,220	5,100	4,400	4,600	295	49	79	200
19	278	295	710	2,870	8,990	10,700	5,200	2,870	230	44	92	200
20	530	430	710	3,230	20,800	17,600	4,500	2,130	203	42	150	148
21	430	530	760	5,300	25,700	17,600	3,860	1,630	166	69	109	130
22	312	910	635	9,460	18,400	14,300	3,230	3,680	136	46	85	115
23	235	860	570	10,400	7,560	8,440	2,690	6,100	121	43	64	101
24	197	660	570	7,010	4,800	5,300	2,210	3,410	160	58	53	82
25	166	530	980	4,310	3,860	3,770	2,690	2,290	105	49	46	72
26	150	450	1,010	4,500	6,800	3,230	2,210	2,130	93	146	33	68
27	153	370	980	9,460	5,800	2,780	1,840	1,910	89	470	35	60
28	150	312	1,700	11,700	4,220	2,290	1,560	1,700	135	760	39	56
29	181	278	18,000	11,300		1,980	1,370	1,840	227	510	43	54
30	295	245	12,000	7,230		1,700	1,130	1,770	239	295	46	49
31	370		6,200	4,900		1,560		1,370		295	44	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	530		22		152		0.071		0.08			
November	910		215		392		.178		.20			
December	18,000		136		1,635		.760		.88			
January	11,700		1,190		5,130		2.39		2.76			
February	25,700		1,430		7,229		3.36		3.50			
March	17,600		860		4,945		2.30		2.65			
April	8,440		1,130		3,024		1.41		1.87			
May	11,500		1,010		3,696		1.72		1.98			
June	1,250		89		380		.177		.20			
July	760		42		147		.068		.08			
August	510		33		152		.071		.08			
September	200		49		102		.047		.05			
The year	25,700		22		2,221		1.03		14.03			

Levisa Fork at Paintsville, Ky.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	49	42	53	660	209	4,130	6,500	1,310	176	57	810	810		
2	54	40	53	710	206	4,130	3,590	1,130	166	197	810	610		
3	56	39	53	710	184	30,400	2,690	1,010	160	150	2,610	510		
4	49	39	57	760	173	48,200	2,050	910	156	130	4,600	410		
5	43	41	58	760	178	25,700	1,700	910	184	109	3,500	350		
6	38	49	82	760	184	15,200	1,630	860	254	101	1,700	312		
7	35	53	312	6,400	186	9,940	1,560	810	330	93	1,070	295		
8	35	53	450	7,230	184	9,340	1,630	710	295	91	710	295		
9	35	52	550	4,800	181	22,300	1,630	635	390	91	490	295		
10	33	50	490	2,870	166	17,400	2,370	635	330	95	1,770	278		
11	32	50	390	1,490	168	8,330	6,700	610	248	121	3,050	248		
12	31	50	295	1,130	173	5,000	6,300	660	330	192	5,700	312		
13	32	52	245	960	163	3,410	5,700	710	390	267	5,100	960		
14	38	53	192	860	146	2,610	4,400	660	330	218	4,600	960		
15	39	53	170	710	146	2,370	3,500	570	248	218	2,370	530		
16	38	50	170	660	146	2,050	2,780	530	189	312	2,690	510		
17	34	50	312	590	143	1,700	2,290	610	156	295	6,300	510		
18	33	52	370	510	141	1,560	2,050	635	158	197	5,700	430		
19	34	53	430	490	141	1,700	2,690	570	184	146	3,680	350		
20	33	53	1,700	430	158	11,000	7,560	470	170	136	1,980	312		
21	31	52	1,770	390	163	17,900	11,700	410	150	119	1,310	278		
22	29	54	1,700	370	160	11,000	7,230	350	136	212	1,010	239		
23	34	56	1,370	370	188	7,560	4,310	296	123	192	710	221		
24	34	56	810	350	166	19,800	2,870	450	148	156	860	197		
25	33	56	590	330	160	20,900	2,370	510	150	121	1,250	184		
26	42	56	1,560	312	7,450	16,800	1,910	490	119	107	3,140	186		
27	53	56	3,050	278	24,800	12,900	1,630	430	99	103	6,800	350		
28	53	53	2,870	260	6,560	12,200	1,770	330	85	117	6,900	267		
29	49	53	1,840	248		15,200	1,700	261	74	510	2,870	410		
30	47	53	1,190	230		12,600	1,480	227	57	1,070	1,510	2,450		
31	47		810	218		9,700		197		810	510			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					56		29		39.5		0.018		0.02	
November					56		39		50.6		.024		.03	
December					3,050		53		774		.360		.42	
January					7,230		218		1,189		.553		.64	
February					24,800		141		1,606		.747		.78	
March					48,200		1,560		12,360		5.75		6.63	
April					11,700		1,430		3,541		1.65		1.84	
May					1,310		197		609		.283		.33	
June					390		57		200		.093		.10	
July					1,070		57		217		.101		.12	
August					6,900		490		2,771		1.29		1.49	
September					2,450		184		469		.218		.24	
The year					48,200		29		1,998		.929		12.64	

Russell Fork at Haysi, Va.

Location.- Chain gage at highway bridge at Haysi, Dickenson County, 500 feet below mouth of McClure River.

Drainage area.- 286 square miles.

Records available.- July 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,500 second-feet Mar. 3 (gage height, 8.70 feet); minimum, 2.0 second-feet Oct. 11 (gage height, 1.42 feet).
1926-34: Maximum discharge recorded, 21,600 second-feet Mar. 23, 1929 (gage height, 17.96 feet); minimum, 0.4 second-feet Sept. 21, 23, 1932 (gage height, 1.31 feet).

Remarks.- Records good except those for period of ice effect, Jan. 29-31, and those estimated for period June 20 to July 11, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	3.5	7	70	17	446	500	159	23		66	60
2	7	3.5	7	94	17	1,650	420	150			267	51
3	7	3.2	8	113	29	5,800	324	144			280	45
4	6	4	9	110	36	2,270	246	138			370	40
5	9	6	8	82	38	1,050	218	129	20		144	34
6	6	19	46	91	31	980	528	118		30	89	30
7	6	15	162	616	28	606	370	110			72	25
8	5	13	48	586	24	3,180	324	103			64	21
9	3.2	11	41	324	21	2,160	347	94			57	18
10	2.5	9	42	193	18	640	566	94			37	16
11	2.2	8	36	147	13	557	740	251	38	40	28	12
12	2.5	8	28	110	7	370	772	302		84	32	10
13	2.8	8	24	108	12	324	557	272		74	98	8
14	2.5	8	20	94	16	280	446	144		80	150	10
15	2.5	6	17	82	15	206	370	84		31	108	13
16	5	6	14	72	19	184	347	129		25	280	43
17	3.5	5	15	45	24	153	472	127		21	586	32
18	10	8	29	37	24	150	840	113	24	18	500	28
19	20	7	46	46	26	218	3,300	94		15	747	32
20	19	6	166	45	23	2,270	2,490	68		16	135	30
21	18	6	141	43	18	1,380	1,130	56		32	108	23
22	13	7	89	43	20	640	910	46		28	124	20
23	9	7	66	46	21	2,490	566	62		23	169	24
24	6	6	51	46	18	2,600	420	72		20	169	25
25	6	10	34	37	395	2,270	347	62		18	206	20
26	5	12	173	36	3,540	1,380	276	45	12	13	2,160	16
27	4	10	280	32	980	1,470	280	37		12	500	13
28	3.5	9	218	30	586	2,940	246	30		15	240	10
29	3.5	8	116	25		1,560	202	25		32	156	13
30	3.2	8	72	15		1,130	180	24		46	176	840
31	3.0		57	15		640		30		43	78	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	20	2.2	6.43	0.022	0.03
November	19	3.2	8.07	.028	.03
December	280	7	66.8	.234	.27
January	616	15	111	.388	.45
February	3,540	7	215	.752	.78
March	5,800	160	1,380	4.83	5.57
April	3,300	180	626	2.19	2.44
May	302	24	107	.374	.43
June			22.9	.080	.09
July	84	12	31.7	.111	.13
August	2,160	28	253	.885	1.02
September	640	8	52.0	.182	.20
The year	5,800	2.2	241	.643	11.44

Pound River near Haysi, Va.

Location.- Chain gage at suspension footbridge 1 mile below Cranesnest River 4 miles west of Haysi, Dickenson County, and 50 feet above Twin Branch.

Drainage area.- 217 square miles, including Twin Branch.

Records available.- July 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,520 second-feet Mar. 3 (gage height, 10.00 feet); minimum, 1 second-foot Oct. 8-16.
1926-34: Maximum gage height recorded, 16.50 feet Mar. 23, 1929 (discharge not determined); minimum discharge, less than 0.1 second-foot several days in September 1932.

Remarks.- Records good above 10 second-feet, fair below. Discharge estimated May 2, and for period of ice effect, Jan. 29, 30. Discharge of Twin Branch included in records.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	8	15	54	25	385	332	132	23	10	48	105
2	3	8	14	92	26	1,090	258	152	21	17	173	73
3	4	10	20	123	29	5,640	208	123	18	20	272	55
4	4	11	19	100	34	2,120	173	118	20	17	605	45
5	4	10	20	74	33	1,490	162	103	15	10	184	39
6	3	14	28	65	31	805	173	95	25	6	103	35
7	2	10	76	258	29	555	142	86	23	7	69	28
8	2	14	68	705	27	2,840	132	76	27	18	59	44
9	1	13	46	630	24	2,040	232	69	26	34	42	37
10	1	10	32	315	16	580	605	70	51	32	34	31
11	1	13	27	123	18	465	532	102	53	39	47	22
12	1	13	20	99	16	300	488	100	44	70	39	20
13	1	14	17	91	20	245	445	71	35	88	47	152
14	1	15	13	80	23	208	350	68	27	55	55	50
15	1	15	12	64	26	173	300	73	20	34	51	34
16	1	17	12	54	28	142	258	92	15	32	300	32
17	2	16	12	49	29	142	220	86	13	24	555	28
18	4	17	13	46	23	118	272	71	16	16	285	28
19	3	18	28	44	27	173	2,120	70	22	12	173	27
20	5	18	109	44	20	1,350	1,720	53	15	12	107	24
21	5	19	114	44	15	705	860	45	12	11	71	19
22	8	22	78	46	19	465	510	152	12	13	59	16
23	9	18	51	39	18	1,490	465	116	12	12	152	14
24	7	18	42	38	20	2,210	315	103	10	9	162	19
25	8	16	34	37	425	1,600	232	60	8	7	510	16
26	8	16	123	37	3,930	1,280	196	49	6	11	2,210	12
27	8	14	332	33	805	1,030	196	40	4	38	705	12
28	8	16	162	36	555	1,880	208	34	4	465	272	22
29	8	16	118	30		915	162	29	7	196	162	39
30	7	14	65	20		655	152	29	9	116	123	860
31	7		55	20		445		27		62	142	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				9	1	4.2	0.019		0.02			
November				22	8	14.4	.066		.07			
December				332	12	57.3	.264		.30			
January				705	20	113	.521		.60			
February				3,930	16	225	1.04		1.08			
March				5,640	118	1,068	5.01		5.78			
April				2,120	132	414	1.91		2.13			
May				152	27	80.5	.371		.43			
June				53	4	19.8	.091		.10			
July				465	6	48.2	.222		.26			
August				2,210	34	255	1.18		1.35			
September				860	12	64.6	.298		.33			
The year				5,640	1	199	.917		12.46			

Tug Fork at Litwar, W. Va.

Location.- Chain gage at highway bridge at Litwar, McDowell County.

Records available.- May 1930 to September 1934.

Discharge.- Maximum discharge recorded during year, 12,200 second-feet Mar. 3 (gage height, 14.78 feet); minimum, 27 second-feet Oct. 11, 12, 16 (gage height, 1.54 feet).

1930-34: Maximum discharge recorded, that of Mar. 3, 1934; minimum, 11 second-feet Oct. 3, 4, 7, 1931 (gage height, 1.30 feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	40	33	37	156	58	635	1,140	385	96	112	139	112		
2	86	30	33	195	71	970	965	370	94	153	33.0	99		
3	67	34	40	216	81	11,600	790	355	86	107	735	89		
4	46	41	44	195	82	6,510	965	340	82	65	605	84		
5	41	46	45	175	78	7,350	605	310	80	51	325	92		
6	35	58	74	165	74	3,250	735	310	98	45	195	77		
7	33	63	156	239	72	1,950	680	262	118	41	135	103		
8	33	55	142	287	60	5,590	630	270	66	44	245	82		
9	30	49	104	287	55	5,150	1,200	245	82	44	195	60		
10	29	44	79	250	50	2,280	2,850	258	96	96	11.6	52		
11	30	40	66	195	46	1,530	2,370	340	87	208	118	48		
12	29	38	57	175	60	1,140	2,750	270	72	143	107	54		
13	31	34	47	175	66	965	2,030	232	66	147	118	71		
14	32	39	47	156	74	905	1,530	245	65	122	340	82		
15	30	43	45	146	76	735	1,140	208	57	66	151	79		
16	28	38	49	126	96	630	1,020	370	51	122	195	77		
17	64	35	63	109	97	515	965	208	48	45	735	184		
18	97	36	72	102	98	558	1,670	195	76	36	402	137		
19	67	38	102	97	106	605	1,740	170	149	33	270	105		
20	50	37	1,030	98	88	5,480	3,450	162	114	37	155	80		
21	44	34	480	96	72	2,550	2,110	147	76	38	114	65		
22	38	38	250	88	86	1,670	1,400	137	54	48	86	58		
23	40	39	175	94	102	1,200	1,140	143	54	50	135	57		
24	39	40	142	92	79	2,370	965	145	49	38	122	71		
25	37	40	110	84	156	4,270	845	123	39	30	272	51		
26	35	39	165	81	6,630	2,750	630	108	41	29	1,060	46		
27	34	40	500	78	1,850	2,110	605	101	44	52	1,020	48		
28	33	37	330	78	850	5,480	558	99	37	155	660	50		
29	34	37	227	44		2,750	475	107	46	195	270	68		
30	35	37	165	52		1,810	420	101	40	340	164	420		
31	32		156	47		1,340		98		149	143			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					97		28		41.8		0.084		0.10	
November					63		30		40.4		.081		.09	
December					1,030		33		162		.324		.37	
January					287		44		141		.282		.33	
February					6,630		46		2,404		5.59		6.44	
March					11,600		515		2,795		2.56		2.86	
April					3,450		420		1,279		.440		.51	
May					385		98		220		.146		.16	
June					149		37		72.8		.183		.21	
July					340		29		91.6		.620		.71	
August					1,080		86		310		.180		.20	
September					420		46		90.0					
The year.					11,600		28		472		.944		12.82	

Tug Fork at Kermit, W. Va.

Location.- Chain gage at Kermit, Mingo County, 2 miles above mouth of Marrowbone Creek. Zero of gage is 574.77 feet above mean sea level.

Drainage area.- 1,240 square miles.

Records available.- June 1915 to December 1920, December 1922 to September 1934.

Extremes.- Maximum discharge recorded during year, 34,200 second-feet Mar. 3 (gage height, 33.46 feet); minimum, 34 second-feet Oct. 1, 15 (gage height, 2.96 feet).
1915-20, 1928-34: Maximum discharge recorded, about 51,400 second-feet Jan. 29, 1918 (gage height, 39.0 feet, present datum); minimum, 14 second-feet Oct. 22, 1930 (gage height, 2.43 feet, present datum).
Highest known stage, 46.9 feet, present datum.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	44	50	435	170	2,250	2,880	970	181	83	475	455
2	95	36	54	415	163	2,610	2,370	870	173	342	775	342
3	60	39	60	435	144	26,000	1,950	820	178	148	2,490	303
4	77	38	67	435	141	25,600	1,660	820	163	227	2,880	260
5	100	60	77	455	146	14,500	1,610	775	158	186	1,440	251
6	91	75	140	435	156	10,300	1,560	730	189	141	920	224
7	71	82	390	2,550	146	5,760	1,660	640	239	114	555	245
8	56	95	475	3,330	144	6,550	1,500	585	235	144	415	275
9	48	108	410	1,780	141	15,700	1,560	555	230	221	342	230
10	42	115	350	1,120	143	7,950	3,730	515	224	137	1,020	215
11	39	100	253	820	135	6,250	4,860	640	242	125	2,950	192
12	38	120	199	640	133	3,330	5,400	640	233	475	3,250	260
13	38	64	166	575	112	2,550	5,400	640	303	395	1,890	342
14	39	80	145	515	114	2,190	4,050	535	197	290	1,660	435
15	35	73	123	455	139	1,890	2,950	535	158	230	1,560	360
16	36	60	138	395	146	1,720	2,370	575	141	175	2,250	360
17	40	60	430	342	308	1,610	2,010	515	128	146	4,320	360
18	64	54	330	308	184	1,500	1,890	475	128	133	2,740	290
19	46	60	430	290	206	1,500	3,020	395	275	110	1,500	290
20	46	64	1,390	260	221	8,350	6,550	378	260	63	920	290
21	93	58	1,780	260	178	9,550	5,490	342	245	74	730	242
22	82	58	1,020	254	203	5,490	3,650	308	224	73	515	218
23	54	60	615	235	195	4,860	2,670	290	212	59	435	195
24	82	64	455	235	189	5,780	2,070	275	206	53	455	176
25	75	56	560	235	415	6,550	1,720	275	137	58	575	158
26	69	95	1,500	221	3,450	7,750	1,390	257	110	64	1,220	148
27	67	62	2,190	203	3,350	5,950	1,390	227	100	73	3,730	144
28	60	50	1,280	197	3,170	9,150	1,340	203	93	104	2,010	153
29	58	54	775	184		8,450	1,220	136	116	290	1,070	168
30	51	52	595	184		5,400	1,020	195	91	415	730	1,120
31	48		515	184		3,810		184		640	555	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					100	35	60.7	0.049		0.06		
November					120	38	67.9	.065		.06		
December					2,190	50	540	.435		.50		
January					3,330	184	593	.478		.55		
February					8,450	112	870	.702		.73		
March					26,000	1,500	7,504	5.89		6.79		
April					6,550	1,020	2,698	2.18		2.45		
May					970	184	495	.399		.46		
June					308	91	186	.150		.17		
July					640	53	187	.161		.17		
August					4,320	342	1,496	1.21		1.40		
September					1,120	144	290	.234		.26		
The year					26,000	35	1,240	1.00		13.58		

Scioto River at Larue, Ohio

Location.- Water-stage recorder 200 feet below highway bridge just below Cleveland, Cincinnati, Chicago & St. Louis Railway bridge at Larue, Marion County. Zero of gage is 910.19 feet above mean sea level.

Drainage area.- 255 square miles.

Records available.- August 1926 to September 1934.

Extremes.- Maximum discharge, 1,570 second-feet Mar. 4 (gage height, 10.30 feet); minimum, 3.1 second-feet July 25 (gage height, 1.90 feet).
1926-34: Maximum discharge recorded, 10,700 second-feet Mar. 20, 1927 (gage height, 15.0 feet); minimum, 3 second-feet Aug. 4, 5, 1930.

Remarks.- Records good except those estimated because of ice effect, Dec. 13-15, 28, 29, Jan. 17-20, Feb. 2-28, Mar. 11, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	262	14	11	141	34	20	317	21	9.6	24	4.2	6.0
2	186	14	10	206	32	30	223	20	10	16	4.4	6.2
3	144	18	9.6	149	31	722	162	20	8.4	13	4.2	6.5
4	106	22	11	102	29	1,470	139	20	9.2	10	4.6	6.8
5	82	20	14	94	28	830	148	20	13	8.1	4.4	6.5
6	63	23	34	154	27	368	144	20	18	7.4	3.8	6.8
7	49	22	34	162	25	191	171	18	16	7.8	3.8	7.1
8	41	22	29	144	23	118	187	18	11	13	3.6	9.2
9	36	20	24	176	22	82	122	17	13	8.8	3.8	8.4
10	32	19	22	151	21	68	99	16	25	8.4	3.8	5.0
11	28	15	18	134	20	58	88	16	21	7.1	8.4	4.6
12	24	15	14	106	20	54	84	16	20	6.2	11	4.2
13	20	14	13	95	19	54	74	15	16	6.2	9.6	4.6
14	18	16	13	103	18	61	68	18	14	6.2	9.2	5.0
15	17	11	13	114	17	98	62	18	11	6.0	7.1	6.5
16	16	10	18	97	17	106	62	18	10	5.5	29	5.0
17	16	13	70	85	16	92	96	18	9.6	5.0	68	4.8
18	15	13	41.6	75	16	110	106	14	200	4.8	72	4.8
19	16	12	44.4	68	16	126	81	13	196	4.4	42	4.2
20	15	14	24.2	62	15	130	66	11	94	4.2	20	4.2
21	16	14	275	50	15	157	55	10	52	3.8	11	4.2
22	22	14	229	45	16	206	48	9.6	33	3.8	7.4	4.2
23	38	14	157	46	14	130	46	9.6	36	3.8	6.0	5.5
24	70	16	122	51	14	97	42	9.2	36	3.6	5.0	5.5
25	53	18	100	49	14	75	36	11	22	3.6	4.4	4.6
26	36	18	78	45	14	62	31	11	16	3.4	4.0	4.4
27	28	16	51	40	13	520	29	12	82	3.8	5.2	4.4
28	22	14	42	40	13	1,010	27	10	134	4.6	5.2	4.4
29	19	14	38	36		848	25	10	59	4.6	5.5	6.5
30	17	12	44	43		700	23	11	36	4.0	5.7	9.2
31	16		53	40		486		10		4.0	6.0	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	262	15	49.1	0.193	0.22
November	23	10	15.9	.062	.07
December	444	9.6	85.4	.335	.39
January	206	36	94.6	.371	.43
February	34	13	19.9	.078	.08
March	1,470	20	293	1.15	1.33
April	317	23	94.4	.370	.41
May	21	9.2	14.8	.056	.07
June	200	8.4	41.0	.161	.18
July	24	3.4	6.94	.027	.03
August	72	3.6	12.3	.048	.06
September	9.2	4.2	5.64	.022	.02
The year	1,470	3.4	61.7	.242	3.29

Scioto River near Dublin, Ohio

Location.- Water-stage recorder quarter of a mile north of Delaware County line, three-quarters of a mile below O'Shaughnessy Dam, and 3 miles north of Dublin, Franklin County. Zero of gage is 775.00 feet above mean sea level.

Drainage area.- 988 square miles.

Records available.- April 1921 to September 1934.

Average discharge.- 13 years, 808 second-feet.

Extremes.- Maximum discharge during year, 3,560 second-feet Mar. 4 (gage height, 7.04 feet); minimum, 3.1 second-feet Aug. 17 (gage height, 2.66 feet).
1921-34: Maximum discharge, 28,500 second-feet May 14, 1933 (gage height, 15.03 feet); minimum, 0.4 second-foot Nov. 8, 1924 (gage height, 2.21 feet).
Flood of Mar. 25, 1913, reached a stage of 24.6 feet.

Remarks.- Records good. Water is stored at O'Shaughnessy Dam for water supply of city of Columbus. Part of monthly table has been corrected for storage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	536	45	62	221	47	73	1,100	99	105	46	76	57
2	445	39	62	228	53	215	836	97	108	46	76	62
3	304	58	62	374	62	1,640	638	94	108	49	76	62
4	235	45	62	393	66	2,970	529	87	99	55	76	62
5	182	35	62	342	62	2,920	445	85	94	60	76	62
6	121	35	62	361	60	2,230	494	85	94	64	67	62
7	105	28	62	494	64	1,170	494	102	94	76	53	64
8	105	30	62	543	57	652	529	67	94	82	58	62
9	89	34	64	501	40	406	522	69	97	82	58	62
10	76	32	56	438	38	316	426	74	94	82	60	62
11	67	44	27	400	39	264	459	71	89	82	62	62
12	69	132	27	335	40	132	452	38	80	80	60	62
13	55	187	27	293	39	96	419	37	80	71	60	62
14	27	78	27	264	38	191	374	67	78	71	60	62
15	28	73	27	246	42	246	322	68	78	71	62	62
16	32	73	27	252	45	366	310	36	78	71	52	62
17	40	49	28	217	43	386	270	63	78	71	8.8	60
18	47	39	179	187	50	393	281	84	76	71	19	60
19	30	38	600	206	59	367	310	92	76	71	19	60
20	34	38	740	200	40	374	275	80	73	64	49	60
21	28	57	600	160	40	439	235	80	71	50	80	60
22	58	69	522	146	42	578	156	82	69	50	76	60
23	46	69	480	166	39	578	152	94	67	60	71	62
24	60	67	393	132	35	438	182	108	67	80	71	62
25	76	67	270	134	39	342	152	91	67	80	53	62
26	30	66	257	116	38	384	142	78	67	82	53	62
27	78	62	126	118	30	2,130	176	92	57	104	53	62
28	68	62	112	204	30	2,760	67	105	47	181	52	60
29	57	62	105	40		2,160	89	105	46	87	52	58
30	55	62	94	8.9		1,840	97	105	46	102	52	52
31	50		110	37		1,460		105		89	52	

Month	Observed				Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	536	27	106		111	0.112	0.13
November	187	28	59.2		36.0	.036	.04
December	740	27	174		193	.195	.22
January	543	8.9	250		252	.255	.29
February	66	30	45.6		45.6	.046	.05
March	2,970	73	911		921	.932	1.07
April	1,100	67	364		358	.360	.40
May	108	36	61.6		50.7	.051	.06
June	108	46	79.2		56.5	.059	.07
July	161	46	74.5		18.1	.018	.02
August	80	8.8	57.7		53.7	.054	.06
September	64	52	61.0		6.97	.071	.08
The year	2,970		8.8	190	177	.179	2.49

Scioto River at Columbus, Ohio

Location.- Water-stage recorder at sewage-treatment works of city of Columbus, Franklin County, 0.4 mile below highway bridge on Frank Road. Zero of gage is 680.40 feet above mean sea level.

Drainage area.- 1,624 square miles.

Records available.- April 1921 to September 1934.

Average discharge.- 13 years, 1,382 second-feet.

Extremes.- Maximum discharge during year, 5,500 second-feet Mar. 5 (gage height, 12.01 feet); minimum, 57 second-feet May 25 (gage height, 5.83 feet).

1921-34: Maximum discharge, 46,200 second-feet Mar. 21, 1927 (gage height, 24.7 feet); minimum, 42 second-feet Sept. 6, 1930.

Maximum known stage, 25.9 feet Mar. 25, 1913 (discharge estimated by Franklin County Conservancy District, 138,000 second-feet).

Remarks.- Records good except those estimated Nov. 13-21, which are fair. Flow regulated at Griggs and O'Shaughnessy Reservoirs for municipal water supply of Columbus. Diversion for water supply several miles above gage; sewage return flow discharged at gage. Part of table of monthly discharge corrected for storage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	94	92	198	137	86	1,660	165	107	97	89	78
2	439	94	100	479	140	220	1,310	162	100	100	171	72
3	355	92	94	542	140	1,810	988	155	83	135	113	70
4	290	92	97	615	144	4,870	843	155	100	113	97	83
5	232	132	94	554	137	4,270	741	144	123	116	80	83
6	212	100	97	554	126	3,150	829	137	110	126	86	80
7	177	94	94	761	133	2,000	988	137	89	169	89	174
8	162	89	92	878	126	1,160	950	133	103	110	86	123
9	158	83	89	878	120	741	950	137	244	100	132	89
10	144	75	94	728	116	556	748	158	158	161	144	89
11	130	78	113	634	116	427	768	126	147	173	169	97
12	113	75	94	542	120	375	795	116	126	162	107	97
13	103	100	94	455	103	233	795	110	100	123	103	89
14	110	130	97	427	100	292	696	144	97	107	100	89
15	100	120	116	401	110	345	615	216	92	100	94	89
16	100	100	144	375	110	512	584	130	89	94	435	89
17	107	96	434	370	110	609	542	103	83	94	317	78
18	94	92	809	335	97	677	506	165	100	94	151	80
19	86	92	714	294	94	665	506	181	100	94	110	75
20	92	92	850	308	94	652	466	130	94	92	107	80
21	89	100	871	290	94	640	412	133	89	86	100	86
22	152	94	836	256	94	850	370	126	141	80	94	130
23	120	92	735	282	94	988	304	103	130	86	94	126
24	100	86	634	252	89	774	286	80	100	86	133	94
25	94	89	530	232	86	572	269	72	100	89	100	92
26	89	89	417	224	86	572	252	97	103	89	87	94
27	86	89	335	224	83	2,360	252	110	256	100	83	97
28	86	100	244	216	80	4,150	220	123	123	113	83	80
29	86	97	200	216		2,950	155	120	103	92	83	228
30	94	92	173	144		2,450	162	110	89	100	83	130
31	97		177	133		2,060		113		92	87	

Month	Observed				Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	439	86	144		142		
November	132	75	94.9		74.8		
December	871	89	308		331		
January	878	133	412		412		
February	144	80	110		92.3		
March	4,870	96	1,355		1,388		
April	1,660	155	633		618		
May	216	72	132		97.6		
June	256	83	116		97.9		
July	173	80	109		50.4		
August	435	80	123		117		
September	228	70	98.7		48.3		
The year	4,870	70	305		292		

Scioto River at Chillicothe, Ohio

Location.-- Water-stage recorder 500 feet below Bridge Street Bridge, at north end of Chillicothe, Ross County. Zero of gage is 594.02 feet above mean sea level.

Drainage area.-- 3,847 square miles.

Records available.-- December 1913 to September 1914, and April 1921 to September 1934.

Average discharge.-- 13 years (1921-34), 3,443 second-feet.

Extremes.-- Maximum discharge during year, 13,100 second-feet Mar. 5 (gage height, 10.60 feet); minimum, 190 second-feet Sept. 19-21, 23 (gage height, 1.09 feet).
1921-34: Maximum discharge, 95,200 second-feet (revised) Feb. 28, 1929 (gage height, 26.0 feet); minimum, 180 second-feet Jan. 1, 1931.
Maximum known stage, 39.8 feet Mar. 26, 1913 (discharge estimated at 260,000 second-feet by Franklin County Conservancy District).

Remarks.-- Records fair. Discharge estimated because of ice effect, Jan. 31 to Mar. 2. Flow regulated at Griggs and O'Shaughnessy Reservoirs; monthly mean discharge at this station only slightly affected.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	564	548	324	987	595	270	3,460	625	301	872	703	231
2	548	544	320	1,010	575	270	2,800	619	297	754	697	220
3	617	532	320	1,350	560	5,740	2,300	590	290	502	377	210
4	740	532	324	1,370	525	11,900	1,950	579	278	410	377	203
5	635	544	324	1,550	500	11,900	1,750	562	259	410	317	200
6	570	420	320	1,600	485	8,200	1,700	551	355	342	290	196
7	504	476	320	2,750	470	5,650	2,580	535	491	338	256	196
8	476	415	317	3,590	450	3,720	2,410	508	373	415	231	213
9	440	377	313	3,100	435	2,520	2,300	486	322	450	217	313
10	420	356	313	2,500	420	1,850	2,000	465	597	355	217	271
11	410	344	309	2,000	405	1,520	1,900	465	585	317	293	241
12	387	352	317	1,650	390	1,350	1,900	470	424	1,300	375	227
13	368	320	324	1,450	380	1,230	2,100	434	368	1,480	368	231
14	352	320	320	1,320	370	1,190	1,950	420	330	783	290	234
15	340	324	324	1,280	360	1,310	1,700	439	297	672	278	220
16	344	328	455	1,240	350	1,430	1,520	491	278	625	1,280	217
17	336	320	740	1,240	340	1,430	1,430	491	263	470	2,740	207
18	340	317	1,660	1,160	330	1,520	1,350	420	263	396	2,200	203
19	336	317	2,980	1,040	320	1,560	1,270	400	330	338	1,190	193
20	317	317	2,530	980	310	1,560	1,190	460	305	297	815	190
21	313	320	2,500	965	300	1,610	1,150	420	271	274	619	224
22	324	320	2,060	895	290	1,750	1,060	377	259	252	502	207
23	360	340	1,700	846	290	1,850	1,000	351	519	252	424	193
24	425	340	1,460	839	280	1,900	937	338	727	241	396	220
25	401	332	1,240	812	280	1,560	872	322	497	213	360	238
26	396	324	1,120	806	270	1,390	840	301	364	224	360	207
27	377	324	965	799	270	1,880	808	290	532	307	322	217
28	360	320	859	754	270	6,820	783	301	1,240	455	282	196
29	356	320	721	721		7,870	758	305	937	301	263	289
30	352	320	665	689		5,210	672	313	697	554	252	938
31	348		665	640		4,110		309		2,440	241	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					740	313	421	0.109		0.13		
November					476	317	341	.089		.10		
December					2,980	309	874	.227		.26		
January					3,590	640	1,353	.352		.41		
February					598	270	398	.100		.10		
March					11,900	270	5,296	.857		.99		
April					3,460	672	1,615	.420		.47		
May					625	290	440	.114		.13		
June					1,240	259	435	.113		.13		
July					2,440	213	549	.143		.16		
August					2,740	217	565	.147		.17		
September					938	190	245	.084		.07		
The year					11,900	190	683	.230		3.12		

Scioto River at Higby, Ohio

Location.- Water-stage recorder in sec. 6, T. 7 N., R. 20 W., at highway bridge 1½ miles north of Higby, Ross County, and three-quarters of a mile below mouth of Walnut Creek. Zero of gage is 567.635 feet above mean sea level.

Drainage area.- 5,129 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum during year, 20,400 second-feet Mar. 4 (gage height, 11.38 feet); minimum, 290 second-feet Sept. 21, 28 (gage height, 1.30 feet).
1930-34: Maximum discharge, 94,100 second-feet May 16, 1933 (gage height, 22.20 feet); minimum, 244 second-feet Oct. 23, 1930.
Maximum stage known, 31.6 feet Mar. 26, 1913.

Remarks.- Records good except those estimated because of ice effect, Feb. 1 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	964	526	559	2,210	940	370	4,960	1,140	542	1,250	1,56C	396
2	885	526	550	2,380	900	370	4,180	1,110	524	1,150	1,200	365
3	852	534	518	2,380	850	8,140	3,460	1,090	506	804	78E	340
4	1,010	534	526	2,380	810	18,900	2,970	1,060	500	644	69S	322
5	885	542	542	3,220	770	16,500	2,620	1,040	482	609	59E	330
6	790	738	542	3,540	740	12,200	2,970	1,000	503	560	51E	322
7	712	841	542	8,280	700	8,660	6,220	980	896	524	464	322
8	678	703	534	8,140	670	6,940	4,850	950	828	554	424	340
9	640	640	534	6,320	650	4,180	3,970	923	716	661	407	380
10	622	596	494	4,850	620	3,360	3,360	896	1,010	581	40E	407
11	604	559	494	3,960	600	2,700	3,460	887	1,020	542	1,26C	370
12	596	542	518	3,220	580	2,380	3,460	887	756	1,310	81E	350
13	577	534	526	2,820	560	2,380	3,360	836	651	2,010	67E	365
14	560	542	518	2,560	540	2,790	3,160	834	588	1,080	554	380
15	534	534	486	2,460	520	2,620	2,700	804	536	828	48E	350
16	516	534	853	2,210	510	2,620	2,380	860	506	804	1,22C	335
17	534	502	3,060	2,210	500	2,460	2,240	905	470	658	4,67C	308
18	534	486	6,060	2,130	475	2,540	2,100	820	500	567	3,16C	308
19	534	478	5,080	1,890	460	2,540	1,980	780	609	500	1,85C	304
20	510	486	6,320	1,770	450	2,540	1,910	780	602	468	1,26C	294
21	494	494	5,660	1,700	435	2,540	1,790	780	494	424	96C	299
22	494	494	4,070	1,580	420	2,790	1,730	732	458	402	804	330
23	640	502	3,350	1,530	410	2,790	1,620	679	548	375	70E	308
24	750	502	2,730	1,590	400	2,790	1,620	637	923	375	70E	308
25	667	502	2,460	1,480	385	2,540	1,500	595	700	350	67E	350
26	622	486	2,130	1,440	375	2,710	1,400	560	567	345	60E	322
27	568	494	1,890	1,440	370	5,510	1,400	542	665	452	524	322
28	550	502	1,590	1,390	370	9,420	1,350	542	1,460	1,300	48E	304
29	542	526	1,350	1,350		11,100	1,300	554	1,670	929	44E	454
30	526	542	1,270	1,100		7,360	1,200	554	1,300	611	44C	1,730
31	534		1,280	988		6,940		554		6,260	41E	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					1,010	494	642	0.125	0.14			
November					841	478	547	.107	.12			
December					6,320	486	1,840	.359	.41			
January					8,280	988	2,726	.531	.61			
February					940	370	572	.112	.12			
March					18,900	370	5,151	1.00	1.15			
April					6,220	1,200	2,707	.528	.59			
May					1,140	542	816	.159	.18			
June					1,670	458	718	.140	.16			
July					5,250	345	868	.169	.19			
August					4,670	402	950	.187	.22			
September					1,730	294	387	.075	.08			
The year.					18,900	294	1,506	.294	3.97			

Little Scioto River near Marion, Ohio

Location.— Staff gage in SW $\frac{1}{4}$ sec. 19, T. 5 S., R. 15 E., at outfall of sewage-treatment works 300 feet below Erie Railroad crossing and 2 miles west of Marion, Marion County.

Drainage area.— 73.3 square miles.

Records available.— July 1925 to September 1934. September 1923 to July 1925 at site 3 miles downstream.

Average discharge.— 11 years, 79.9 second-feet.

Extremes.— Maximum discharge recorded during year, 489 second-feet Mar. 3 (gage height, 7.95 feet); minimum, 0.1 second-foot Aug. 26, Sept. 25.
1923-34: Maximum discharge recorded, 1,420 second-feet Mar. 22, 1927 (gage height, 15.2 feet); minimum, that of Aug. 26, Sept. 25, 1934.

Remarks.— Records poor. Discharge estimated because of ice effect Dec. 10-15, Jan. 17-19, Jan. 30 to Mar. 1, Mar. 10, 11. Water diverted above station; amount not known.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	1.3	1.5	15	1.9	0.7	76	6.8	1.0	1.0	0.7	0.7
2	2.0	1.3	1.5	27	1.6	6.5	46	6.8	1.2	1.0	4.3	.4
3	1.8	1.8	1.7	20	1.5	368	32	6.8	1.0	1.0	1.9	.4
4	1.4	1.2	1.8	12	1.3	401	32	5.7	1.0	.9	.7	.6
5	1.4	2.3	1.9	14	1.2	227	68	5.0	1.1	.8	.6	.6
6	1.2	1.1	3.4	21	1.1	112	53	6.0	1.5	.9	.6	.7
7	1.3	1.4	2.9	19	1.0	48	68	5.2	1.4	1.0	.8	1.4
8	1.6	1.4	2.5	22	1.0	18	55	4.5	1.4	.6	.6	.5
9	1.0	1.5	1.9	30	.9	8.8	39	4.5	2.5	.7	.7	.4
10	1.3	1.4	1.3	21	.9	6.0	29	3.0	1.4	.8	.7	.4
11	1.1	1.7	1.1	13	.8	4.7	29	3.2	1.4	1.1	2.7	.5
12	1.0	1.3	1.0	10	.8	3.9	26	2.9	1.4	.8	.6	.5
13	1.1	1.4	1.0	13	.8	5.0	22	2.9	1.3	.9	.6	.5
14	1.1	1.4	1.0	11	.8	8.5	19	3.9	1.4	8.8	.6	.5
15	1.0	1.4	1.4	14	.8	14	18	4.1	1.1	2.4	.6	.5
16	1.7	1.4	3.0	11	.7	12	20	3.7	1.0	1.8	14	.3
17	1.1	1.5	15	9.5	.7	10	21	3.5	.9	1.3	.5	.3
18	1.8	1.5	19	8.2	.7	20	21	3.7	1.2	1.0	.7	.4
19	1.1	1.2	19	7.2	.7	21	16	3.4	1.0	1.0	.8	.3
20	1.1	1.6	12	6.2	.7	23	14	2.3	1.0	1.1	.7	.5
21	1.4	2.4	10	5.5	.7	36	12	3.0	1.3	1.0	.6	.5
22	9.7	2.7	12	7.1	.7	50	11	2.6	10	1.0	.6	.5
23	2.4	1.8	7.9	6.5	.7	15	13	2.2	1.2	.8	.5	.6
24	2.4	2.0	7.1	7.1	.7	19	12	2.2	1.0	1.0	.5	.5
25	2.4	2.0	5.5	7.3	.7	7.6	9.0	2.4	1.3	.8	.5	.4
26	2.0	2.6	4.8	5.5	.7	11	7.9	2.0	1.2	.8	.3	.7
27	1.4	1.6	3.7	4.1	.7	187	9.0	1.4	1.5	1.0	.6	1.0
28	1.4	1.5	2.9	5.2	.7	191	7.6	1.4	1.2	.7	.7	.5
29	1.2	1.7	2.7	3.4		131	6.2	1.8	1.4	.5	.6	6.0
30	1.0	1.7	2.5	2.5		118	7.1	1.6	1.2	.5	.6	.2
31	1.3		3.5	2.0		100		1.5		.4	.6	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				9.7		1.0		1.75				
November				2.7		1.1		1.64				
December				19		1.0		5.06				
January				30		2.0		11.6				
February						1.9						
March				401		.7		69.8				
April				76		6.2		26.7				
May				6.8		1.4		3.55				
June				10		.9		1.55				
July				8.8		.4		1.21				
August				14		.3		1.27				
September				6.0		.2		.70				
The year				401		.2		10.6				

Olentangy River near Delaware, Ohio

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 1, T. 5 N., R. 19 W., at highway bridge a quarter of a mile north of Pennsylvania Railroad crossing and 4 miles north of Delaware. Zero of gage is 876.92 feet above mean sea level.

Drainage area.- 387 square miles.

Records available.- December 1923 to September 1934 (discontinued). October 1921 to December 1923 at Delaware.

Average discharge.- 11 years (1923-34), 374 second-feet.

Extremes.- Maximum discharge during year, 2,380 second-feet Mar. 3 (gage height, 7.06 feet); maximum gage height, 9.43 feet Mar. 3 (backwater from ice jam); minimum, 0.1 second-foot Sept. 14-29.
1921-34: Maximum discharge, 15,000 second-feet May 20, 1922 (gage height, 11.3 feet at Delaware); minimum, 0.1 second-foot Aug. 20, 1930, Sept. 14-23, 1934.

Remarks.- Records fair except those estimated because of ice effect Jan. 17-22, Jan. 29 to Feb. 10, Feb. 17-21, Mar. 3, 6-13, and those for July, August, and September, which are poor.

City of Delaware waterworks pumping plant diverts water above control for municipal use. Mean diversion during July, 1.28 second-feet; August, 1.14 second-feet; September, 1.00 second-foot.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	13	14	309	33	16	331	28	37	11	0.7	0.7
2	19	13	14	245	33	62	248	26	35	9.6	.6	.6
3	15	12	14	177	30	1,260	184	25	35	11	.8	.5
4	14	12	14	129	25	2,000	155	28	34	10	.8	.4
5	12	12	14	159	24	1,260	246	30	36	7.5	.7	.4
6	11	13	15	200	22	755	362	31	156	6.1	.6	.3
7	9.2	14	16	220	20	418	352	29	67	5.8	.5	.3
8	8.9	15	16	289	20	207	369	28	30	9.6	.5	.3
9	8.6	16	17	231	19	118	234	27	23	12	.4	.3
10	8.6	16	17	190	18	87	162	24	16	8.8	.4	.2
11	8.9	16	15	134	17	73	206	22	15	7.0	.4	.2
12	8.6	16	14	107	17	67	276	22	17	5.3	.4	.2
13	8.2	16	14	105	18	72	223	21	13	4.9	.4	.2
14	7.8	15	11	116	20	86	187	22	10	5.4	.3	.1
15	7.2	15	12	115	22	131	180	25	7.8	8.8	.3	.1
16	7.2	15	264	120	23	149	184	26	7.0	6.6	.6	.1
17	7.2	15	392	77	22	188	166	25	6.8	4.6	.9	.1
18	6.6	14	660	77	21	202	159	24	7.0	3.7	1.2	.1
19	6.4	15	286	87	19	200	127	22	7.0	3.9	1.3	.1
20	6.4	15	190	69	18	168	105	20	6.8	5.4	1.3	.1
21	7.6	17	202	59	18	217	87	19	6.3	4.8	1.3	.1
22	6.6	20	159	62	18	366	75	17	6.1	4.1	1.3	.1
23	10	21	123	63	18	244	73	15	7.0	3.6	1.3	.1
24	16	23	104	62	17	144	65	15	7.3	2.9	1.5	.1
25	15	23	61	65	16	108	57	14	7.8	2.7	1.7	.1
26	14	21	70	62	16	126	52	15	9.6	2.3	1.6	.1
27	17	20	49	59	17	1,070	46	22	11	1.8	1.4	.1
28	16	17	49	59	17	1,140	40	23	14	1.5	1.2	.1
29	13	17	40	49		645	35	24	16	1.3	1.1	.1
30	12	16	34	37		482	31	26	14	1.1	1.0	10
31	12		41	35		406		37		.9	.8	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				22	6.4	11.1	0.029		0.03			
November				23	12	16.1	.042		.05			
December				660	11	95.5	.247		.28			
January				309	35	122	.315		.36			
February				33	16	20.6	.053		.06			
March				2,000	16	402	1.04		1.20			
April				369	31	167	.432		.48			
May				37	14	23.6	.061		.07			
June				156	6.1	22.2	.057		.06			
July				12	.9	5.61	.014		.02			
August				1.7	.3	.881	.0023		.005			
September				10	.1	.540	.0014		.002			
The year				2,000	.1	74.6	.193		2.62			

Olentangy River at Stratford, Ohio

Location.- Water-stage recorder above concrete control in the northeast quarter of T. 4 N., R. 19 W., 0.2 mile above highway bridge at Stratford, Delaware County.

Drainage area.- 438 square miles.

Records available.- July to September 1934.

Extremes.- Maximum discharge during period, 31 second-feet Aug. 16 (gage height, 1.80 feet); minimum, 0.98 second-foot Sept. 17, 18 (gage height, 0.76 foot).

Remarks.- Records excellent except those for July 5 to Aug. 3, which are good, and those interpolated July 7, 15, 22, 29, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1											2.8	1.4
2											3.4	1.5
3											5.1	1.3
4											2.1	1.3
5										8.5	2.7	1.4
6										6.8	2.5	1.3
7										8.3	2.1	1.7
8										7.5	1.8	2.7
9										6.6	1.6	1.6
10										10.7	1.7	1.2
11										8.7	9.4	1.5
12										6.8	4.8	2.0
13										5.6	4.6	1.7
14										4.2	3.0	1.3
15										5.4	2.6	1.3
16										6.6	13.1	1.2
17										6.6	12.1	.99
18										4.8	5.9	1.0
19										3.5	3.7	.98
20										3.0	2.7	.98
21										2.4	2.1	.99
22										2.8	1.8	1.2
23										3.2	1.6	2.0
24										3.0	1.6	1.5
25										3.4	1.5	1.2
26										2.4	1.2	1.1
27										2.8	1.1	1.3
28										2.4	1.2	1.5
29										2.0	1.3	9.1
30										1.5	1.3	3.6
31										1.4	1.4	
Month				Maximum		Minimum		Mean		Per square mile	Run-off in inches	
October												
November												
December												
January												
February												
March												
April												
May												
June												
July 5-31				10.7		1.4		4.65		0.011	0.01	
August				13.1		1.1		5.35		.0076	.009	
September				9.1		.98		1.75		.0039	.004	
The year												

Big Walnut Creek at Rees, Ohio

Location.- Water-stage recorder in T. 4 N., R. 22 W., at highway bridge about 3 $\frac{1}{2}$ miles below Alum Creek and just below Scioto Valley Railway & Power Co.'s bridge at Rees, Franklin County. Zero of gage is 698.20 feet above mean sea level.

Drainage area.- 544 square miles.

Records available.- October 1927 to September 1934; August 1921 to October 1927 at site 0.3 mile upstream.

Average discharge.- 13 years, 516 second-feet.

Extremes.- Maximum discharge during year, 8,170 second-feet Mar. 3 (gage height, 9.57 feet); minimum, 10 second-feet June 18 (gage height, 0.90 foot).
1921-34: Maximum discharge, 18,600 second-feet Feb. 27, 1929 (gage height, 18.0 feet); minimum, 5 second-feet Sept. 4, 6, 10-12, 1925.
Maximum stage known, 20.5 feet (present datum) Mar. 25, 1913.

Remarks.- Records good except those estimated because of ice, Dec. 28-30, Jan. 30 to Feb. 15, Feb. 21 to Mar. 2, and those estimated Dec. 9-15, which are fair.

Discharge, in second-feet, 1925-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	32	34	62	59	26	328	68	18	62	13	18
2	60	31	34	537	54	50	271	65	18	46	27	17
3	48	29	34	380	51	3,360	221	63	17	38	43	16
4	41	28	35	228	49	2,770	191	60	16	38	34	14
5	35	30	35	218	47	1,260	166	59	16	25	22	13
6	31	39	38	365	45	908	184	59	15	20	18	13
7	29	37	33	625	43	560	291	58	15	22	14	14
8	30	35	32	890	42	320	500	55	22	29	13	45
9	29	33	32	600	41	194	324	53	28	22	13	24
10	29	32	31	390	40	163	221	52	40	18	61	24
11	32	31	31	283	39	134	232	54	27	289	91	26
12	31	33	31	204	39	117	569	48	24	407	62	26
13	28	32	30	178	38	113	440	45	22	172	87	26
14	26	35	31	194	39	139	316	42	19	422	124	22
15	26	32	34	221	40	169	263	46	17	204	78	20
16	27	32	42	235	42	169	259	45	15	127	454	18
17	28	32	155	221	43	181	221	42	13	84	1,630	16
18	27	31	1,130	172	46	210	184	40	12	58	445	15
19	26	31	734	172	46	259	149	39	16	43	218	14
20	26	31	365	139	42	232	124	36	18	34	134	14
21	26	32	324	115	40	235	113	34	17	26	89	13
22	33	33	365	99	37	295	108	32	16	23	63	13
23	43	33	251	104	35	307	102	29	58	20	48	24
24	39	32	178	110	33	191	95	27	40	17	47	18
25	40	34	141	138	31	141	93	28	26	15	53	15
26	44	36	110	127	30	141	87	25	20	14	40	14
27	47	41	90	115	29	1,260	80	24	196	16	3	13
28	43	40	80	104	28	2,000	74	23	149	22	26	12
29	40	39	70	78		748	71	22	149	23	23	45
30	38	36	68	70		500	70	20	91	18	21	46
31	34		71	62		400		20		15	19	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				78	26	35.9	0.066		0.08			
November				41	28	33.3	.061		.07			
December				1,130	30	161	.278		.32			
January				890	62	240	.441		.51			
February				59	25	41.0	.076		.08			
March				3,360	28	565	1.04		1.20			
April				569	70	212	.390		.44			
May				68	20	42.4	.078		.09			
June				198	12	38.4	.071		.08			
July				422	14	76.4	.140		.16			
August				1,630	13	130	.239		.28			
September				46	12	20.2	.037		.04			
The year				3,360	12	134	.246		3.35			

Alum Creek at Columbus, Ohio

Location.— Water-stage recorder a quarter of a mile below Livingston Avenue Bridge, at Columbus, Franklin County. Zero of gage is 733.62 feet above mean sea level.

Drainage area.— 190 square miles.

Records available.— July 1923 to September 1934.

Average discharge.— 11 years, 175 second-feet.

Extremes.— Maximum discharge during year, 2,180 second-feet Mar. 3 (gage height, 6.87 feet); minimum, 2.0 second-feet Aug. 9 (gage height, 1.25 feet).
1923-34: Maximum discharge, 8,800 second-feet Feb. 27, 1929 (gage height, 13.6 feet); minimum, 1.8 second-feet Sept. 7, 1925 (gage height, 0.79 foot).

Remarks.— Records good except those for periods of ice effect, Dec. 13-23, 1932, Feb. 5, 6, 9-16, Dec. 8-15, 1933, Feb. 1 to Mar. 2, 1934, and those estimated Oct. 14-19, 1932, Feb. 24 to Mar. 22, Mar. 24 to Apr. 30, June 12-14, 16-27, July 14-16, Sept. 27-30, Dec. 18-31, 1933, Jan. 1, 2, 23-31, Apr. 27 to Mar. 6, May 8-15, 19-21, 30, 31, June 3-29, Aug. 14 to Sept. 10, Sept. 12-30, 1934, which are fair.

Discharge, in second-feet, 1932-35

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												
2	3.0	112	29	2,810	75	80	140	52	34	12	5.2	7.4
3	3.0	200	28	356	69	70	150	187	30	11	5.7	34
4	3.0	90	28	198	91	63	210	906	29	11	6.2	21
5	7.3	57	26	168	74	57	350	326	32	14	6.2	16
6	4.5	41	26	192	60	53	300	175	29	25	5.2	8.1
7												
8	3.0	33	29	205	52	50	600	470	25	38	5.2	32
9	3.0	26	37	172	146	60	900	562	21	24	5.7	35
10	3.0	20	65	131	774	760	400	732	18	16	8.9	24
11	3.2	21	54	101	270	550	250	1,480	17	13	8.1	19
12	6.5	20	45	95	160	220	170	652	14	9.8	42	12
13												
14	9.0	20	33	80	110	100	500	2,390	13	8.9	17	11
15	7.9	46	30	75	95	95	2,200	1,310	12	8.9	22	9.6
16	7.4	41	30	60	66	230	600	2,060	12	8.9	14	9.8
17	7.4	38	30	49	79	2,200	310	6,630	13	9.8	11	31
18	4.5	30	29	49	74	4,000	180	2,520	14	19	12	34
19												
20	4.0	50	29	49	68	850	350	670	15	11	11	21
21	20	104	29	47	58	350	1,300	424	14	9.1	9.8	18
22	10	200	29	49	53	640	1,000	278	14	6.8	20	18
23	7.9	350	29	105	57	3,000	1,600	198	13	5.7	6.2	18
24	7.9	520	28	296	292	1,300	700	164	12	5.2	4.7	29
25												
26	7.9	189	28	156	359	4,000	270	143	11	5.2	4.7	12
27	6.5	107	29	911	175	900	200	119	11	5.2	4.7	9.8
28	12	75	36	698	124	317	140	105	10	5.2	4.7	13
29	15	67	876	242	120	280	120	99	10	8.1	4.7	14
30	12	82	1,220	168	110	300	98	212	120	7.4	4.7	11
31												
32	33	84	364	165	280	800	86	107	80	6.2	4.7	8.9
33	17	62	182	165	160	430	76	79	40	5.2	5.7	40
34	13	44	122	142	95	260	68	66	18	5.2	6.2	23
35	35	33	93	103	180	62	52	17	17	5.2	6.8	15
36	34	32	166	82	140	57	42	22	22	5.2	8.9	19
37	78		3,550	72	130		38			5.2	8.9	
Month	Maximum					Minimum		Mean		Per square mile		Run-off in inches
October	78					3.0		12.5		0.066		0.06
November	520					20		93.1		.490		.55
December	3,550					26		237		1.25		1.44
January	2,810					47		263		1.38		1.59
February	774					52		150		.789		.82
March	4,000					50		724		3.81		4.39
April	2,200					57		446		2.35		2.62
May	6,630					33		750		3.95		4.55
June	120					10		24.0		.126		.14
July	38					5.2		10.6		.056		.06
August	42					4.7		9.38		.049		.06
September	40					7.4		19.1		.101		.11
The year	6,630					3.0		230		1.21		16.41

Note.— Records for May to September 1935 supersede those published in Water-Supply Paper 743.

Alum Creek at Columbus, Ohio

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	11	9.8	35	20	10	110	25	5.2	3.9	3.5	5.4
2	18	8.9	9.8	220	19	100	94	24	4.7	3.5	30	5.0
3	14	11	8.9	105	18	1,290	80	22	4.5	9.2	5.2	4.5
4	9.8	12	11	75	17	790	70	19	4.3	3.9	3.2	4.2
5	8.9	18	12	79	16	399	71	17	4.1	3.5	2.8	3.9
6	8.1	13	8.1	133	16	253	84	16	4.0	3.5	2.8	3.8
7	6.8	13	8.1	189	15	153	128	13	3.8	8.6	3.5	7.0
8	7.4	13	8.0	266	14	92	153	12	3.8	3.2	3.2	20
9	6.8	13	8.0	166	14	58	97	12	5.0	3.5	33	9.0
10	8.1	13	8.0	114	13	58	73	12	10	57	34	8.0
11	8.1	13	8.1	84	13	60	109	12	8.8	32	25	8.1
12	6.8	13	8.2	66	13	47	201	12	7.4	19	16	7.8
13	6.2	11	8.4	63	13	38	138	12	6.0	21	48	7.2
14	6.2	11	8.8	66	13	44	105	11	4.5	96	40	6.6
15	6.8	8.9	10	71	14	50	88	11	3.8	48	27	6.2
16	7.4	8.9	13	68	14	58	90	11	3.5	30	70	5.6
17	7.4	8.9	140	71	14	68	75	8.9	3.2	22	600	5.2
18	7.4	8.1	400	53	14	77	66	9.8	3.0	11	150	4.8
19	7.4	6.8	200	53	13	80	60	9.4	3.2	8.1	70	4.4
20	7.4	6.8	120	47	13	70	50	8.6	4.5	7.4	40	4.1
21	6.8	8.9	90	38	12	71	46	7.8	4.2	5.7	25	3.9
22	12	8.9	65	34	12	112	41	7.4	4.0	4.3	18	3.8
23	6.7	6.8	50	37	11	90	38	7.4	15	3.9	15	7.4
24	6.2	9.8	41	42	10	58	40	7.4	10	3.5	13	5.0
25	16	12	35	45	9.6	50	38	6.8	7.0	3.2	11	3.9
26	21	13	32	41	9.4	60	34	6.2	5.0	8.2	9.4	3.6
27	16	13	31	38	9.2	815	32	5.7	90	7.0	8.4	3.5
28	12	13	30	32	9.0	465	30	5.2	60	5.2	7.4	3.5
29	8.9	12	30	28		207	29	5.2	15	3.5	7.0	4.5
30	7.4	11	30	25		148	28	5.2	3.5		6.4	14
31	8.9		30	22		128		5.2		3.5	5.8	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				22	5.7	9.74	0.051		0.06			
November				18	6.8	11.0	.058		.06			
December				400	5.0	47.5	.250		.29			
January				266	22	76.3	.404		.47			
February				20	9.0	13.8	.071		.07			
March				1,290	10	193	1.02		1.18			
April				201	26	76.5	.403		.45			
May				25	5.2	11.2	.059		.07			
June				90	3.0	10.4	.055		.06			
July				98	3.2	14.4	.076		.09			
August				600	2.8	43.0	.226		.25			
September				20	3.5	6.13	.032		.04			
The year				1,290	2.8	43.2	.227		3.10			

Darby Creek at Darbyville, Ohio

Location.- Staff gage at highway bridge three-eighths of a mile northeast of Darbyville, Pickaway County. Zero of gage is 713.84 feet above mean sea level.

Drainage area.- 533 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 451 second-feet.

Extremes.- Maximum discharge recorded during year, 2,540 second-feet Mar. 5 (gage height, 8.00 feet); minimum, 2.2 second-feet Aug. 7, 8, 10 (gage height, 1.88 feet).
1921-34: Maximum discharge recorded, about 18,800 second-feet Feb. 27, 1929 (gage height, 15.9 feet); minimum, 1.4 second-feet Oct. 7, 1921; minimum gage height, 1.54 feet Sept. 10-12, 1925.

Remarks.- Records good except those estimated because of ice effect, Jan. 31 to Mar. 4, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	24	27	70	58	32	391	61	20	12	5.7	8.8
2	42	23	26	62	53	33	320	54	19	11	4.0	7.2
3	38	30	27	98	50	90	276	58	18	9.8	3.4	6.4
4	32	28	29	108	48	1,000	259	58	16	9.8	2.8	6.8
5	30	31	27	114	46	1,710	242	54	15	9.8	2.8	6.4
6	26	38	27	124	44	651	226	54	16	10	2.6	6.1
7	27	36	26	171	42	468	218	50	15	12	2.2	8.0
8	36	32	25	366	39	366	242	50	14	11	2.4	11
9	30	32	25	343	38	251	276	47	25	8.8	2.6	18
10	26	32	25	255	37	186	268	50	20	7.5	2.2	11
11	20	30	27	210	36	171	226	54	16	8.8	2.6	9.8
12	22	31	27	183	34	142	251	50	14	11	9.3	8.0
13	24	32	27	167	33	132	298	47	16	18	65	8.4
14	24	36	27	152	31	132	259	43	17	22	74	7.5
15	23	36	29	131	30	183	206	43	14	18	50	6.4
16	24	30	31	117	30	190	179	47	12	12	30	6.8
17	29	29	37	111	30	198	153	43	11	9.3	22	5.8
18	28	28	251	111	33	210	146	43	12	7.2	19	5.5
19	24	26	366	104	35	186	139	47	14	6.8	153	4.9
20	22	27	298	108	35	171	132	47	14	6.1	91	5.2
21	22	29	255	98	34	179	125	43	13	4.9	69	4.9
22	26	32	206	92	33	186	110	40	12	4.0	50	4.3
23	36	28	183	62	32	218	102	35	17	2.8	34	4.9
24	44	25	149	62	32	210	105	32	16	2.6	50	3.7
25	42	25	114	92	32	202	93	30	12	2.6	23	5.2
26	36	27	92	92	32	202	83	27	11	3.4	19	5.8
27	30	29	57	95	32	234	79	25	13	11	15	6.4
28	36	29	38	89	32	829	74	23	12	10	14	7.2
29	36	28	36	84		792	69	23	12	8.0	12	20
30	36	26	34	79		555	65	21	12	6.8	11	36
31	26		48	65		468		21		4.3	9.8	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						48	20	30.5	0.057		0.07	
November						38	23	29.6	.056		.06	
December						366	25	83.7	.157		.18	
January						366	65	131	.246		.28	
February						58	30	37.2	.070		.07	
March						1,710	32	341	.640		.74	
April						391	65	197	.361		.39	
May						61	21	42.6	.080		.09	
June						25	11	14.9	.028		.03	
July						22	2.6	9.08	.017		.02	
August						153	2.2	26.6	.050		.06	
September						36	3.7	8.55	.016		.02	
The year						1,710	2.2	79.1	.148		2.01	

Deer Creek at Williamsport, Ohio

Location.- Chain gage at highway bridge at Williamsport, Pickaway County, 2 miles below Dry Run.

Drainage area.- 331 square miles.

Records available.- August 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,480 second-feet Mar. 3 (gage height, 4.98 feet); minimum, 1.6 second-feet July 25 (gage height, 0.40 foot).
1926-34: Maximum discharge recorded, 11,600 second-feet Jan. 20, 1927 (gage height, 8.88 feet); minimum, that of July 25, 1934.

Remarks.- Records good except those below 10 second-feet and those estimated because of ice effect, Dec. 27-30, Jan. 29 to Mar. 2, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	20	20	91	41	24	218	42	13	26	30	7.1
2	28	20	20	95	38	24	175	42	16	21		6.1
3	24	20	20	83	37	1,800	149	40	12	12	18	5.6
4	22	19	20	69	35	1,630	131	39	9.3	8.1	10	5.2
5	20	23	20	113	35	572	120	38	10	7.1	8.7	5.2
6	19	28	20	133	34	445	120	37	30	7.1	7.1	4.4
7	19	26	20	294	33	292	162	37	13	8.7	6.1	7.6
8	20	28	20	314	33	235	162	32	11	12	6.1	7.1
9	19	28	19	257	33	175	156	30	30	9.3	5.2	6.1
10	19	26	23	203	33	152	143	32	24	10	5.2	8.1
11	19	24	20	166	33	114	143	32	16	9.9	5.2	9.3
12	17	22	20	139	32	114	143	28	14	9.3	4.8	8.1
13	17	22	19	123	32	111	149	28	12	8.1	5.2	7.1
14	16	22	19	133	32	125	131	26	12	7.1	4.8	6.6
15	16	20	20	109	32	156	108	28	9.9	5.2	4.4	7.1
16	17	20	28	99	32	168	98	28	9.3	4.8	254	6.1
17	17	20	39	91	32	156	88	30	8.1	5.6	125	6.1
18	16	20	222	79	32	143	79	28	11	5.2	67	5.6
19	16	20	222	83	31	131	75	24	10	4.4	52	4.8
20	16	20	169	79	30	114	67	22	8.1	3.4	34	4.4
21	16	20	144	74	29	175	65	20	6.6	2.8	24	4.8
22	21	20	131	70	28	165	67	20	5.6	2.0	17	4.4
23	22	22	106	72	25	134	67	17	88	2.0	16	3.7
24	30	22	91	69	25	106	60	16	22	2.0	14	3.7
25	39	22	76	67	25	103	55	17	12	1.8	13	3.7
26	28	22	72	59	24	108	53	16	8.7	2.0	10	3.7
27	24	22	58	59	24	273	52	16	16	1.8	10	3.1
28	23	21	43	59	24	520	47	15	12	4.4	12	3.1
29	21	22	40	53		350	46	15	8.7	12	10	28
30	20	22	38	48		273	43	14	7.1	13	9.3	57
31	20		54	44		235		14		137	7.6	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	39	16	21.3	0.064	0.07
November	28	19	22.1	.067	.07
December	222	19	59.1	.179	.21
January	314	44	111	.335	.39
February	41	24	31.2	.094	.10
March	1,800	24	294	.888	1.02
April	218	43	105	.317	.35
May	42	14	26.5	.080	.09
June	88	5.6	15.4	.047	.05
July	137	1.8	11.6	.035	.04
August	254	4.4	26.3	.079	.09
September	57	3.1	8.10	.024	.03
The year	1,800	1.8	61.5	.186	2.51

Paint Creek near Greenfield, Ohio

Location.- Chain gage at highway bridge in Fayette County, a quarter of a mile north of county line and 2 miles north of Greenfield, Highland County.

Drainage area.- 251 square miles.

Records available.- August 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,060 second-feet July 30 (gage height, 5.32 feet); minimum, 0.1 second-foot July 26 (gage height, 0.05 foot).
1926-34: Maximum discharge recorded, about 10,800 second-feet Aug. 17, 1926 (gage height, 10.5 feet); minimum, 0.1 second-foot on numerous days in July, August, September 1930 and July 26, 1934.

Remarks.- Records good except those estimated, which are fair.

Discharge, in second-feet, 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												160
2												344
3												360
4												282
5												215
6												296
7												1,140
8												490
9												344
10												268
11											94	202
12											100	160
13											94	141
14											72	123
15											412	107
16											3,550	100
17											8,110	87
18											4,610	141
19											6,250	114
20											2,470	100
21											1,420	94
22											905	114
23											640	114
24											470	795
25											378	1,020
26											282	328
27											228	360
28											190	312
29											160	268
30											132	268
31											125	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May												
June												
July												
August 11-31					8,110	72	1,460	5.82				
September					1,140	87	295	1.18				
The year												

Note.- Records for the period Aug. 11 to Sept. 30, 1926, supersede those published in Water-Supply Paper 645.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1926-27

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	282	1,580	202	202	582	247	1,480	418	156	55	29	6.1
2	282	1,140	180	160	498	168	1,350	292	133	52	27	5.2
3	510	470	160	160	477	193	950	247	118	48	26	4.5
4	360	360	160	282	437	206	800	309	141	42	27	3.9
5	1,920	312	141	470	1,050	168	900	262	133	36	22	3.3
6	1,350	240	128	510	1,050	180	1,050	232	292	33	16	2.9
7	960	215	114	395	666	168	624	193	156	32	14	2.9
8	550	190	123	268	437	160	437	193	129	29	98	2.9
9	395	202	132	202	399	168	1,000	180	111	27	180	4.2
10	296	190	170	*170	342	156	755	232	103	27	79	6.4
11	282	170	170	180	309	143	477	180	145	27	68	9.2
12	215	150	170	132	276	137	361	168	137	21	47	7.3
13	180	150	170	150	276	145	456	166	122	18	35	5.2
14	160	170	150	202	582	519	399	206	342	17	29	7.8
15	141	141	*130	180	456	380	309	262	418	17	35	5.8
16	412	150	114	*120	361	292	292	218	262	15	23	3.9
17	560	150	*110	180	326	247	276	180	193	63	18	2.9
18	360	141	*105	296	900	1,160	342	247	218	53	18	2.6
19	240	123	*100	1,990	540	1,110	380	900	168	37	18	2.2
20	202	114	114	5,550	399	1,920	342	1,110	145	56	18	2.2
21	180	114	123	4,290	380	2,920	292	666	139	24	16	2.9
22	160	107	160	4,450	456	2,690	232	418	133	180	15	2.0
23	160	100	141	3,630	1,050	1,110	206	326	118	139	12	2.0
24	1,350	100	160	2,470	800	710	180	262	98	108	10	2.0
25	1,740	100	296	1,160	582	498	156	262	84	84	9.2	2.0
26	1,140	228	396	800	477	418	156	292	127	59	7.3	1.7
27	740	395	312	456	380	342	180	247	103	35	6.9	2.2
28	470	296	284	519	292	292	156	193	61	27	7.3	2.2
29	595	254	282	540	247	309	180	71	24	24	7.3	2.8
30	1,580	228	240	1,050	218	755	168	60	24	6.9	2.6	
31	1,140		215	850	206		180		55		8.2	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,820	141	606	2.41	2.78
November	1,580	100	275	1.10	1.23
December	395	100	175	.697	.80
January	4,450	120	973	3.88	4.47
February	1,050	276	528	2.10	2.19
March	2,920	137	566	2.25	2.59
April	1,480	156	520	2.07	2.31
May	1,110	156	303	1.21	1.39
June	418	60	155	.618	.69
July	180	15	46.6	.166	.21
August	180	6.9	30.1	.120	.14
September	9.2	1.7	3.79	.015	.02
The year	4,450	1.7	348	1.39	18.82

*Stage-discharge relation affected by ice.

Note.—Records for the year ending Sept. 30, 1927, supersede those published in Water-Supply Paper 843.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1927-28

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5	26	1,160	*410	*120	*160	247	193	63	477	67	118
2	3.3	29	1,110	*190	*120	145	193	156	60	362	76	89
3	2.8	36	710	*150	118	*140	168	145	54	247	68	59
4	2.8	38	437	*150	122	*137	145	133	2,270	218	48	36
5	2.4	36	309	*150	710	*134	129	129	755	193	60	30
6	2.0	34	262	*160	755	131	123	118	1,160	156	59	35
7	4.8	29	247	*170	850	127	156	115	850	156	168	23
8	6.1	32	193	418	1,550	125	193	108	850	137	122	17
9	5.5	32	82	582	1,280	139	193	108	900	118	77	17
10	6.1	34	218	498	755	135	156	105	762	117	60	12
11	5.5	34	309	276	582	133	145	105	624	116	44	12
12	7.3	28	498	262	380	137	137	105	498	101	33	8.7
13	7.8	26	900	276	342	180	192	98	292	1,550	29	7.8
14	7.3	26	4,610	262	582	800	247	89	218	498	127	6.4
15	6.9	24	4,780	247	710	666	156	88	193	309	125	5.8
16	6.9	26	2,800	193	710	456	137	94	141	232	124	6.1
17	7.3	70	755	218	540	361	131	98	135	156	123	5.2
18	6.9	61	437	218	456	262	120	98	129	115	126	3.6
19	6.4	86	309	193	366	232	120	100	1,420	100	119	3.6
20	5.5	61	*240	540	276	218	108	125	4,450	98	119	4.8
21	4.8	59	*190	498	262	193	800	105	1,280	309	117	5.5
22	6.4	56	*160	247	247	168	1,550	94	1,350	755	116	5.5
23	5.8	56	*140	*200	276	156	1,280	88	755	540	126	4.8
24	5.8	98	*130	218	456	143	850	77	582	276	115	3.9
25	6.9	67	*120	540	361	139	624	82	582	193	114	3.9
26	5.8	67	*110	342	232	156	456	88	498	145	113	3.9
27	5.5	67	*110	276	193	168	361	88	326	122	112	4.2
28	9.6	437	111	193	*180	168	309	86	613	103	111	4.5
29	16	456	168	*150	*170	145	247	74	900	77	110	5.2
30	21	810	309	*140	145	145	206	74	666	71	110	6.1
31	24		580	*130		342		66		58	28	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				24		2.0		7.09		0.028		0.03
November				810		24		98.0		.390		.44
December				4,780		82		719		2.86		3.30
January				582		130		274		1.09		1.26
February				1,550		118		472		1.88		2.03
March				800		125		217		.865		1.00
April				1,550		108		329		1.31		1.46
May				193		66		104		.414		.48
June				4,450		54		779		3.10		3.46
July				1,550		58		261		1.04		1.20
August				168		10		40.5		.161		.19
September				118		3.6		18.2		.073		.08
The year				4,780		2.0		275		1.10		14.93

*Stage-discharge relation affected by ice.

†Estimated.

Note.- Records for the year ending Sept. 30, 1928, supersede those published in Water-Supply Paper 663.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1928-29

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	7.8	44	79	*130	1,050	161	141	218	180	15	2.2
2	5.5	9.2	40	116	*110	800	133	193	168	247	14	2.4
3	4.5	20	36	122	*100	624	133	666	159	180	39	1.8
4	6.4	105	35	122	*96	624	125	582	125	118	39	1.7
5	7.3	93	36	101	*98	666	122	498	111	180	33	1.5
6	7.3	68	33	91	*100	1,000	122	666	105	292	24	2.4
7	6.4	49	30	81	101	666	111	437	92	247	28	3.0
8	5.8	36	27	*76	105	380	108	326	129	195	20	5.6
9	5.5	28	23	*71	108	276	232	262	102	232	16	11
10	3.3	30	20	*67	98	247	1,620	232	83	292	10	34
11	5.8	25	19	*63	81	232	1,690	206	77	180	†12	24
12	6.9	24	21	*60	74	193	1,050	180	76	232	†24	16
13	7.3	21	22	*57	68	206	666	418	67	309	19	34
14	6.9	18	49	55	*64	292	437	1,550	80	180	30	27
15	7.3	17	63	*58	*64	342	380	2,090	67	159	48	23
16	6.9	17	125	*56	*72	399	309	1,220	66	118	32	14
17	8.2	17	312	74	262	342	247	624	98	99	22	34
18	25	17	498	666	309	292	218	477	63	77	18	77
19	18	40	309	1,620	*170	262	180	1,920	58	95	14	46
20	33	32	218	1,160	*120	247	168	1,420	54	84	11	28
21	26	38	137	624	*110	218	309	755	47	62	9.6	22
22	22	45	*155	666	*105	218	326	498	40	53	8.2	16
23	22	38	*122	1,000	*100	232	292	361	38	39	7.0	14
24	20	36	*91	1,620	*100	276	247	326	46	37	6.2	9.0
25	18	32	66	2,090	*170	247	232	342	50	35	7.0	10
26	12	24	60	1,160	3,040	247	206	262	43	32	5.8	9.0
27	11	22	63	*660	5,480	232	168	232	106	32	4.0	9.0
28	11	22	58	*370	2,180	206	161	193	51	28	3.8	9.6
29	9.2	23	54	*250		180	193	1,000	43	23	3.2	8.2
30	8.2	27	48	*190		168	163	418	55	21	2.5	6.6
31	7.8		42	*150		163		309		19	†2	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				33		3.3		11.3		0.045		0.05
November				105		7.8		32.7		.130		.14
December				498		19		91.4		.364		.42
January				2,090		55		425		1.69		1.95
February				5,480		54		486		1.94		2.02
March				1,050		163		372		1.48		1.71
April				1,690		109		350		1.39		1.65
May				2,090		141		607		2.42		2.79
June				218		38		83.9		.334		.37
July				309		19		131		.522		.60
August				48		2.2		16.8		.067		.08
September				77		1.5		16.7		.066		.07
The year.				5,480		1.5		218		.869		11.75

*Stage-discharge relation affected by ice.

†Estimated.

Note.—Records for the year ending Sept. 30, 1929, supersede those published in Water-Supply Paper 683.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1929-30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	163	*130	540	*90	582	173	58	14	3.6	0.1	0.2
2	6.2	218	*120	582	*100	437	582	57	12	2.8	.2	.2
3	6.6	309	*110	1,000	108	326	437	54	11	2.0	.1	.2
4	7.0	309	*100	755	666	326	326	51	9.3	2.0	.1	.1
5	7.0	247	*96	498	755	309	236	51	8.1	1.4	.1	.5
6	7.8	206	*94	380	519	278	210	49	8.5	1.4	6.4	.3
7	7.0	145	*130	362	380	2,180	197	46	8.5	.9	1.4	.4
8	5.8	129	154	1,280	309	2,180	162	43	8.1	.9	.4	.5
9	5.0	108	206	2,270	264	1,160	141	42	7.7	.7	.2	.2
10	6.6	100	193	2,000	264	755	122	40	7.0	1.4	.3	.2
11	6.2	100	180	1,160	223	†540	113	39	6.4	1.0	.3	.2
12	6.8	92	193	800	†220	498	110	36	5.8	.9	.1	.4
13	6.0	90	†540	2,000	950	543	107	32	5.8	.9	.2	.5
14	5.4	1,280	950	2,800	850	294	105	32	5.2	1.1	.3	3.4
15	6.0	1,840	950	2,370	800	249	106	34	4.0	.9	.2	3.2
16	5.4	1,620	582	1,000	498	223	100	32	8.5	.7	.2	3.6
17	5.0	1,160	624	†600	362	210	100	30	7.7	.2	.1	1.3
18	6.6	1,160	†1,800	399	278	210	97	30	30	.2	.1	.9
19	7.4	900	3,040	343	249	197	91	32	16	.1	.1	1.4
20	9.0	†630	1,420	278	236	173	85	32	9.3	.1	.1	.6
21	50	456	950	†240	223	151	82	30	7.0	.1	.1	.5
22	193	380	624	*210	210	141	82	27	6.4	.1	.1	.4
23	292	309	456	*190	249	131	74	24	10	.2	2.4	.3
24	326	262	343	*170	399	131	71	22	9.3	.1	.3	.2
25	247	218	309	*150	380	141	71	19	7.7	.1	.2	.5
26	180	206	*290	*130	1,420	141	68	21	5.8	.2	.1	.2
27	145	193	*320	*120	1,110	110	66	19	5.2	.6	.1	.5
28	116	247	*350	*110	710	113	64	17	3.6	.5	.1	.5
29	111	218	399	*110		210	66	17	3.0	.2	.1	.8
30	115	150	562	*100		236	62	16	2.8	.1	.1	.6
31	145		456	*96		197		15		.1	.1	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				326	5.0	66.3	0.283		0.30			
November				1,840	90	448	1.78		1.99			
December				3,040	94	532	2.12		2.44			
January				2,800	95	743	2.96		3.41			
February				1,420	90	458	1.82		1.90			
March				2,180	110	425	1.69		1.95			
April				582	62	144	.574		.64			
May				58	15	33.8	.135		.16			
June				30	2.8	8.46	.034		.04			
July				3.6	.1	.823	.0033		.004			
August				6.4	.1	.474	.0019		.002			
September				3.6	.1	.737	.0029		.003			
The year.				3,040	.1	237	.944		12.84			

*Stage-discharge relation affected by ice.

†Estimated.

Note. - Records for year ending Sept. 30, 1930, supersede those published in Water-Supply Paper 698.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	2.6	4.6	*2.0	2.4	12	131	141	74	26	58	87
2	.5	2.2	7.0	*2.0	2.6	11	173	128	56	39	45	309
3	.5	2.0	4.6	*2.4	2.8	11	1,110	110	47	34	49	264
4	.5	2.2	4.6	2.6	2.8	10	1,050	88	75	30	53	223
5	.5	2.0	4.0	51	2.8	9.7	800	82	55	26	43	173
6	.4	2.0	5.8	18	2.8	10	498	78	51	16	39	160
7	.3	1.8	6.4	9.3	3.2	11	399	210	82	13	35	112
8	.4	2.2	6.1	4.6	3.5	15	278	150	112	10	36	81
9	.4	2.0	5.8	3.6	5.2	16	210	130	75	9.4	50	65
10	.3	2.2	5.2	*3.3	4.6	16	197	112	61	7.9	65	55
11	.5	2.8	4.6	*3.1	6.4	17	173	112	54	6.4	34	51
12	.3	3.8	4.0	*2.9	7.0	22	126	108	43	4.4	29	45
13	.2	4.3	3.2	*2.8	13	30	112	97	36	3.9	197	37
14	.2	4.6	3.2	*2.7	14	49	99	130	36	3.0	249	30
15	.2	5.2	3.6	2.6	10	61	88	108	32	4.0	177	26
16	.3	4.5	3.2	*2.5	8.1	56	76	101	27	4.9	141	24
17	.2	4.0	3.2	*2.4	12	50	72	86	25	173	101	29
18	.2	3.4	3.0	2.4	20	42	68	90	22	343	76	755
19	.3	3.0	2.8	3.4	19	40	63	88	19	900	418	1,420
20	.3	2.6	2.6	3.2	22	34	62	61	15	519	755	1,550
21	.6	2.6	2.4	*3.0	21	30	60	78	24	4,290	600	540
22	.7	2.4	*2.3	2.8	19	30	249	70	25	5,160	456	456
23	.7	2.6	*2.2	2.8	18	27	477	72	41	1,280	343	294
24	.7	2.6	*2.2	2.6	17	27	343	63	46	666	223	519
25	.6	2.4	*2.2	2.4	15	30	249	65	39	437	173	362
26	.6	*2.2	3.6	2.4	14	26	249	56	32	309	177	900
27	1.1	*2.1	3.2	2.6	12	24	399	49	27	210	264	755
28	.9	*2.0	*2.8	3.0	12	38	309	43	20	162	264	519
29	1.3	*2.0	*2.5	3.0		43	223	44	32	116	197	343
30	1.4	5.6	*2.3	2.8		48	173	124	32	78	150	264
31	3.0		*2.1	2.6		49		82		63	114	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				3.0	0.2	0.594	0.0024		0.003			
November				5.2	1.8	2.79	.011		.01			
December				7.0	2.1	3.72	.015		.02			
January				51	2.0	6.06	.020		.02			
February				22	2.4	10.4	.041		.04			
March				61	9.7	28.9	.115		.13			
April				1,110	60	284	1.13		1.26			
May				210	43	96.0	.382		.44			
June				112	15	45.9	.175		.20			
July				4,290	3.0	418	1.67		1.92			
August				800	29	189	.753		.87			
September				1,550	24	348	1.39		1.55			
The year.				4,290		.2	119		.474		6.46	

*Stage-discharge relation affected by ice.

Note.—Records for the year ending Sept. 30, 1931, supersede those published in Water-Supply Paper 713.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1931-32

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	55	624	1,350	539	103	309	93	27	278	16	1.2
2	173	51	418	1,160	518	104	252	82	39	326	18	1.2
3	150	48	326	1,000	497	108	215	74	22	278	18	1.5
4	130	44	309	582	1,760	136	178	73	19	1,420	18	1.7
5	110	43	278	477	900	178	146	76	24	1,220	14	1.5
6	90	42	264	1,280	665	158	136	76	19	755	12	3.3
7	81	41	236	1,220	455	118	136	74	18	1,180	11	3.5
8	139	40	197	710	379	*100	214	87	14	900	9.2	1.8
9	150	39	249	498	309	*90	950	74	12	755	8.1	1.5
10	141	39	326	380	294	*86	1,050	70	12	379	7.0	.9
11	122	38	640	294	294	*84	800	70	12	252	7.0	.5
12	104	40	950	278	294	*82	539	98	11	202	6.1	.4
13	84	43	1,690	362	278	*81	379	72	10	156	4.9	.4
14	101	62	1,690	380	278	*80	294	66	10	136	4.5	.8
15	132	278	1,180	1,840	214	*78	226	87	11	118	3.8	.5
16	150	236	666	1,280	208	*80	190	60	12	104	3.3	.3
17	326	185	418	1,110	202	118	178	55	16	127	2.6	.4
18	326	197	380	1,620	202	127	167	52	21	91	2.2	.3
19	173	197	309	1,110	190	115	146	51	27	76	1.5	.5
20	143	249	249	823	178	101	136	45	146	63	2.2	.6
21	120	380	236	476	187	98	127	38	110	47	3.1	.9
22	104	456	540	497	166	294	118	36	74	56	2.2	.6
23	84	309	850	850	146	239	110	31	52	41	1.5	.3
24	81	264	1,280	1,050	141	202	108	27	37	36	1.0	.8
25	80	278	1,280	755	136	156	108	27	31	30	1.0	1.3
26	71	294	800	710	127	167	104	27	24	27	1.5	2.6
27	67	278	477	665	127	187	99	24	2,580	27	1.8	2.8
28	62	264	380	730	118	202	91	21	1,360	27	1.8	2.8
29	62	326	343	800	106	190	82	20	1,420	22	3.5	3.5
30	61	624	278	1,690	146	146	93	19	539	20	2.2	2.8
31	59		236	1,050		379		20		18	1.5	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				326	59	125	0.498		0.57			
November				624	38	181	.721		.80			
December				1,690	197	584	2.33		2.69			
January				1,840	278	865	3.45		3.93			
February				1,760	106	341	1.36		1.47			
March				379	78	141	.562		.65			
April				1,050	82	256	1.02		1.14			
May				98	19	54.7	.218		.25			
June				2,580	10	223	.888		.99			
July				1,420	18	295	1.18		1.36			
August				18	1.0	6.13	.024		.03			
September				3.5	.3	1.37	.0064		.006			
The year				2,580	.3	257	1.02		13.94			

*Stage-discharge relation affected by ice.

Note.—Records for year ending Sept. 30, 1932, supersede those published in Water-Supply Paper 728.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	64	24	*1,900	247	142	390	142	99	39	8.7	16
2	1.2	†44	22	*1,100	232	134	390	203	88	164	1,830	44
3	.9	25	22	600	189	126	390	232	82	333	370	39
4	.7	12	22	491	176	113	370	315	78	176	153	39
5	.8	11	20	450	153	†100	315	232	73	108	76	37
6	.7	10	24	†380	*170	102	512	232	67	67	44	33
7	.6	9.6	43	315	*200	†190	832	232	63	49	30	46
8	1.5	8.8	40	264	†400	980	600	232	59	35	26	30
9	1.8	10	36	232	*350	930	450	390	54	44	20	20
10	1.3	9.2	35	189	†300	470	370	880	49	217	164	15
11	1.3	11	32	176	*260	280	556	4,320	44	120	56	11
12	1.0	9.2	35	153	†240	†220	880	2,320	38	73	56	9.1
13	.8	7.8	32	138	*220	784	4,320	34	62	40	8.3	8.7
14	2.4	7.8	*29	134	†210	3,370	512	7,450	30	44	60	8.7
15	2.0	7.0	*26	118	*200	4,170	390	4,780	28	36	54	10
16	2.0	30	*23	†102	*190	1,830	351	2,140	25	31	37	11
17	2.0	32	*21	101	*180	880	534	980	24	23	96	8.7
18	3.8	24	*20	†100	*180	1,830	2,600	644	23	18	315	6.5
19	3.3	136	*19	142	*190	5,860	2,600	512	21	15	31	5.6
20	4.3	101	*19	153	†322	6,250	2,060	390	18	13	20	9.1
21	3.8	76	*21	189	450	4,470	980	534	13	11	16	5.9
22	4.3	67	*60	832	315	1,830	644	450	12	9.1	13	5.6
23	3.3	66	*110	1,210	280	1,270	470	333	10	7.1	11	4.8
24	4.9	52	190	644	217	736	390	264	9.1	138	10	4.5
25	7.4	42	239	556	217	1,150	351	247	8.7	153	8.3	4.8
26	11	37	226	534	†184	1,340	280	203	9.5	56	7.1	4.8
27	12	30	178	600	164	1,040	232	189	54	32	6.5	122
28	12	24	136	450	153	680	203	164	35	25	5.9	54
29	5.8	25	127	†320	491	176	138	23	20	20	5.6	42
30	4.3	24	755	298		450	164	126	27	16	4.8	35
31	4.0		2,140	247		390		109		12	37	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	12			0.6			3.46			0.014	0.02	
November	136			7.0			33.7			.134	.15	
December	2,140			19			152			.606	.70	
January	1,900			100			423			1.69	1.95	
February	450			153			235			.936	.97	
March	6,250			100			1,466			5.84	6.73	
April	2,600			164			659			2.63	2.93	
May	7,450			109			1,087			4.33	4.99	
June	99			8.7			39.9			.159	.18	
July	333			7.1			69.2			.276	.32	
August	1,830			4.8			117			.466	.54	
September	122			4.5			23.0			.092	.10	
The year.	6,250			.6			362			1.44	19.58	

*Stage-discharge relation affected by ice.

†Estimated.

Note.- Records for year ending Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Paint Creek near Greenfield, Ohio

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	14	10	189	*42	*22	164	44	6.8	6.8	63	5.6
2	21	13	10	176	*39	556	153	43	6.1	2.1	46	4.5
3	16	13	10	142	*36	1,760	140	45	5.6	1.8	29	4.1
4	15	13	10	140	*34	1,340	118	43	4.5	1.3	16	3.2
5	14	30	10	153	*33	832	122	46	5.7	1.1	12	2.6
6	12	32	10	176	*32	470	333	43	50	1.0	8.3	2.4
7	12	24	9.5	690	*32	333	284	40	16	2.4	6.1	3.4
8	9.5	21	9.1	556	*32	113	176	35	9.1	24	5.6	3.0
9	10	18	9.5	450	*33	203	153	34	19	5.9	4.5	4.5
10	11	18	9.1	315	*34	176	142	34	23	5.1	5.1	4.1
11	9.5	16	9.1	264	*34	136	217	34	10	2.8	18	2.8
12	9.5	16	8.7	203	*34	128	176	32	7.5	1.8	21	2.1
13	8.3	14	8.3	189	*34	140	132	32	5.1	1.6	9.1	4.1
14	8.3	15	8.3	164	*34	132	115	32	4.3	5.1	5.3	2.4
15	7.5	14	8.3	142	*34	128	102	32	4.1	3.6	4.1	2.6
16	8.7	12	34	132	*34	134	86	30	3.6	2.4	298	2.8
17	7.9	12	164	124	*33	130	82	31	3.0	1.8	176	2.1
18	7.1	12	264	118	*33	118	76	30	3.2	1.3	90	1.8
19	7.9	12	410	117	*31	117	74	31	3.2	.9	50	1.7
20	6.1	12	450	109	*29	117	69	26	2.4	.6	36	1.6
21	5.6	12	370	96	*27	164	69	22	2.2	.3	26	1.6
22	27	12	247	93	*26	153	67	17	2.0	3.0	19	1.7
23	22	13	189	96	*24	132	66	15	3.2	1.3	17	2.1
24	12	13	153	86	*23	122	63	12	2.1	.5	13	1.7
25	8.3	12	128	91	*23	113	59	12	1.7	.2	12	1.2
26	10	12	99	84	*22	176	55	11	1.2	.1	7.9	3.2
27	13	11	73	92	*22	491	52	12	4.5	.8	6.8	2.2
28	18	11	*60	80	*22	450	50	10	2.0	176	5.8	1.4
29	19	10	*50	69		351	47	9.1	4.1	59	4.8	164
30	18	11	*43	*65		264	45	7.5	4.3	644	4.5	59
31	16		109	*45		217		7.1		232	5.1	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				31		5.6		12.9		0.051		0.06
November				32		10		14.9		.059		.07
December				450		8.3		96.2		.383		.44
January				690		45		174		.693		.80
February				42		22		30.9		.123		.13
March				1,760		22		313		1.25		1.44
April				333		45		116		.462		.52
May				46		7.1		27.5		.110		.13
June				50		1.2		7.42		.030		.03
July				644		.1		38.4		.153		.18
August				298		4.1		33.1		.132		.15
September				164		1.2		9.98		.040		.04
The year.				1,760		.1		73.6		.293		3.99

*Stage-discharge relation affected by ice.

Paint Creek near Bourneville, Ohio

Location.- Water-stage recorder at highway bridge $1\frac{1}{2}$ miles southwest of Bourneville, Ross County, and $1\frac{1}{2}$ miles above Twin Creek. Zero of gage is 667.01 feet above mean sea level.

Drainage area.- 808 square miles.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 794 second-feet.

Extremes.- Maximum discharge during year, 8,850 second-feet about Mar. 4 (gage height, 11.20 feet); minimum, 19 second-feet Sept. 28 (gage height, 3.12 feet).
1923-34: Maximum discharge, about 29,500 second-feet May 14, 1933 (gage height, 16.72 feet); minimum, 6.7 second-feet Aug. 13, 14, 1930 (gage height, 2.24 feet).

Remarks.- Records good except those estimated Jan. 5-20, Jan. 30 to Mar. 12, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	72	66	718	220	50	698	149	56	160	251	46
2	125	73	65	834	200	50	601	143	57	125	145	41
3	111	71	68	667	180	1,700	511	138	54	78	130	37
4	98	70	84	559	160	5,100	461	136	50	64	106	34
5	78	102	67	1,050	150	3,200	417	134	50	54	82	34
6	76	417	68	1,200	140	2,000	754	129	141	50	60	32
7	78	174	64	3,900	130	1,300	2,200	125	241	51	54	31
8	75	127	64	3,200	120	1,000	1,090	116	181	65	50	34
9	73	106	64	2,200	110	800	771	111	257	70	43	39
10	71	98	63	1,600	100	720	631	106	264	61	709	31
11	74	91	63	1,200	95	660	771	106	127	84	487	28
12	74	88	60	1,000	90	620	778	99	96	75	169	61
13	64	84	65	800	85	601	625	96	79	59	103	54
14	65	87	61	700	80	820	529	91	72	53	80	36
15	64	85	62	600	76	685	450	99	63	45	75	34
16	64	79	397	520	74	619	412	113	58	41	610	33
17	63	74	1,010	490	72	565	380	106	55	41	484	31
18	65	74	3,050	490	70	517	330	96	64	41	275	29
19	63	75	1,260	490	68	505	310	89	142	38	215	32
20	60	73	2,290	560	65	478	286	85	62	34	136	28
21	71	78	1,920	370	62	523	264	80	55	32	113	26
22	106	74	1,170	365	60	613	254	80	50	36	96	60
23	365	73	862	406	58	529	259	74	49	38	80	36
24	132	75	673	412	56	472	242	72	54	32	123	29
25	91	75	619	360	55	456	218	68	48	30	140	25
26	78	74	523	375	53	763	203	64	44	30	77	24
27	74	71	456	365	52	2,520	199	64	98	32	58	22
28	75	74	330	345	51	1,850	188	61	364	892	58	29
29	75	71	315	320		1,300	171	61	589	149	69	434
30	74	67	320	290		989	162	61	239	82	58	494
31	75		340	250		815		57		1,140	50	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				365	60	90.9	0.112		0.13			
November				417	67	95.1	.118		.13			
December				3,050	60	532	.658		.76			
January				3,900	250	859	1.06		1.22			
February				220	51	97.6	.121		.13			
March				5,100	50	1,059	1.31		1.51			
April				2,200	162	506	.626		.70			
May				149	57	97.1	.120		.14			
June				589	44	125	.155		.17			
July				1,140	30	122	.151		.17			
August				709	43	167	.207		.24			
September				494	22	63.5	.079		.09			
The year.				5,100	22	321	.397		5.39			

Ohio Brush Creek near West Union, Ohio

Location.- Chain gage at highway bridge 2 miles southwest of Cedar Mills and 7 miles east of West Union, Adams County. Zero of gage is 510.6 feet above mean sea level.

Drainage area.- 388 square miles.

Records available.- August 1926 to September 1934.

Extremes.- Maximum discharge recorded during year, 13,300 second-feet Jan. 7 (gage height, 14.92 feet); minimum, 2.3 second-feet June 5 (gage height, 1.14 feet).
1926-34: Maximum discharge recorded, about 19,300 second-feet July 4, 1932 (gage height, 19.22 feet); minimum, 0.2 second-foot Aug. 4, Sept. 6-11, 1930; minimum gage height, 0.84 foot Sept. 8, 1930.

Remarks.- Records good except those for periods of ice effect, Jan. 30 to Feb. 2, Feb. 4-6, 9, 25, Mar. 1-3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	14	19	985	44	22	256	46	5.2	224	27	13
2	44	14	18	461	46	85	209	40	4.6	78	432	12
3	29	14	18	275	42	1,280	176	56	4.6	40	128	9.5
4	22	14	22	209	46	3,690	156	38	4.1	25	89	8.0
5	19	164	19	1,520	54	1,130	138	37	2.6	19	52	5.7
6	16	387	18	562	54	650	150	33	327	15	30	5.7
7	16	145	17	9,630	54	590	590	29	122	13	21	4.9
8	14	90	16	1,360	50	880	366	28	82	26	16	4.1
9	16	55	16	748	46	534	240	24	2,690	55	12	3.6
10	16	39	16	562	34	682	185	23	985	30	461	3.5
11	14	31	16	410	33	327	179	100	191	209	812	3.3
12	15	30	14	308	40	290	209	44	96	66	173	308
13	16	25	14	308	46	387	179	30	60	29	87	117
14	14	23	14	308	50	534	148	26	40	19	308	46
15	12	22	16	240	58	410	126	68	31	27	93	40
16	12	23	3,390	208	66	308	115	145	23	26	163	70
17	14	22	7,260	164	44	240	115	78	18	14	98	32
18	13	21	2,110	142	50	224	100	47	21	9.5	57	17
19	11	18	1,840	142	52	308	89	34	256	6.8	33	14
20	13	18	2,590	127	35	256	83	29	73	5.2	23	10
21	12	19	1,130	117	40	346	76	21	35	4.4	14	8.0
22	23	22	461	112	42	256	80	38	22	203	11	7.6
23	256	32	346	159	39	197	80	33	20	83	10	34
24	102	29	273	176	29	224	76	17	256	36	273	30
25	52	24	308	147	25	308	66	13	68	17	209	18
26	30	27	256	127	23	1,130	57	10	29	11	102	13
27	24	24	209	114	23	4,010	60	8.7	18	10	52	15
28	18	21	162	117	23	1,130	62	6.8	73	1,840	30	9.9
29	14	23	142	92		562	51	8.0	290	290	21	346
30	15	19	150	54		387	46	6.4	432	89	15	1,200
31	15		308	44		308		6.0		44	14	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				256		11		30.2		0.078		0.09
November				387		14		47.0		.121		.13
December				7,260		14		684		1.76		2.03
January				9,630		44		643		1.66		1.91
February				66		23		42.4		.109		.11
March				4,010		22		700		1.80		2.08
April				590		46		149		.384		.43
May				146		8.0		35.5		.091		.10
June				2,690		2.6		209		.539		.60
July				1,840		4.4		115		.296		.34
August				812		10		125		.322		.37
September				1,200		3.3		80.3		.207		.23
The year.				9,630		2.6		241		.621		8.42

Whiteoak Creek near Georgetown, Ohio

Location.- Chain gage on highway bridge 800 feet below mouth of Opossum Run and 1½ miles southwest of Georgetown, Brown County. Zero of gage is 577.21 feet above mean sea level.

Drainage area.- 221 square miles.

Records available.- October 1923 to September 1934.

Average discharge.- 11 years, 251 second-feet.

Extremes.- Maximum discharge during year, 5,540 second-feet Dec. 18 (gage height, 8.56 feet); minimum, 0.3 second-foot July 27, Sept. 21 (gage height, 1.84 feet).
1923-34: Maximum discharge, 20,500 second-feet May 14, 1933 (gage height, 12.87 feet); no flow July 19 to Aug. 8, Sept. 4-19, Oct. 14-31, Nov. 2-15, 1930.

Remarks.- Records fair. Discharge estimated because of ice effect Dec. 13-22, 1932, Feb. 10, 12, Nov. 16-19, Dec. 26-31, 1933, Jan. 31 to Mar. 1, 1934.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	565	18	685	167	51	185	26	67	9.0	4.1	443
2	6.7	147	19	201	345	44	322	116	49	400	3.8	86
3	5.2	49	19	131	133	41	305	466	43	1,900	8.3	49
4	3.8	28	19	121	90	37	422	97	35	150	44	112
5	4.6	23	18	145	60	36	167	110	30	67	10	81
6	3.6	17	35	133	80	36	2,230	241	35	40	11	35
7	2.9	14	158	92	283	201	700	172	28	27	14	38
8	2.7	16	293	75	1,570	2,210	272	83	23	23	10	24
9	3.1	24	92	63	128	406	144	112	22	17	7.5	16
10	3.1	191	55	51	94	150	110	241	20	16	6.8	12
11	4.9	70	37	48	80	94	360	1,160	94	12	9.0	10
12	4.3	36	37	42	75	75	1,600	615	42	94	81	8.6
13	3.1	25	29	40	75	560	272	4,790	23	40	33	11
14	3.6	20	23	34	117	2,480	133	15,800	19	22	35	19
15	3.1	17	20	38	610	3,900	226	1,600	15	16	19	226
16	3.1	35	18	28	306	427	443	1,700	13	13	13	121
17	3.6	367	17	32	217	217	945	305	12	10	10	57
18	3.3	88	16	112	306	5,220	9,500	170	12	9.0	7.5	29
19	2.5	1,470	15	1,360	189	15,400	880	119	10	7.5	7.2	38
20	3.3	367	15	448	1,290	1,700	288	97	10	6.8	95	123
21	4.1	120	20	3,900	345	1,600	167	3,230	9.0	6.0	38	150
22	3.8	67	150	4,750	140	288	118	422	8.6	5.0	20	58
23	3.6	45	610	765	102	198	77	160	7.6	4.1	13	29
24	4.1	39	445	261	80	212	69	99	6.8	3.8	9.0	20
25	3.6	41	700	660	73	212	67	256	6.0	3.8	6.8	15
26	7.1	48	194	930	96	400	86	1,010	5.3	19	5.3	12
27	9.2	41	90	560	70	158	72	488	5.3	7.2	4.1	198
28	23	34	64	685	50	116	46	760	4.7	7.9	3.1	642
29	31	28	53	217	92	92	38	198	4.7	6.0	3.1	110
30	19	20	1,540	137	76	76	30	198	5.0	3.4	3.1	54
31	20		6,920	112	79	79		104		4.1	830	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				31	2.5	6.73	0.030		0.03			
November				1,470	14	135	.611		.58			
December				6,920	15	379	1.71		1.97			
January				4,750	28	543	2.46		2.84			
February				1,570	60	257	1.16		1.21			
March				15,400	36	1,184	5.36		6.16			
April				9,500	30	676	3.06		3.41			
May				15,800	26	1,127	5.10		5.88			
June				67	4.7	22.2	.100		.11			
July				1,900	3.4	95.1	.430		.50			
August				880	3.1	45.6	.206		.24			
September				642	8.6	94.2	.426		.48			
The year.				15,800	2.5	383	1.73		23.53			

Note.- Records for period March to September 1933 supersede those published in Water-Supply Paper 743.

Whiteoak Creek near Georgetown, Ohio

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	13	14	820	18	10	77	17	1.9	38	30	5.1
2	23	13	14	226	17	64	60	17	1.5	34	202	3.3
3	18	13	14	121	16	2,970	50	17	1.4	19	362	2.6
4	15	13	13	94	15	2,120	43	16	.7	13	84	2.6
5	14	241	13	1,800	14	615	38	17	4.1	10	46	1.9
6	13	422	13	322	13	380	65	16	29	8.9	27	1.5
7	11	118	12	4,110	13	212	443	16	39	11	18	1.4
8	10	65	13	700	13	360	198	14	22	15	13	1.2
9	10	43	12	322	12	226	104	14	23	6.8	8.9	.8
10	9.0	32	12	256	12	341	72	13	68	4.4	10	.5
11	8.3	26	12	150	13	162	60	12	53	5.1	361	.8
12	9.0	22	12	125	13	104	106	12	45	4.0	103	20
13	10	20	11	119	13	165	76	12	17	5.8	60	5.4
14	10	19	11	155	13	612	58	12	12	5.1	36	7.4
15	10	18	11	112	13	241	43	16	8.9	6.8	32	5.8
16	9.0	17	880	81	13	123	35	15	6.3	10	23	4.7
17	8.3	16	3,230	70	12	103	33	14	4.7	13	120	2.0
18	8.6	16	3,100	60	12	74	30	12	4.4	10	60	1.2
19	8.3	15	1,240	52	12	116	27	12	5.1	6.8	30	.5
20	7.5	15	2,010	49	11	95	25	10	4.0	4.4	20	.4
21	7.5	14	562	46	11	108	24	8.3	2.2	2.9	14	.4
22	54	16	241	40	10	88	22	6.8	1.9	3.6	10	.4
23	322	16	133	67	10	65	20	6.0	4.7	3.6	22	1.2
24	106	15	104	150	9.0	50	24	6.0	2.6	1.5	49	1.9
25	49	15	110	81	9.0	103	23	5.0	2.0	.8	15	.8
26	30	15	115	62	8.5	730	20	4.4	1.7	.4	60	.7
27	23	15	90	52	8.0	1,800	22	4.4	4.4	.3	30	.4
28	19	15	70	52	8.0	400	19	3.8	7.4	272	19	.4
29	16	14	54	35		160	19	3.4	164	108	13	52
30	15	14	54	23		123	18	2.8	64	46	8.9	422
31	14		76	20		94		2.5		28	6.8	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					322	7.5	29.1	0.132		0.15		
November					422	13	43.5	.197		.22		
December					3,230	11	395	1.79		2.06		
January					4,110	20	355	1.52		1.75		
February					18	8.0	12.2	.055		.06		
March					2,970	10	410	1.86		2.14		
April					443	18	61.8	.280		.31		
May					17	2.5	10.9	.049		.06		
June					164	.7	20.2	.091		.10		
July					272	.3	22.5	.102		.12		
August					361	6.8	61.7	.279		.32		
September					422	.4	18.3	.083		.09		
The year.					4,110	.3	120	.543		7.38		

Little Miami River at Spring Valley, Ohio

Location.- Chain gage in R. 5, T. 4, at highway bridge three-eighths of a mile southwest of Spring Valley, Greene County, and 2½ miles below mouth of Sugar Creek.

Drainage area.- 361 square miles.

Records available.- September 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 5,110 second-feet Aug. 11 (gage height, 10.27 feet); minimum, 23 second-feet July 27 (gage height, 2.20 feet).
1925-34: Maximum discharge recorded, about 14,800 second-feet Feb. 26, 1929 (gage height, 18.8 feet); minimum, that of July 27, 1934.

Remarks.- Records good except those estimated because of ice effect, Dec. 28-30, Jan. 30 to Feb. 13, Feb. 23-28, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	88	96	199	95	104	238	77	42	622	33	35
2	93	89	84	186	94	1,840	212	75	43	142	34	34
3	91	89	89	161	92	3,640	199	79	41	67	32	32
4	86	88	82	159	91	1,070	186	75	39	51	30	34
5	82	93	82	225	90	475	174	75	137	41	28	32
6	84	119	82	225	89	362	174	75	65	39	27	34
7	84	112	75	319	88	292	212	72	51	40	28	40
8	89	104	77	377	86	225	186	69	43	40	26	38
9	99	99	74	334	86	225	174	68	50	37	26	34
10	93	93	75	292	84	199	174	67	50	36	702	32
11	86	89	79	238	84	174	174	68	45	34	3,440	32
12	75	89	77	225	87	161	199	67	43	35	265	32
13	79	89	79	225	89	161	174	61	41	34	212	32
14	75	93	77	225	93	174	159	67	38	32	93	33
15	75	89	79	212	101	174	147	79	35	32	88	40
16	79	82	123	212	93	174	144	69	35	31	475	31
17	84	84	1,840	212	89	174	130	65	37	30	265	30
18	79	91	702	199	89	161	121	60	37	30	128	30
19	80	89	392	186	97	161	119	56	35	29	69	29
20	75	89	377	174	104	161	114	54	39	27	60	29
21	79	93	319	174	91	161	112	49	35	28	51	29
22	334	91	278	161	86	151	126	51	34	27	47	38
23	161	89	252	186	84	149	110	49	32	27	45	39
24	142	88	212	161	82	149	101	51	34	27	622	34
25	114	86	186	159	81	151	96	51	32	24	79	31
26	106	91	186	151	80	186	95	49	32	24	53	32
27	99	89	123	147	80	334	93	47	37	67	46	36
28	93	86	110	151	80	212	89	47	61	319	43	34
29	88	89	110	97		362	84	46	48	80	39	67
30	82	88	115	90		319	82	45	43	48	37	54
31	88		161	88		265		43		37	37	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	334	75	99.5	0.276	0.32
November	119	82	91.6	.254	.28
December	1,840	74	216	.598	.69
January	377	88	198	.548	.63
February	104	80	88.7	.246	.26
March	3,640	104	404	1.12	1.29
April	238	82	147	.407	.45
May	79	43	61.5	.170	.20
June	137	32	44.4	.123	.14
July	622	24	68.9	.191	.22
August	3,440	26	231	.640	.74
September	67	29	35.2	.098	.11
The year	3,640	24	142	.393	5.33

Little Miami River at Milford, Ohio

Location.- Water-stage recorder 500 feet below highway bridge in Milford, Clermont County, and 14 miles above mouth of East Fork. Zero of gage used 1925-27 was 500.07 feet (revised) and zero of present gage is 499.35 feet (revised) above mean sea level.

Drainage area.- 1,195 square miles.

Records available.- March 1925 to September 1934.

Extremes.- Maximum discharge during year, 13,000 second-feet Mar. 3 (gage height, 8.00 feet); minimum, 34 second-feet July 26 (gage height, 1.01 feet)
1925-34: Maximum discharge, about 82,900 second-feet Mar. 19, 1933 (gage height, 19.72 feet); minimum, that of July 26, 1934.

Remarks.- Records good except those estimated Dec. 29-31, Jan. 29 to Feb. 13, Feb. 22-28, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	279	132	128	760	210	169	1,090	200	81	182	86	93
2	217	128	130	860	202	2,610	920	196	86	222	72	86
3	184	130	126	637	200	10,000	770	189	76	348	73	70
4	167	126	128	520	198	4,830	655	186	67	172	68	73
5	159	165	130	1,219	198	2,630	592	189	83	122	63	66
6	152	224	126	1,290	195	1,950	753	189	327	101	49	66
7	147	204	124	2,100	192	1,450	1,630	182	338	110	56	76
8	157	199	122	2,580	188	1,260	1,110	166	196	84	51	110
9	164	175	124	1,820	185	1,030	790	167	214	88	51	169
10	167	159	119	1,510	184	920	628	151	581	166	661	106
11	155	150	122	1,150	190	790	691	142	189	93	2,580	97
12	147	143	120	980	194	628	960	135	137	73	2,670	95
13	141	143	119	900	200	637	720	132	112	64	760	79
14	132	137	119	900	206	730	601	137	90	66	360	64
15	124	137	120	800	206	810	520	145	92	60	230	67
16	128	132	145	682	203	720	448	151	63	50	538	64
17	128	130	884	628	193	682	416	157	67	50	2,420	64
18	126	130	3,430	592	181	691	367	145	74	47	870	67
19	122	126	1,990	556	196	870	336	137	73	50	439	59
20	120	130	2,440	520	175	720	306	124	64	47	300	51
21	120	128	1,760	464	167	1,140	285	122	61	44	192	45
22	141	132	1,280	440	160	1,030	285	106	86	36	154	54
23	347	137	960	472	152	800	285	101	68	37	124	55
24	282	141	760	520	148	664	280	97	61	40	110	39
25	203	137	628	472	144	720	255	106	59	36	1,430	56
26	167	134	529	601	142	2,130	238	95	108	38	466	60
27	152	137	440	529	142	4,220	230	92	79	67	255	55
28	147	132	311	448	146	2,940	226	92	60	494	169	55
29	141	130	240	300		1,950	218	88	63	661	113	105
30	141	128	230	250		1,570	210	90	132	186	101	494
31	139		290	220		1,280		84		117	95	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	347	120	164	0.137	0.16
November	224	126	145	.121	.13
December	3,430	119	586	.490	.56
January	2,680	220	829	.694	.80
February	210	142	182	.152	.16
March	10,000	169	1,700	1.42	1.64
April	1,630	210	560	.469	.52
May	200	84	138	.115	.13
June	581	59	126	.105	.12
July	661	36	128	.107	.12
August	2,670	49	503	.421	.49
September	494	39	88.0	.074	.08
The year.	10,000	36	433	.362	4.91

East Fork of Little Miami River at Perintown, Ohio

Location.- Chain gage on highway bridge at Perintown, Clermont County, 5 miles above junction with Little Miami River. Zero of gage is 507.27 feet above mean sea level.

Drainage area.- 477 square miles.

Records available.- May 1915 to May 1920, January 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 7,330 second-feet Dec. 17 (gage height, 10.60 feet); minimum, 0.9 second-foot July 26 (gage height, 0.40 foot).
1915-20: Maximum stage, 19.77 feet Apr. 20, 1920; minimum, -0.18 foot Oct. 3-7, 1917. Discharge not determined.
1925-34: Maximum discharge, about 32,400 second-feet Mar. 19, 1933 (gage height, 22.68 feet, from flood marks); minimum, 0.3 second-foot July 24, 1930; minimum gage height, 0.32 foot Aug. 1, 2, 4, 29, 1930.

Remarks.- Records good except those estimated because of ice effect, Dec. 12, 13, Jan. 30 to Mar. 1, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	17	16	1,250	50	15	192	39	5.8	6.8	275	3.3
2	61	16	16	550	40	630	157	39	5.2	157	122	2.6
3	42	16	16	269	31	4,410	135	35	5.2	78	510	1.8
4	30	16	16	170	33	2,580	120	33	4.7	48	133	1.8
5	24	403	15	2,120	34	1,250	106	32	4.2	33	75	1.4
6	21	301	17	865	34	720	302	31	8.6	68	40	1.3
7	19	269	16	4,000	33	420	1,310	31	30	61	36	6.5
8	18	139	16	1,840	29	630	970	27	42	48	32	9.2
9	18	80	14	765	22	438	368	25	35	42	23	51
10	16	57	14	510	18	590	231	25	510	21	20	95
11	17	44	13	334	19	318	218	26	78	15	26	54
12	16	36	13	239	22	205	258	22	46	12	26	46
13	16	30	13	224	23	438	244	20	28	9.2	168	56
14	14	30	14	285	24	815	168	20	19	8.0	90	33
15	14	21	14	239	25	630	139	23	14	5.8	61	40
16	14	20	915	170	26	334	118	23	9.8	3.8	168	41
17	15	18	5,070	132	25	231	102	21	8.0	10	102	20
18	14	17	3,000	109	25	302	91	22	8.6	9.2	160	14
19	13	18	2,050	103	24	386	78	20	39	8.0	99	9.8
20	14	17	2,740	82	22	302	80	20	39	5.2	62	9.8
21	14	16	1,080	82	20	302	72	18	22	4.2	40	6.8
22	16	17	473	75	19	258	67	16	13	2.9	28	5.2
23	158	18	269	156	18	205	64	15	12	2.0	20	5.8
24	70	18	183	269	17	180	64	15	47	1.3	19	4.7
25	34	16	158	196	17	272	58	14	22	1.1	15	13
26	23	16	151	151	16	1,980	52	14	14	1.0	16	12
27	20	18	120	136	16	3,610	55	10	11	1.3	14	11
28	28	18	111	132	15	1,250	50	7.4	8.0	272	12	8.6
29	23	16	103	103		473	43	10	5.8	420	9.2	110
30	22	15	90	75		318	41	8.6	3.3	157	6.3	970
31	19		196	55		244		6.3		91	5.2	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				158	13	29.5	0.062		0.07			
November				403	16	57.8	.121		.13			
December				5,070	13	546	1.14		1.31			
January				4,000	55	505	1.06		1.22			
February				50	15	24.9	.052		.05			
March				4,410	15	798	1.67		1.93			
April				1,310	41	198	.415		.46			
May				39	6.3	21.6	.045		.05			
June				510	3.3	36.6	.077		.09			
July				420	1.0	51.7	.108		.12			
August				510	5.2	76.2	.160		.16			
September				970	1.3	54.8	.115		.13			
The year				5,070	1.0	203	.426		5.74			

Licking River at Catawba, Ky.

Location.- Water-stage recorder three-quarters of a mile east of Catawba, Pendleton County, and three-quarters of a mile above mouth of Kinkaid Creek. Zero of gage is 498.37 feet above mean sea level, the same as elevation of zero of gage at former site half a mile downstream.

Drainage area.- 3,300 square miles.

Records available.- July 1928 to September 1934. July 1916 to September 1920 at site half a mile downstream.

Extremes.- Maximum discharge during year, 38,400 second-feet Dec. 18 (gage height, 27.57 feet); minimum, 45 second-feet Oct. 21 (gage height, 4.53 feet).
1928-34: Maximum discharge, 54,600 second-feet Jan. 22, 1933 (gage height, 35.22 feet); minimum, 2.5 second-feet Aug. 5, Oct. 14, 18, 1930.
1916-20: Maximum stage recorded, 36.9 feet April 21, 1920 at former site (discharge, 85,000 second-feet).

Remarks.- Records good except those estimated for Aug. 11-18, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	352	108	97	2,720	519	260	6,360	1,200	152	190	816	255		
2	300	78	103	2,430	466	453	4,030	1,080	144	156	872	231		
3	236	78	100	1,960	466	6,380	2,920	952	124	121	3,340	213		
4	179	83	91	2,040	416	21,800	2,310	832	118	144	5,060	200		
5	196	978	89	4,860	392	26,300	2,110	748	121	404	6,840	179		
6	175	1,370	83	3,220	398	22,300	2,010	680	185	358	4,440	156		
7	160	564	73	13,800	392	18,000	2,480	612	722	294	1,940	156		
8	141	434	469	21,000	386	18,000	2,210	554	1,000	255	1,240	152		
9	152	606	665	18,200	422	16,200	2,010	519	1,170	200	832	148		
10	152	561	554	13,200	528	13,400	1,760	492	8,100	152	665	144		
11	134	434	512	8,770	398	11,000	1,580	498	6,200	124	3,200	134		
12	105	347	404	5,720	310	8,940	1,630	575	3,820	136	11,700	173		
13	105	284	362	3,460	315	6,680	1,680	479	2,210	217	12,000	681		
14	97	245	315	2,530	320	4,470	1,760	392	1,940	213	5,600	797		
15	81	213	336	2,060	310	3,480	1,680	416	1,240	261	3,500	466		
16	76	192	4,250	1,760	289	2,920	1,540	718	904	512	4,200	512		
17	71	171	25,800	1,500	294	2,580	1,360	665	650	410	5,380	635		
18	61	148	36,400	1,320	289	2,310	1,200	1,120	519	347	8,940	568		
19	57	137	22,500	1,200	284	2,150	1,080	960	547	342	8,940	404		
20	53	131	20,400	1,080	284	1,960	976	740	575	924	6,040	325		
21	49	121	19,900	992	294	1,810	960	590	374	269	2,690	294		
22	159	118	13,000	912	284	1,680	920	479	289	262	1,450	269		
23	346	114	6,920	888	274	1,960	864	410	245	1,630	1,040	240		
24	354	111	3,980	952	255	2,920	800	369	209	1,360	840	240		
25	212	108	2,640	896	200	3,220	755	315	179	770	695	231		
26	137	108	2,060	840	255	6,090	710	260	164	479	650	200		
27	108	108	1,760	778	330	15,000	732	231	160	364	620	192		
28	97	105	1,720	710	269	19,300	920	204	134	300	486	179		
29	118	100	1,810	642		6,200	1,160	192	111	305	398	343		
30	148	97	2,010	547		12,800	1,360	187	97	269	336	4,810		
31	137		1,960	880		9,280		175		294	300			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					354		49		153		0.046		0.05	
November					1,370		78		275		.083		.09	
December					36,400		73		5,528		1.68		1.94	
January					21,000		547		3,931		1.19		1.37	
February					528		200		344		.104		.11	
March					26,300		260		8,705		2.64		3.04	
April					6,360		710		1,729		.524		.58	
May					1,200		175		569		.172		.20	
June					8,100		97		1,080		.327		.36	
July					1,630		121		369		.112		.13	
August					12,000		300		3,389		1.03		1.19	
September					4,810		134		451		.137		.15	
The year					36,400		49		2,240		.679		9.21	

Miami River at Sidney, Ohio

Location.- Water-stage recorder at North Street Bridge, at Sidney, Shelby County.
Zero of gage is 924.74 feet above mean sea level.

Drainage area.- 545 square miles.

Records available.- February 1914 to September 1934.

Average discharge.- 20 years, 506 second-feet.

Extremes.- Maximum discharge during year, 2,360 second-feet Mar. 4 (gage height, 5.88 feet); minimum, 9.6 second-feet Aug. 9 (gage height, 0.64 foot).

1914-34: Maximum discharge, about 20,700 second-feet Mar. 20, 1927 (gage height, 14.4 feet); minimum, 9 second-feet Sept. 18, 19, 1917 (gage height, -1.5 feet).

Maximum stage known, 19.6 feet, present datum, Mar. 25, 1913 (discharge estimated by Miami Conservancy District, 44,000 second-feet).

Remarks.- Records fair. Discharge estimated because of ice effect, Nov. 17-21, Dec. 11-14, 28-30, Jan. 29 to Mar. 2. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	555	208	80	303	85	65	604	114	48	51	18	22
2	321	208	78	350	83	400	520	108	37	40	18	22
3	216	213	78	265	80	1,890	446	108	45	45	16	16
4	160	213	92	291	80	1,830	324	106	30	35	18	19
5	134	208	103	263	78	1,230	257	104	47	22	18	21
6	117	221	113	306	77	865	243	102	53	35	17	21
7	105	190	107	286	78	604	257	96	47	33	17	28
8	97	156	97	277	74	482	265	90	30	28	14	35
9	99	190	92	306	72	378	237	86	40	22	24	33
10	93	203	86	315	70	347	217	80	48	32	78	19
11	88	172	81	312	70	314	227	69	30	37	78	31
12	80	132	78	271	69	308	246	68	47	27	68	35
13	77	165	77	280	68	308	224	62	38	23	54	41
14	77	185	76	297	68	371	202	69	33	24	53	32
15	73	175	176	306	67	466	188	80	32	23	41	27
16	73	144	251	300	66	427	190	73	34	17	57	34
17	78	135	581	268	65	311	202	64	28	20	66	21
18	77	130	935	198	64	310	209	61	56	23	66	31
19	77	125	810	172	63	320	183	59	122	18	75	25
20	73	115	622	156	62	330	173	56	112	17	54	24
21	73	105	573	140	62	340	159	50	94	18	54	23
22	142	99	501	142	61	382	155	56	73	17	32	26
23	203	90	409	154	60	268	157	53	84	15	28	33
24	170	84	303	158	60	212	142	59	77	21	33	21
25	134	84	240	151	60	192	133	58	77	19	33	28
26	191	80	235	142	60	198	131	53	59	18	26	30
27	246	86	178	134	60	1,530	126	48	140	15	16	21
28	235	84	165	132	60	1,500	126	32	77	17	24	25
29	211	82	165	110		1,120	120	48	50	19	26	38
30	208	78	170	92		865	116	48	54	16	25	54
31	211	193	88			708		28		17	23	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	555	73	151	0.277	0.32
November	221	78	145	.266	.30
December	935	76	250	.469	.53
January	360	88	225	.413	.48
February	85	60	68.6	.126	.13
March	1,890	65	608	1.12	1.29
April	604	116	226	.415	.46
May	114	28	70.6	.130	.15
June	140	28	58.1	.107	.12
July	51	15	24.6	.045	.05
August	78	14	37.7	.069	.08
September	54	16	27.9	.051	.06
The year.	1,890	14	189	.292	3.97

Miami River at Taylorsville, Ohio

Location.- Water-stage recorder at outlet works of Taylorsville Dam, three-quarters of a mile north of Taylorsville, Montgomery County. Zero of gage is 700.00 feet above mean sea level.

Drainage area.- 1,155 square miles.

Records available.- January 1922 to September 1934. January 1914 to September 1917 at former station at Tadmor.

Average discharge.- 12 years (1922-34), 989 second-feet.

Extremes.- Maximum discharge during year, estimated, 5,500 second-feet Mar. 3 (gage height not recorded); minimum, 38 second-feet sometime during Aug. 3 to Sept. 6, probably Aug. 8 (gage height, 61.19 feet).

1922-34: Maximum discharge, 25,500 second-feet May 14, 1933 (gage height, 73.26 feet); minimum, 36 second-feet Dec. 31, 1930.

Flood of March 1913 reached a stage of 25.4 feet at former gaging station at Tadmor (discharge estimated by Miami Conservancy District, 127,000 second-feet).

Remarks.- Records good except those estimated Nov. 17 to Dec. 3, Dec. 29-31, Jan. 31 to Mar. 5, Mar. 10-13, 19, 20, Aug. 3 to Sept. 6, which are fair. Flow at high stages automatically regulated at retarding basin on Miami River just above station and on Loramie Creek at Lockington. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,980	320	120	382	170	118	1,340	200	76	433	47	70
2	1,240	310	125	510	160	800	1,120	200	68	320	43	68
3	1,030	320	130	490	160	4,000	945	200	74	164	48	68
4	752	325	160	421	155	2,500	780	196	68	122	45	67
5	543	315	168	411	150	2,000	618	200	84	108	42	67
6	445	320	202	436	150	1,500	567	192	91	98	43	67
7	373	315	214	480	145	975	555	192	58	198	41	68
8	329	296	202	465	140	710	549	182	68	210	40	74
9	296	246	189	532	140	592	525	178	79	118	42	68
10	259	277	172	548	140	460	438	169	81	94	150	63
11	236	277	164	521	130	450	432	164	74	81	540	63
12	197	259	160	470	130	420	425	152	71	76	370	81
13	172	210	148	436	130	410	421	139	58	81	270	84
14	160	236	148	440	130	406	377	147	61	76	190	74
15	152	259	152	470	130	560	340	160	61	71	150	68
16	148	250	180	470	125	614	330	164	61	68	500	66
17	148	230	487	475	123	543	423	156	58	66	740	58
18	152	210	2,140	426	122	455	454	143	81	63	500	56
19	148	200	1,700	353	120	450	398	131	111	58	350	58
20	140	190	1,320	310	120	470	335	122	135	58	220	54
21	140	180	1,160	282	120	495	310	111	135	56	160	54
22	176	170	1,040	288	120	592	280	104	131	54	120	54
23	232	160	856	282	119	532	275	104	111	52	103	54
24	306	145	710	292	119	397	265	101	104	50	96	56
25	282	135	565	292	119	349	250	101	98	48	90	56
26	236	130	480	273	118	344	235	101	101	48	86	56
27	259	130	401	259	118	2,660	225	91	968	56	83	56
28	320	140	320	246	118	4,020	220	87	642	58	79	66
29	310	125	310	210		2,760	210	84	290	56	76	232
30	296	120	310	176		2,100	210	74	287	48	74	178
31	320		340	170		1,740		76		48	72	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				1,980	140	380	0.329		0.38			
November				325	120	227	.197		.22			
December				2,140	120	479	.415		.43			
January				548	170	351	.330		.38			
February				170	118	133	.115		.12			
March				4,020	118	1,111	.962		1.11			
April				1,340	210	461	.399		.45			
May				200	74	143	.124		.14			
June				968	58	146	.126		.14			
July				433	48	101	.087		.10			
August				740	40	175	.152		.18			
September				232	54	73.5	.064		.07			
The year.				4,020	40	320	.277		3.77			

Miami River at Dayton, Ohio

Location.— Water-stage recorder 1,000 feet below Main Street Bridge, at Dayton, Montgomery County. Zero of gage is 700.00 feet above mean sea level.

Drainage area.— 2,513 square miles.

Records available.— March 1905 to December 1909, April 1913 to September 1934.

Average discharge.— 21 years (1913-34), 2,351 second-feet.

Extremes.— Maximum discharge during year, 10,700 second-feet Mar. 3 (gage height, 26.70 feet); minimum, 97 second-feet July 23 (gage height, 20.39 feet).

1913-34: Maximum discharge at Millers Ford, $\frac{3}{4}$ miles below gage, estimated by engineers of Miami Conservancy District, 59,800 second-feet Apr. 21, 1920 (gage height, 16.0 feet, old datum, or 39.7 feet, present datum); minimum, that of July 23, 1934.

Maximum stage known, 29.0 feet, old datum, or 52.7 feet, present datum, Mar. 26, 1913 (discharge estimated by Miami Conservancy District, 250,000 second-feet).

Remarks.— Records excellent except those for periods estimated because of ice, Jan. 30 to Feb. 4, Feb. 9-13, Feb. 25 to Mar. 3, which are fair. Flood flow automatically regulated at four retarding basins above station. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,820	685	484	912	630	750	2,650	619	276	1,030	140	204
2	1,930	678	466	1,070	620	1,550	2,130	598	260	584	124	196
3	1,580	678	510	1,110	610	8,560	1,810	557	252	403	148	190
4	1,370	656	484	1,010	600	7,250	1,620	567	269	352	130	196
5	1,090	716	524	1,020	598	4,640	1,320	557	346	308	110	162
6	960	752	557	1,040	578	3,000	1,220	550	338	268	121	193
7	888	722	591	1,180	584	2,130	1,220	536	264	408	115	235
8	832	730	557	1,180	560	1,640	1,170	498	264	403	109	244
9	800	663	557	1,370	560	1,370	1,140	491	306	304	127	228
10	730	685	556	1,420	540	1,220	1,040	478	312	288	373	212
11	670	685	530	1,270	540	1,140	1,080	431	276	244	971	224
12	641	648	524	1,180	540	1,030	1,110	437	264	252	964	276
13	584	619	493	1,110	530	992	1,090	437	248	244	861	264
14	557	598	491	1,100	530	992	1,020	460	244	212	408	248
15	557	653	543	1,140	524	1,140	944	504	236	200	366	236
16	564	619	591	1,130	514	1,320	904	491	216	200	1,120	232
17	530	601	1,360	1,140	498	1,220	1,090	460	200	212	1,340	220
18	530	578	4,450	1,090	484	1,130	1,270	448	264	182	912	204
19	517	598	3,940	980	498	1,140	1,060	403	325	179	641	208
20	530	612	2,670	888	443	1,140	960	377	362	172	458	208
21	504	591	2,340	824	472	1,130	888	357	348	158	403	216
22	636	634	2,130	800	510	1,320	840	371	320	158	543	204
23	772	598	1,690	840	466	1,320	800	343	292	134	360	193
24	1,040	530	1,470	832	444	1,080	768	352	292	140	266	186
25	880	543	1,270	840	440	952	715	348	280	162	260	176
26	776	536	1,170	808	440	984	700	329	292	144	264	206
27	715	530	1,020	768	440	4,300	685	312	932	155	252	200
28	762	484	944	738	500	8,580	641	304	864	209	244	212
29	730	530	880	663		6,080	619	296	504	158	236	620
30	692	517	920	650		4,580	612	304	419	144	216	591
31	670		880	640		3,640		272		127	220	
Month	Maximum		Minimum		Mean		Per square mile		Fun-off in inches			
October	2,820	504	866	0.345	0.40							
November	752	494	625	2.248	2.28							
December	4,450	466	1,144	4.55	5.2							
January	1,420	640	991	3.94	4.5							
February	630	440	524	2.09	2.22							
March	8,580	750	2,494	9.92	1.14							
April	2,650	612	1,101	4.38	.49							
May	619	272	435	1.73	.20							
June	932	200	336	1.34	.15							
July	1,030	127	263	1.05	.12							
August	1,340	109	399	1.59	.18							
September	620	176	240	.096	.11							
The year	8,580	109	789	.314	4.26							

Miami River near Miamisburg, Ohio

Location.- Water-stage recorder in sec. 35, Miami Township, at Cleveland, Cincinnati, Chicago & St. Louis Railway bridge $1\frac{1}{2}$ miles south of Miamisburg and $2\frac{1}{2}$ miles below mouth of Bear Creek. Zero of gage is 677.06 feet above mean sea level.

Drainage area.- 2,719 square miles.

Records available.- August 1924 to September 1934.

Average discharge.- 10 years, 2,502 second-feet.

Extremes.- Maximum discharge during year, estimated, 11,600 second-feet Mar. 3 (gage height not recorded); minimum, 69 second-feet Sept. 9.
1924-34: Maximum discharge, 55,000 second-feet Feb. 27, 1929 (gage height, 16.5 feet); minimum, that of Sept. 9, 1934.
Flood of March 1913 reached a stage of 14.3 feet.

Remarks.- Records good except those estimated for Feb. 9-12, Feb. 17 to Mar. 18, and those for June 1 to Sept. 30, which are fair. Flow at high stages automatically regulated by four retarding basins above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	2,980	770	542	962	646	700	3,040	681	350	719	198	278		
2	2,160	762	524	1,100	646	2,500	2,490	681	345	640	188	180		
3	1,770	762	530	1,210	548	9,000	2,160	625	266	405	184	190		
4	1,510	738	548	1,120	597	8,200	1,880	632	365	320	184	310		
5	1,260	794	554	1,160	639	6,000	1,660	590	524	320	178	294		
6	1,070	834	590	1,130	618	4,000	1,560	597	456	286	178	238		
7	962	786	618	1,260	639	2,900	1,560	590	360	274	178	238		
8	917	826	604	1,360	618	2,100	1,460	584	325	385	188	254		
9	874	762	584	1,460	615	1,800	1,410	566	375	370	195	160		
10	834	716	566	1,560	605	1,500	1,310	548	325	298	306	246		
11	770	738	572	1,410	600	1,380	1,310	506	375	286	777	250		
12	709	702	566	1,310	595	1,250	1,310	512	330	262	926	262		
13	688	698	548	1,220	590	1,200	1,280	482	325	262	688	294		
14	632	674	554	1,170	584	1,190	1,220	566	320	250	494	278		
15	597	695	548	1,210	578	1,320	1,120	590	315	165	440	274		
16	639	688	660	1,250	572	1,500	1,050	584	310	270	1,020	254		
17	625	639	2,160	1,240	570	1,400	1,050	554	245	246	1,410	258		
18	611	611	4,100	1,220	540	1,300	1,460	518	360	246	944	246		
19	618	632	4,280	1,090	575	1,280	1,310	500	375	258	681	238		
20	618	653	2,850	998	520	1,310	1,130	452	428	250	542	234		
21	590	646	2,490	890	560	1,310	1,040	476	410	223	452	238		
22	785	674	2,380	866	570	1,410	962	470	390	216	416	216		
23	834	653	1,990	935	540	1,510	908	470	375	206	390	246		
24	1,080	584	1,660	935	520	1,240	858	470	320	216	375	238		
25	1,020	584	1,460	953	500	1,060	818	452	360	220	350	238		
26	874	560	1,260	899	490	1,140	770	428	340	220	270	270		
27	818	578	1,120	858	490	3,870	762	390	462	266	282	278		
28	786	560	926	818	520	9,040	725	395	1,020	262	294	262		
29	770	572	890	778		6,620	674	380	578	152	320	566		
30	778	566	862	572		4,960	688	330	405	123	320	524		
31	746		917	564		4,010		380		223	302			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					2,980		590		965		0.355		0.41	
November					834		560		692		.261		.28	
December					4,280		524		1,241		.456		.53	
January					1,560		572		1,062		.398		.46	
February					846		490		574		.211		.22	
March					9,040		700		2,838		1.04		1.20	
April					3,040		674		1,298		.477		.53	
May					681		330		516		.190		.22	
June					1,020		245		391		.144		.16	
July					719		152		288		.106		.12	
August					1,410		178		440		.162		.19	
September					568		160		268		.099		.11	
The year					9,040		152		887		.326		4.43	

Miami River at Hamilton, Ohio

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 6, T. 1 N., R. 3 E., 1,000 feet below Columbia Bridge at Hamilton. Zero of gage is 500.00 feet above mean sea level.

Drainage area.- 3,639 square miles.

Records available.- April 1927 to September 1934. February 1910 to September 1917 at site 0.7 mile upstream.

Average discharge.- 14 years (1910-17, 1927-34), 3,603 second-feet.

Extremes.- Maximum discharge during year, 14,800 second-feet Mar. 3 (gage height, 65.74 feet); minimum, 117 second-feet Sept. 5 (gage height, 56.83 feet).

1927-34: Maximum discharge, 70,300 second-feet Feb. 28, 1929 (gage height, 76.5 feet); minimum, that of Sept. 5, 1934.

Maximum stage known, 599.2 feet (mean sea level datum) at former gage site Mar. 26, 1913.

Remarks.- Records good except those for extremely low water, which are fair. Discharge partly estimated July 18 to Aug. 9. Flow in river at low stages regulated for power at Hamilton. Flow at high stages automatically regulated by five retarding basins above station. Gage-height record and part of discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,990	898	664	1,340	930	710	4,300	846	455	550	290	355
2	2,760	898	674	1,300	1,000	3,750	3,410	844	470	976	280	316
3	2,250	930	625	1,460	930	12,200	2,940	828	393	796	240	224
4	1,900	898	614	1,460	832	11,500	2,520	768	343	597	230	217
5	1,680	898	674	1,810	865	7,220	2,200	732	392	484	180	276
6	1,420	1,000	699	1,680	865	4,920	2,000	684	617	484	210	339
7	1,300	1,000	722	1,810	898	3,980	2,000	710	509	410	170	356
8	1,220	965	740	2,000	865	2,700	1,860	730	422	412	220	336
9	1,140	965	704	1,900	770	2,200	1,760	708	596	500	250	316
10	1,100	898	674	2,050	642	1,950	1,720	670	458	543	541	267
11	1,040	898	636	1,900	740	1,760	1,720	649	409	446	498	317
12	965	832	686	1,760	800	1,630	1,720	538	368	416	1,090	338
13	930	800	704	1,680	800	1,580	1,680	565	389	366	934	368
14	865	832	669	1,680	800	1,540	1,580	617	355	350	668	380
15	740	800	710	1,540	800	1,680	1,450	628	319	326	598	383
16	800	832	740	1,580	800	1,760	1,360	674	345	332	1,250	360
17	800	832	3,540	1,540	800	1,860	1,360	684	334	289	2,250	334
18	800	770	6,960	1,540	722	1,720	1,630	628	284	240	1,410	294
19	770	698	5,790	1,500	728	1,630	1,580	587	346	245	924	356
20	770	734	4,460	1,340	770	1,680	1,400	526	402	240	762	322
21	800	800	3,340	1,220	716	1,720	1,320	498	434	250	647	296
22	947	800	3,080	1,180	740	1,760	1,190	488	477	230	576	326
23	1,260	832	2,580	1,180	770	1,960	1,150	474	439	210	566	270
24	1,140	800	2,150	1,260	704	1,720	1,110	510	376	205	566	263
25	1,260	704	1,760	1,220	642	1,500	1,060	486	312	220	488	282
26	1,140	669	1,680	1,220	592	2,040	1,010	380	334	220	408	280
27	1,040	664	1,500	1,180	581	8,650	963	468	344	600	336	304
28	930	740	1,300	1,070	680	12,300	914	470	797	3,000	382	308
29	930	669	1,220	1,040		9,280	872	448	945	500	344	779
30	898	716	1,180	865		6,860	824	390	709	300	366	1,160
31	965		1,180	865		5,680		435		230	364	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				3,990	740	1,244	0.342	0.39				
November				1,000	664	826	.227	.25				
December				6,960	614	1,699	.487	.54				
January				2,050	865	1,454	.400	.46				
February				1,000	581	778	.214	.22				
March				12,300	710	3,911	1.07	1.23				
April				4,300	824	1,687	.464	.52				
May				846	380	602	.165	.19				
June				945	284	445	.122	.14				
July				3,000	205	482	.132	.15				
August				2,250	170	582	.160	.18				
September				1,160	217	357	.098	.11				
The year				12,300	170	1,179	.324	4.38				

Loramie Creek at Lockington, Ohio

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 30, T. 7 N., R. 6 E., just below Lockington Dam, half a mile northwest of Lockington. Gage datum changed on Oct. 1, 1926, from 874.99 to 800.00 feet above mean sea level.

Drainage area.- 261 square miles.

Records available.- October 1915 to September 1934.

Average discharge.- 19 years, 218 second-feet.

Extremes.- Maximum discharge during year, 2,430 second-feet Mar. 27 (gage height, 81.20 feet); minimum, 3.3 second-feet Aug. 6-9 (gage height, 77.08 feet).
1915-34: Maximum discharge, 9,900 second-feet May 7, 1916 (gage height, 10.4 feet, original datum); minimum, 2.0 second-feet Aug. 19, 1931.
Maximum stage known, 15.6 feet, original datum, Mar. 25, 1913 (discharge estimated by Miami Conservancy District, 25,600 second-feet).

Remarks.- Records fair to July 9; good thereafter. Discharge estimated because of ice effect Feb. 6-8; float frozen Feb. 9-12, Feb. 23 to Mar. 2. Slight regulation by State reservoir at Fort Loramie. Flow at high stages automatically regulated at Lockington retarding basin. Gage-height record and part of discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	872	25	14	140	39	23	372	25	8.8	42	4.3	7.8
2	662	34	13	121	40	400	311	23	8.8	32	4.3	7.8
3	530	32	37	90	36	1,740	201	27	8.8	26	4.1	7.1
4	365	26	45	84	31	935	175	25	8.8	23	3.6	6.8
5	261	23	56	117	30	448	159	25	10	21	3.6	6.4
6	189	46	55	148	28	297	155	24	10	21	3.4	6.1
7	148	39	47	126	26	196	155	23	7.0	23	3.4	6.4
8	119	28	44	186	24	166	142	22	7.6	22	3.4	6.3
9	84	20	41	208	21	136	90	21	8.8	21	12.4	8.4
10	73	16	42	171	25	109	55	20	7.6	9.3	22.5	8.1
11	45	16	39	127	24	90	56	19	5.8	8.1	10.6	7.8
12	35	19	36	101	23	78	56	19	5.2	8.1	5.8	7.4
13	32	16	27	99	23	68	52	19	4.6	7.8	3.6	6.8
14	29	13	19	119	23	118	47	19	4.6	7.6	2.4	6.6
15	27	14	17	113	23	180	46	19	4.6	7.4	17.4	7.1
16	25	13	47	144	23	151	92	19	4.1	6.8	117	9.0
17	28	12	615	113	26	131	212	18	4.1	6.6	135	8.7
18	30	13	816	82	26	125	103	17	11	6.4	102	7.4
19	23	16	527	74	29	115	73	16	12	6.1	70	6.6
20	19	16	449	64	32	121	58	16	10	5.4	44	6.6
21	17	14	452	60	32	199	50	16	5.2	5.4	33	8.1
22	24	14	335	60	29	196	46	14	4.1	5.2	25	6.4
23	46	14	264	78	27	115	42	13	10	4.5	19.7	7.6
24	45	13	206	65	26	107	41	13	22	4.3	15.6	6.8
25	31	12	166	62	24	97	34	13	11	4.3	12.4	5.8
26	16	11	125	56	23	106	32	12	7.6	4.3	10.6	5.4
27	18	12	99	53	23	1,700	30	11	485	5.6	9.6	5.4
28	19	12	103	54	23	1,050	35	11	108	4.5	8.7	4.9
29	15	11	84	51		810	31	10	81	4.3	8.4	13.2
30	15	15	70	45		760	28	10	58	4.1	8.1	29
31	16		79	43		544		9.4		4.0	7.8	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						872	15	124				
November						46	11	18.8				
December						816	13	160				
January						208	43	98.7				
February						40	21	27.1				
March						1,740	23	365				
April						372	28	99.3				
May						27	9.4	17.7				
June						485	4.1	31.5				
July						42	4.0	11.6				
August						225	3.4	36.6				
September						29	4.9	8.16				
The year.						1,740	3.4	84.2				

Stillwater River at Covington, Ohio

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 30, T. 8 N., R. 5 E., 100 feet below Bridge Street Bridge, in Covington, and half a mile below mouth of Greenville Creek. Zero of gage is 870.00 feet above mean sea level.

Drainage area.- 438 square miles.

Records available.- December 1930 to September 1934.

Extremes.- Maximum discharge during year, 3,880 second-feet Mar. 27 (gage height, 7.64 feet); minimum daily discharge, 8 second-feet July 27-29, 31, Aug. 5.
1931-34: Maximum discharge, 21,700 second-feet May 13, 1933 (gage height, 13.74 feet); minimum daily discharge, that of July 27-29, 31, Aug. 5, 1934.

Remarks.- Records fair. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	476	85	58	231	88	52	606	82	32	64	10	15
2	545	79	70	210	86	568	445	90	37	76	10	18
3	262	61	44	152	90	2,940	331	78	24	64	9	17
4	215	86	62	144	82	1,260	280	83	58	34	10	23
5	168	87	91	166	87	700	235	58	36	33	8	18
6	144	100	92	302	80	462	210	62	18	19	10	16
7	124	116	77	254	83	263	204	89	30	24	11	27
8	126	118	68	453	70	199	194	78	46	24	10	23
9	122	93	76	468	59	158	176	60	20	35	13	26
10	126	86	50	350	88	137	152	78	20	45	220	28
11	102	78	56	253	75	116	184	53	48	19	628	28
12	96	66	52	208	75	117	195	62	44	14	230	26
13	83	71	53	204	80	112	168	50	21	16	111	36
14	76	78	55	273	81	161	160	83	18	14	73	27
15	56	68	78	239	76	286	129	70	19	15	36	30
16	67	50	122	270	70	226	317	74	17	41	242	22
17	80	66	762	234	64	200	659	52	24	30	467	32
18	86	72	2,000	200	62	194	355	46	117	15	162	44
19	72	53	852	179	59	196	260	60	70	12	84	25
20	64	60	730	152	68	200	202	40	37	12	46	22
21	80	72	760	138	70	332	175	70	19	12	54	20
22	86	68	455	134	65	396	146	38	24	12	24	22
23	730	60	352	151	60	212	141	45	20	27	28	21
24	354	80	270	161	55	163	130	36	20	16	32	22
25	241	77	231	139	54	148	110	40	42	10	28	28
26	172	44	180	132	55	152	100	32	37	9	22	18
27	133	66	136	115	60	2,830	90	36	212	8	22	20
28	112	70	142	118	64	2,170	99	40	28	8	24	18
29	111	70	122	105		1,580	76	40	21	8	24	31
30	94	50	127	76		1,460	96	29	19	18	16	42
31	91		126	90		885		34		8	16	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	730	56	164	0.374	0.43
November	118	44	75.0	.171	.19
December	2,000	44	269	.614	.71
January	468	76	203	.463	.53
February	90	54	71.6	.163	.17
March	2,940	52	609	1.39	1.60
April	659	76	221	.605	.66
May	90	29	58.6	.134	.15
June	212	17	39.3	.090	.10
July	76	8	24.1	.055	.06
August	628	8	87.1	.199	.23
September	44	15	24.8	.057	.06
The year.	2,940	8	155	.354	4.79

Stillwater River at Englewood, Ohio

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 23, T. 5 N., R. 5 E., 1,000 feet below Englewood Dam and half a mile southeast of Englewood. Zero of gage is 700.00 feet above mean sea level.

Drainage area.- 640 square miles.

Records available.- November 1925 to September 1934.

Extremes.- Maximum discharge during year, 3,750 second-feet Mar. 28 (gage height, 76.45 feet); minimum, 8.7 second-feet July 30 (gage height, 70.27 feet).
1925-34: Maximum discharge, 9,910 second-feet May 14, 1933 (gage height, 79.99 feet); minimum, that of July 30, 1934.
The peak discharge during flood of March 1913 was estimated by Miami Conservancy District at 85,400 second-feet.

Remarks.- Records good except those estimated because of ice Dec. 9-15, 25-31, Jan. 28 to Mar. 1, and those estimated July 31, Aug. 1, which are fair. Flow automatically retarded at high stages by Englewood retarding basin. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	546	117	80	206	120	74	845	110	38	82	28	20
2	368	114	83	286	114	325	627	92	28	108	15	21
3	304	108	96	247	112	1,860	452	90	30	95	12	20
4	224	96	70	209	110	2,040	357	92	27	75	12	20
5	192	118	88	206	106	1,030	294	88	87	51	12	28
6	177	108	98	230	108	652	264	96	52	38	9	18
7	154	126	104	308	102	434	242	95	44	110	12	23
8	146	126	92	296	100	319	212	90	50	87	18	21
9	154	128	83	468	86	250	216	81	22	51	13	20
10	142	121	84	418	100	216	192	72	69	47	12	21
11	156	110	75	340	94	178	198	74	32	40	228	40
12	134	109	68	287	96	188	226	60	44	42	442	50
13	114	99	70	254	98	184	221	68	44	30	192	33
14	106	100	75	251	97	194	190	62	50	21	146	34
15	112	107	85	282	93	254	186	75	43	20	94	34
16	110	84	105	264	90	337	164	76	18	30	208	32
17	96	94	296	278	85	292	482	66	14	44	362	22
18	101	94	1,890	254	62	264	490	61	30	31	338	32
19	106	101	1,320	229	88	266	315	48	136	20	184	31
20	103	90	710	204	90	256	248	56	132	18	114	48
21	91	96	820	191	86	272	198	46	78	14	75	36
22	117	96	612	179	84	422	162	55	51	12	52	17
23	288	92	438	184	80	374	160	45	48	11	50	16
24	424	96	365	202	75	260	148	40	28	43	34	18
25	266	90	300	184	69	224	122	41	23	36	34	37
26	204	106	250	196	76	257	116	34	40	22	44	28
27	167	78	200	172	82	1,910	112	42	40	14	27	20
28	140	81	170	160	76	3,490	100	26	150	11	36	33
29	138	84	170	150		2,220	100	45	80	10	32	84
30	120	94	158	130		1,730	110	37	37	9	26	68
31	114		170	112		1,280		20		24		
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				546		91		180		0.279		0.32
November				128		78		102		.158		.18
December				1,890		68		298		.461		.53
January				468		112		298		.368		.42
February				120		69		92.8		.144		.15
March				3,490		74		711		1.10		1.27
April				845		100		259		.399		.45
May				110		20		64.0		.099		.11
June				150		14		52.2		.081		.09
July				110		9		39.5		.061		.07
August				442		9		93.0		.144		.17
September				84		16		30.8		.048		.06
The year				3,490		9		181		.280		3.81

Greenville Creek near Bradford, Ohio

Location.- Chain gage on highway bridge on line between Darke and Miami Counties, 1½ miles south of Bradford.

Drainage area.- 195 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,320 second-feet Mar. 27 (gage height, 4.45 feet); minimum, 6.7 second-feet Aug. 4, 5.
1931-34: Maximum discharge recorded, 5,040 second-feet Mar. 14, 1933 (gage height, 9.20 feet); minimum, that of Aug. 4, 5, 1934.

Remarks.- Records good except those estimated because of ice effect Dec. 28, 29, Jan. 30 to Mar. 1, Mar. 10-12, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	54	43	98	58	38	243	60	28	31	7.9	11
2	106	48	43	86	56	218	187	59	25	24	7.4	10
3	81	50	48	77	54	1,060	155	52	26	28	7.6	9.6
4	66	54	53	73	52	386	139	49	22	28	7.1	10
5	60	56	53	86	51	243	120	50	24	17	6.9	15
6	53	68	59	112	50	173	108	46	25	18	7.1	10
7	52	75	56	110	49	120	110	49	29	17	7.6	12
8	53	68	56	139	48	104	110	48	25	18	7.4	18
9	56	64	56	160	47	88	92	41	24	16	10	14
10	50	62	52	134	46	72	86	43	31	18	90	13
11	45	54	48	116	45	62	104	44	26	13	62	13
12	45	54	48	106	44	67	110	43	26	14	22	21
13	43	59	46	108	43	73	100	45	22	11	14	19
14	41	58	54	116	42	84	92	44	21	13	12	15
15	41	52	49	110	41	114	84	50	21	13	12	14
16	38	45	92	110	41	104	100	46	20	12	35	14
17	44	46	262	100	40	96	232	40	18	11	46	13
18	46	53	714	102	40	96	157	39	21	11	31	13
19	45	50	280	92	40	92	131	40	24	11	17	11
20	39	48	262	84	40	94	110	39	24	10	17	11
21	39	52	243	79	40	118	94	30	21	10	13	11
22	104	53	173	77	40	136	88	36	18	9.6	12	11
23	240	54	139	88	40	108	86	32	16	10	13	11
24	122	50	118	84	39	96	77	30	19	8.6	14	11
25	90	46	104	81	39	88	66	33	18	7.9	12	11
26	73	50	92	73	39	94	65	29	15	8.6	12	11
27	64	44	65	77	38	1,190	66	34	17	8.6	11	13
28	60	53	54	77	38	826	58	28	15	8.6	11	13
29	52	49	50	50		658	62	26	14	8.3	14	25
30	52	49	68	65		525	59	29	13	9.0	10	28
31	48		79	62		542		24		7.9	8.6	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				240	38	66.8	0.343	0.40				
November				75	44	53.9	.276	.31				
December				714	43	115	.590	.68				
January				160	50	94.6	.485	.56				
February				58	38	44.3	.227	.24				
March				1,190	38	244	1.25	1.44				
April				243	58	110	.564	.63				
May				60	24	40.5	.208	.24				
June				31	13	21.6	.111	.12				
July				31	7.9	13.9	.071	.08				
August				90	6.9	18.1	.093	.11				
September				28	9.6	13.7	.070	.08				
The year				1,190	6.9	70.1	.359	4.89				

Mad River near Springfield, Ohio

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 16, R. 9, T. 4, 150 feet below Rock Run and 3 miles west of Springfield. Zero of gage is 881.47 feet above mean sea level.

Drainage area.- 485 square miles.

Records available.- March 1924 to September 1934. January 1904 to March 1906 at site one-third mile downstream. February 1914 to February 1924 at site $1\frac{1}{2}$ miles upstream.

Average discharge.- 20 years (1914-34), 517 second-feet.

Extremes.- Maximum discharge during year, 5,580 second-feet Mar. 3 (gage height, 7.18 feet); minimum, 70 second-feet Feb. 9, '26.
1914-34: Maximum discharge, 18,000 second-feet Feb. 26, 1929 (gage height, 14.9 feet); minimum, that of Feb. 9, '26, 1934.
Maximum stage known, 19.2 feet (original gage datum) and 16.9 feet (present gage datum) Mar. 25, 1913 (discharge at railway bridge, between gage sites, estimated by Miami Conservancy District at 55,400 second-feet.

Remarks.- Records good except those estimated Dec. 28 to Jan. 26, Mar. 4-16, Apr. 8 to May 2, May 31 to June 21, Sept. 14-30, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	241	235	206	230	235	200	363	200	140	138	88	97		
2	229	235	206	220	217	1,040	326	195	135	123	113	91		
3	235	241	206	210	200	3,700	302	197	130	134	107	88		
4	235	235	212	240	206	1,300	264	206	125	123	91	91		
5	235	282	206	260	200	800	278	206	140	117	91	97		
6	235	264	195	255	206	540	284	202	145	127	91	94		
7	235	252	195	300	206	430	308	197	135	157	97	110		
8	258	246	195	340	200	350	290	192	125	138	101	110		
9	258	235	184	310	114	300	260	202	165	127	157	97		
10	246	229	184	275	189	270	260	202	155	131	156	94		
11	246	229	189	260	212	260	380	197	130	120	371	94		
12	252	229	184	250	200	250	330	197	130	117	188	110		
13	246	229	184	240	200	240	290	197	125	120	138	101		
14	241	235	189	240	195	245	280	206	122	110	127	110		
15	235	229	212	230	200	245	270	222	122	107	127	105		
16	241	223	276	250	189	240	265	192	120	101	660	102		
17	246	223	274	230	184	228	260	184	120	101	290	94		
18	252	223	309	220	184	249	255	188	140	97	174	94		
19	241	223	369	220	195	249	250	184	135	101	138	100		
20	235	217	332	210	162	249	245	170	125	101	127	97		
21	229	229	301	210	189	249	245	161	115	97	123	94		
22	338	229	264	230	184	255	240	170	120	94	120	100		
23	288	223	241	260	168	222	230	161	117	91	113	115		
24	264	212	223	230	162	217	225	157	107	94	113	105		
25	246	212	212	220	162	202	220	170	104	91	110	100		
26	235	217	212	220	102	275	220	157	104	91	107	105		
27	235	217	178	206	151	994	210	153	194	233	104	110		
28	229	229	175	212	162	694	220	150	134	113	107	110		
29	223	223	180	138		541	220	157	123	88	104	400		
30	235	223	190	134		467	210	153	127	86	104	210		
31	235		220	189		406		145		88	101			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					338		223		245		0.505		0.58	
November.					282		212		231		.476		.53	
December.					874		175		245		.505		.58	
January					340		134		234		.482		.56	
February					235		102		185		.381		.40	
March					3,700		200		513		1.06		1.22	
April					380		210		267		.551		.61	
May					222		145		183		.377		.43	
June					194		104		130		.268		.30	
July					233		86		115		.237		.27	
August					660		88		150		.309		.36	
September.					400		88		114		.235		.26	
The year.					3,700		86		218		.449		6.10	

Mad River near Dayton, Ohio

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 7, T. 2, R. 8, just below Huffman Dam and 6 miles northeast of Dayton. Zero of gage is 700.00 feet above mean sea level.

Drainage area.- 632 square miles.

Records available.- October 1924 to September 1934. November 1914 to September 1921 at site 1 mile upstream.

Average discharge.- 16 years (1915-21, 1924-34), 677 second-feet. (Average for 15 years published in Water-Supply Paper 743 in error; correct value, 704 second-feet.)

Extremes.- Maximum discharge during year, 4,530 second-feet Mar. 3 (gage height, 83.10 feet); minimum, 91 second-feet Aug. 6, 9 (gage height, 79.02 feet).
1924-34: Maximum discharge, 18,400 second-feet Feb. 28, 1929 (gage height, 87.9 feet); minimum, that of Aug. 6, 9, 1934.
Maximum stage known, 14.0 feet (former site and datum) Mar. 25, 1913 (discharge, estimated by Miami Conservancy District, 75,700 second-feet).

Remarks.- Records good except those estimated because of ice effect Dec. 28-30, Feb. 25 to Mar. 1, which are fair. Flow at high stages automatically regulated at Huffman retarding basin. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	275	286	275	328	298	200	448	254	161	468	107	108
2	262	288	279	323	288	832	420	250	168	178	111	105
3	262	288	284	308	271	3,970	399	240	151	161	114	102
4	266	284	279	308	271	1,630	372	232	147	158	103	100
5	275	308	284	355	266	883	360	227	164	138	107	105
6	266	328	279	361	262	660	360	218	168	139	94	102
7	266	313	279	361	262	521	379	214	158	151	97	117
8	279	308	279	379	262	434	360	210	147	164	100	129
9	288	298	275	390	249	384	343	210	190	141	97	114
10	279	293	275	373	249	367	331	210	182	138	203	105
11	271	298	271	350	275	344	406	210	158	135	332	111
12	275	298	271	338	258	328	406	206	154	132	263	126
13	275	293	266	333	258	318	366	206	147	129	168	117
14	266	303	266	344	254	323	355	218	144	129	138	123
15	262	298	284	328	249	323	351	236	144	123	123	114
16	258	293	333	328	245	318	326	218	141	120	523	111
17	275	288	828	323	237	313	320	206	138	114	469	105
18	271	293	1,000	323	237	323	309	206	161	111	214	106
19	271	293	566	318	245	323	304	198	161	108	168	108
20	266	284	500	308	229	323	294	194	147	108	147	105
21	271	288	466	303	237	318	288	190	135	105	141	102
22	347	298	421	298	229	323	288	190	135	105	135	111
23	350	293	390	328	222	288	283	186	138	100	132	120
24	308	284	361	318	210	279	278	182	132	100	128	111
25	303	279	338	308	210	266	273	186	126	102	126	111
26	293	284	333	308	205	293	268	182	126	102	120	114
27	293	284	303	298	200	1,190	263	178	262	111	117	123
28	284	288	280	293	200	895	263	171	168	196	120	123
29	284	288	260	268		694	258	175	147	117	117	365
30	279	288	280	258		558	254	171	144	105	111	263
31	284		308	271		517		161		102	111	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					350	258	281	0.445		0.51		
November					328	279	294	.465		.62		
December					1,000	260	358	.566		.65		
January					360	268	323	.511		.59		
February					298	200	246	.389		.41		
March					3,970	200	606	.959		1.11		
April					448	254	330	.522		.58		
May					264	161	204	.323		.37		
June					262	126	164	.244		.27		
July					468	100	138	.218		.25		
August					523	94	162	.256		.30		
September					365	100	125	.198		.22		
The year					3,970	94	269	.426		5.78		

Buck Creek at Springfield, Ohio

Location.- Water-stage recorder at Plum Street Bridge, in Springfield, Clark County.
Zero of gage is 908.99 feet above mean sea level.

Drainage area.- 137 square miles.

Records available.- October 1928 to September 1934. July 1914 to September 1921 at present site at datum 907.99 feet above mean sea level. May 1924 to September 1928 at site half a mile upstream with zero of gage 913.02 feet above mean sea level.

Average discharge.- 17 years (1914-21, 1924-34), 137 second-feet.

Extremes.- Maximum discharge during year, 1,660 second-feet Mar. 3 (gage height, 6.20 feet); minimum, 12 second-feet July 23, 28, Aug. 5, 6 (gage height, 2.07 feet).
1914-21, 1924-34: Maximum discharge, 13,000 second-feet Feb. 26, 1929 (gage height, 14.3 feet); minimum, that of July 23, 28, Aug. 5, 6, 1934.
Flood of Mar. 25, 1913, reached a stage of 13.3 feet, present gage datum (discharge estimated by Miami Conservancy District at 11,100 second-feet).

Remarks.- Records good except those for Aug. 18 to Sept. 30, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	59	56	67	57	62	68	44	27	31	21	23
2	63	59	56	63	57	500	65	41	26	23	28	21
3	64	61	56	60	55	940	62	43	24	36	21	19
4	65	57	57	69	57	217	59	44	27	22	16	21
5	63	77	56	73	55	125	61	43	31	22	14	22
6	61	65	55	71	56	97	63	43	27	24	17	22
7	61	62	54	87	55	82	70	42	24	39	17	31
8	68	61	54	94	54	72	61	41	22	26	16	25
9	65	58	52	88	49	66	57	40	50	27	48	21
10	62	59	54	78	53	67	54	36	28	27	24	22
11	62	60	55	72	54	62	77	34	25	24	175	30
12	66	59	52	71	54	59	63	35	26	22	53	23
13	63	58	53	73	54	58	58	37	24	23	35	32
14	59	62	54	71	53	62	56	51	24	18	27	24
15	58	60	62	66	54	62	53	54	24	18	38	21
16	61	60	68	71	52	62	53	43	22	19	299	21
17	62	60	258	65	51	62	50	42	21	19	80	21
18	60	63	193	64	53	71	48	39	31	17	65	22
19	59	62	107	63	52	70	47	37	25	17	43	22
20	57	61	97	61	50	66	47	34	22	17	43	21
21	57	64	88	80	52	64	46	34	21	16	43	20
22	96	62	76	66	49	82	46	33	22	15	37	30
23	70	60	72	73	47	55	46	30	22	16	31	25
24	65	59	66	64	48	55	42	31	20	17	32	31
25	61	58	62	63	44	52	41	31	21	16	30	34
26	59	63	63	62	46	82	40	29	20	16	30	35
27	60	59	58	60	48	234	45	27	58	86	29	44
28	57	61	56	60	46	126	47	29	32	22	32	35
29	57	62	56	54	48	98	46	28	22	16	28	163
30	57	58	55	56	34	84	47	25	22	19	27	64
31	59	62	62	56	75	75	27	27	20	24	24	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					96	57	62.7	0.468	0.53			
November					77	57	61.0	.445	.50			
December					258	52	75.0	.653	.61			
January					94	54	67.7	.494	.57			
February					57	44	52.0	.380	.40			
March					940	52	124	.905	1.04			
April					77	40	53.9	.393	.44			
May					54	25	37.0	.270	.31			
June					58	20	26.3	.192	.21			
July					86	15	23.5	.172	.20			
August					299	14	46.8	.334	.39			
September					163	19	31.5	.230	.26			
The year					940	14	55.0	.401	5.46			

Twin Creek near Germantown, Ohio

Location.— Water-stage recorder in NW $\frac{1}{4}$ sec. 11, T. 3 N., R. 4 E., a quarter of a mile below Germantown Dam and $1\frac{1}{2}$ miles northwest of Germantown. Zero of gage is 700.00 feet above mean sea level.

Drainage area.— 275 square miles.

Records available.— December 1926 to September 1934. April 1914 to December 1923 at site 1 mile downstream.

Average discharge.— 16 years (1914-23, 1927-34), 288 second-feet.

Extremes.— Maximum discharge during year, 3,370 second-feet Mar. 27 (gage height, 24.25 feet); minimum, 2.9 second-feet July 28 (gage height, 18.16 feet).

1914-23, 1926-34: Maximum discharge, 8,480 second-feet Apr. 21, 1920;
minimum, that of July 28, 1934.

Maximum stage known, 18.3 feet (original gage datum) Mar. 25, 1913 (discharge, estimated by Miami Conservancy District, 66,000 second-feet).

Remarks.— Records good except those for extremely low water and those estimated because of ice, Dec. 27-30, Jan. 29 to Mar. 1, which are fair. Flow at high stages automatically regulated at Germantown retarding basin. Gage-height record and some discharge measurements furnished by Miami Conservancy District.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	78	24	19	84	52	25	233	43	14	13	14	8.9
2	57	23	18	81	48	682	190	39	12	100	13	9.1
3	44	25	18	65	45	1,920	158	38	12	45	12	7.2
4	41	26	18	62	43	768	138	38	11	40	10	5.6
5	33	24	19	135	41	350	125	38	11	25	8.9	4.0
6	30	35	18	144	39	250	114	31	14	16	8.5	5.9
7	28	33	18	140	38	170	122	33	14	14	8.5	6.2
8	27	32	19	154	36	133	109	31	12	35	8.1	6.2
9	31	32	17	160	35	104	99	29	14	31	7.2	5.9
10	29	29	17	150	34	98	93	29	15	23	11.9	5.9
11	26	27	17	127	33	88	103	27	15	17	27	5.6
12	25	24	17	109	32	62	123	26	16	14	14	37
13	24	23	17	107	31	78	106	25	14	12	11	14
14	22	23	17	113	30	72	96	29	11	11	9.3	10
15	21	23	20	107	29	111	86	34	10	9.3	8.5	60
16	21	24	29	99	28	120	80	32	9.3	8.1	627	14
17	23	24	878	90	28	103	78	29	8.5	7.2	195	9.7
18	17	23	1,360	84	28	96	75	25	8.9	6.5	81	7.2
19	18	22	354	82	27	96	70	24	42	6.2	45	6.5
20	16	22	272	77	27	90	65	22	46	5.6	31	5.9
21	19	22	260	71	27	106	62	21	26	4.9	22	5.6
22	134	23	188	68	27	138	59	19	19	4.0	19	5.9
23	103	25	144	78	27	107	57	18	14	4.0	16	6.2
24	66	25	122	88	27	88	52	17	12	3.5	15	6.2
25	50	24	101	98	26	81	49	20	9.7	3.5	14	5.6
26	39	22	88	82	26	114	45	20	8.5	3.1	12	5.6
27	35	20	78	74	26	2,130	45	18	7.2	235	12	5.2
28	31	22	63	71	25	1,170	44	17	5.5	614	10	4.6
29	29	22	42	66		650	42	16	5.9	52	9.3	447
30	25	20	45	60		440	40	16	5.2	28	7.6	111
31	25		62	56		298		14		20	7.6	

Month	Maximum	Minimum	Mean	Per square mile	Rm-off in inches
October	134	17	37.7	0.137	0.16
November	35	20	24.8	.090	.10
December	1,360	17	140	.509	.59
January	160	56	95.9	.349	.40
February	52	25	32.7	.119	.12
March	2,130	25	347	1.26	1.45
April	233	40	91.9	.334	.37
May	43	14	26.4	.096	.11
June	46	5.2	14.1	.051	.06
July	614	3.1	45.6	.166	.19
August	627	7.2	45.3	.165	.19
September	447	4.0	27.9	.101	.11
The year	2,130	3.1	78.3	.285	3.85

West Fork of Whitewater River near Alpine, Ind.

Location.- Water-stage recorder in sec. 23, T. 13 N., R. 12 E., $1\frac{1}{2}$ miles north of Alpine, Fayette County. Zero of gage is 750.25 feet above mean sea level.

Drainage area.- 528 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, 3,730 second-feet Mar. 27 (gage height, 8.68 feet); minimum, 29 second-feet Aug. 5 (gage height, 2.82 feet).
1928-34: Maximum discharge, 20,900 second-feet Feb. 26, 1929 (gage height, 14.8 feet); minimum, 14 second-feet Sept. 22, 1931.

Remarks.- Records good except those for periods of ice effect, Feb. 9-14, Feb. 25 to Mar. 1, and those estimated Aug. 9-13, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	232	134	101	232	155	90	665	162	74	86	35	42
2	198	128	107	188	137	1,130	571	162	72	143	31	41
3	188	130	106	174	132	1,860	465	158	68	79	35	38
4	141	126	108	172	137	734	401	146	65	64	34	40
5	150	144	110	191	146	526	352	147	75	57	34	40
6	134	148	111	196	149	421	323	144	204	54	30	38
7	138	150	107	195	131	348	320	138	91	88	34	60
8	132	146	104	232	131	292	302	138	79	57	34	50
9	147	134	102	282	115	250	272	127	81	50	35	48
10	132	123	102	263	125	232	254	120	83	47	95	40
11	128	126	98	232	125	200	272	120	73	44	120	44
12	122	124	99	227	120	203	302	109	73	51	65	69
13	119	123	101	224	120	197	272	112	64	49	50	50
14	115	124	103	238	125	209	254	124	62	46	43	48
15	115	113	116	247	136	213	244	128	61	48	36	46
16	122	115	238	232	122	212	399	122	56	40	316	77
17	128	117	1,400	232	121	210	734	110	54	44	209	64
18	119	115	1,220	215	110	224	476	102	62	40	85	44
19	118	113	667	210	112	224	378	98	74	42	71	50
20	114	112	688	192	95	221	316	99	57	40	59	44
21	114	120	615	186	122	220	276	92	56	38	59	48
22	434	114	506	186	124	268	250	79	52	37	50	48
23	466	118	413	210	104	236	235	89	80	35	50	43
24	282	115	330	204	90	206	213	84	54	32	52	44
25	213	112	286	195	65	192	189	96	56	42	52	42
26	197	107	247	184	85	239	184	90	55	32	39	42
27	160	102	143	181	87	2,440	184	88	50	207	40	44
28	152	110	197	166	97	1,740	177	86	46	177	45	54
29	144	110	197	92		1,360	176	82	44	49	44	70
30	138	106	177	156		1,090	160	79	47	40	34	102
31	136		184	213		855		77		35	42	

Month	Maximum	Minimum	Mean	P. square mile	Run-off in inches
October	466	114	169	0.320	0.37
November	150	102	122	.231	.26
December	1,400	98	293	.555	.64
January	282	92	205	.388	.45
February	149	65	116	.223	.23
March	2,440	90	543	1.03	1.19
April	665	160	320	.606	.68
May	182	77	113	.214	.25
June	204	44	68.9	.130	.14
July	207	32	61.1	.116	.13
August	316	30	63.2	.120	.14
September	102	38	50.3	.095	.11
The year	2,440	30	178	.337	4.59

Whitewater River at Brookville, Ind.

Location.- Water-stage recorder in sec. 32, T. 9 N., R. 2 W., three-quarters of a mile south of Brookville, Franklin County, and three-eighths of a mile below junction of East and West Forks. Zero of gage is 595.22 feet above mean sea level.

Drainage area.- 1,180 square miles.

Records available.- June 1915 to May 1920, October 1927 to September 1934, in reports of U. S. Geological Survey; July 1923 to September 1927 in reports of Indiana Department of Conservation.

Average discharge.- 11 years (1923-34), 1,300 second-feet.

Extremes.- Maximum discharge during year, 13,200 second-feet Dec. 17 (gage height, 10.20 feet); minimum recorded, 54 second-feet July 27 (gage height, 0.35 foot). 1927-34: Maximum discharge, 69,200 second-feet Feb. 28, 1929 (gage height, 25.56 feet); minimum, that of July 27, 1934.

Remarks.- Records good except those for period of ice effect, Feb. 27 to Mar. 1, which are fair. Discharge determined from readings of chain gage at same site June 3-5, 12-29, July 4-6, 9-27, July 30 to Aug. 9, Aug. 12-16, Aug. 20 to Sept. 27, Sept. 30. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	454	233	208	467	296	200	1,290	362	179	205	103	74
2	393	230	202	433	286	3,020	1,060	354	181	279	94	70
3	343	223	217	393	279	4,880	927	354	182	205	156	66
4	317	233	217	369	275	2,090	832	354	151	170	103	62
5	282	287	220	547	275	1,370	745	354	151	146	97	62
6	282	376	227	501	282	1,060	717	377	384	118	79	58
7	262	310	227	493	282	832	745	350	258	217	74	66
8	266	292	223	547	274	701	690	336	193	289	74	123
9	272	269	220	575	230	589	633	324	258	181	70	94
10	259	256	217	565	259	547	594	314	236	136	217	87
11	249	256	217	501	252	475	633	300	196	123	265	70
12	233	243	214	484	236	450	664	289	170	108	141	92
13	220	236	211	479	245	452	628	282	151	108	108	136
14	214	233	211	493	239	497	579	310	146	103	92	94
15	202	230	220	475	252	497	537	336	128	92	94	83
16	208	223	400	475	256	497	547	317	128	83	750	94
17	214	217	5,260	446	246	462	896	289	128	83	625	136
18	214	217	2,880	433	236	488	773	266	123	83	322	123
19	202	217	1,480	421	249	519	654	249	128	74	227	92
20	202	211	1,730	405	227	501	589	239	141	74	199	92
21	196	214	1,250	381	223	519	537	227	123	70	146	74
22	564	217	960	366	236	533	510	217	113	66	128	99
23	669	223	773	437	229	510	494	199	113	70	123	79
24	497	220	675	454	208	475	454	208	162	66	123	87
25	381	217	594	429	184	454	429	223	113	66	118	83
26	324	214	542	413	187	1,340	425	217	108	62	103	72
27	292	202	454	393	190	7,090	413	202	108	54	106	72
28	278	199	401	365	190	3,640	397	193	108	418	92	81
29	262	220	401	326		2,420	385	187	92	223	92	613
30	249	214	385	244		1,960	358	187	187	136	87	306
31	239		409	289		1,570		181		113	74	
Month					Maximum	Minimum		Mean	Per square mile		Run-off in inches	
October					689	196		298	0.253		0.29	
November					576	199		238	.202		.23	
December					5,260	202		705	.597		.69	
January					296	244		440	.373		.43	
February					296	184		244	.207		.22	
March					7,090	200		1,311	1.11		1.28	
April					1,290	358		638	.541		.60	
May					377	181		277	.235		.27	
June					384	92		161	.136		.15	
July					418	54		136	.115		.13	
August					750	70		164	.139		.16	
September					613	58		111	.094		.10	
The year					7,090	54		396	.336		4.55	

Kentucky River at Lock 10, near Winchester, Ky.

Location.- Staff gage at Lock 10, in Madison County, 8 miles southwest of Winchester, Clark County. Zero of gage is 558.6 feet and crest of dam is 567.6 feet above mean sea level.

Drainage area.- 3,990 square miles.

Records available.- October 1909 to September 1934.

Average discharge.- 25 years, 5,111 second-feet.

Extremes.- Maximum discharge recorded during year, 56,900 second-feet Mar. 5 (gage height, 26.3 feet); minimum, 65 second-feet Oct. 19-21 (gage height, 9.30 feet). 1909-34: Maximum discharge recorded, about 68,500 second-feet Mar. 29, 1913 (gage height, 35.1 feet); minimum (estimated), less than 10 second-feet in October 1930.

Remarks.- Records good except these for extremely low water, which are poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	172	92	120	2,150	511	12,300	7,440	3,060	260	328	363	840
2	146	76	126	2,150	482	13,900	5,770	2,670	245	840	464	680
3	133	76	126	2,150	492	37,600	4,810	2,320	215	840	1,990	492
4	120	87	120	1,990	511	52,400	3,910	2,150	165	680	3,480	426
5	120	245	120	2,320	511	56,400	3,060	1,990	178	600	1,910	530
6	120	426	502	2,320	530	52,200	2,860	1,750	230	417	1,670	399
7	120	294	1,020	17,800	520	19,300	2,670	1,520	294	550	1,300	159
8	98	192	2,320	29,800	520	15,100	2,490	1,370	294	1,160	960	126
9	98	185	1,990	26,600	492	25,400	2,320	1,230	417	730	680	185
10	98	185	1,440	10,800	426	32,500	2,490	1,160	630	511	630	172
11	92	260	1,020	5,770	361	23,600	3,910	1,370	630	399	4,130	172
12	82	268	765	4,510	345	11,200	4,560	1,370	730	680	4,350	140
13	82	200	610	3,480	345	7,140	4,810	1,230	730	960	1,750	178
14	76	172	520	3,060	381	5,280	4,810	1,230	630	1,020	1,750	302
15	70	172	444	2,320	399	4,350	4,350	3,060	550	1,090	3,060	302
16	76	159	840	1,990	399	3,910	3,480	2,860	540	785	3,060	354
17	76	133	3,060	1,630	399	3,480	3,060	1,910	492	680	4,810	345
18	76	126	3,910	1,520	390	3,060	2,670	1,520	435	580	4,810	482
19	65	126	8,400	1,370	363	3,060	2,670	1,300	426	511	4,550	680
20	65	120	15,600	1,230	363	8,060	3,480	1,090	435	435	2,860	560
21	65	120	12,300	1,090	363	26,000	6,020	900	417	363	1,830	381
22	76	120	6,560	1,020	363	28,500	6,560	730	345	320	1,230	260
23	120	126	3,910	960	399	18,800	5,280	630	345	417	900	230
24	146	146	2,670	960	426	29,200	4,130	550	336	354	730	208
25	104	146	1,990	960	502	42,100	3,270	473	277	294	610	200
26	97	146	2,150	900	7,440	41,100	2,670	399	260	260	730	192
27	92	146	7,760	785	33,900	28,500	2,670	363	230	230	3,060	435
28	97	133	8,060	730	33,900	24,200	3,270	363	200	230	3,910	610
29	82	133	5,040	730		23,600	3,910	345	192	230	2,670	1,160
30	76	133	3,270	680		16,000	3,480	328	277	454	1,670	3,910
31	70		2,320	570		10,800		294		435	1,090	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					172	65	96.5	0.024		0.03		
November					426	76	165	.041		.05		
December					15,600	120	3,198	.802		.92		
January					29,800	570	4,350	1.09		1.26		
February					33,900	345	3,073	.770		.80		
March					56,400	3,060	21,910	5.49		6.33		
April					7,440	2,320	3,897	.977		1.09		
May					3,060	294	1,340	.336		.39		
June					730	178	381	.095		.11		
July					1,160	230	560	.140		.16		
August					4,810	363	2,155	.540		.62		
September					3,910	126	504	.126		.14		
The year.					56,400	65	3,496	.876		11.90		

Kentucky River at Lock 6, at Warwick, Ky.

Location.- Staff gage at Lock 6, 1 mile northwest of Warwick, Woodford County.

Drainage area.- 5,140 square miles.

Records available.- October 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 63,000 second-feet Mar. 6 (gage height, 25.5 feet); minimum, about 25 second-feet several days during October, November, and December.

1925-34: Maximum discharge, 75,400 second-feet Dec. 26, 1926 (gage height, 33.7 feet); minimum discharge, about 25 second-feet on several days in 1930, 1931, 1933, 1934.

Remarks.- Records fair between 150 and 800 second-feet, good above, and poor below. For periods Oct. 1 to Dec. 8, Dec. 11-13, Jan. 14 to Feb. 26, May 7-15, May 19 to July 7, July 10-15, July 18 to Aug. 3, Aug. 8, 23, 25-27, Sept. 1-29 discharge given is at Lock 7, 21 miles above Lock 6, determined from power-plant records. Discharge estimated Jan. 6, Mar. 16, 17. Flow at Lock 6 regulated by operation of hydroelectric plants on Dix River and at Lock 7. Gage-height record furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	414	25	25	2,900	1,350	25,200	10,000	3,590	414	219	747	303
2	358	303	275	2,770	1,190	16,600	8,280	3,310	386	720	831	942
3	414	247	25	2,640	775	41,600	6,700	3,170	247	1,050	1,430	1,110
4	275	247	25	2,900	608	54,600	5,280	3,040	164	831	2,030	442
5	358	720	289	2,900	1,220	60,800	4,320	2,640	525	803	3,450	558
6	358	1,030	275	3,500	1,080	62,800	4,020	2,520	219	664	2,640	720
7	414	469	581	21,900	1,160	52,400	4,020	2,130	664	1,300	2,030	386
8	303	692	1,460	30,000	1,190	18,800	3,590	1,760	636	2,900	1,220	247
9	331	581	2,770	36,100	1,080	24,500	3,310	1,430	469	2,270	2,270	358
10	192	525	2,640	20,600	747	33,700	3,170	1,110	720	914	2,640	275
11	469	636	1,430	9,120	469	34,300	3,170	1,730	775	803	2,390	247
12	358	358	886	5,970	970	19,400	5,280	1,330	1,250	664	4,630	497
13	469	275	858	5,280	997	10,900	5,970	1,350	1,300	997	3,450	386
14	469	497	747	3,150	1,140	7,470	5,970	1,680	1,030	1,520	2,270	386
15	53	553	581	2,950	1,110	5,970	5,280	442	747	1,030	2,520	497
16	247	358	1,350	2,630	1,080	5,000	4,630	3,040	692	2,640	2,770	358
17	469	414	4,320	2,270	692	4,500	4,020	2,900	581	2,390	3,880	303
18	192	358	5,620	2,150	636	4,020	3,730	2,520	747	1,080	5,620	247
19	358	25	9,120	1,890	942	3,730	3,730	1,570	497	1,330	4,630	747
20	442	442	19,400	1,380	1,030	7,080	3,730	1,250	581	664	3,730	608
21	25	275	18,200	1,430	1,080	24,500	4,020	1,080	525	581	2,770	747
22	358	331	10,900	1,490	1,250	25,200	5,970	942	525	469	2,270	497
23	414	358	5,970	1,500	1,030	25,200	6,700	858	469	525	1,270	303
24	525	386	4,020	1,680	747	26,600	5,970	803	525	664	2,150	581
25	414	192	3,730	1,350	1,110	34,900	4,020	692	581	553	1,030	303
26	469	25	2,900	1,270	1,760	43,600	3,730	442	442	581	692	414
27	414	25	4,020	1,140	23,200	40,600	3,730	414	469	386	1,160	414
28	358	192	10,000	747	39,000	30,000	3,450	469	303	720	3,310	497
29	25	247	7,470	1,410		28,700	3,730	469	358	831	3,730	1,380
30	275	358	5,280	1,430		23,200	4,020	442	442	1,050	2,520	3,170
31	275		3,450	1,580		14,900		386		608	2,520	
Month					Maximum	Minimum	Mean		Per square mile		Run-off in inches	
October					525	25	339					
November					1,030	25	371					
December					19,400	25	4,149					
January					36,100	747	5,730					
February					39,000	469	3,166					
March					62,800	3,730	26,150					
April					10,000	3,170	4,785					
May					3,590	386	1,597					
June					1,300	164	576					
July					2,900	219	1,024					
August					5,620	692	2,535					
September					3,170	247	607					
The year.					62,800	25	4,291					

Kentucky River at Lock 4, at Frankfort, Ky.

Location.- Staff gage at Lock 4 at Frankfort, Franklin County, a quarter of a mile below Benson Creek.

Drainage area.- 5,480 square miles.

Records available.- October 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 64,500 second-feet Mar. 6 (gage height, 28.9 feet); minimum, about 15 second-feet Nov. 28, Dec. 5 (gage height, 5.8 feet).
1928-34: Maximum discharge recorded, 72,700 second-feet Dec. 26, 1926 (gage height, 34.9 feet); minimum stage, 4.6 feet Jan. 29, 1927 (discharge not determined).

Remarks.- Records good except those estimated and those for extreme low water, which are fair. Regulation from power plants upstream. Gage-height record furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	640	122	122	3,390	*1,400	29,500	11,100	4,260	550	380	460	1,070		
2	235	52	52	3,220	1,200	13,200	8,220	3,390	550	300	740	1,200		
3	550	*200	*150	2,880	1,070	37,300	7,340	2,880	550	1,070	1,070	840		
4	380	*250	52	2,880	740	55,400	5,720	2,880	550	1,070	2,060	380		
5	*300	1,760	*150	3,390	*800	62,400	5,720	2,380	380	955	3,390	840		
6	*350	1,320	*250	3,560	1,070	64,400	4,980	2,210	640	955	2,060	955		
7	380	955	170	19,100	*1,250	62,400	4,980	1,600	460	955	1,600	380		
8	640	550	640	26,600	*1,250	31,300	4,260	1,600	460	2,540	1,900	235		
9	*350	550	1,900	34,400	*1,250	22,400	3,740	1,460	640	2,380	1,600	170		
10	300	550	2,210	25,000	*1,000	29,000	3,740	1,200	640	1,460	4,080	300		
11	*250	640	1,600	11,100	*850	35,300	3,740	1,460	840	740	2,710	300		
12	*350	550	1,200	7,340	*800	20,800	4,980	1,900	1,070	840	4,620	380		
13	380	460	640	5,720	*900	12,100	5,720	1,750	1,750	955	4,980	640		
14	460	*250	550	4,620	*1,100	8,220	5,720	1,600	1,070	1,600	3,050	550		
15	460	*300	640	3,560	*1,150	6,920	5,720	2,060	955	1,750	2,210	460		
16	52	550	2,710	3,390	1,200	5,720	4,620	3,390	840	2,880	2,880	840		
17	*150	*350	16,700	3,050	955	4,980	4,440	3,560	740	2,380	4,080	640		
18	*350	*300	8,220	2,540	640	4,440	3,910	2,380	840	1,460	5,720	740		
19	*300	235	12,100	2,210	*750	4,080	3,560	2,210	740	840	5,720	460		
20	300	52	22,400	2,210	955	4,260	3,560	1,900	550	840	4,620	300		
21	300	300	20,200	*2,000	*1,000	11,600	3,910	1,320	640	640	3,560	1,070		
22	460	*250	13,200	*1,750	*1,000	25,500	6,100	1,460	640	640	2,380	740		
23	640	*300	7,780	1,460	840	24,500	6,920	1,070	640	460	2,210	740		
24	550	*350	5,340	*1,500	640	22,400	5,720	1,070	740	550	1,200	380		
25	460	300	3,560	*1,750	640	32,600	4,620	840	550	640	1,200	550		
26	380	122	3,560	*1,500	1,070	48,300	3,910	840	640	640	740	550		
27	640	75	3,560	1,320	15,500	48,600	3,740	460	460	740	955	640		
28	380	22	8,680	1,070	34,900	34,000	3,390	460	460	1,200	3,220	550		
29	390	*150	8,220	*850		26,500	3,560	550	300	840	3,910	2,060		
30	75	*300	5,720	*1,500		24,000	4,260	460	300	1,200	2,880	3,220		
31	170		4,260	*1,500		16,100		640		550	2,210			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					840		52		381					
November					1,750		22		405					
December					22,400		52		5,050					
January					34,400		850		6,008					
February					34,900		640		2,711					
March					64,400		4,080		26,720					
April					11,100		3,390		5,083					
May					4,260		460		1,782					
June					1,750		300		673					
July					2,880		300		1,111					
August					5,720		460		2,710					
September					3,220		170		739					
The year					64,400		22		4,490					

*Estimated.

Kentucky River at Lock 2, at Lockport, Ky.

Location.- Staff gage at Lock 2, at Lockport, Henry County, just below mouth of Six-mile Creek.

Drainage area.- 6,310 square miles.

Records available.- October 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 69,800 second-feet Mar. 7 (gage height, 32.3 feet); minimum, 110 second-feet Oct. 2, 3, Aug. 2 (gage height, 7.20 feet).

1925-34: Maximum discharge recorded, 84,400 second-feet Jan. 23, 1927 (gage height, 41.7 feet); minimum, about 30 second-feet, occurred in August and October 1930.

Remarks.- Records good except those estimated, which are fair. Some regulation at power plants upstream. Gage-height record furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	320	470	200	4,540	1,360	36,200	13,100	4,230	630	470	980	1,660
2	173	470	200	4,540	1,460	16,300	10,200	3,500	630	582	582	1,360
3	320	320	284	3,500	1,460	33,500	8,150	3,240	582	926	1,760	980
4	630	320	320	4,230	1,110	54,400	7,000	2,980	470	1,300	2,170	926
5	470	*2,000	200	4,870	980	64,000	5,910	2,740	582	1,110	3,930	800
6	470	*2,000	200	4,230	1,360	67,500	5,210	2,280	1,460	800	2,860	1,110
7	470	1,460	200	20,100	1,360	69,500	5,560	2,170	630	926	2,280	630
8	749	1,170	630	34,200	1,360	59,800	4,870	2,060	582	2,060	1,960	470
9	518	*800	1,960	39,000	1,300	38,000	4,230	1,760	*800	*2,500	1,360	320
10	320	*800	2,390	36,500	1,300	44,400	4,230	1,360	*900	*2,000	1,360	425
11	284	800	2,060	14,000	1,110	50,300	4,230	1,560	*1,000	*1,500	5,210	470
12	236	980	1,460	8,940	800	41,900	5,210	1,860	1,230	*1,000	3,240	470
13	582	749	1,170	6,630	980	17,300	6,270	1,660	1,770	800	*5,000	630
14	518	*600	926	5,560	1,170	10,200	6,270	1,760	1,230	1,170	*4,500	630
15	470	*500	800	3,930	1,300	8,150	5,560	1,860	980	1,560	*3,000	630
16	320	582	3,640	4,540	1,360	7,000	4,870	3,110	800	2,500	2,500	630
17	200	518	27,200	3,240	1,300	5,910	4,840	6,630	800	2,500	3,240	630
18	320	470	17,300	2,980	980	5,210	4,230	2,620	980	2,060	4,870	630
19	284	*300	18,700	2,500	980	4,540	3,930	2,060	800	1,360	*6,000	630
20	320	*250	31,800	2,390	1,170	4,540	3,640	1,660	800	1,110	*5,500	320
21	582	320	25,800	1,860	1,110	9,760	3,930	1,460	630	800	*4,500	681
22	*800	470	17,300	1,560	1,170	25,800	6,270	1,360	630	630	*3,500	630
23	*1,000	320	10,600	2,060	1,110	29,800	7,000	1,110	681	630	*2,750	630
24	980	470	7,000	1,760	681	23,000	6,270	1,040	630	630	1,360	470
25	*800	470	5,210	1,760	980	32,800	4,870	1,110	630	800	1,460	582
26	854	320	3,930	1,960	1,040	50,000	3,930	980	800	630	980	518
27	800	200	4,230	1,660	9,340	55,800	3,930	749	630	630	980	854
28	681	*175	8,940	1,460	32,800	47,500	3,640	470	582	1,300	2,170	630
29	470	*175	9,340	1,360		33,900	3,640	630	470	1,360	*4,250	2,280
30	320	200	6,630	1,460		29,000	3,930	630	470	1,360	*3,500	3,110
31	320		5,560	1,360		20,100		630		1,170	*2,500	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,000	173	503		
November	2,000	175	626		
December	31,800	200	6,974		
January	39,000	1,360	7,377		
February	32,800	681	2,587		
March	69,500	4,540	32,130		
April	13,100	3,640	5,487		
May	6,630	470	1,976		
June	1,460	470	793		
July	2,500	470	1,233		
August	6,000	582	2,927		
September	3,110	320	825		
The year.	69,500	173	5,346		

*Estimated.

Blue River near White Cloud, Ind.

Location.- Staff gage in sec. 19, T. 3 S., R. 3 E., three-quarters of a mile north of White Cloud, Harrison County, and 400 feet below Spring Creek.

Drainage area.- 487 square miles.

Records available.- April 1931 to September 1934.

Extremes.- Maximum discharge during year, 4,250 second-feet Mar. 27 (gage height, 7.52 feet); minimum, 19 second-feet Sept. 5, 6 (gage height, 1.43 feet).
1931-34: Maximum discharge, 15,900 second-feet May 15, 1933 (gage height, 16.70 feet); minimum, that of Sept. 5, 6, 1934.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	60	62	166	100	66	660	133	45	1,020	50	21
2	82	73	42	169	98	146	555	139	45	375	50	21
3	69	56	50	172	87	330	484	117	48	166	52	23
4	54	56	54	179	98	1,160	417	120	46	142	31	21
5	48	258	43	296	92	830	375	109	46	92	26	20
6	48	277	50	355	98	555	355	126	46	80	36	20
7	46	258	48	375	87	439	335	133	66	66	50	23
8	54	207	48	375	90	605	316	130	60	60	58	23
9	56	159	44	355	75	770	316	112	70	50	40	22
10	50	126	48	335	73	715	296	103	126	46	36	28
11	56	117	48	296	78	605	277	92	120	50	56	31
12	62	92	40	277	73	507	258	87	136	48	688	28
13	70	82	42	258	78	439	254	78	95	109	258	52
14	58	73	45	235	73	396	243	80	73	316	139	52
15	56	70	42	221	75	355	228	103	62	166	90	35
16	73	68	56	200	70	316	218	146	48	92	56	355
17	66	60	396	196	73	296	204	117	58	204	58	531
18	103	62	950	176	75	316	200	109	48	146	44	240
19	80	54	770	176	70	355	186	90	56	75	46	109
20	68	64	950	162	78	417	169	82	73	52	36	86
21	73	60	715	152	73	396	166	78	70	45	82	68
22	484	56	484	149	73	375	152	68	66	45	103	78
23	950	52	355	152	68	375	149	64	159	39	68	103
24	335	54	296	139	73	484	146	58	1,020	33	64	73
25	214	48	254	136	60	555	139	64	296	36	52	54
26	159	48	228	136	64	1,230	130	48	214	44	42	45
27	120	54	196	130	62	3,700	172	52	146	42	34	48
28	98	46	172	120	60	2,800	176	46	103	73	33	45
29	92	46	155	120		1,440	159	48	82	176	32	68
30	73	46	152	106		1,020	155	48	70	100	28	277
31	70		149	103		830		48		68	21	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					950	46	128	0.274		0.32		
November					277	45	92.7	.199		.22		
December					950	40	225	.482		.55		
January					375	103	207	.445		.51		
February					109	60	78.0	.167		.17		
March					3,700	68	752	1.61		1.86		
April					660	130	263	.563		.63		
May					146	46	91.2	.195		.22		
June					1,020	45	120	.257		.29		
July					1,020	33	131	.281		.32		
August					888	21	79.3	.170		.20		
September					531	20	86.3	.189		.21		
The year					3,700	20	189	.405		5.51		

Green River at Livermore, Ky.

Location.- Staff gage at Louisville & Nashville Railroad bridge at Livermore, McLean County, 650 feet below Rough River. Zero of gage is 360.65 feet above mean sea level.

Drainage area.- 7,800 square miles.

Records available.- March 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 51,100 second-feet Mar. 10; maximum gage height recorded, 22.78 feet Mar. 12; minimum discharge recorded, 642 second-feet Sept. 24, 25, 28 (gage height, 3.64 feet).
1930-34: Maximum discharge recorded, 80,000 second-feet Feb. 6, 1932 (gage height, 28.43 feet); minimum, 280 second-feet Oct. 5-9, 23-27, 1930, and Feb. 2-4, 1931.

Remarks.- Records good. Discharge determined by using slope as a factor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,600	1,260	992	5,610	2,600	39,000	27,200	4,900	900	1,720	6,740	1,460
2	1,990	1,130	992	5,250	2,600	41,500	15,000	4,210	900	1,690	6,360	1,210
3	1,630	1,080	946	5,250	2,600	44,000	14,000	3,720	900	2,910	4,900	1,110
4	1,370	1,110	946	5,250	2,440	45,100	11,700	3,390	946	3,720	3,070	1,080
5	1,160	4,550	946	7,130	2,440	46,700	8,750	3,390	1,400	3,070	1,990	969
6	1,080	11,700	992	9,580	2,440	48,900	7,530	3,390	1,540	2,140	1,690	900
7	1,020	12,600	1,570	13,900	2,440	48,600	9,160	3,390	1,350	2,140	1,290	900
8	946	10,800	7,130	24,400	2,290	50,700	10,400	3,230	1,260	1,990	1,160	946
9	900	7,930	10,000	32,700	2,290	50,600	10,400	3,230	1,540	1,750	1,130	946
10	900	5,260	7,130	36,600	2,140	50,800	10,000	2,760	3,390	1,750	1,350	946
11	900	3,390	4,380	37,000	1,990	50,600	8,340	2,760	10,400	2,140	1,290	882
12	900	2,600	3,070	31,200	1,990	49,500	8,340	2,600	7,130	2,600	1,110	828
13	923	2,290	2,440	19,600	1,990	47,500	7,930	2,140	5,980	2,600	969	828
14	864	2,140	2,140	13,000	1,960	43,900	6,740	1,990	2,600	3,880	1,130	774
15	864	1,900	1,870	10,000	1,930	38,900	5,610	3,070	4,380	8,340	1,630	720
16	864	1,780	2,290	8,340	1,900	29,600	4,900	4,210	4,040	7,530	1,370	969
17	864	1,600	16,100	7,530	1,810	21,100	4,550	4,040	5,980	5,980	1,750	2,290
18	828	1,430	31,200	5,980	1,750	14,000	4,210	3,390	3,230	4,900	3,880	2,290
19	810	1,350	39,600	5,610	1,810	9,580	3,720	2,760	8,340	3,720	5,250	1,990
20	738	1,350	42,200	5,250	1,870	8,340	3,550	2,290	10,000	3,070	8,250	1,430
21	738	1,290	45,000	4,900	1,690	7,930	3,390	1,960	10,000	2,440	4,040	1,080
22	992	1,240	44,800	4,550	1,780	10,400	3,230	1,780	10,400	1,930	2,760	969
23	3,230	1,130	44,700	4,380	1,990	15,600	3,230	1,720	8,340	1,490	2,140	810
24	6,740	1,130	44,500	4,210	2,290	22,400	3,070	1,600	6,740	1,350	5,980	655
25	5,610	1,130	40,400	4,040	2,910	25,700	2,910	1,430	6,740	1,160	10,800	655
26	4,550	1,080	32,200	3,880	10,800	32,200	2,760	1,290	6,740	882	10,400	694
27	3,230	1,040	21,700	3,720	24,800	36,300	4,900	1,210	4,900	810	6,740	694
28	2,290	1,040	16,500	3,720	36,400	39,100	7,530	1,130	3,550	900	4,210	642
29	1,720	1,040	12,600	3,550		38,500	6,740	1,060	2,600	1,040	3,070	1,160
30	1,490	992	9,160	3,230		37,300	5,610	992	1,960	3,070	2,290	4,990
31	1,370		6,740	2,910		33,500		946		3,880	1,810	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	6,740	738	1,746	0.224	0.26
November	12,600	992	2,945	.378	.42
December	45,000	946	15,980	2.05	2.36
January	37,000	2,910	10,720	1.37	1.58
February	36,400	1,690	4,498	.577	.60
March	50,800	7,930	34,770	4.46	5.14
April	27,200	2,760	7,513	.963	1.07
May	4,900	946	2,580	.331	.38
June	10,400	900	4,488	.575	.64
July	8,340	810	2,794	.358	.41
August	10,800	969	3,469	.445	.51
September	4,900	642	1,191	.153	.17
The year.	50,800	642	7,791	.999	13.54

Wabash River at Bluffton, Ind.

Location.- Chain gage in sec. 4, T. 26 N., R. 12 E., at Main Street highway bridge in Bluffton, Wells County.

Drainage area.- 500 square miles.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; September 1923 to September 1930 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 6,130 second-feet Oct. 1 (gage height, 10.79 feet); minimum, about 5 second-feet Aug. 3-6 (gage height not determined).

1930-34: Maximum discharge recorded, 9,450 second-feet May 13, 1933 (gage height, 12.72 feet); minimum, that of Aug. 3-6, 1934.

Remarks.- Records fair except those for period of ice effect, Dec. 28 to Jan. 1, Jan. 28 to Mar. 2, and those estimated May 2 to June 4, June 28 to Aug. 1, Aug. 3-14, Aug. 21 to Sept. 17, Sept. 19-30, which are poor. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,970	260	26	115	105	75	2,280	47	10	10	7	8
2	4,570	245	27	231	100	85	1,600	42	10	10	6	9
3	2,160	245	29	304	100	99	710	40	9	9	5	9
4	1,320	245	32	274	85	1,450	500	37	9	9	5	8
5	900	217	51	166	95	1,750	570	35	23	9	5	8
6	466	204	191	191	90	1,320	416	33	15	15	5	8
7	432	178	204	320	90	1,320	351	29	12	25	6	9
8	432	148	191	500	85	1,100	289	26	11	20	6	9
9	399	125	145	745	85	289	245	23	103	15	6	8
10	383	92	139	780	80	231	204	21	101	12	15	8
11	351	87	115	745	80	217	166	19	109	12	50	8
12	335	77	59	600	75	191	204	20	128	12	30	8
13	320	64	59	260	75	148	143	24	87	11	15	8
14	289	67	57	204	75	143	111	27	38	10	13	8
15	289	61	59	231	75	178	75	27	24	10	15	10
16	289	53	60	367	75	157	675	25	13	9	217	80
17	304	46	61	367	75	139	1,500	24	12	9	47	70
18	269	41	59	351	70	399	1,550	22	42	8	31	57
19	269	45	56	245	70	416	1,100	21	399	8	23	40
20	274	41	432	231	70	416	535	20	231	8	17	25
21	274	39	500	145	70	1,600	289	19	143	7	14	20
22	466	36	466	143	70	570	231	18	101	7	12	17
23	570	34	274	432	70	335	166	17	41	7	11	14
24	416	33	204	500	70	231	111	16	27	6	13	12
25	355	31	204	416	70	166	92	15	13	6	11	11
26	304	29	152	320	65	130	75	14	12	6	10	11
27	274	29	113	274	65	1,650	111	13	12	8	9	15
28	274	28	105	200	65	1,850	92	12	11	9	9	12
29	260	28	100	140		2,220	67	11	10	8	8	60
30	260	26	100	120		3,370	53	11	10	7	8	25
31	260		100	110		2,840		11		7	8	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	5,970	260	766	1.53	1.76
November	260	26	95.4	.191	.21
December	500	26	141	.282	.33
January	780	110	320	.640	.74
February	105	65	78.9	.158	.16
March	3,370	75	810	1.62	1.87
April	2,280	53	484	.968	1.08
May	47	11	23.2	.046	.05
June	399	9	55.9	.118	.13
July	25	6	10.0	.020	.02
August	217	5	20.5	.041	.05
September	80	8	19.8	.040	.04
The year.	5,970	5	238	.476	6.44

Wabash River at Wabash, Ind.

Location.- Chain gage in sec. 14, T. 27 N., R. 6 E., at Wabash Street Bridge, in Wabash, Wabash County.

Drainage area.- 1,740 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; August 1923 to March 1930 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 7,970 second-feet Oct. 1 (gage height, 11.56 feet); minimum recorded, 17 second-feet Aug. 4, 5, 9 (gage height, 1.66 feet). 1930-34: Maximum discharge recorded, 22,200 second-feet Mar. 20, 1933 (gage height, 19.77 feet); minimum, that of Aug. 4, 5, 9, 1934. A stage of 22.65 feet occurred on Jan. 16, 1930.

Remarks.- Records good except those for period of ice effect, Dec. 28 to Jan. 3, Jan. 28 to Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,970	316	110	240	400	200	4,900	262	91	56	22	38
2	5,550	414	98	350	375	300	3,230	262	74	47	20	119
3	3,900	354	115	500	350	1,500	2,690	246	74	36	17	80
4	2,420	316	119	436	340	4,000	2,870	246	80	36	17	56
5	2,070	297	123	373	330	3,700	2,690	230	98	33	17	40
6	950	280	334	354	320	2,690	2,690	230	106	38	17	50
7	1,080	262	316	457	310	1,690	1,610	215	146	194	20	69
8	770	252	297	692	300	890	1,220	194	178	119	19	63
9	682	246	230	1,150	275	655	950	180	162	63	17	63
10	655	215	215	1,670	250	394	770	172	132	71	128	60
11	628	189	246	1,510	240	373	770	154	125	141	770	55
12	528	180	297	1,010	230	394	740	141	123	106	430	47
13	480	167	246	655	240	354	655	162	137	69	156	40
14	436	154	215	457	240	373	800	167	132	60	151	47
15	414	146	180	1,150	250	373	502	151	125	56	123	65
16	394	141	167	1,080	250	550	2,330	141	119	50	1,750	550
17	373	132	230	850	240	655	5,110	141	102	38	950	457
18	354	146	215	600	230	770	3,800	137	80	36	414	354
19	334	137	246	550	220	830	2,510	137	63	36	230	246
20	334	132	575	502	210	890	2,070	132	60	60	133	162
21	334	128	770	526	210	1,750	950	130	373	50	151	119
22	394	137	1,220	550	210	1,830	655	119	334	50	137	87
23	414	128	655	1,080	210	1,150	575	115	297	45	174	76
24	456	119	480	2,070	210	890	502	106	180	38	94	66
25	480	128	394	1,430	200	1,150	457	106	115	36	80	63
26	457	123	334	890	200	2,150	436	106	91	27	80	69
27	457	119	246	628	200	4,600	373	98	69	24	73	80
28	436	110	230	550	200	6,100	334	96	60	30	63	373
29	394	128	220	500		6,520	334	94	56	25	52	98
30	354	98	220	450		5,770	354	96	63	22	50	262
31	334		230	425		5,220		94		24	45	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	7,970	334	1,123	0.645	0.74
November	414	98	190	1.09	.12
December	1,220	98	309	.178	.21
January	2,070	240	763	.439	.51
February	400	200	269	.149	.16
March	6,520	200	1,884	1.08	1.24
April	5,110	334	1,599	.919	1.03
May	262	94	157	.090	.10
June	373	56	128	.074	.08
July	194	22	55.4	.032	.04
August	1,750	17	207	.119	.14
September	550	38	132	.076	.08
The year	7,970	17	570	.328	4.45

Wabash River at Logansport, Ind.

Location.— Water-stage recorder in sec. 35, T. 27 N., R. 1 E., 150 feet below Cicott Street Bridge, at Logansport, 1,000 feet below Eel River. Prior to Feb. 9, 1934, chain gage with same datum at bridge was used. Zero of gage is 573.21 feet (revised) above mean sea level.

Drainage area.— 3,830 square miles.

Records available.— April 1903 to July 1906, May 1923 to September 1934.

Average discharge.— 11 years (1923-34), 3,630 second-feet.

Extremes.— Maximum discharge recorded during year, 18,100 second-feet Mar. 31 (gage height, 8.79 feet); minimum, 116 second-feet July 28 (gage height, 2.34 feet).
1923-34: Maximum discharge recorded, 61,400 second-feet Jan. 15, 1930 (gage height, 17.8 feet); minimum, that of July 28, 1934.
Maximum stage known, 25.5 feet Mar. 26, 1913.

Remarks.— Records good except those for periods of ice effect, Nov. 15, 16, Dec. 28 to Jan. 1, Jan. 30 to Feb. 8, Feb. 10 to Mar. 1, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,200	891	551	850	1,200	675	13,000	856	332	258	154	252
2	10,600	786	570	878	1,250	726	9,200	812	338	231	136	1,020
3	7,150	824	541	945	1,200	1,870	7,290	784	410	208	154	1,020
4	5,200	786	668	1,090	1,100	4,380	5,320	769	643	211	134	662
5	3,780	738	602	1,090	1,000	6,900	6,150	784	696	240	136	458
6	2,530	774	580	1,020	950	5,450	4,950	740	634	266	128	410
7	1,940	774	668	1,020	900	3,700	3,820	727	718	788	139	458
8	1,760	762	1,020	1,170	850	2,360	3,010	701	766	878	146	576
9	2,230	786	891	1,500	587	1,600	2,510	662	656	582	160	564
10	1,760	786	774	2,040	850	1,310	2,150	649	620	396	336	468
11	1,500	750	714	2,930	850	1,070	1,970	610	463	358	746	401
12	1,410	714	560	2,230	875	969	1,990	587	408	355	1,260	354
13	1,240	679	591	1,670	900	962	1,850	576	366	311	707	350
14	1,090	702	613	1,500	900	932	1,600	599	358	333	420	309
15	1,020	700	774	1,500	875	842	1,470	610	385	277	1,140	344
16	1,020	700	624	2,040	850	842	1,560	587	364	248	5,020	411
17	945	690	702	1,760	875	1,080	7,240	552	322	241	4,320	477
18	904	702	679	1,500	825	1,360	9,820	526	342	227	2,330	636
19	891	657	668	1,500	800	2,900	5,820	504	308	216	1,330	486
20	878	657	1,580	1,410	750	3,120	4,200	478	312	212	947	439
21	850	602	2,230	1,170	675	2,790	2,790	455	296	192	701	542
22	918	690	1,760	1,090	850	3,240	2,010	473	433	207	599	727
23	1,020	679	2,040	1,170	650	3,010	1,660	498	464	186	519	553
24	1,090	646	1,580	1,320	625	2,320	1,450	442	415	171	430	458
25	1,020	646	1,240	3,350	600	1,790	1,280	413	376	172	369	480
26	1,170	613	1,090	2,530	625	1,420	1,160	422	322	166	306	377
27	1,090	624	945	1,850	625	1,790	1,090	392	285	160	886	369
28	945	624	900	1,670	650	12,200	1,020	371	254	168	287	377
29	878	613	850	1,170		12,200	847	386	240	164	287	762
30	904	580	800	1,100		15,500	900	344	257	151	246	1,240
31	878		825	1,150		17,200		339		146	217	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	14,200			850			2,349			0.613	0.71	
November	891			560			705			.184	.21	
December	2,230			541			924			.241	.28	
January	3,350			850			1,523			.398	.46	
February	1,250			587			839			.219	.23	
March	17,200			675			3,758			.981	1.13	
April	13,000			900			3,620			.945	1.05	
May	856			339			566			.148	.17	
June	766			240			427			.111	.12	
July	878			146			280			.073	.08	
August	5,020			128			773			.202	.23	
September	1,240			252			530			.138	.15	
The year	17,200			128			1,362			.356	4.82	

Wabash River at Lafayette, Ind.

Location.- Water-stage recorder in sec. 20, T. 23 N., R. 4 W., at Brown Street Bridge, Lafayette. Prior to Nov. 21, 1935 chain gage at same location with same datum. Zero of gage is 504.14 feet above mean sea level.

Drainage area.- 7,200 square miles.

Records available.- May 1901 to May 1903, October 1927 to September 1934 in reports of U. S. Geological Survey; October 1923 to September 1927 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge during year, 21,700 second-feet Mar. 31 (gage height, 11.57 feet); minimum, 500 second-feet Aug. 1, 2 (gage height, 0.60 foot).
1901-3, 1923-34: Maximum discharge, 74,600 second-feet Jan. 16, 1970 (gage height, 24.07 feet); minimum, 430 second-feet Aug. 15, 18, 1901.
Maximum stage known, 32.9 feet Mar. 26, 1913 (discharge not determined).

Remarks.- Records good except those for periods of ice effect, Dec. 26, Jan. 28, Feb. 1 to Mar. 1, which are fair. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18,300	1,950	1,510	2,100	1,600	1,350	20,200	2,170	947	720	508	947
2	17,100	1,950	1,490	1,880	1,900	1,460	15,000	2,100	914	700	524	1,950
3	12,900	1,950	1,490	1,730	1,800	1,810	12,100	1,990	1,040	680	690	3,640
4	9,820	2,400	1,810	1,810	1,700	4,140	10,000	1,870	1,130	652	580	3,400
5	6,890	1,810	1,540	2,020	1,650	8,070	8,710	1,980	1,310	625	532	2,920
6	5,200	1,410	1,740	2,020	1,600	7,350	9,280	1,870	1,400	700	516	2,460
7	4,010	1,410	1,640	1,880	1,500	5,730	7,950	1,770	1,380	1,320	540	2,540
8	3,500	1,540	1,710	2,250	1,350	4,520	6,500	1,730	1,330	1,450	516	2,840
9	3,500	1,810	1,810	2,250	1,300	3,260	5,600	1,660	1,430	1,590	548	3,000
10	3,840	1,410	1,740	2,550	1,300	2,550	4,920	1,650	1,380	1,260	1,310	2,750
11	3,020	1,410	1,660	3,180	1,350	2,020	4,750	1,450	1,360	1,520	2,760	2,540
12	3,340	1,540	1,510	3,580	1,400	1,950	4,160	1,450	1,210	2,300	2,810	2,010
13	3,340	1,810	1,340	3,100	1,400	2,100	4,070	1,460	1,040	1,460	2,170	1,940
14	2,650	1,410	1,310	2,620	1,450	1,960	3,900	1,610	936	1,170	1,510	2,080
15	3,020	1,280	1,410	2,400	1,450	1,880	3,680	1,620	892	1,070	2,110	1,510
16	2,860	1,040	1,790	2,550	1,450	1,880	3,580	1,510	925	914	15,600	2,140
17	2,400	1,160	1,640	2,860	1,400	1,810	4,510	1,540	925	840	17,300	3,000
18	2,400	1,410	1,680	2,400	1,350	1,950	10,600	1,320	892	770	9,580	2,460
19	2,250	1,410	1,620	2,620	1,250	2,400	9,850	1,320	870	750	5,660	2,310
20	2,250	1,410	1,660	2,250	1,200	4,260	6,860	1,230	870	700	3,680	1,870
21	2,250	1,670	2,720	2,480	1,250	4,100	5,430	1,200	840	680	2,680	1,840
22	2,250	1,760	2,700	1,950	1,100	4,100	4,410	1,330	850	661	2,080	2,680
23	2,860	1,720	2,860	2,320	1,000	4,520	3,500	1,210	892	643	1,930	2,310
24	3,500	1,550	2,760	2,250	850	3,920	3,100	1,160	1,110	634	1,690	2,060
25	3,020	1,550	2,480	3,160	750	3,260	3,020	1,140	1,000	580	1,500	1,940
26	2,860	1,540	1,750	4,520	1,100	2,940	2,540	1,110	892	572	1,370	1,720
27	2,860	1,320	1,220	3,260	1,200	3,500	2,540	1,100	860	564	1,310	1,670
28	2,100	1,540	1,270	2,750	1,250	8,400	2,470	1,090	790	540	1,230	1,790
29	1,780	1,500	1,420	2,390		14,500	2,170	1,080	720	524	1,090	3,000
30	2,650	1,500	1,550	1,220		15,900	2,320	1,080	730	516	991	4,280
31	1,950		2,060	1,670		20,400		1,070		516	958	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	18,300			1,780			4,531			0.629		0.73
November	2,400			1,040			1,572			.218		.24
December	2,860			1,220			1,771			.246		.28
January	4,520			1,220			2,452			.341		.39
February	1,900			750			1,561			.189		.20
March	20,400			1,350			4,773			.663		.76
April	20,200			2,170			6,254			.869		.97
May	2,170			1,070			1,460			.203		.23
June	1,430			720			1,029			.145		.16
July	2,300			516			891			.124		.14
August	17,300			508			2,780			.386		.44
September	4,280			947			2,388			.332		.37
The year	20,400			508			2,613			.363		4.91

Wabash River at Montezuma, Ind.

Location.- Wire-weight gage in sec. 35, T. 16 N., R. 9 W., at highway bridge at Montezuma. Prior to Sept. 12, 1933, chain gage at same location with same datum. Zero of gage is 458.49 feet above mean sea level.

Drainage area.- 11,100 square miles.

Records available.- October 1927 to September 1934 in reports of U. S. Geological Survey; July 1924 to September 1927 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 21,800 second-feet Apr. 2 (gage height, 12.52 feet); minimum discharge recorded, 700 second-feet July 31, Aug. 2, 3, 9, 10; minimum gage height recorded, 1.43 feet Aug. 3, 10.
1927-34: Maximum discharge recorded, 101,000 second-feet May 14, 1933 (gage height, 28.19 feet); minimum, that of July 31, Aug. 2, 3, 9, 10, 1934.

Remarks.- Records good except those for period of ice effect, Dec. 28-31, Jan. 31 to Mar. 4, which are poor. Discharge interpolated Sept. 12.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,500	2,860	2,260	2,710	2,250	2,000	20,900	3,160	1,400	1,020	740	1,280
2	17,300	2,860	2,260	2,710	2,550	2,250	21,600	3,010	1,340	970	700	1,230
3	16,100	2,710	2,260	2,560	2,450	2,750	18,600	2,860	1,340	920	700	1,120
4	12,800	2,710	2,260	2,410	2,600	3,900	14,700	2,860	1,280	920	740	1,980
5	9,970	2,710	2,260	2,560	2,750	4,120	12,400	2,710	1,280	920	785	3,640
6	7,690	2,560	2,410	2,560	2,600	7,690	10,600	2,560	1,460	1,020	875	3,900
7	6,030	2,560	2,410	2,710	2,500	7,860	10,900	2,560	1,580	1,120	785	3,480
8	4,970	2,410	2,260	2,710	2,400	6,570	9,970	2,560	1,710	1,340	740	3,480
9	4,460	2,260	2,260	2,710	1,800	5,490	8,260	2,560	1,710	1,710	700	3,640
10	4,120	2,260	2,410	2,860	1,900	4,290	7,120	2,260	1,710	1,980	700	3,960
11	4,290	2,410	2,410	3,010	1,950	3,480	6,570	2,120	1,710	1,980	1,180	3,640
12	3,960	2,260	2,260	3,480	2,100	3,160	6,210	2,120	1,580	1,840	1,980	3,100
13	3,800	2,410	2,260	3,960	2,200	2,860	5,490	1,980	1,580	2,120	2,710	2,660
14	3,960	2,560	2,120	3,800	2,260	3,010	5,310	1,980	1,680	2,120	2,560	2,410
15	3,640	2,410	2,120	3,640	2,250	3,160	5,140	2,120	1,400	1,710	2,120	2,660
16	3,480	2,260	1,980	3,160	2,200	2,710	5,310	2,120	1,230	1,460	1,840	3,320
17	3,160	2,120	2,260	3,160	2,100	2,860	5,850	1,980	1,230	1,340	9,970	3,480
18	3,160	1,980	2,410	3,480	2,000	2,860	5,850	1,980	1,280	1,340	14,700	3,480
19	3,160	2,120	2,410	3,160	1,600	2,710	9,590	1,840	1,280	1,280	13,600	3,480
20	3,160	2,120	2,260	3,160	1,600	3,010	10,400	1,840	1,340	1,120	9,590	3,010
21	3,160	2,120	2,410	3,160	1,900	3,800	8,260	1,840	1,280	920	4,970	2,710
22	3,010	2,260	2,560	3,320	1,750	4,800	6,930	1,710	1,230	920	3,960	5,670
23	3,010	2,560	3,480	3,160	1,600	4,800	6,030	1,580	1,150	920	3,010	3,640
24	3,800	2,410	3,320	3,320	1,500	4,970	4,800	1,710	1,120	875	2,410	2,860
25	4,290	2,560	3,480	3,320	1,100	4,630	4,120	1,580	1,120	830	2,120	2,860
26	3,800	2,260	3,320	3,800	1,250	4,120	3,960	1,520	1,180	830	1,980	2,560
27	3,480	2,410	2,260	4,800	1,350	7,120	3,800	1,520	1,280	830	1,840	2,710
28	3,480	2,260	2,000	4,290	1,750	8,530	3,480	1,520	1,230	875	1,710	2,710
29	3,160	2,410	1,900	3,640		10,400	3,640	1,460	1,120	830	1,520	6,750
30	2,860	2,260	2,000	2,710		15,600	3,480	1,460	1,020	740	1,400	6,030
31	2,860		2,360	2,500		18,000		1,460		700	1,280	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						17,500	2,860	5,601	0.505		0.58	
November						2,860	1,980	2,402	.216		.24	
December						3,480	1,900	2,407	.217		.25	
January						4,800	2,410	3,173	.286		.33	
February						2,750	1,100	1,991	.179		.19	
March						18,000	2,000	5,285	.476		.55	
April						21,600	3,480	8,302	.748		.83	
May						3,160	1,460	2,082	.188		.22	
June						1,710	1,020	1,357	.122		.14	
July						2,120	700	1,210	.109		.13	
August						14,700	700	3,030	.273		.31	
September						6,750	1,120	3,248	.293		.33	
The year						21,600	700	3,347	.302		4.10	

Wabash River at Terre Haute, Ind.

Location.- Water-stage recorder in sec. 21, T. 12 N., R. 9 W., at Wabash Avenue Bridge at Terre Haute. Zero of gage is 442.90 feet above mean sea level.

Drainage area.- 12,200 square miles.

Records available.- October 1927 to September 1934; at pump house 4,000 feet upstream August 1902 to December 1903; at Vandalia Railway bridge 2,600 feet upstream February 1905 to July 1906.

Extremes.- Maximum discharge during year, 20,700 second-feet Apr. 2 (gage height, 13.47 feet); minimum, 890 second-feet Aug. 10 (gage height, 2.40 feet).
1927-34: Maximum discharge, 106,000 second-feet May 15, 1933 (gage height, 26.53 feet); minimum, that of Aug. 10, 1934.
Maximum known stage, about 33.0 feet on present gage, Mar. 27, 1913.

Remarks.- Records good except those for periods of ice effect, Dec. 30 to Jan. 3, Feb. 10-19, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
1	16,900	3,180	2,360	2,500	2,280	2,130	19,000	3,810	1,600	1,140	712	1,460			
2	16,400	3,100	2,360	2,650	2,880	2,430	20,500	3,730	1,600	1,090	712	1,350			
3	16,400	3,030	2,430	2,800	2,960	2,680	19,400	3,650	1,500	1,040	701	1,430			
4	14,600	2,960	2,360	2,800	3,100	4,130	16,400	3,570	1,430	992	723	2,130			
5	12,200	2,880	2,360	2,730	3,180	4,770	14,000	3,100	1,440	954	860	3,650			
6	9,960	2,880	2,500	2,800	3,260	6,780	12,400	3,030	1,530	1,040	860	3,970			
7	7,970	2,660	2,500	2,960	3,180	8,330	11,600	2,960	1,720	1,160	789	3,730			
8	6,440	2,500	2,500	3,030	2,880	7,630	11,100	2,880	1,840	1,310	734	3,650			
9	5,420	2,430	2,430	3,030	2,130	6,610	9,950	2,730	1,850	1,920	723	3,730			
10	4,770	2,360	2,430	3,180	2,150	5,420	8,510	2,660	1,790	1,990	734	3,890			
11	4,610	2,360	2,580	3,330	2,150	4,450	7,630	2,500	1,810	2,280	1,090	4,130			
12	4,610	2,280	2,500	3,570	2,200	3,810	7,120	2,430	1,810	1,990	1,820	3,810			
13	4,290	2,430	2,430	4,130	2,350	3,490	6,610	2,280	1,750	1,810	2,360	3,330			
14	4,130	2,580	2,360	4,290	2,450	3,330	6,100	2,280	1,650	2,360	2,730	2,880			
15	4,130	2,500	2,200	4,050	2,560	3,260	5,930	2,280	1,510	2,060	2,430	2,730			
16	3,810	2,360	2,130	3,730	2,500	3,180	6,780	2,280	1,390	1,770	2,200	3,410			
17	3,730	2,200	2,280	3,490	2,350	3,100	7,630	2,280	1,310	1,530	3,520	3,810			
18	3,570	2,200	2,580	3,570	2,350	3,100	7,120	2,280	1,310	1,380	11,800	3,730			
19	3,490	2,200	2,580	3,650	2,250	3,030	8,150	2,130	1,330	1,270	13,600	3,890			
20	3,410	2,200	2,660	3,410	1,780	3,180	10,900	2,060	1,290	1,160	13,800	3,570			
21	3,260	2,280	2,660	3,410	2,200	3,810	10,100	1,990	1,250	1,080	8,330	3,180			
22	3,260	2,360	2,730	3,410	2,580	5,090	8,330	1,920	1,270	1,020	5,250	4,290			
23	3,180	2,730	3,260	3,570	2,430	5,420	7,120	1,850	1,330	954	3,570	5,090			
24	3,650	2,730	3,570	3,410	1,850	5,590	5,930	1,850	1,510	896	3,180	3,970			
25	4,450	2,580	3,570	3,650	1,250	5,590	5,250	1,850	1,400	872	2,660	3,410			
26	4,450	2,500	3,570	3,810	1,780	5,250	4,770	1,770	1,400	872	2,360	3,030			
27	3,970	2,500	2,880	4,610	1,630	8,150	4,610	1,720	1,440	872	2,130	2,880			
28	3,730	2,430	2,050	5,090	1,920	10,100	4,130	1,710	1,330	1,540	1,590	2,960			
29	3,730	2,280	1,990	4,290	10,100	3,970	1,700	1,240	1,170	1,170	1,810	5,010			
30	3,410	2,360	2,150	2,660	13,800	3,890	1,650	1,140	836	1,650	7,800				
31	3,180		2,250	2,500	16,700		1,610			787	1,530				
Month						Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October						16,900		3,180		6,165		0.505		0.58	
November						3,180		2,200		2,555		.208		.23	
December						3,570		1,990		2,555		.209		.24	
January						5,090		2,500		3,423		.281		.32	
February						3,260		1,250		2,367		.194		.20	
March						16,700		2,130		5,634		.462		.53	
April						20,500		3,890		9,164		.751		.84	
May						3,810		1,610		2,405		.197		.23	
June						1,850		1,140		1,492		.122		.14	
July						2,360		767		1,327		.109		.13	
August						13,800		701		3,153		.258		.30	
September						7,800		1,350		3,530		.289		.32	
The year.						20,500		701		3,650		.299		4.06	

Wabash River at Vincennes, Ind.

Location.— Staff gage at highway bridge at Vincennes, Knox County. Zero of gage is 398.43 feet above mean sea level.

Drainage area.— 14,000 square miles.

Records available.— December 1929 to September 1934.

Extremes.— Maximum discharge recorded during year, 19,000 second-feet Apr. 3, 4; maximum gage height recorded, 7.72 feet Apr. 3; minimum discharge recorded, 770 second-feet Aug. 4, 5; minimum gage height recorded, -0.60 foot Aug. 4.
1929-34: Maximum discharge recorded, about 114,000 second-feet Jan. 17, 1930 (gage height, 25.25 feet); minimum, that of Aug. 4, 5, 1934.

Remarks.— Records good except those for period of ice effect, Feb. 4, 5, and those estimated June 21-24, June 29 to July 6, which are fair. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,100	3,580	2,600	2,420	3,380	2,070	15,400	4,650	1,820	1,300	940	2,160
2	14,500	3,380	2,600	2,600	3,150	2,420	17,200	4,630	1,740	1,250	895	2,070
3	15,000	3,380	2,600	2,600	2,980	3,180	19,000	4,420	1,740	1,200	810	1,980
4	15,700	3,380	2,600	2,600	3,250	3,580	19,000	4,210	1,740	1,150	770	1,980
5	14,500	3,380	2,600	3,180	3,500	3,790	18,000	4,000	1,740	1,100	770	2,420
6	12,800	3,380	2,600	3,180	3,180	4,630	15,700	3,790	1,660	1,050	810	3,790
7	10,900	3,380	2,600	2,980	3,180	6,820	14,500	3,790	1,660	1,160	810	3,580
8	9,420	3,380	2,600	2,980	3,180	8,000	13,700	3,580	1,740	1,160	810	4,630
9	7,770	3,380	2,600	3,180	2,980	8,000	12,600	3,580	1,740	1,160	810	4,420
10	6,620	3,180	2,600	3,180	2,600	7,310	11,600	3,580	1,740	1,160	810	4,000
11	5,510	2,980	2,600	2,980	2,600	6,170	10,100	3,380	1,740	1,820	940	4,420
12	5,290	2,790	2,600	3,180	2,420	5,070	9,180	3,180	1,740	2,070	1,980	4,850
13	5,070	2,790	2,600	3,580	2,420	4,420	8,700	3,180	1,820	2,160	2,800	4,630
14	4,850	2,790	2,600	3,790	2,420	3,790	8,230	3,180	1,900	2,240	2,790	4,210
15	4,630	2,600	2,600	3,790	2,600	3,580	8,000	2,980	1,820	2,330	2,790	3,790
16	4,420	2,600	2,600	4,000	2,600	3,380	7,770	2,980	1,740	2,600	2,790	3,790
17	4,420	2,600	2,980	3,790	2,600	3,380	10,400	2,790	1,740	2,160	3,180	4,000
18	4,000	2,600	3,180	3,790	2,600	3,380	10,400	2,790	1,580	1,980	2,790	4,000
19	3,790	2,600	2,980	3,790	2,600	3,380	8,940	2,790	1,500	1,980	5,610	4,000
20	3,790	2,600	3,180	3,790	2,420	3,180	8,700	2,790	1,430	1,820	10,400	4,000
21	3,790	2,600	2,790	3,790	2,160	3,180	8,460	2,790	1,400	1,580	12,300	4,000
22	3,790	2,420	2,790	3,580	2,160	3,380	10,900	2,600	1,350	1,430	10,800	3,790
23	3,790	2,420	2,790	3,580	2,160	3,790	9,660	2,420	1,350	1,290	7,770	4,630
24	3,790	2,420	2,790	3,580	2,330	4,420	6,700	2,330	1,400	1,160	5,730	5,610
25	3,790	2,790	2,790	3,580	2,240	5,750	7,540	2,240	1,430	1,040	4,210	5,070
26	4,210	2,600	3,380	3,580	2,240	6,170	6,390	2,240	1,500	940	4,000	4,000
27	4,850	2,600	3,790	3,580	2,160	7,770	5,950	2,240	1,430	990	3,380	3,790
28	4,210	2,600	3,580	3,580	2,160	11,800	5,510	2,160	1,430	1,160	2,980	4,000
29	4,000	2,600	2,600	4,000	12,800	5,290	2,070	2,070	1,400	1,100	2,420	4,210
30	4,000	2,600	2,420	4,420	11,800	4,850	1,980	1,980	1,350	1,100	2,240	6,620
31	3,790		2,420	4,000		13,700		1,820		1,040	2,160	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	15,700			3,790			6,745			0.482		0.56
November	3,580			2,420			2,980			.206		.23
December	3,790			2,420			2,776			.199		.23
January	4,420			2,420			3,440			.246		.28
February	3,500			2,160			2,654			.190		.20
March	13,700			2,070			5,609			.401		.46
April	19,000			4,850			10,690			.764		.85
May	4,850			1,820			3,076			.220		.25
June	1,900			1,350			1,612			.116		.13
July	2,600			940			1,474			.105		.12
August	12,300			770			3,293			.235		.27
September	6,620			1,980			3,945			.282		.31
The year	19,000			770			4,019			.287		3.89

Wabash River at Mount Carmel, Ill.

Location.— Chain gage at Cleveland, Chicago, Cincinnati & St. Louis Railway bridge 3 miles below Mount Carmel, Wabash County, and 3 1/3 miles below Potaka River. Prior to Oct. 1, 1933, operated as a slope station in conjunction with recording gage at Southern Railway bridge. Zero of both gages is 371.58 feet above mean sea level, general adjustment of 1929.

Drainage area.— 28,600 square miles.

Records available.— January 1908 to September 1913, October 1927 to September 1934.

Extremes.— Maximum discharge during year, 43,400 second-feet Apr. 2 (gage height, 10.21 feet); minimum, 2,450 second-feet July 28, Aug. 6, 7 (gage height, 0.14 foot).

1908-13, 1927-34: Maximum gage height (at Southern Railway bridge 3 miles upstream), 31.0 feet Mar. 30, 1913 (discharge not determined); minimum (at Southern Railway bridge), 0.3 foot Sept. 12, 1908 (discharge not determined).

Remarks.— Records good. Discharge determined by application of stage-discharge rating table.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,300	5,500	3,910	5,700	6,290	3,700	41,600	8,900	3,560	5,700	3,380	3,980
2	16,600	5,310	3,730	5,700	5,700	4,080	43,400	8,700	3,480	4,750	2,970	3,700
3	18,600	5,310	3,770	5,890	5,310	4,940	42,500	8,290	3,480	4,310	3,170	3,560
4	19,600	5,120	3,880	5,890	5,120	6,280	39,400	7,860	3,500	5,120	3,280	3,520
5	18,600	5,120	3,880	6,280	5,600	6,900	34,900	7,680	3,420	6,080	2,900	3,770
6	16,600	4,940	3,910	6,680	5,700	12,300	29,500	7,480	3,340	6,080	2,480	4,340
7	14,200	4,940	3,800	6,880	5,600	16,200	25,700	7,280	3,590	6,080	2,580	6,080
8	12,000	4,940	3,910	6,880	5,600	18,600	24,400	7,280	3,620	6,890	2,900	7,080
9	10,600	4,940	3,840	6,880	5,600	19,100	22,800	7,280	3,700	6,120	3,360	7,080
10	9,320	4,710	3,640	6,880	4,940	17,000	20,300	6,880	4,340	4,560	3,280	6,880
11	8,290	4,680	3,680	6,880	4,200	15,000	18,200	6,280	6,280	4,450	4,940	8,700
12	7,480	4,640	3,950	7,080	4,420	13,100	16,200	6,060	6,900	5,120	11,200	10,900
13	7,080	4,640	4,020	7,280	4,530	11,700	14,600	5,890	11,400	5,310	14,600	10,600
14	6,880	4,450	3,950	7,480	4,240	10,600	13,500	5,690	9,720	5,500	15,800	9,110
15	6,480	4,240	3,910	7,680	4,490	9,720	12,700	5,700	7,680	5,310	13,800	9,110
16	6,480	4,310	4,060	7,880	4,600	8,900	12,000	5,500	6,280	6,680	11,200	7,080
17	6,480	4,310	4,710	7,480	4,600	8,290	13,800	5,310	5,510	7,480	8,290	7,480
18	6,080	4,240	5,700	7,080	4,710	6,280	17,400	5,310	4,600	5,890	7,080	8,290
19	5,700	4,060	6,280	6,880	4,600	7,680	19,500	5,120	4,020	5,500	8,700	6,500
20	5,500	3,910	9,930	6,680	4,380	7,680	18,200	5,120	3,700	5,310	13,500	8,080
21	5,500	3,640	10,900	6,480	4,420	7,480	17,800	4,940	3,550	4,490	16,200	7,680
22	6,080	3,880	11,400	6,480	4,130	7,680	16,600	4,710	3,950	3,730	17,400	7,680
23	6,680	3,840	11,700	6,480	4,060	8,700	17,600	4,490	6,290	3,520	15,800	7,280
24	6,880	3,840	11,700	6,080	4,270	10,300	16,000	4,380	6,480	3,340	12,700	7,480
25	6,680	4,060	10,900	6,280	4,680	10,900	13,100	4,200	6,280	3,110	10,600	7,680
26	6,680	4,270	10,100	6,280	4,940	11,400	12,000	4,130	6,480	2,870	7,880	6,480
27	7,280	4,130	9,320	6,480	4,240	13,500	11,200	4,060	7,680	2,640	6,680	5,690
28	7,280	3,980	8,500	6,880	3,880	21,900	10,600	3,910	7,680	2,450	5,890	5,310
29	6,680	3,910	6,880	7,280		31,300	10,100	3,840	7,280	3,340	5,120	5,690
30	6,280	3,960	6,480	7,280		37,100	9,520	3,800	6,880	3,340	4,710	6,280
31	6,280		5,890	6,680		38,900		3,660		3,210	4,240	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	19,500	5,500	9,260	0.324	0.37
November	5,500	3,640	4,465	.166	.17
December	11,700	3,730	6,279	.219	.25
January	7,880	5,700	6,734	.235	.27
February	6,280	3,880	4,802	.168	.17
March	38,900	3,700	13,270	.464	.53
April	43,400	9,520	20,540	.718	.80
May	8,900	3,660	5,805	.203	.25
June	11,400	3,340	5,618	.196	.22
July	7,480	2,450	4,725	.165	.19
August	17,400	2,480	7,956	.276	.32
September	10,900	3,520	6,917	.242	.27
The year	43,400	2,450	8,043	.281	3.79

Salamonie River at Dora, Ind.

Location.- Chain gage in sec. 18, T. 27 N., R. 8 E., at highway bridge at Dora, Wabash County, 4 miles above mouth.

Drainage area.- 504 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; November 1923 to March 1930 in reports of the Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 3,350 second-feet Mar. 30 (gage height, 6.81 feet); minimum, 8.2 second-feet Aug. 3 (gage height, 1.11 feet).
1930-34: Maximum discharge recorded, 9,020 second-feet May 14, 1933 (gage height, 11.54 feet); minimum occurred Aug. 3, 1934.

Remarks.- Records good except those for periods of ice effect, Dec. 11-13, 27-31, Jan. 2-5, 18, 19, Jan. 22 to Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,650	58	50	78	125	80	1,720	83	33	32	8.8	23
2	1,720	61	52	90	120	105	880	78	30	28	8.8	22
3	780	56	53	100	115	650	632	76	29	24	8.2	21
4	468	53	53	100	110	1,880	608	73	28	22	10	20
5	380	53	55	95	105	1,300	608	67	30	20	10	17
6	277	55	97	91	100	680	468	67	55	42	11	18
7	240	55	155	119	100	424	359	66	119	138	11	24
8	230	61	227	206	95	277	277	64	114	116	12	25
9	216	61	98	446	95	220	258	61	96	91	11	22
10	209	64	87	632	90	163	213	59	76	73	116	20
11	194	71	87	446	90	134	200	56	56	55	830	17
12	173	66	86	297	85	115	182	56	48	42	258	16
13	150	61	85	206	85	104	155	61	44	34	78	15
14	114	63	85	188	85	108	145	66	42	29	58	15
15	100	64	80	179	85	114	138	61	40	26	58	21
16	80	61	73	176	85	153	402	56	37	24	1,060	380
17	74	58	69	182	80	203	2,120	55	35	23	468	166
18	69	55	61	170	80	491	1,720	53	33	22	185	78
19	83	58	125	165	80	680	680	53	32	22	138	160
20	80	59	277	158	80	608	424	56	29	20	93	102
21	78	53	317	158	75	584	258	58	129	17	67	76
22	76	55	380	121	75	468	197	55	93	17	64	67
23	76	53	277	155	75	380	163	55	67	15	46	48
24	71	55	182	940	75	297	143	56	56	14	26	38
25	78	56	155	606	75	197	134	52	47	13	26	33
26	104	53	119	424	70	240	121	48	42	12	33	28
27	91	50	106	277	70	880	108	47	40	11	30	59
28	82	50	95	200	75	1,720	98	44	35	11	29	52
29	71	50	90	150		3,150	95	40	33	10	26	108
30	63	52	85	140		3,350	89	37	34	9.4	26	171
31	59		80	130		3,050		34		8.8	24	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,650			59			295			0.585	0.67	
November	71			50			57.3			.114	.13	
December	380			50			120			.238	.27	
January	940			78			240			.476	.55	
February	125			70			58.6			.176	.18	
March	3,350			80			756			1.46	1.68	
April	2,120			89			453			.899	1.00	
May	83			34			57.8			.115	.13	
June	129			28			52.7			.105	.12	
July	138			8.8			32.9			.065	.07	
August	1,060			8.2			124			.246	.28	
September	380			15			62.1			.123	.14	
The year	3,350			8.2			194			.385	5.22	

Mississinewa River at Marion, Ind.

Location.— Water-stage recorder in sec. 31, T. 25 N., R. 7 E., at Highland Avenue Bridge, in Marion, Grant County. Prior to Dec. 9, 1933, chain gage at same location with same datum.

Drainage area.— 762 square miles.

Records available.— August 1930 to September 1934 in reports of U. S. Geological Survey; September 1923 to May 1930 in reports of Indiana Department of Conservation.

Extremes.— Maximum discharge during year, 3,880 second-feet Mar. 28 (gage height, 5.71 feet); minimum, 5.6 second-feet June 22 (gage height, -0.11 foot); minimum daily discharge, 21 second-feet June 23; Aug. 2, 3.
1930-34: Maximum discharge, 20,600 second-feet May 12, 1933 (gage height, 15.59 feet); minimum, that of June 22; minimum daily discharge, that of June 23, Aug. 2, 3.

Remarks.— Records good except those for days of ice effect, Jan. 31, Feb. 9, 19, 23, and those estimated Jan. 14-18, Mar. 4, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,140	87	80	134	132	67	1,320	121	56	55	25	30
2	735	83	72	124	129	234	930	121	55	55	21	30
3	535	89	80	151	127	1,020	728	118	60	162	21	30
4	400	93	89	164	124	1,670	580	118	55	104	23	32
5	297	98	338	142	115	930	480	115	94	94	25	32
6	277	139	258	128	113	561	410	113	269	122	25	36
7	235	115	188	126	110	401	365	113	145	253	25	40
8	162	105	175	277	113	280	335	107	100	94	30	43
9	160	91	127	512	105	221	305	104	92	67	30	39
10	151	96	107	610	94	151	276	100	84	53	32	39
11	128	103	102	585	87	151	256	94	78	58	59	41
12	123	101	84	490	84	154	236	90	75	55	69	62
13	118	91	75	445	84	151	229	87	60	49	49	49
14	103	93	73	300	87	154	217	90	48	47	47	38
15	103	105	75	275	92	174	202	90	61	42	90	42
16	113	105	75	300	98	319	1,230	92	53	46	236	53
17	123	101	80	350	84	309	2,730	87	66	42	170	44
18	93	85	233	350	82	517	1,600	84	71	40	210	114
19	89	83	1,360	331	80	513	510	80	75	39	192	141
20	89	80	700	248	80	480	541	75	62	37	113	92
21	85	89	645	195	75	625	406	71	53	34	75	69
22	75	85	615	170	75	650	331	71	33	33	58	58
23	89	80	379	288	75	498	280	67	21	34	49	49
24	163	85	301	650	75	344	240	64	38	36	46	42
25	239	60	256	494	75	252	206	62	51	57	40	40
26	201	85	210	344	80	280	184	75	46	49	38	40
27	157	80	167	280	71	3,050	170	67	45	36	34	76
28	123	76	121	244	71	3,770	154	75	47	34	34	53
29	108	80	124	192		3,390	141	56	42	32	36	207
30	93	63	124	145		3,550	132	55	44	28	33	132
31	85		118	140		2,660		55		26	32	
Month	Maximum		Minimum		Mean		Per square mile		Run-off in inches			
October	1,140	76	213	0.280	0.32							
November	139	76	92.2	.121	.14							
December	1,560	72	240	.315	.36							
January	650	124	296	.398	.45							
February	132	71	93.8	.123	.13							
March	3,550	67	886	1.16	1.34							
April	2,730	132	554	.701	.78							
May	121	55	87.6	.115	.13							
June	269	21	69.2	.091	.10							
July	253	26	61.7	.081	.09							
August	236	21	53.5	.083	.10							
September	207	30	59.8	.078	.09							
The year	3,550	21	226	.297	4.03							

Eel River at North Manchester, Ind.

Location.- Chain gage in sec. 5, T. 29 N., R. 7 E., at Second Street Bridge, North Manchester, Wabash County.

Drainage area.- 399 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; November 1923 to March 1930 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge during year, 1,590 second-feet Apr. 4 (gage height, 5.95 feet); minimum, 29 second-feet July 27 (gage height, 1.94 feet).
1930-34: Maximum discharge recorded, 3,780 second-feet May 11, 1933 (gage height, 9.81 feet); minimum, 22 second-feet Sept. 10, 1931 (gage height, 1.92 feet).

Remarks.- Records good except those for periods of ice effect, Dec. 27-30, Jan. 28 to Mar. 2, which are fair. Discharge interpolated Dec. 13, May 18, July 31.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	106	104	188	140	106	1,180	150	65	54	36	45
2	755	112	108	184	130	130	1,450	145	77	56	39	134
3	582	124	106	165	135	1,180	1,260	140	60	45	41	79
4	354	112	109	143	130	975	1,590	140	58	39	37	56
5	253	112	101	167	125	800	1,520	124	121	45	34	54
6	207	106	104	226	125	394	1,440	124	174	45	34	77
7	313	109	95	241	125	293	845	121	98	50	37	74
8	354	109	95	253	130	230	668	109	67	45	37	74
9	253	106	101	293	120	163	498	109	70	45	37	68
10	210	104	74	241	110	174	415	109	67	52	67	39
11	192	118	101	196	110	196	540	109	58	92	84	54
12	160	112	90	177	110	188	477	95	58	60	52	52
13	134	101	91	196	110	157	394	106	45	50	45	52
14	143	124	92	253	110	137	354	109	52	67	50	52
15	121	118	95	234	115	143	313	101	56	62	79	52
16	121	121	92	214	120	118	1,020	95	56	54	253	54
17	118	124	104	170	115	134	845	92	58	43	90	56
18	109	121	101	167	110	293	755	92	62	45	67	43
19	109	112	95	167	105	293	582	92	62	45	60	50
20	109	95	106	128	100	253	415	62	58	41	56	43
21	106	118	140	131	100	436	333	62	58	43	56	32
22	214	137	170	153	100	456	293	104	60	47	45	36
23	207	124	150	394	100	313	293	84	72	47	45	50
24	177	128	137	313	100	230	230	95	79	41	43	50
25	140	121	118	253	100	181	210	84	56	41	45	54
26	154	121	112	207	100	177	214	82	60	41	47	56
27	124	121	105	196	100	625	196	82	60	29	52	137
28	109	104	100	180	100	498	177	79	62	30	52	84
29	109	118	98	170		436	163	74	58	34	32	106
30	109	109	105	160		1,100	160	72	56	36	43	192
31	112		143	160		1,330		65		36	39	

Month	Maximum	Minimum	Mean	Pir square mile	Run-off in inches
October	1,060	106	232	0.561	0.67
November	137	95	115	.288	.32
December	170	74	108	.271	.31
January	394	128	203	.509	.59
February	140	100	113	.283	.29
March	1,330	105	392	.982	1.13
April	1,590	160	629	1.68	1.76
May	150	65	101	.253	.26
June	174	45	58.1	.171	.19
July	92	29	47.1	.118	.14
August	253	32	55.9	.140	.16
September	192	32	66.4	.166	.19
The year	1,590	29	178	.446	6.04

Tippecanoe River near Monticello, Ind.

Location.- At Norway plant of Northern Indiana Public Service Co., in sec. 21, T. 27 N., R. 3 W., 2 miles north of Monticello, White County.

Drainage area.- 1,750 square miles.

Records available.- October 1931 to September 1934.

Extremes.- Maximum mean daily discharge during year, 2,570 second-feet Aug. 16; minimum, 103 second-feet July 27.

1931-34: Maximum mean daily discharge, 11,500 second-feet May 11, 1933; minimum, that of July 27, 1934.

Remarks.- Discharge computed from records of power-plant operation and flow over dam. Daily-discharge record furnished by Northern Indiana Public Service Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	680	553	628	602	327	2,290	711	335	224	123	474
2	1,270	605	618	595	536	2,370	694	372	224	162		1,700
3	1,350	608	605	662	559	497	2,190	673	398	179	133	1,440
4	954	679	644	585	520	610	2,280	658	412	180	141	1,380
5	875	572	707	647	595	723	2,310	620	373	180	123	1,180
6	695	582	647	609	511	723	2,320	620	320	180	147	1,170
7	763	648	647	722	595	745	2,140	613	396	181	159	1,500
8	679	569	532	684	520	847	1,960	562	366	181	144	1,860
9	814	570	564	737	537	572	1,700	545	407	173	175	1,580
10	795	496	589	647	445	496	1,640	550	380	193	171	1,290
11	740	556	512	592	443	429	1,530	482	300	283	759	1,050
12	732	531	483	571	471	534	1,490	490	294	238	718	888
13	730	547	400	646	430	566	1,400	527	284	216	195	796
14	621	531	551	759	538	540	1,300	527	286	209	138	702
15	628	400	626	701	436	586	1,250	550	288	236	1,560	929
16	610	443	844	633	495	500	1,270	452	262	185	2,570	1,260
17	610	421	596	534	496	569	1,290	520	257	185	1,720	1,100
18	572	647	531	723	534	459	1,240	520	289	174	1,140	948
19	572	610	564	648	380	609	1,120	402	245	177	822	827
20	572	635	511	535	383	571	1,030	462	245	163	651	721
21	723	618	690	628	458	693	993	419	267	173	496	668
22	1,100	618	624	621	458	781	970	460	267	161	650	678
23	1,270	569	604	814	383	715	1,010	440	289	141	640	636
24	1,160	579	666	803	422	742	892	452	267	133	466	616
25	1,010	567	596	919	368	629	791	412	262	212	703	570
26	920	569	505	753	443	794	858	407	252	167	751	576
27	846	531	162	756	293	775	765	392	252	103	299	597
28	729	590	475	711	432	1,000	756	371	234	151	275	681
29	777	583	370	340		1,020	789	388	239	124	270	1,040
30	698	585	494	357		1,590	748	349	224	108	247	1,380
31	641		666	454		2,180		337		184	245	
Month	Maximum					Minimum			Mean	Per square mile		Run-off in inches
October	1,350					572			832	0.475		0.55
November	680					400			571	.326		.36
December	707					162			560	.320		.37
January	919					340			647	.370		.43
February	602					293			469	.268		.28
March	2,180					327			716	.409		.47
April	2,370					748			1,423	.813		.91
May	711					337			504	.288		.33
June	412					224			303	.173		.19
July	283					103			180	.103		.12
August	2,570					123			489	.279		.32
September	1,860					474			1,007	.575		.64
The year	2,570					103			641	.366		4.97

Vermilion River near Danville, Ill.

Location.- Chain gage in sec. 22, T. 19 N., R. 11 W., at Chicago & Eastern Illinois Railroad bridge 2 miles southeast of Danville, Vermilion County. Zero of gage is 503.99 feet above mean sea level.

Drainage area.- 1,230 square miles.

Records available.- November 1914 to August 1921, June 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,900 second-feet Mar. 31 (gage height, 6.13 feet); minimum recorded, 1.9 second-feet June 5 (gage height, 1.54 feet).

1914-21, 1928-34: Maximum discharge recorded, 20,200 second-feet May 12, 1933 (gage height, 21.95 feet); minimum recorded, that of June 5, 1934.

Remarks.- Records poor. Flow regulated at times by storage reservoir on North Fork of Vermilion River, 4 miles above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	495	124	101	94	82	48	1,500	124	24	21	9.4	16
2	355	172	53	80	116	69	1,130	111	11	24	9.4	49
3	520	124	77	87	96	172	1,130	132	9.9	27	149	190
4	316	116	94	77	82	222	690	118	10	14	61	398
5	181	124	83	101	74	282	670	122	15	12	28	446
6	149	85	79	63	72	236	696	72	23	12	28	356
7	166	103	54	105	89	187	570	77	25	65	27	282
8	161	75	111	166	47	164	421	72	10	41	24	236
9	109	77	66	164	36	120	421	85	10	39	21	222
10	79	83	58	155	63	71	356	77	6.0	22	24	195
11	80	83	68	139	120	54	470	98	9.9	34	24	178
12	79	42	38	155	62	51	398	75	12	23	36	146
13	58	92	55	158	68	82	376	90	12	82	50	124
14	62	66	72	142	69	50	236	96	20	53	22	105
15	59	37	32	164	94	75	298	101	9.9	40	26	150
16	77	83	68	126	61	61	316	72	21	40	96	1,200
17	85	44	56	155	45	80	236	71	27	41	265	620
18	83	51	68	82	75	82	250	58	65	35	103	335
19	146	49	66	94	50	80	198	61	27	39	68	398
20	105	55	94	89	69	132	222	25	146	25	82	265
21	85	83	87	72	72	124	161	48	89	20	72	222
22	126	89	124	105	87	335	161	40	56	9.9	63	175
23	835	96	164	187	66	356	158	29	43	13	44	136
24	1,070	90	178	376	45	335	172	48	29	18	44	115
25	570	61	190	398	43	222	124	37	37	12	29	101
26	398	89	109	316	31	298	175	34	103	13	21	90
27	298	85	42	282	36	696	142	25	85	8.9	25	89
28	236	72	56	236	32	1,010	99	25	50	8.4	23	75
29	222	68	79	82	79	1,010	101	18	38	7.6	16	356
30	136	58	83	72	72	1,570	124	25	35	10	15	570
31	149		54	120		1,900		21		15	17	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				1,070		58		241		0.188		0.22
November				172		37		82.5		.064		.07
December				190		32		82.5		.064		.07
January				398		63		150		.117		.13
February				120		31		87.2		.052		.05
March				1,900		48		328		.256		.30
April				1,500		99		407		.318		.35
May				132		18		67.0		.082		.06
June				146		6.0		35.3		.028		.03
July				65		7.6		26.6		.021		.02
August				265		9.4		49.1		.038		.04
September				1,200		16		262		.205		.23
The year				1,900		6.0		150		.117		1.57

Embarrass River at Ste. Marie, Ill.

Location.- Chain gage in sec. 30, T. 6 N., R. 14 W., at highway bridge at Ste. Marie, Jasper County. Zero of gage is 447.14 feet above mean sea level.

Drainage area.- 1,540 square miles.

Records available.- October 1909 to December 1912, August 1914 to September 1934.

Average discharge.- 20 years (1914-34), 1,193 second-feet.

Extremes.- Maximum discharge recorded during year, 3,750 second-feet Mar. 28 (gage height, 11.47 feet); minimum recorded, 24 second-feet Nov. 14 (gage height, 0.80 foot).

1909-12, 1914-34: Maximum discharge recorded, 39,000 second-feet May 30, 1927 (gage height, 24.3 feet); minimum recorded, 1.0 second-foot Sept. 5-9 and Oct. 19, 1914.

Remarks.- Records good except those for periods of ice effect, Dec. 27-31, Jan. 30 to Feb. 3, Feb. 25 to Mar. 2, which may be poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	59	29	64	193	54	1,480	230	63	43	260	132
2	164	50	29	57	184	66	1,280	220	62	38	603	299
3	132	49	28	57	184	117	1,080	210	63	33	230	440
4	108	44	31	64	174	231	911	200	66	31	122	857
5	101	49	30	57	146	451	776	210	59	30	112	911
6	115	52	29	54	146	577	776	300	59	52	160	644
7	108	52	31	62	126	514	1,320	444	66	40	170	540
8	92	43	30	88	117	430	803	300	59	32	110	566
9	76	41	29	99	110	350	626	240	150	42	78	911
10	71	43	29	146	106	290	534	210	210	37	63	803
11	69	44	28	184	106	240	498	200	160	38	57	1,240
12	66	40	27	193	94	212	444	180	160	38	106	933
13	47	37	28	174	108	184	423	170	126	33	749	618
14	44	27	28	155	108	184	381	170	340	911	200	465
15	39	31	29	146	92	184	360	150	240	2,400	250	416
16	44	28	27	156	81	193	1,080	150	180	803	150	911
17	44	27	29	126	85	202	2,990	136	132	360	1,560	2,010
18	43	28	27	121	69	212	857	154	210	260	2,630	1,720
19	76	27	29	110	99	202	803	180	108	300	2,940	1,320
20	76	26	136	103	121	202	511	120	84	230	2,810	995
21	46	27	108	101	67	202	423	114	80	557	2,330	749
22	47	27	94	95	61	240	381	106	63	465	1,640	670
23	136	28	123	97	61	310	360	98	60	320	911	515
24	104	31	126	95	56	330	340	96	57	230	644	440
25	76	31	115	222	50	310	300	91	49	170	440	368
26	62	31	108	240	47	310	300	86	46	130	392	345
27	59	31	92	250	46	1,360	280	82	42	136	239	440
28	88	29	78	251	47	5,650	280	78	38	280	233	392
29	88	31	69	252		2,270	260	76	36	110	200	1,400
30	79	31	66	202		1,720	250	72	38	82	170	2,900
31	71		66	193		1,600		70		70	151	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	164	39	80.5	0.082	0.06
November	59	26	36.5	.024	.05
December	136	27	55.7	.036	.04
January	250	54	134	.097	.10
February	193	46	103	.067	.07
March	3,650	54	561	.364	.42
April	2,990	250	697	.453	.51
May	444	70	164	.106	.12
June	340	36	104	.068	.08
July	2,400	30	268	.174	.20
August	2,940	57	671	.456	.50
September	2,900	152	832	.540	.50
The year	3,650	26	309	.201	2.73

West Fork of White River at Muncie, Ind.

Location.- Water-stage recorder in sec. 10, T. 20 N., R. 10 E., 200 feet below Walnut Street highway bridge in Muncie. Zero of gage is 924.10 feet above mean sea level. Prior to Jan. 4, 1934, chain gage at Walnut Street highway bridge with datum 1.00 foot higher.

Drainage area.- 233 square miles.

Records available.- November 1930 to September 1934 in reports of U. S. Geological Survey; July 1925 to December 1929 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge during year, 1,950 second-feet June 22 (gage height, 6.24 feet); minimum, 1.2 second-feet Aug. 5, 6 (gage height, 0.95 foot). 1930-34: Maximum discharge recorded, 10,500 second-feet May 14, 1933 (gage height, old datum, 12.61 feet); minimum, that of Aug. 5, 6, 1934.

Remarks.- Records good except those for period of ice effect, Nov. 14-17, Dec. 12, 13, Dec. 28 to Jan. 3, Jan. 30 to Feb. 7, Feb. 9-18, 20-24, and for estimated period June 23-27, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117	36	34	42	36	25	369	50	19	125	1.5	2.3
2	100	36	33	44	36	71	270	59	14	124	1.4	1.7
3	74	48	100	46	34	646	204	50	11	50	1.4	2.3
4	59	72	105	49	33	373	166	53	20	26	1.3	3.4
5	53	55	80	64	32	255	140	55	42	20	1.2	3.2
6	48	49	55	83	32	171	128	55	29	16	1.3	3.0
7	44	53	48	94	31	125	118	50	24	22	1.5	3.6
8	42	53	44	148	30	92	103	47	26	25	1.4	4.5
9	42	53	36	190	29	68	92	45	36	14	1.4	6.7
10	42	48	37	155	29	64	85	41	84	11	1.7	6.4
11	39	44	29	110	29	60	103	38	29	11	4.4	5.1
12	36	39	30	106	28	80	115	37	21	9.4	5.4	4.5
13	34	37	30	108	28	63	92	35	17	8.9	5.1	5.1
14	30	37	29	130	28	78	83	39	13	8.9	4.1	5.1
15	30	38	29	122	28	113	83	44	10	6.5	3.7	4.9
16	30	39	37	118	27	106	704	39	9.8	8.0	62	431
17	33	37	70	94	27	92	612	35	10	7.0	106	161
18	39	36	640	89	26	92	339	35	15	6.4	21	49
19	29	36	320	83	23	89	229	31	20	5.1	11	27
20	28	36	285	70	24	98	195	28	16	4.1	8.5	20
21	25	39	285	64	24	161	138	24	63	2.6	7.3	13
22	25	36	180	63	23	174	120	22	1,270	3.4	6.4	11
23	161	36	140	113	24	122	103	21	250	4.1	5.4	10
24	125	33	125	115	23	89	87	22	100	2.6	4.8	9.8
25	77	26	97	94	22	76	74	24	50	1.6	4.1	8.5
26	62	25	80	81	22	85	70	22	30	1.5	4.5	6.4
27	53	29	34	70	23	1,170	68	20	25	1.6	5.1	7.6
28	42	33	43	66	24	1,200	63	18	19	1.4	4.5	9.0
29	31	33	41	45		930	57	20	14	1.4	4.1	51
30	39	34	40	42		930	52	17	14	1.4	3.6	107
31	36		41	40		570		16		1.5	3.4	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					161	25	52.4	0.225		0.26		
November					72	25	40.2	.173		.19		
December					640	29	102	.438		.50		
January					190	40	88.3	.379		.44		
February					38	22	27.8	.119		.12		
March					1,200	25	267	1.15		1.33		
April					704	52	169	.725		.81		
May					55	16	34.8	.146		.17		
June					1,270	9.8	76.7	.329		.37		
July					125	1.4	17.2	.074		.09		
August					106	1.2	10.3	.044		.05		
September					431	1.7	32.4	.139		.16		
The year					1,270	1.2	76.9	.350		4.49		

West Fork of White River at Anderson, Ind.

Location.- Staff gage in sec. 18, T. 19 N., R. 8 E., at municipal water supply plant in Anderson, 1 mile above Killbuck Creek. Prior to May 12, 1934, chain gage with same datum at Twelfth Street Bridge, 250 feet upstream.

Drainage area.- 381 square miles.

Records available.- July 1932 to September 1934 in reports of U. S. Geological Survey; July 1925 to September 1927 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 1,980 second-feet Mar. 28 (gage height, 9.50 feet); minimum recorded, 18 second-feet Aug. 2 (gage height, 6.21 feet).

1932-34: Maximum discharge recorded, 14,500 second-feet May 14, 1933 (gage height, 17.59 feet); minimum, that of Aug. 2, 1934.

Maximum stage known, 22.9 feet Mar. 25, 1913.

Remarks.- Records good except those for period of ice effect, Dec. 27 to Jan. 2, Jan. 29 to Feb. 27, and for estimated period May 12-15, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	264	106	97	135	135	92	715	142	45	104	22	22
2	216	106	106	135	130	131	505	142	45	92	21	28
3	180	123	128	134	125	445	332	142	52	86	22	24
4	145	131	251	134	120	605	268	137	45	81	24	22
5	131	131	184	145	115	417	247	126	72	68	22	21
6	120	128	148	154	110	286	247	115	70	61	23	26
7	148	118	128	164	110	216	212	106	57	73	23	46
8	131	120	118	198	110	204	197	101	56	70	25	46
9	120	118	118	295	110	176	173	92	60	64	23	36
10	120	118	118	251	110	158	161	90	70	58	23	31
11	120	118	104	220	110	142	190	90	82	56	37	36
12	113	118	90	243	110	137	173	87	59	53	42	37
13	104	118	90	198	110	139	173	85	52	53	30	39
14	104	118	94	212	110	161	173	82	48	53	30	37
15	101	106	99	212	110	173	168	77	44	53	27	39
16	99	106	108	204	105	173	538	73	42	47	115	51
17	94	106	204	187	105	173	1,120	72	40	45	139	64
18	94	106	678	176	105	173	605	70	92	46	84	101
19	94	106	570	161	105	173	417	67	77	44	56	70
20	108	106	445	148	105	173	337	64	56	42	42	57
21	113	108	445	142	105	173	264	58	50	39	30	52
22	212	115	323	142	100	173	235	57	67	56	28	46
23	184	108	228	190	100	173	216	57	795	32	28	45
24	220	106	175	224	100	173	201	57	224	27	37	43
25	170	106	164	180	100	170	173	61	131	25	35	43
26	139	106	151	148	100	161	173	58	88	26	30	42
27	123	106	145	158	95	1,020	173	56	86	25	26	42
28	118	106	140	158	92	1,860	170	48	75	30	28	42
29	113	104	140	150		1,390	154	47	64	28	29	61
30	110	99	135	145		1,390	142	46	60	25	28	70
31	106		135	140		925		45		23	26	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					264	94	136	0.357	0.41			
November					131	99	112	.294	.33			
December					678	90	195	.512	.59			
January					295	134	177	.465	.54			
February					135	92	109	.286	.30			
March					1,860	92	366	1.01	1.16			
April					1,120	142	294	.772	.86			
May					142	45	82.3	.216	.25			
June					795	40	93.4	.245	.27			
July					104	23	50.5	.133	.15			
August					139	21	37.3	.099	.11			
September					101	21	44.0	.115	.13			
The year					1,860	21	143	.375	5.10			

West Fork of White River near Noblesville, Ind.

Location.- Water-stage recorder in sec. 4, T. 19 N., R. 5 E., at highway bridge 1 mile west of Strawtown and 7 miles northeast of Noblesville, Hamilton County. Prior to Nov. 21, 1933, chain gage at same location with same datum.

Drainage area.- 800 square miles.

Records available.- July to September 1922, October 1927 to September 1934, May 1915 to June 1922 (at gage 2 miles downstream), in reports of U. S. Geological Survey; October 1922 to September 1927 in reports of Indiana Department of Conservation.

Average discharge.- 15 years (1915-25, 1929-34), 855 second-feet.

Extremes.- Maximum discharge during year, 3,700 second-feet Mar. 28 (gage height, 9.17 feet); minimum, 49 second-feet Aug. 4 (gage height, 4.23 feet).
1922-34: Maximum discharge, 20,800 second-feet Mar. 21, 1927 (gage height, 16.05 feet); minimum, that of Aug. 4, 1934.

Remarks.- Records good except those for period of ice effect, Dec. 26 to Jan. 3, Jan. 28 to Mar. 2, which are poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	672	161	134	180	195	175	1,460	260	110	105	56	64
2	550	164	154	180	190	260	1,100	248	107	150	54	61
3	440	184	145	185	185	895	899	235	110	204	54	61
4	342	204	226	194	180	1,220	764	240	105	148	54	60
5	280	204	304	201	180	647	628	236	115	115	54	59
6	244	211	244	215	180	580	568	229	221	125	55	66
7	244	201	211	233	175	445	532	226	187	177	59	87
8	236	190	190	288	175	356	476	211	134	136	61	103
9	211	187	177	395	170	304	445	201	142	115	62	91
10	208	184	167	455	170	276	415	194	167	105	64	75
11	197	173	164	390	170	248	425	187	161	96	98	77
12	184	173	161	324	170	240	415	184	151	89	112	77
13	173	170	151	312	165	240	400	173	120	89	98	74
14	167	167	151	316	165	264	375	180	105	87	71	71
15	154	151	158	329	165	280	352	187	98	84	70	72
16	158	161	158	320	160	316	1,030	184	94	84	149	181
17	167	170	187	304	160	320	2,360	175	99	82	323	334
18	164	139	524	292	160	356	1,460	187	134	80	248	293
19	164	154	896	284	155	415	1,000	154	236	77	154	161
20	158	158	604	268	155	415	738	148	154	72	107	117
21	145	151	604	248	155	532	598	145	117	71	91	98
22	177	158	538	244	150	586	520	136	105	67	80	89
23	215	168	425	375	150	498	465	134	1,300	66	77	82
24	320	148	352	455	150	405	415	134	572	64	74	77
25	280	145	308	410	150	338	360	154	280	61	72	74
26	229	139	250	352	160	351	338	139	197	61	71	74
27	201	136	220	316	180	2,070	324	128	158	61	67	84
28	164	134	200	290	200	3,500	308	123	134	62	66	80
29	173	136	195	235		2,630	288	117	112	61	67	258
30	161	136	190	210		2,720	268	117	115	59	66	276
31	164		185	200		2,140		115		58	65	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	672	145	237	0.296	0.34
November	211	134	165	.206	.23
December	896	134	276	.345	.40
January	455	180	290	.362	.42
February	200	155	169	.211	.22
March	3,500	175	781	.976	1.13
April	2,360	268	657	.821	.92
May	260	115	175	.220	.25
June	1,300	89	194	.242	.27
July	204	58	93.9	.117	.13
August	323	54	90.3	.113	.13
September	334	59	113	.141	.16
The year.	3,500	54	271	.339	4.60

West Fork of White River near Nora, Ind.

Location.- Water-stage recorder in sec. 20, T. 17 N., R. 4 E., at highway bridge 2 miles east of Nora, Marion County.

Drainage area.- 1,180 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; July 1925 to September 1926, October 1929 to March 1930 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge during year, 4,540 second-feet Mar. 28 (gage height, 7.61 feet); minimum, 38 second-feet July 31 (gage height, 1.24 feet).
1930-34: Maximum discharge, 23,200 second-feet May 13, 1933 (gage height, 16.49 feet); minimum, that of July 31, 1934.

Remarks.- Records good except those for estimated periods Dec. 11 to Jan. 1, Jan. 29 to Mar. 11, which are fair. Backwater from dam and intakes of Indianapolis Water Co. 3½ miles below gage affects stage-discharge relation during some periods of low and medium stage; daily discharge during periods of backwater determined from slope computed from stages at gage and at dam. Gage-height records furnished by Indianapolis Water Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	820	214	188	250	260	250	2,210	359	165	216	65	84
2	680	209	184	234	250	300	1,580	352	156	140	64	52
3	552	242	186	251	250	600	1,240	354	157	186	56	82
4	445	239	193	234	240	1,300	970	333	144	212	56	94
5	369	248	270	239	230	1,200	820	333	132	173	60	94
6	358	243	301	239	230	900	755	310	154	180	66	92
7	360	254	267	245	220	750	708	306	215	318	70	116
8	335	245	231	301	220	600	628	298	188	241	72	109
9	332	245	209	338	210	500	577	286	170	230	72	115
10	319	236	196	490	220	400	533	252	174	162	90	105
11	308	228	195	472	220	350	543	244	184	167	87	99
12	264	231	190	406	230	315	533	235	178	147	270	135
13	242	222	185	389	230	334	486	243	154	149	270	128
14	236	216	185	365	220	338	472	241	145	142	158	106
15	228	214	185	357	230	359	432	247	141	128	128	102
16	228	211	190	365	220	362	937	257	120	120	177	118
17	228	201	300	353	220	363	2,850	245	116	108	447	167
18	228	203	450	349	220	382	2,210	238	116	113	425	284
19	219	206	650	326	220	486	1,420	228	174	106	322	242
20	206	216	700	319	220	538	1,040	230	214	96	223	160
21	216	214	650	315	210	623	820	220	159	94	163	137
22	234	222	600	290	210	735	708	215	134	89	123	125
23	242	219	500	319	210	690	623	200	290	90	124	126
24	287	216	450	393	210	628	543	197	877	73	122	122
25	342	214	400	519	210	436	461	194	374	78	118	114
26	330	206	350	481	210	393	440	196	278	72	104	104
27	284	198	300	410	220	1,740	432	170	237	75	98	105
28	245	196	265	373	275	4,320	397	170	208	74	97	108
29	248	198	260	325		3,770	361	160	177	74	94	267
30	211	196	255	280		3,450	349	151	163	67	97	368
31	201		250	250		3,150		147		70	140	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	820	201	316	0.268	0.31
November	254	196	220	.186	.21
December	700	184	314	.266	.31
January	619	234	339	.287	.33
February	275	210	226	.192	.20
March	4,320	250	982	.832	.96
April	2,850	349	869	.736	.82
May	359	147	245	.208	.24
June	877	116	203	.172	.19
July	318	67	135	.114	.13
August	447	56	144	.122	.14
September	368	52	135	.114	.13
The year	4,320	52	345	.292	3.97

West Fork of White River at Indianapolis, Ind.

Location.— Water-stage recorder at Morris Street Bridge, in Indianapolis. Zero of gage is 2.28 feet above mean sea level.

Drainage area.— 1,610 square miles.

Records available.— April 1930 to September 1934; May 1904 to July 1906 at Cleveland, Cincinnati, Chicago & St. Louis Railway bridge three-quarters of a mile above Morris Street, in reports of U. S. Geological Survey. July 1925 to March 1930 in reports of the Indiana Department of Conservation.

Extremes.— Maximum discharge during year, 5,850 second-feet Mar. 28 (gage height, 670.00 feet); minimum, 24 second-feet Aug. 4 (gage height, 664.42 feet); minimum daily discharge, 42 second-feet Aug. 3, 4.
1930-34: Maximum discharge, 32,200 second-feet May 13, 1933 (gage height, 681.28 feet); minimum, that of Aug. 4, 1934.

Remarks.— Records good except those for periods of ice effect, Dec. 30 to Jan. 5, Feb. 1-9, which are poor. Water supply of city of Indianapolis diverted 12 miles above gage. Records Apr. 1, 1930, to Sept. 30, 1931, represent discharge at sanitation plant 2 miles below Morris Street and include sewage flow. Subsequent records taken at Morris Street and do not include sewage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	279	234	290	300	286	2,830	417	174	187	49	53
2	780	279	209	290	280	359	2,000	411	157	198	46	67
3	734	291	261	295	270	498	1,560	411	165	159	42	67
4	641	260	234	300	260	1,400	1,240	405	165	137	42	69
5	519	303	247	310	250	1,430	1,060	411	137	174	44	63
6	450	293	330	329	250	1,060	907	400	151	367	46	68
7	437	284	375	365	250	907	850	417	160	332	45	92
8	399	284	325	354	240	751	786	411	213	324	45	49
9	375	269	289	368	240	610	760	382	310	245	59	63
10	369	265	284	457	237	519	734	334	214	203	69	95
11	319	255	251	563	248	470	701	334	184	159	74	175
12	293	255	234	533	267	424	625	319	180	159	106	162
13	314	293	226	505	263	424	617	329	180	157	309	158
14	308	303	221	483	252	417	602	329	164	132	214	244
15	303	265	230	457	237	437	635	309	159	104	106	184
16	394	251	221	463	263	476	1,230	309	127	143	320	161
17	303	251	429	483	280	519	3,380	309	121	129	301	210
18	289	242	269	457	252	555	3,030	309	276	106	417	175
19	289	242	473	437	234	571	1,890	275	204	78	405	255
20	279	408	795	424	234	699	1,310	267	204	80	259	265
21	284	300	742	405	241	734	1,040	252	210	66	127	215
22	279	234	708	430	241	869	907	227	177	67	132	145
23	279	221	674	411	230	907	841	196	157	75	169	135
24	279	213	578	483	223	850	742	199	688	60	114	125
25	274	217	497	571	213	742	650	199	483	49	80	110
26	319	206	450	641	203	758	594	196	334	44	75	100
27	381	206	371	578	203	1,680	533	196	267	63	78	125
28	335	255	309	505	206	5,400	483	203	199	80	73	115
29	319	255	305	463		5,100	417	190	148	56	63	305
30	325	242	295	344		4,250	417	162	157	70	60	215
31	284		290	319		3,970		168		73	60	
Month	Maximum					Minimum		Mean	Per square mile		Run-off in inches	
October	1,020					274		392	0.243		0.28	
November	408					206		264	.164		.18	
December	795					209		366	.227		.26	
January	641					290		430	.267		.31	
February	300					203		245	.152		.16	
March	5,400					256		1,226	.761		.88	
April	3,380					417		1,112	.691		.77	
May	417					162		299	.186		.21	
June	688					121		216	.134		.15	
July	367					44		138	.086		.10	
August	417					42		130	.081		.09	
September	305					53		142	.088		.10	
The year	5,400					42		415	.258		3.49	

West Fork of White River at Spencer, Ind.

Location.— Wire-weight gage in sec. 29, T. 10 N., R. 3 W., at highway bridge at Spencer, Owen County. Prior to Sept. 13, 1934, chain gage at same location with same datum.

Drainage area.— 2,910 square miles.

Records available.— October 1927 to September 1934 in reports of U. S. Geological Survey; July 1925 to September 1927 in reports of Indiana Department of Conservation.

Extremes.— Maximum discharge recorded during year, 9,260 second-feet Mar. 28 (gage height—10.89 feet); minimum, about 260 second-feet July 25.
1927-34: Maximum discharge recorded, 56,000 second-feet May 15, 1933 (gage height, 23.17 feet); minimum, 225 second-feet Aug. 18, 19, 1931.

Remarks.— Records good except those for periods of ice effect, Dec. 27 to Jan. 2, Jan. 29 to Mar. 1, and those estimated July 18-27, Sept. 4-6, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,430	585	454	800	750	550	5,570	1,030	454	671	353	287
2	1,870	585	479	775	725	790	4,580	1,030	430	615	430	271
3	1,710	642	479	750	700	970	4,250	1,030	454	479	1,030	271
4	1,360	613	504	730	680	3,150	3,050	970	585	430	1,220	270
5	1,220	613	479	700	660	2,790	2,690	970	530	407	970	270
6	970	671	479	671	640	2,590	2,190	1,030	530	407	323	265
7	910	700	479	671	620	2,510	2,030	970	530	970	271	430
8	910	671	454	671	600	2,430	1,870	910	479	1,500	271	2,110
9	850	642	479	850	575	2,270	1,790	850	504	790	271	790
10	850	642	454	910	560	1,950	1,640	850	1,570	642	271	504
11	790	613	454	910	575	1,430	1,710	790	2,190	530	2,110	407
12	730	642	454	970	600	1,150	1,640	760	1,030	454	6,410	385
13	700	613	454	970	625	970	1,500	760	585	430	1,640	454
14	671	557	430	1,030	650	970	1,430	760	530	407	790	454
15	642	530	430	970	625	1,030	1,360	790	530	385	700	407
16	642	530	530	970	613	1,030	3,250	790	504	353	642	585
17	613	504	1,160	910	585	1,030	5,020	730	479	343	504	454
18	585	504	3,750	910	530	970	4,580	700	479	340	700	430
19	585	530	3,850	910	613	1,030	3,950	671	454	330	1,290	407
20	613	557	3,950	850	540	1,100	3,150	642	642	325	1,950	407
21	642	557	3,650	850	520	1,290	3,050	613	353	315	970	407
22	730	557	2,780	850	520	1,360	2,430	585	430	295	730	430
23	1,030	530	1,500	650	510	1,430	2,030	557	790	280	671	385
24	790	557	1,290	970	500	1,570	1,950	530	1,360	265	557	353
25	642	530	1,160	970	500	1,570	1,640	642	1,150	260	504	323
26	613	530	1,100	970	490	2,030	1,350	585	850	270	479	323
27	557	504	1,000	970	500	6,530	1,350	530	671	270	454	454
28	613	479	950	910	525	9,120	1,290	530	585	353	385	1,030
29	642	454	900	850		6,980	1,290	504	479	671	323	1,950
30	642	430	850	800		6,180	1,100	479	430	479	305	2,270
31	585		625	775		6,290		504		407	305	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,430	557	875	0.301	0.35
November	700	430	569	.196	.22
December	3,950	430	1,168	.401	.46
January	1,030	671	861	.296	.34
February	750	490	590	.203	.21
March	9,120	650	2,557	.879	1.01
April	5,570	1,100	2,492	.855	.96
May	1,030	479	745	.255	.30
June	2,190	553	687	.236	.28
July	1,500	260	474	.163	.19
August	6,410	271	898	.309	.36
September	2,270	265	593	.204	.23
The year.	9,120	260	1,046	.359	4.89

West Fork of White River at Newberry, Ind.

Location.- Water-stage recorder in sec. 25, T. 6 N., R. 6 W., at highway bridge at Newberry, Greene County. Zero of gage is 465.59 feet above mean sea level.

Drainage area.- 4,670 square miles.

Records available.- September 1928 to September 1934.

Extremes.- Maximum discharge during year, 13,600 second-feet Mar. 29 (gage height, 12.30 feet); minimum, 367 second-feet July 27 (gage height, 0.90 foot).
1928-34: Maximum discharge, 60,700 second-feet Jan. 15, 1930 (gage height, 23.1 feet); minimum, 345 second-feet Aug. 30, 1930; gage height, that of July 27, 1934.
Flood of January 1913 reached a stage of 26.2 feet.

Remarks.- Records good except those for period of ice effect, Jan. 30 to Feb. 8, and those estimated, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,770	*900	*750	*1,100	1,100	950	7,800	1,710	675	922	651	634
2	2,810	*875	*740	1,070	1,050	1,020	6,720	1,620	659	984	554	594
3	2,190	*875	*750	*1,050	1,000	2,620	5,530	1,570	643	862	539	686
4	1,810	*875	760	*1,020	950	5,040	4,650	1,480	675	794	930	594
5	1,620	*875	768	*1,000	900	4,540	3,990	1,460	743	760	1,060	554
6	1,480	*900	*770	*990	875	4,430	3,440	1,480	854	726	786	531
7	1,580	896	*780	*980	850	3,660	3,240	1,480	948	888	667	594
8	1,290	*900	*790	*1,400	825	3,040	3,140	1,580	846	1,060	547	972
9	1,180	*875	*790	1,530	*800	2,640	2,840	1,290	870	1,360	492	2,790
10	1,160	*860	*780	*1,550	*800	2,340	2,640	1,200	5,350	1,110	477	2,320
11	*1,100	*850	*780	*1,600	*825	2,040	2,490	1,160	4,110	948	7,710	1,340
12	*1,070	*840	777	*1,650	*850	1,810	2,390	1,090	1,950	879	9,000	1,090
13	*1,050	*830	*775	*1,700	875	1,710	2,290	1,060	1,240	802	6,710	930
14	*1,020	811	*780	*1,650	896	1,660	2,190	1,060	1,010	760	2,590	845
15	*1,000	*790	*780	*1,600	862	1,620	2,040	1,060	879	692	1,480	820
16	*1,020	*770	*850	1,390	828	1,570	3,160	1,060	811	618	2,010	1,090
17	1,070	*750	*3,250	*1,300	794	1,530	7,530	1,030	760	578	1,760	1,530
18	*1,050	*730	*3,750	*1,270	768	1,570	8,160	984	718	523	1,160	1,340
19	*1,000	*730	3,880	*1,220	811	1,570	6,720	957	667	507	1,730	557
20	*1,000	*750	*4,250	*1,200	777	1,660	5,640	930	709	485	4,110	836
21	*1,050	760	*4,000	*1,180	760	1,810	4,430	896	845	477	6,000	768
22	*1,150	*770	*3,500	*1,170	777	2,140	3,660	870	726	439	4,600	762
23	*1,400	*770	*2,760	1,170	786	2,340	3,140	846	667	432	1,880	752
24	1,340	*760	*2,250	1,290	760	2,290	2,840	820	1,220	403	1,380	875
25	*1,200	*760	*1,650	1,340	726	2,240	2,640	811	1,710	369	1,340	643
26	*1,000	*760	1,570	1,340	684	2,290	2,340	768	1,110	381	1,130	602
27	*900	*770	*1,400	1,340	684	9,530	2,190	760	1,190	374	993	618
28	*850	777	*1,300	1,380	*700	12,500	2,090	760	1,060	684	888	1,380
29	*875	*770	*1,200	1,340		13,400	2,000	734	1,000	1,030	802	3,440
30	*900	*760	*1,150	1,250		11,800	1,860	718	854	966	734	5,640
31	913		*1,120	1,180		9,390		709		768	675	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					3,770	850	1,311	0.281	0.32			
November					900	730	811	.174	.19			
December					4,250	740	1,601	.343	.40			
January					1,700	980	1,295	.277	.32			
February					1,100	684	833	.178	.19			
March					13,400	930	3,765	.806	.93			
April					8,160	1,960	3,790	.812	.91			
May					1,710	709	1,089	.233	.27			
June					5,350	643	1,183	.253	.28			
July					1,380	374	729	.156	.18			
August					9,000	477	2,109	.452	.52			
September					5,640	531	1,207	.258	.29			
The year					13,400	374	1,649	.353	4.80			

*Estimated.

White River at Hazleton, Ind.

Location.- Water-stage recorder in sec. 29, T. 1 N., R. 10 W. (revised), a quarter of a mile above highway bridge at Hazleton. Prior to Aug. 31, 1934, chain gage with same datum at highway bridge. Zero of gage is 383.23 feet above mean sea level (revised).

Drainage area.- 11,200 square miles.

Records available.- October 1928 to September 1934 in reports of U. S. Geological Survey; July 1924 to September 1928 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 25,200 second-feet Apr. 1 (gage height, 14.66 feet); minimum, 1,080 second-feet July 31 (gage height, 1.31 feet). 1928-34: Maximum discharge recorded, 139,000 second-feet Jan. 17, 1930 (gage height, 30.2 feet); minimum, 635 second-feet Oct. 31, 1930 (gage height, 1.66 feet).

Remarks.- Records good except those for periods of ice effect, Jan. 30 to Feb. 3, Feb. 10-14, Feb. 25 to Mar. 1, which are fair. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,670	1,950	1,410	3,000	2,500	1,600	25,200	4,090	1,610	4,230	1,370	1,550
2	4,490	1,950	1,410	2,880	2,450	1,750	24,200	3,950	1,530	2,730	1,370	1,470
3	4,920	1,860	1,410	2,880	2,400	2,170	20,600	3,670	1,630	2,860	1,450	1,430
4	4,350	1,750	1,410	2,760	2,400	2,760	16,400	3,530	1,450	4,370	1,370	1,390
5	3,670	1,750	1,410	2,760	2,280	5,160	13,100	3,530	1,370	4,800	1,370	1,390
6	3,410	1,750	1,340	3,250	2,280	7,890	11,000	3,390	1,470	4,370	1,290	1,310
7	2,900	1,750	1,340	3,250	2,170	12,100	9,460	3,250	1,610	3,950	1,370	1,510
8	2,780	1,490	1,340	3,380	1,750	14,400	8,380	3,250	1,530	3,250	1,600	1,820
9	2,300	1,750	1,410	3,380	1,750	11,000	7,680	3,390	1,700	2,860	1,990	1,720
10	2,300	1,750	1,410	3,510	1,700	9,280	7,340	3,390	3,250	2,860	1,890	2,200
11	2,190	1,950	1,410	3,510	1,750	8,200	7,000	3,120	3,950	2,860	3,950	3,760
12	2,190	2,060	1,410	3,510	1,750	7,170	6,500	2,860	7,340	2,860	8,020	4,330
13	2,080	2,060	1,410	3,770	1,750	6,500	6,020	2,730	9,460	2,730	10,800	3,000
14	1,860	1,750	1,410	3,900	1,750	6,020	5,700	2,730	6,660	2,730	11,900	2,370
15	1,860	1,750	1,410	4,030	1,860	5,550	5,550	2,470	4,800	1,790	9,650	2,190
16	1,760	1,750	1,490	4,030	1,750	5,100	5,250	2,470	3,530	1,610	6,340	2,080
17	1,760	1,490	1,570	3,250	1,750	4,510	5,100	2,340	2,730	2,220	4,250	2,250
18	1,660	1,570	3,120	3,120	1,750	4,510	5,550	2,220	2,470	1,890	3,530	2,080
19	1,660	1,570	5,010	3,000	1,750	4,370	6,020	2,220	2,100	2,100	3,530	2,140
20	1,660	1,570	6,380	3,000	1,660	4,090	8,580	2,220	1,790	1,890	2,990	2,140
21	1,660	1,490	7,200	3,000	1,750	3,950	8,920	2,220	1,700	1,600	2,470	2,020
22	1,660	1,490	8,070	2,880	1,750	4,090	8,560	2,100	2,600	1,530	4,650	1,920
23	1,660	1,490	6,810	2,880	1,750	3,950	7,340	1,990	5,400	1,290	5,860	1,870
24	2,640	1,490	9,930	2,520	1,750	4,950	6,340	1,990	4,950	1,290	5,400	1,640
25	2,640	1,490	10,700	2,520	1,600	4,950	6,340	1,790	2,990	1,290	4,090	1,470
26	2,640	1,490	11,500	2,520	1,500	5,330	6,180	1,790	4,230	1,220	2,990	1,390
27	2,640	1,490	11,500	2,760	1,400	7,340	5,100	1,790	5,860	1,220	2,470	1,350
28	3,000	1,490	9,170	2,750	1,500	11,700	4,800	1,700	6,020	1,150	2,340	1,310
29	2,400	1,410	4,170	2,760		17,000	4,650	1,700	5,550	1,150	2,100	1,470
30	2,170	1,410	3,510	2,600		21,800	4,230	1,610	4,800	1,150	1,890	2,040
31	2,170		3,380	2,550		24,000		1,610		1,080	1,550	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	4,920	1,660	2,540	0.227	0.26
November	2,060	1,410	1,667	.149	.17
December	11,500	1,340	4,015	.358	.41
January	4,030	2,520	3,094	.276	.32
February	2,500	1,600	1,864	.166	.17
March	24,000	1,600	7,522	.672	.77
April	25,200	4,230	8,953	.800	.89
May	4,090	1,610	2,616	.234	.27
June	9,460	1,370	3,532	.315	.35
July	4,800	1,080	2,353	.210	.24
August	11,900	1,290	3,736	.334	.39
September	4,330	1,310	1,954	.174	.19
The year.	25,200	1,080	3,665	.327	4.43

Fall Creek at Millersville, Ind.

Location.- Water-stage recorder in sec. 9, T. 16 N., R. 4 E., at highway bridge just south of Millersville, Marion County, and 8.5 miles above mouth.

Drainage area.- 308 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; July 1925 to September 1926, October 1929 to March 1930 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge during year, 1,000 second-feet Mar. 28 (gage height, 5.08 feet); minimum, 16 second-feet Aug. 4 (gage height, 0.94 foot).
1930-34: Maximum discharge, 6,900 second-feet May 14, 1933 (gage height, 11.77 feet); minimum, that of Aug. 4, 1934.

Remarks.- Records good except those for Oct. 1 and for periods of ice effect, Dec. 27 to Jan. 3, Jan. 30 to Mar. 2, which are fair. Gage-height records furnished and two discharge measurements made by Indianapolis Water Co.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	48	49	60	60	49	332	99	41	57	19	18
2	62	49	49	61	59	90	265	96	39	37	18	18
3	59	51	53	61	58	316	223	92	40	32	19	16
4	55	54	62	62	57	333	192	91	40	30	17	18
5	50	61	95	64	56	206	169	87	39	29	17	18
6	49	58	74	65	55	165	156	87	36	57	17	19
7	50	58	66	67	54	137	149	83	34	204	18	23
8	52	57	60	76	52	116	142	77	34	92	19	25
9	55	54	57	91	50	100	127	74	36	52	20	28
10	50	51	54	99	49	91	122	72	36	43	19	25
11	49	51	51	91	50	88	128	67	36	36	22	27
12	47	50	49	86	51	85	127	65	36	36	20	27
13	45	50	49	86	52	85	117	66	33	36	22	24
14	44	50	50	83	51	90	111	68	31	36	21	25
15	43	48	50	82	51	101	110	74	31	34	19	42
16	46	44	51	80	50	110	651	68	30	30	71	178
17	46	51	66	80	50	107	900	64	29	30	58	85
18	48	49	111	79	50	107	492	63	103	29	53	49
19	47	50	156	77	50	104	344	59	67	28	38	37
20	46	49	122	75	49	103	261	57	74	25	29	31
21	45	51	120	73	49	130	223	54	46	24	26	28
22	47	50	117	72	50	158	192	53	37	23	24	28
23	51	50	103	80	50	132	178	50	36	22	24	27
24	61	50	91	100	49	110	147	49	36	20	24	26
25	56	50	81	107	49	101	132	52	37	20	23	26
26	50	49	75	99	48	106	127	53	39	20	22	26
27	50	49	62	87	47	641	127	50	36	22	22	28
28	49	49	60	83	46	880	114	46	35	24	20	28
29	49	50	61	73		660	106	43	30	23	20	41
30	48	50	60	62		550	100	44	89	20	19	48
31	48		59	61		423		42		20	18	
Month	Maximum					Minimum		Mean		Per square mile		Run-off in inches
October	100					43		51.5		0.168		0.19
November	61					44		51.0		.187		.19
December	156					49		73.0		.239		.28
January	107					60		78.1		.255		.29
February	60					46		51.5		.168		.17
March	880					49		209		.683		.79
April	900					100		219		.716		.80
May	99					42		66.0		.216		.25
June	103					29		42.2		.138		.15
July	204					20		38.4		.125		.14
August	71					17		25.1		.082		.09
September	178					18		34.7		.113		.13
The year	900					17		78.4		.256		3.47

Eel River near Centerpoint, Ind.

Location.— Chain gage in sec. 33, T. 11 N., R. 6 W., at highway bridge $4\frac{1}{2}$ miles south of Centerpoint, Clay County.

Drainage area.— 883 square miles.

Records available.— January 1931 to September 1934.

Extremes.— Maximum discharge recorded during year, 7,240 second-feet Aug. 20 (gage height, 14.78 feet); minimum recorded, 24 second-feet July 27 (gage height, 0.20 foot).

1931-34: Maximum discharge recorded, 12,800 second-feet May 14, 1933 (gage height, 21.26 feet); minimum, that of July 27, 1934.

Remarks.— Records good except those estimated for periods of missing gage heights, Jan. 6-8, 12-23, Jan. 30 to Mar. 2, which are poor.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	206	88	114	166	125	95	755	217	64	57	69	106		
2	176	97	114	148	120	110	685	206	67	74	59	91		
3	157	103	114	139	120	2,200	615	196	67	64	41	114		
4	139	106	114	139	115	1,940	545	186	64	67	88	106		
5	130	114	114	239	110	1,100	450	176	77	59	97	91		
6	114	130	104	200	110	755	450	250	74	50	77	91		
7	106	122	98	220	105	545	615	196	72	64	52	97		
8	114	122	106	250	105	480	545	176	69	148	43	1,380		
9	106	114	103	392	100	420	450	166	67	114	39	1,070		
10	114	106	100	311	100	337	392	157	1,420	91	36	392		
11	114	100	97	262	100	262	364	139	337	74	510	580		
12	102	97	91	230	105	262	364	139	157	62	695	398		
13	90	94	97	225	110	274	364	130	114	57	239	196		
14	84	94	94	220	110	298	324	130	94	52	157	166		
15	98	91	91	220	110	298	286	130	77	48	139	148		
16	114	91	100	210	110	274	1,660	122	67	43	122	1,580		
17	122	88	122	200	110	262	3,350	122	64	41	94	420		
18	122	87	364	180	110	262	1,300	114	62	39	77	298		
19	139	102	350	170	110	286	958	106	59	37	2,500	217		
20	122	98	337	160	105	364	615	100	52	34	7,240	157		
21	114	102	350	150	105	580	480	94	50	32	1,660	139		
22	239	108	274	150	105	685	420	88	48	32	392	130		
23	186	114	239	200	100	510	392	83	825	30	392	122		
24	157	114	217	250	100	420	337	80	364	29	545	114		
25	130	114	206	239	100	420	311	77	157	27	311	106		
26	122	114	186	217	100	510	286	77	130	26	217	97		
27	106	114	157	196	95	6,200	298	74	83	24	206	685		
28	98	114	148	186	95	5,690	274	72	74	139	196	1,040		
29	94	114	130	157		1,980	250	69	64	186	157	1,220		
30	94	122	122	135		1,420	228	67	52	114	139	2,350		
31	91		139	130		1,100		64		100	122			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					239		84		126		0.145		0.16	
November					130		87		106		.120		.13	
December					364		91		161		.182		.21	
January					392		130		203		.230		.27	
February					125		95		107		.121		.13	
March					6,200		95		979		1.11		1.28	
April					3,350		228		612		.693		.77	
May					250		64		129		.146		.17	
June					1,420		48		166		.188		.21	
July					186		24		65.0		.074		.09	
August					7,240		36		546		.618		.71	
September					2,350		91		456		.516		.58	
The year					7,240		24		306		.347		4.71	

East Fork of White River at Seymour, Ind.

Location.- Water-stage recorder in sec. 7, T. 6 N., R. 6 E., 1,700 feet below highway bridge and 1 mile north of Seymour. Prior to July 17, 1934, staff gage 150 feet downstream was used. Zero of staff gage and zero of recorder £50.87 feet above mean sea level; zero of chain gage, 1,700 feet upstream formerly used during high stages, 558.28 feet above mean sea level.

Drainage area.- 2,380 square miles.

Records available.- October 1927 to September 1934 in reports of U. S. Geological Survey; May 1923 to September 1927 in reports of Indiana Department of Conservation.

Extremes.- Maximum discharge recorded during year, 10,300 second-feet Mar. 28 (gage height, 11.58 feet); minimum, 125 second-feet Sept. 5 (gage height, 0.37 foot).
1927-34: Maximum discharge recorded, about 42,700 second-feet Jan. 10, 1930 (chain-gage height, 11.6 feet); minimum, that of Sept. 5, 1934.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	990	446	350	890	640	497	3,570	735	338	1,050	216	152
2	830	446	350	890	640	551	2,860	735	392	561	192	153
3	686	425	350	890	595	4,370	2,310	690	338	442	964	150
4	595	406	350	830	595	6,370	2,030	690	338	371	1,870	150
5	530	406	446	791	595	4,370	1,780	645	264	424	756	152
6	487	466	487	880	595	2,940	1,600	645	292	338	462	149
7	466	595	446	980	595	2,310	1,550	645	307	371	344	152
8	446	640	425	980	595	1,900	1,450	603	354	870	290	212
9	425	551	406	1,150	551	1,660	1,350	603	371	645	258	238
10	406	530	386	733	551	1,480	1,300	603	442	480	241	200
11	386	497	369	1,180	530	1,280	1,250	561	461	406	260	186
12	406	466	350	1,130	508	1,180	1,250	561	424	338	868	192
13	368	466	350	1,080	487	1,130	1,200	520	388	322	562	180
14	350	446	333	1,080	466	1,080	1,150	520	338	292	366	177
15	350	425	350	1,080	487	1,080	1,100	520	307	292	291	168
16	350	406	368	980	487	1,030	1,000	561	307	279	262	194
17	368	386	733	930	487	1,030	960	520	292	264	230	184
18	368	386	5,260	880	487	1,030	1,720	520	292	232	214	156
19	368	386	7,080	880	466	1,030	1,550	480	480	222	216	176
20	350	386	4,780	830	466	1,030	1,350	461	561	222	232	164
21	333	386	3,540	830	446	1,030	1,200	442	424	221	218	160
22	406	386	2,960	830	446	1,130	1,100	424	354	202	203	163
23	1,030	386	2,380	830	446	1,180	1,050	406	1,550	182	204	158
24	1,180	386	1,840	890	446	1,130	1,000	388	1,100	132	170	160
25	980	386	1,600	980	425	1,080	915	388	561	178	178	164
26	781	368	1,380	980	333	1,080	870	371	442	180	181	158
27	686	368	1,230	930	487	5,140	825	371	354	170	172	158
28	595	350	1,080	830	487	10,300	825	388	322	216	169	156
29	551	350	980	733		8,900	780	371	292	348	180	438
30	487	350	930	508		6,240	735	354	890	280	152	760
31	466		880	595		4,590		354		266	158	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	1,180			333			549			0.251		0.27
November	640			350			429			.180		.20
December	7,080			333			1,380			.580		.67
January	1,180			508			898			.377		.43
February	840			333			612			.215		.22
March	10,300			497			2,553			1.07		1.23
April	3,570			735			1,398			.563		.65
May	735			354			519			.218		.25
June	1,550			264			444			.187		.21
July	1,050			170			350			.147		.17
August	1,870			152			358			.150		.17
September	780			149			198			.083		.09
The year	10,300			149			802			.337		4.56

East Fork of White River at Shoals, Ind.

Location.- Water-stage recorder in sec. 30, T. 3 N., R. 3 W., at highway bridge at Shoals. Zero of gage is 442.97 feet above mean sea level.

Drainage area.- 4,900 square miles.

Records available.- June 1903 to July 1906, October 1908 to September 1916, October 1926 to September 1934 in reports of U. S. Geological Survey; June 1923 to September 1928 in reports of Indiana Department of Conservation.

Average discharge.- 11 years (1923-34), 5,530 second-feet.

Extremes.- Maximum discharge during year, 15,800 second-feet Mar. 31 (gage height, 10.56 feet); minimum, 235 second-feet July 30 (gage height, 1.82 feet).
1903-6, 1908-16, 1926-34: Maximum stage, 42.2 feet Mar. 28, 1913 (discharge not determined); minimum discharge, 128 second-feet on several days.

Remarks.- Records good. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,360	1,000	577	1,440	719	558	12,700	1,370	518	1,780	555	368
2	1,650	925	562	1,260	1,090	688	9,050	1,300	500	2,740	510	355
3	1,400	900	613	1,300	1,300	2,250	6,580	1,230	562	3,850	446	403
4	1,200	875	602	1,360	864	3,850	5,320	1,120	444	3,530	497	298
5	1,050	867	617	1,530	835	6,160	4,690	1,160	527	2,100	517	376
6	950	720	598	1,260	956	8,050	4,270	1,260	511	1,350	1,260	366
7	914	653	598	1,580	780	7,420	5,740	1,350	727	1,160	1,560	580
8	883	921	632	1,420	893	5,950	3,530	1,160	598	1,540	962	1,320
9	855	1,160	691	1,620	762	4,800	3,420	1,060	823	1,280	835	1,110
10	816	1,010	662	1,840	935	4,270	3,310	1,030	2,940	1,100	679	535
11	807	1,170	688	1,910	335	3,960	3,200	845	7,000	1,120	1,640	647
12	719	935	682	2,020	670	3,530	2,760	1,020	4,900	1,160	3,530	694
13	665	903	632	1,900	745	2,980	2,700	826	2,880	903	1,980	710
14	745	740	620	1,900	754	2,680	2,530	845	1,660	883	1,430	607
15	509	845	634	1,560	762	2,200	2,510	835	1,030	798	1,110	570
16	728	751	642	1,530	771	2,140	2,490	826	997	618	976	724
17	578	670	1,870	1,540	558	2,160	2,140	826	709	581	1,020	562
18	652	677	4,480	1,530	736	2,050	2,050	835	639	558	835	668
19	654	686	4,270	1,300	694	2,050	2,030	816	642	569	678	727
20	636	703	5,950	1,500	797	2,090	2,470	603	580	526	2,310	605
21	594	708	7,000	784	568	1,980	2,630	845	565	504	1,120	504
22	899	656	6,580	1,400	694	2,370	2,200	727	727	478	874	472
23	1,610	666	5,740	1,060	587	2,180	2,200	697	1,410	368	816	396
24	1,400	663	4,590	1,120	702	2,050	1,960	694	3,010	508	581	371
25	1,910	638	3,740	1,230	600	2,500	1,750	624	4,580	383	516	382
26	1,900	578	2,880	1,180	464	3,500	1,710	662	4,900	423	525	366
27	1,710	626	2,660	1,300	315	8,450	1,650	591	4,480	435	582	422
28	1,380	652	2,110	1,600	396	12,500	1,530	545	3,420	371	318	428
29	1,350	588	1,930	1,800		11,500	1,390	518	1,660	481	424	553
30	1,200	584	1,540	1,450		14,900	1,420	555	1,130	338	371	1,350
31	1,100		1,560	809		16,100		567		486	384	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				2,360	509	1,091	0.223	0.26				
November				1,770	578	789	.161	.18				
December				7,000	562	2,163	.441	.61				
January				2,020	784	1,430	.292	.34				
February				1,500	315	725	.146	.15				
March				15,100	558	4,792	.978	1.13				
April				12,700	1,390	3,331	.680	.76				
May				1,370	518	680	.180	.21				
June				7,000	444	1,836	.375	.42				
July				3,850	338	1,062	.217	.26				
August				3,530	318	963	.197	.23				
September				1,560	296	582	.119	.13				
The year.				15,100	298	1,644	.336	4.67				

Flatrock Creek at St. Paul, Ind.

Location.— Chain gage in sec. 10, T. 11 N., R. 8 E., on highway bridge half a mile southwest of St. Paul, Decatur County.

Drainage area.— 314 square miles.

Records available.— October 1930 to September 1934.

Extremes.— Maximum discharge recorded during year ending Sept. 30, 1933, 10,800 second-feet May 14 (gage height, 9.85 feet); minimum, 7.5 second-feet (revised) Sept. 11-13 (gage height, 0.77 foot).

Maximum discharge recorded during year ending Sept. 30, 1934, 3,810 second-feet Dec. 17 (gage height, 6.43 feet); minimum, 1.0 second-foot Sept. 2, 3, 5 (gage height, 0.42 foot).

1930-34: Maximum discharge recorded, 10,800 second-feet May 14, 1933 (gage height, 9.85 feet); minimum, 0.5 second-foot Aug. 7, 9, 1931 (gage height, 0.68 foot).

Flood of 1913 reached a stage of about 22 feet on present gage.

Remarks.— Records good except those for periods of ice effect, Dec. 14-22, 1932, Feb. 9-13, Dec. 28, 29, 1933, Jan. 30 to Feb. 3, Feb. 9-14, 19, Feb. 24 to Mar. 1, 1934, which are fair.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	404	356	333	4,320	404	271	582	190	214	2,650	23	14
2	263	800	310	1,240	330	226	608	330	194	455	24	12
3	190	556	288	745	333	204	530	504	169	198	23	13
4	196	429	275	662	288	182	454	333	164	116	26	15
5	745	356	254	635	242	169	356	263	155	78	25	16
6	635	310	263	556	267	141	860	271	150	64	24	11
7	380	275	745	504	333	333	1,040	234	140	53	21	11
8	280	250	1,100	380	690	920	860	223	123	45	23	12
9	196	288	800	333	425	745	608	263	112	41	44	11
10	169	310	608	288	375	429	479	356	99	69	38	9.5
11	504	288	479	275	325	356	454	556	85	57	36	7.5
12	530	275	404	230	275	284	380	1,170	75	40	30	8.1
13	356	230	356	190	250	582	310	2,090	62	41	57	7.8
14	250	219	325	179	254	690	288	10,100	58	32	33	25
15	200	215	300	172	242	860	333	4,150	56	32	25	95
16	169	1,890	275	153	234	608	800	1,800	52	31	21	32
17	163	1,620	275	163	207	479	1,310	1,100	52	33	22	21
18	166	1,310	275	207	193	1,990	4,500	800	48	28	20	18
19	163	1,040	250	690	166	4,500	3,050	608	39	28	20	18
20	138	860	225	745	479	4,320	1,170	505	36	29	20	26
21	125	800	200	582	479	2,530	800	980	34	26	20	27
22	115	745	225	4,320	356	1,460	635	800	34	25	20	18
23	111	662	333	2,780	310	860	479	555	30	24	13	18
24	102	920	2,300	1,240	284	800	404	408	34	34	12	16
25	100	920	2,090	1,100	429	800	356	555	34	169	15	16
26	131	745	1,710	1,380	608	1,170	310	359	37	46	12	23
27	288	582	860	1,040	429	1,100	267	406	33	34	12	1,620
28	333	454	662	860	333	800	230	505	30	34	13	430
29	271	380	530	635		608	207	555	29	34	13	147
30	219	380	1,620	530		504	207	336	27	26	11	77
31	254		8,950	429		556		251		24	11	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	745			100			263			0.838	0.97	
November	1,890			215			616			1.96	2.19	
December	8,950			200			891			2.94	3.27	
January	4,320			163			889			2.83	3.26	
February	690			166			342			1.09	1.14	
March	4,500			141			951			3.03	3.49	
April	4,500			207			762			2.43	2.71	
May	10,100			190			1,019			3.25	3.75	
June				27			80.2			.255	.28	
July	2,650			24			148			.471	.54	
August	57			11			22.8			.073	.08	
September	1,620			7.5			92.5			.295	.33	
The year	10,100			7.5			509			1.62	22.01	

Note.— Records for period May 15 to Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Flatrock Creek at St. Paul, Ind.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	39	33	95	55	48	359	48	24	8.4	4.7	1.3
2	38	37	34	85	60	530	288	46	23	5.7	75	1.1
3	30	35	35	68	65	1,240	259	45	22	6.6	16	1.0
4	29	37	37	66	50	635	207	44	22	6.9	8.8	1.2
5	27	69	35	102	51	336	188	45	22	29	4.7	1.0
6	26	119	35	119	50	251	155	43	21	18	3.3	1.2
7	27	82	31	119	47	178	164	45	19	30	3.0	4.7
8	26	59	33	150	50	150	142	41	30	46	2.6	4.0
9	31	50	33	172	50	121	125	39	27	27	2.8	1.8
10	33	45	30	155	48	106	114	34	27	20	3.0	1.8
11	32	41	31	132	45	95	130	38	30	18	4.9	1.8
12	29	41	30	121	48	90	123	35	26	14	3.8	2.4
13	28	50	30	127	50	82	106	34	20	14	3.8	2.0
14	26	37	29	130	48	92	97	39	18	14	4.0	1.8
15	26	36	30	121	45	97	85	42	16	11	4.2	1.9
16	27	38	207	108	48	102	92	39	16	10	3.8	4.0
17	27	40	1,620	93	44	95	140	39	12	11	3.3	6.3
18	27	35	1,620	93	43	90	137	33	14	8.8	2.5	14
19	27	34	690	90	43	83	112	31	16	7.2	2.6	9.1
20	26	34	800	88	44	92	95	30	14	6.6	3.1	5.2
21	29	38	555	72	47	99	86	33	12	5.7	2.6	6.6
22	152	35	382	71	47	116	77	30	12	4.2	3.1	7.8
23	314	36	292	106	41	102	71	27	16	3.6	4.7	6.9
24	152	37	221	125	42	82	66	27	14	3.1	4.0	6.0
25	83	32	166	114	44	83	59	27	9.8	2.8	3.6	6.3
26	66	37	142	101	42	140	57	28	14	3.0	2.4	7.2
27	48	34	114	95	40	1,540	55	31	9.8	3.1	2.2	7.5
28	47	34	110	86	42	1,170	54	29	7.8	3.0	2.2	6.6
29	44	33	100	68		800	45	26	6.3	22	1.5	14
30	43	34	78	60		635	48	25	30	14	1.5	14
31	41		90	55		505		25		6.3	1.3	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					314	25	51.6	0.164		0.19		
November					119	32	43.6	.136		.16		
December					1,620	29	248	.790		.91		
January					172	55	103	.328		.38		
February					65	40	47.5	.151		.16		
March					1,540	48	316	1.01		1.16		
April					359	45	125	.398		.44		
May					48	25	35.4	.113		.13		
June					30	6.3	18.4	.059		.07		
July					46	2.8	12.4	.038		.04		
August					75	1.3	6.10	.018		.02		
September					14	1.0	5.02	.016		.02		
The year					1,620	1.0	84.9	.270		3.68		

Muscatatuck River near Austin, Ind.

Location.- Water-stage recorder in sec. 23, T. 4 N., R. 6 E., at bridge on U. S. Highway 31, 2 miles north of Austin, Scott County. Prior to June 22, 1934, chain gage with same datum at same location.

Drainage area.- 356 square miles.

Records available.- August 1932 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,550 second-feet July 1 (gage height, 19.18 feet); minimum, 1.8 second-feet Sept. 14 (gage height, 1.33 feet).
1932-34: Maximum discharge recorded, 22,000 second-feet May 14, 1933 (gage height, 26.60 feet); minimum, that of Sept. 14, 1934; minimum gage height, 1.19 feet Sept. 4, 1933.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	18	24	43	39	26	190	23	3.3	2,900	12	3.2
2	24	28	19	40	38	29	145	22	3.1	1,270	11	2.6
3	23	29	18	40	38	617	111	21	3.3	296	12	2.4
4	19	32	19	40	38	1,600	95	20	3.1	99	24	2.5
5	13	38	23	40	35	915	79	17	2.9	68	79	2.4
6	12	361	23	154	35	427	72	20	370	52	58	2.2
7	12	265	22	154	33	295	136	20	145	46	40	3.4
8	11	163	23	208	31	315	199	19	52	43	31	3.7
9	11	46	23	226	29	392	163	16	68	38	25	3.7
10	9.8	43	22	190	28	326	111	13	1,280	32	21	3.6
11	9.2	40	22	103	29	255	111	11	659	29	274	3.8
12	9.3	38	21	99	30	217	76	10	145	26	148	5.2
13	8.1	35	21	83	30	172	91	9.0	58	24	43	4.0
14	7.7	32	21	68	31	163	99	9.2	35	22	27	2.0
15	7.6	29	23	65	32	199	76	10	27	19	20	4.9
16	7.4	26	38	65	30	181	68	12	21	17	16	77
17	7.6	24	181	55	27	119	43	10	20	16	13	21
18	6.2	26	820	49	28	111	40	6.6	17	16	12	10
19	6.2	25	659	49	30	235	40	6.5	16	16	16	7.0
20	6.6	24	1,100	43	28	225	35	6.1	15	16	16	5.3
21	6.2	24	730	40	28	172	34	7.0	12	15	12	4.1
22	65	24	348	43	28	136	38	6.2	2,050	14	9.0	4.4
23	564	24	165	40	27	127	30	5.4	2,400	13	7.9	3.4
24	145	26	111	43	26	111	28	5.0	2,820	12	7.0	2.8
25	76	26	87	40	25	119	25	4.4	1,580	12	6.7	2.7
26	40	25	65	49	25	381	25	3.7	496	11	5.9	2.6
27	28	26	55	68	25	1,990	26	3.7	124	18	5.3	2.7
28	21	26	49	87	25	2,080	26	3.3	68	73	4.7	2.8
29	22	24	46	76		1,030	26	2.8	55	32	4.2	85
30	21	24	43	65		577	24	2.4	1,820	19	3.8	163
31	21		43	43		275		5.1		14	3.4	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				564	6.2	40.3	0.113		0.13			
November				381	18	53.0	.149		.17			
December				1,100	18	157	.441		.51			
January				226	40	77.7	.218		.25			
February				38	25	30.2	.085		.09			
March				2,080	25	446	1.25		1.44			
April				199	24	75.4	.212		.24			
May				23	2.4	10.8	.030		.03			
June				2,820	2.9	479	1.35		1.51			
July				2,900	11	170	.478		.55			
August				274	3.4	31.2	.088		.10			
September				163	2.0	14.8	.042		.05			
The year				2,900	2.0	133	.374		5.07			

Little Wabash River at Wilcox, Ill.

Location.- Wire gage in SE $\frac{1}{4}$ sec. 3, T. 2 N., R. 8 E., at highway bridge at Wilcox, Clay County, a quarter of a mile below mouth of Big Muddy Creek. Prior to Aug. 2, 1934, chain gage with same datum at same location.

Drainage area.- 1,130 square miles.

Records available.- August 1914 to September 1934.

Average discharge.- 20 years, 787 second-feet.

Extremes.- Maximum discharge recorded during year, 2,870 second-feet July 16 (gage height, 16.62 feet); minimum recorded, 1.4 second-feet Nov. 25, 28 (gage height, 2.01 feet).

1914-34: Maximum discharge (estimated), 16,000 second-feet Aug. 22, 1915 (gage inaccessible); minimum recorded, 0.3 second-foot Aug. 3, Sept. 1, 1930.

Remarks.- Records fair. Corrected for ice effect Dec. 27-29, Jan. 30, 31, Feb. 8-10, 25-28.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	6.5	1.8	12	34	16	565	66	5.3	47	88	43
2	16	7.3	2.5	9.1	30	26	299	63	5.0	38	684	42
3	13	5.7	3.4	8.1	25	83	210	56	5.3	18	952	244
4	9.7	3.8	3.0	9.1	23	455	172	49	13	29	958	172
5	6.9	2.5	2.5	32	24	557	145	49	5.2	22	616	592
6	4.3	2.7	2.2	50	20	497	221	60	5.8	16	221	565
7	4.1	2.7	2.2	60	16	346	1,490	56	4.5	63	163	299
8	4.5	2.3	2.2	73	15	221	1,580	52	4.3	70	244	190
9	6.1	4.3	1.9	153	14	154	844	60	32	35	181	163
10	6.9	23	2.7	186	13	119	362	74	25	41	112	163
11	5.3	18	2.2	153	14	98	190	60	41	29	74	362
12	4.9	8.5	4.3	104	20	80	136	48	98	26	446	880
13	2.5	7.7	4.9	76	15	66	112	41	80	28	1,780	1,040
14	3.0	4.5	3.8	57	9.7	56	98	88	46	362	2,080	497
15	2.3	3.0	4.3	48	6.9	49	80	163	29	1,870	1,730	163
16	6.1	2.7	4.9	42	8.1	45	314	105	25	2,870	916	105
17	13	3.2	8.5	37	6.9	40	1,580	70	23	2,410	270	565
18	22	3.0	11	33	9.1	41	1,820	47	14	1,820	958	952
19	16	2.5	15	30	10	36	1,340	36	45	1,370	1,340	633
20	11	2.5	18	26	22	47	531	29	80	736	1,110	232
21	4.1	2.3	13	26	11	77	210	26	46	244	429	145
22	4.3	1.8	12	25	9.7	91	145	23	34	145	163	154
23	11	2.2	37	25	9.7	127	119	22	23	98	112	112
24	29	2.1	42	20	9.1	136	105	17	105	70	112	98
25	42	1.6	38	23	7.7	119	91	14	145	49	497	80
26	60	2.1	34	34	6.5	105	80	11	244	40	314	70
27	42	1.8	29	67	6.5	970	77	9.6	127	34	136	70
28	33	1.5	24	64	8.6	2,220	74	8.2	66	163	91	395
29	29	3.0	20	50		2,250	77	7.4	39	284	70	790
30	21	2.2	16	44		1,950	74	7.0	24	200	49	1,370
31	12		14	38		1,300		6.7		145	45	
Month	Maximum					Minimum		Mean		Per square mile	Run-off in inches	
October	60					2.3		15.3		0.014	0.02	
November	25					1.5		4.57		.0040	.004	
December	42					1.8		12.3		.011	.01	
January	186					8.1		52.1		.046	.05	
February	34					6.5		14.4		.013	.01	
March	2,250					16		399		.353	.41	
April	1,820					74		438		.388	.43	
May	163					6.7		45.9		.041	.05	
June	244					4.3		48.0		.042	.05	
July	2,870					16		431		.351	.44	
August	2,080					45		548		.485	.56	
September	1,370					42		373		.330	.37	
The year.	2,870					1.5		200		.177	2.40	

Skillet Fork at Wayne City, Ill.

Location.- Chain gage in SW $\frac{1}{4}$ sec. 7, T. 2 S., R. 6 E., at highway bridge 1 mile north of Wayne City, Wayne County. Zero of gage is 381.28 feet above mean sea level.

Drainage area.- 475 square miles.

Records available.- June 1928 to September 1934. August 1908 to December 1912, June 1914 to September 1921 at Southern Railway bridge 2 miles downstream.

Average discharge.- 13 years (1914-21, 1928-34), 424 second-feet.

Extremes.- Maximum discharge recorded during year, 834 second-feet Apr. 7 (gage height, 11.74 feet); minimum recorded, 0.3 second-foot June 11 (gage height, 3.10 feet). 1908-12, 1914-21, 1928-34: Maximum discharge recorded, 15,800 second-feet Aug. 22, 1915; no flow for 54 days, September to December 1908.

Remarks.- Records poor. Discharge estimated because of ice effect Dec. 27-29, Jan. 29-31, Feb. 9, 10, Feb. 25 to Mar. 1.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	7.8	6.7	3.1	4.2	2.8	93	21	0.8	2.3	170	0.6
2	7.8	6.4	6.7	2.8	4.2	12	58	17	.7	6.2	582	1.5
3	6.4	5.6	7.2	3.3	3.5	46	44	14	.8	4.1	301	2.6
4	5.3	6.0	6.7	3.3	3.1	106	34	12	1.0	4.1	160	2.4
5	3.9	6.1	6.7	75	2.8	140	27	11	.8	3.7	58	2.0
6	3.3	6.1	6.7	22	2.6	170	66	16	.7	2.6	35	1.7
7	3.1	5.8	6.7	20	2.6	120	822	22	.5	3.0	22	1.8
8	3.3	5.6	6.7	20	2.6	66	774	25	.4	2.7	15	1.5
9	2.6	5.0	7.0	20	2.2	47	554	21	.4	2.2	9.4	1.3
10	2.0	4.7	6.4	16	2.2	37	170	17	.4	4.4	6.2	1.3
11	2.0	5.0	6.7	19	2.4	22	102	14	.7	2.7	3.9	334
12	1.8	5.0	6.7	21	2.4	18	58	10	16	2.2	2.6	312
13	2.0	5.0	6.4	20	2.0	15	37	8.6	16	1.7	2.1	58
14	1.6	5.6	6.1	16	1.8	14	25	10	11	88	1.7	8.6
15	2.4	5.6	6.1	12	1.6	11	22	9.8	9.5	125	1.4	5.0
16	4.2	6.1	6.7	11	1.8	9.8	170	11	7.8	49	1.2	35
17	62	6.7	40	9.8	2.0	9.2	354	11	6.1	58	1.1	29
18	16	6.7	70	8.9	1.5	9.2	466	13	4.2	66	1.0	11
19	9.5	6.1	20	8.9	1.8	10	280	16	2.8	31	.8	5.6
20	6.7	6.4	12	8.6	2.2	13	93	14	1.5	19	.7	2.6
21	4.4	6.7	7.2	7.2	2.4	15	58	11	1.0	12	.6	3.0
22	4.2	6.7	7.8	6.7	3.1	12	36	9.2	.7	7.2	.5	510
23	3.9	6.7	6.4	6.7	3.1	16	22	5.8	160	5.0	1.1	150
24	3.3	7.0	6.1	6.4	3.1	30	17	4.7	75	3.4	1.4	26
25	3.1	7.0	5.6	6.7	2.4	31	14	4.2	24	2.7	1.3	14
26	2.8	7.0	5.0	6.7	2.2	40	14	2.6	16	2.2	1.1	8.9
27	2.4	6.7	4.2	6.4	2.0	210	98	1.5	7.2	2.1	.9	9.8
28	4.4	6.7	3.1	6.1	2.4	422	93	1.5	3.4	1.8	.9	15
29	8.6	7.0	2.8	5.0		594	50	1.2	2.2	1.4	.8	88
30	10	6.7	2.8	4.2		411	29	1.0	1.8	1.1	.7	150
31	9.5		2.8	4.2		180		1.0		.9	.6	
Month	Maximum					Minimum			Mean		Per square mile	Run-off in inches
October	62					1.8			6.77		0.014	0.02
November	7.8					4.7			6.15		.013	.01
December	70					2.8			9.74		.021	.02
January	75					2.8			12.5		.026	.03
February	4.2					1.5			2.51		.0053	.006
March	594					2.8			91.6		.193	.22
April	822					14			154		.324	.36
May	25					1.0			10.9		.023	.03
June	160					.4			12.4		.026	.03
July	125					.9			16.7		.035	.04
August	582					.5			44.7		.094	.11
September	510					.5			59.7		.126	.14
The year	822					.4			35.6		.075	1.02

Cumberland River at Cumberland Falls, Ky.

Location.- Water-stage recorder 1,200 feet above falls at Cumberland Falls post office, Whitley County, and 13 miles east of Cumberland Falls railroad station. Zero of gage is 825.49 feet above mean sea level.

Drainage area.- 2,010 square miles.

Records available.- August 1907 to December 1911, April 1915 to September 1934.

Average discharge.- 22 years (1907-11, 1915-31, 1932-34), 3,361 second-feet.

Extremes.- Maximum discharge during year, 34,200 second-feet Mar. 3 (gage height, 10.90 feet); minimum, 38 second-feet Oct. 17-22 (gage height, 1.14 feet).
1907-11, 1915-34: Maximum discharge, about 59,600 second-feet Jan. 23, 1918 (gage height, 12.5 feet); minimum, 8.5 second-feet Sept. 19, 20, 1932.

Remarks.- Records fair. Low-water flow may be slightly affected by operation of power plant at Williamsburg, 25 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	48	55	856								
2	67	51	51	841	410	9,920	4,640	*1,570	*217	276	1,080	763
3	58	51	51	789	410	6,380	3,500	*1,480	*203	657	700	545
4	58	51	48	802	400	29,400	2,870	*1,400	159	470	500	420
5	48	48	48	841	400	29,400	2,340	*1,310	156	420	382	392
						25,300	1,970	*1,160	304	337	294	382
6	51	51	234	*1,000	400	*19,500	1,770	1,120	346	286	294	328
7	48	51	346	*1,500	391	*11,200	1,640	1,030	278	255	440	310
8	51	55	802	*14,000	364	*12,700	1,520	1,090	330	302	400	278
9	51	55	922	*15,000	346	*21,400	3,390	*867	355	319	328	263
10	48	53	*710	*10,000	310	*20,900	4,640	*867	428	463	278	231
11	45	67	*520	*3,900	294	15,600	4,900	*867	*1,200	802	328	196
12	48	63	*420	*2,300	278	7,460	4,580	*867	*2,260	1,020	302	217
13	55	63	*330	1,740	278	4,250	3,740	*1,170	1,480	1,080	260	238
14	51	58	*270	1,590	270	3,260	3,260	1,020	1,020	1,310	576	196
15	45	58	*230	1,400	278	2,650	2,870	922	687	1,110	461	162
16	42	58	*220	1,200	270	2,200	2,600	895	534	1,620	1,550	156
17	38	59	*230	1,080	263	1,870	2,390	867	499	2,360	1,110	151
18	38	58	*460	977	255	1,640	2,410	815	847	1,310	928	134
19	38	58	*600	867	238	6,410	3,880	712	637	936	1,120	128
20	38	51	700	815	247	20,400	*10,100	650	500	674	1,110	128
21	38	48	1,140	789	238	18,600	*13,100	590	578	490	828	128
22	38	55	1,120	724	255	16,600	*9,460	*534	662	382	637	134
23	42	55	950	674	286	14,000	*5,720	*450	639	310	534	145
24	42	55	881	650	319	21,900	*4,000	*460	1,130	247	480	134
25	45	55	750	612	3,470	26,800	*3,140	*400	556	196	534	116
26	45	48	687	601	20,400	*21,900	*2,580	*355	400	162	2,780	105
27	45	51	687	567	21,400	*17,700	*2,150	337	328	145	5,720	96
28	51	55	650	545	18,100	*15,100	*2,050	278	255	139	4,850	105
29	48	55	1,230	500		*12,700	*1,850	255	217	183	2,610	169
30	48	55	1,310	490		*9,120	*1,660	238	224	196	1,430	637
31	48		1,080	450		*6,300		*231		1,250	977	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	77	38	47.9	0.024	0.03
November	67	48	55.0	.027	.03
December	1,310	48	574	.286	.33
January	15,000	450	2,199	1.09	1.26
February	21,400	238	2,535	1.26	1.31
March	29,400	1,640	13,950	6.94	8.00
April	13,100	1,520	3,818	1.90	2.12
May	1,570	231	900	.398	.46
June	2,260	156	581	.289	.32
July	2,360	139	656	.316	.36
August	5,720	260	1,085	.540	.62
September	763	96	246	.122	.14
The year	29,400	38	2,219	1.10	14.98

*Estimated.

Cumberland River at Burnside, Ky.

Location.— Water-stage recorder at highway bridge over Cumberland River 100 feet above mouth of South Fork of Cumberland River at Burnside, Pulaski County, in pool formed by Dam 21, 28 miles downstream. Prior to Nov. 20, 1933, a staff gage on South Fork of Cumberland River 700 feet above mouth was used. Zero of both gages is 585.60 feet above mean sea level.

Drainage area.— 4,890 square miles, including area of South Fork.

Records available.— October 1914 to September 1934.

Average discharge.— 20 years, 7,841 second-feet.

Extremes.— Maximum discharge during year, 107,000 second-feet Mar. 4 (gage height, 50.7 feet); minimum daily discharge, 180 second-feet several days in October and November. 1914-34: Maximum discharge, about 164,000 second-feet Jan. 29, 1918 (gage height, 69.5 feet); minimum, 65 second-feet Sept. 6-20, 1925 (gage height, 1.85 feet). Lower stages have been recorded but were due to lowering of pool at Dam 21. Flood of Jan. 29, 1918, reached highest stage since 1864.

Remarks.— Records good except those for periods Oct. 1 to Nov. 23, Apr. 1 to May 23, which are fair. Tables of discharge include flow in main river and South Fork. Stage at low water affected by manipulations at Dam 21. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	420	180	194	3,900	1,400	24,500	12,200	4,040	650	710	2,040	1,680
2	330	180	194	4,180	1,360	23,000	9,870	3,760	630	1,620	1,800	1,310
3	330	180	260	5,040	1,430	80,500	8,000	3,480	582	3,870	1,420	1,060
4	330	180	226	4,460	1,460	97,600	6,800	3,220	524	2,560	1,080	920
5	330	260	266	4,460	1,510	65,000	5,620	2,940	600	1,560	850	810
6	250	420	2,510	4,900	1,450	39,900	5,040	2,740	670	1,240	730	790
7	250	610	5,480	34,600	1,420	24,900	4,750	2,480	790	1,020	890	750
8	330	810	5,620	59,100	1,320	28,200	4,320	2,360	780	931	942	690
9	420	710	3,900	34,500	1,130	47,300	5,330	2,160	910	1,040	1,050	620
10	180	610	2,880	19,900	1,110	37,000	10,200	2,040	1,220	1,450	830	562
11	180	610	2,100	11,700	1,020	28,300	9,400	1,920	1,390	1,430	860	506
12	180	420	1,560	8,000	1,040	18,500	8,460	2,230	2,650	2,420	820	439
13	250	330	1,310	6,650	1,070	11,500	7,550	2,360	4,040	4,590	760	420
14	250	330	1,130	5,760	1,100	8,950	6,650	2,420	2,650	3,420	660	459
15	250	330	1,070	5,040	1,090	7,400	5,760	2,740	1,800	2,550	1,050	610
16	180	250	2,180	4,320	1,030	6,500	5,040	2,620	1,340	2,910	1,830	680
17	180	250	6,500	3,900	994	5,760	4,600	2,620	1,050	2,360	3,620	534
18	180	250	5,760	3,420	962	5,040	4,320	2,420	1,640	4,900	4,800	468
19	180	250	7,070	3,150	962	8,220	5,330	1,860	4,040	2,030	3,280	411
20	180	250	16,400	2,940	931	48,300	10,700	1,680	3,420	2,160	2,560	357
21	180	180	14,900	2,810	910	49,000	19,300	1,560	2,230	1,620	2,040	330
22	180	180	9,080	2,680	1,020	33,200	16,400	1,450	1,740	1,230	1,660	322
23	250	180	6,350	2,650	1,420	30,400	11,200	1,320	2,170	973	1,530	314
24	250	194	4,750	2,480	1,560	52,600	8,310	1,510	4,040	790	1,800	322
25	180	208	3,620	2,290	13,500	59,300	6,650	1,450	2,940	650	1,980	322
26	180	250	4,900	2,160	64,000	54,300	5,480	1,220	1,800	562	2,660	322
27	180	215	9,710	2,160	60,500	41,300	4,900	1,020	1,280	524	8,160	330
28	180	208	9,400	2,100	36,100	37,000	4,900	910	1,020	610	5,000	375
29	180	208	6,950	1,980	29,300	29,300	5,040	610	800	610	5,330	765
30	180	208	5,480	1,800	22,300	22,300	4,460	740	650	1,650	3,280	2,980
31	160		4,320	1,560		18,200		700		1,740	2,230	
Month	Maximum			Minimum			Mean			Feet square mile		Run-off in inches
October	420			180			235			0.048		0.06
November	810			180			314			.064		.07
December	16,400			194			4,712			.964		1.11
January	59,100			1,660			8,209			1.68		1.94
February	64,000			910			7,235			1.48		1.54
March	97,600			5,040			33,590			6.87		7.92
April	19,300			4,320			7,543			1.54		1.72
May	4,040			700			2,090			.427		.49
June	4,040			524			1,669			.341		.38
July	6,650			524			2,053			.426		.49
August	9,160			660			2,265			.463		.55
September	2,980			314			651			.139		.16
The year	97,600			180			5,911			1.21		16.41

Cumberland River at Celina, Tenn.

Location.- Water-stage recorder at highway bridge at Celina, Clay County, 600 feet below mouth of Obey River. Zero of gage is 489.46 feet above mean sea level.

Drainage area.- 7,320 square miles.

Records available.- October 1922 to September 1934.

Average discharge.- 12 years, 12,020 second-feet.

Extremes.- Maximum discharge during year, about 92,500 second-feet Mar. 6 (gage height, about 42.0 feet); minimum, 260 second-feet Oct. 15 (gage height, 0.92 foot).
1922-34: Maximum discharge, about 153,000 second-feet Dec. 29, 1928 (gage height, 57.2 feet); minimum, 92 second-feet Sept. 2, 11-14, 26, 1925 (gage height, 0.2 foot).

Remarks.- Records good except those for Feb. 27 to Apr. 15, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	724	445	490	7,180	2,630	69,900	25,600	6,760	1,490	2,440	2,370	4,110
2	678	418	490	6,900	2,700	58,000	18,700	6,060	1,330	2,180	2,760	3,030
3	634	418	570	6,620	2,560	67,200	14,200	5,640	1,290	1,850	2,700	2,370
4	601	427	623	6,760	2,500	80,800	11,400	5,220	1,490	2,560	2,500	2,110
5	580	1,040	678	8,050	2,500	89,000	9,850	4,600	1,360	4,360	2,110	1,980
6	540	1,650	3,880	8,350	2,500	91,900	8,500	4,520	1,330	3,440	1,770	1,790
7	500	1,520	3,100	21,000	2,500	90,800	7,600	4,520	1,260	2,500	1,770	1,500
8	481	1,400	8,350	41,200	2,500	81,400	7,180	4,110	1,280	2,180	1,920	1,540
9	472	1,250	8,350	58,000	2,370	71,000	6,900	3,840	1,460	2,440	1,560	1,430
10	454	1,330	6,900	59,400	2,240	64,000	8,060	3,570	1,670	2,760	1,720	1,260
11	427	1,330	5,220	42,200	2,040	57,500	11,800	3,700	1,980	2,240	2,110	1,230
12	601	1,190	4,110	22,600	2,040	46,800	12,500	3,980	3,440	2,240	2,110	1,200
13	540	1,060	3,230	13,700	1,980	31,200	11,400	3,700	3,980	2,300	1,780	1,150
14	378	945	2,630	10,300	1,920	20,100	10,300	3,570	4,900	7,900	3,640	1,020
15	276	820	2,370	8,950	1,920	14,000	9,250	3,700	5,080	8,500	2,110	945
16	312	760	2,240	7,750	1,850	11,100	8,350	4,380	3,840	10,000	1,780	1,100
17	400	689	4,670	6,900	1,850	9,700	7,460	4,110	2,760	8,950	2,700	1,120
18	418	656	9,250	6,200	1,850	6,900	6,900	3,840	12,400	8,200	4,520	1,260
19	400	601	16,600	5,500	1,850	10,500	6,620	3,700	14,400	7,750	5,500	1,200
20	409	570	19,700	5,080	1,780	28,200	8,350	3,440	8,950	5,640	5,500	1,030
21	400	550	21,700	4,800	1,720	53,300	10,600	3,100	7,180	4,110	4,390	920
22	400	550	22,100	4,660	1,720	62,100	19,100	2,900	5,790	3,100	3,570	845
23	700	540	15,900	4,380	2,370	59,600	20,700	3,700	4,110	2,440	3,030	820
24	820	678	10,800	4,380	3,100	57,600	16,400	3,980	4,940	1,980	4,520	724
25	689	623	8,050	4,110	17,700	63,700	12,000	3,030	7,040	1,680	5,500	678
26	580	445	7,320	3,980	51,700	71,600	9,550	2,630	6,340	1,460	7,610	634
27	520	378	8,200	3,840	68,600	77,700	8,200	2,500	4,660	1,300	7,180	678
28	490	436	10,600	3,670	73,000	77,200	7,600	2,180	3,300	1,530	6,760	724
29	472	490	12,800	3,440		67,200	7,180	1,920	2,560	2,040	9,850	1,500
30	481	490	10,500	3,160		52,800	7,040	1,710	2,240	2,900	8,500	3,570
31	463		8,500	3,030		37,800		1,590		2,180	5,920	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				620	275	511	0.070		0.08			
November				1,650	376	797	1.109		.12			
December				22,100	480	7,901	1.06		1.24			
January				59,400	3,030	12,770	1.74		2.01			
February				73,000	1,720	9,435	1.29		1.34			
March				91,900	8,800	54,270	7.41		8.54			
April				25,600	6,620	10,980	1.50		1.67			
May				6,760	1,590	3,755	.513		.69			
June				14,400	1,260	4,127	.564		.63			
July				10,300	1,300	3,709	.507		.58			
August				9,850	1,560	3,662	.529		.61			
September				4,110	634	1,449	.198		.22			
The year				91,900	275	9,520	1.30		17.63			

Cumberland River at Carthage, Tenn.

Location.- Staff gage at highway bridge at Carthage, Smith County, 1 m'le below mouth of Caney Fork and 8 miles above Lock and Dam 7. Zero of gage is 437.83 feet above mean sea level.

Drainage area.- 10,700 square miles.

Records available.- October 1922 to September 1934.

Average discharge.- 12 years, 17,840 second-feet.

Extremes.- Maximum discharge recorded during year, 136,000 second-feet Mar. 5 (gage height, 44.10 feet); minimum, about 700 second-feet (estimated) Oct. 16, 17.
1922-34: Maximum discharge, about 209,000 second-feet Dec. 30, 1928 (gage height, 59.8 feet); minimum recorded, 200 second-feet Sept. 10, 11, 1925.

Remarks.- Records good except those estimated Oct. 14-17, which are fair. Low-water flow largely regulated by hydroelectric plant on Caney Fork.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	2,060	1,500	960	11,100	5,940	79,500	48,800	10,200	3,590	4,860	3,110	7,370		
2	1,420	1,500	930	9,700	5,120	81,400	32,900	10,500	3,350	4,340	3,350	5,660		
3	1,250	1,500	1,250	8,350	4,860	101,000	26,000	9,200	3,590	4,090	4,090	5,120		
4	1,420	1,420	1,170	10,000	4,860	125,000	21,300	8,580	2,540	3,350	4,090	4,600		
5	2,470	4,400	1,330	11,100	4,600	135,000	16,800	8,270	2,650	4,090	3,840	4,600		
6	2,470	3,630	11,800	12,500	4,600	129,000	14,600	7,670	3,110	5,940	3,000	3,590		
7	2,260	3,630	12,500	31,600	4,600	118,000	13,200	6,790	3,350	4,860	2,880	3,590		
8	2,160	2,920	12,100	41,800	4,860	113,000	11,800	6,220	3,350	4,090	2,880	2,880		
9	1,780	2,160	10,400	68,500	4,340	106,000	11,200	6,220	3,590	3,590	3,350	2,650		
10	1,780	1,960	10,000	74,100	4,090	92,900	11,500	5,390	3,350	3,590	2,880	2,880		
11	1,680	1,780	8,020	68,100	4,340	79,500	12,800	5,660	3,590	4,340	2,760	2,650		
12	1,420	2,060	6,740	44,800	4,090	67,400	16,800	5,940	4,860	4,860	3,110	2,550		
13	1,020	1,550	5,820	26,000	3,350	51,300	16,800	5,940	9,200	4,090	3,110	3,000		
14	900	1,330	5,230	18,300	3,110	34,100	16,000	5,120	7,670	4,340	3,840	3,000		
15	800	1,330	4,670	14,600	3,550	23,200	15,000	5,390	8,580	10,200	5,120	2,650		
16	700	1,590	4,400	13,200	3,110	18,300	13,200	5,390	8,270	11,200	3,840	2,320		
17	700	1,250	5,230	11,200	3,110	15,300	11,800	5,940	6,500	11,500	4,340	2,100		
18	842	1,020	7,050	10,500	2,880	13,200	10,800	5,660	19,000	10,800	6,790	2,000		
19	870	900	16,000	10,500	2,650	18,300	12,200	5,390	24,800	9,520	6,220	2,100		
20	900	915	25,200	9,840	2,650	50,500	12,200	5,390	17,500	9,200	6,790	2,540		
21	856	870	25,200	9,200	2,760	71,000	13,200	4,600	12,500	7,080	5,940	2,430		
22	870	1,020	26,800	8,990	2,880	80,100	14,600	5,120	10,200	5,390	4,860	2,320		
23	1,250	1,330	24,400	8,580	3,000	79,900	25,600	7,370	6,270	3,840	4,600	2,210		
24	1,420	1,020	17,500	8,580	3,110	79,500	24,800	7,670	7,080	4,090	5,120	1,520		
25	1,330	915	13,200	7,670	6,790	98,800	20,500	7,370	7,970	3,350	6,500	1,430		
26	1,420	960	11,100	7,670	55,500	119,000	16,000	6,220	9,200	3,590	8,270	2,000		
27	1,780	960	11,100	7,080	68,100	125,000	13,600	5,940	7,970	3,590	10,800	1,700		
28	1,960	842	11,100	6,790	75,400	119,000	12,500	6,660	6,220	4,600	8,270	1,610		
29	1,780	885	15,000	6,790	112,000	11,800	11,800	5,120	5,120	3,590	10,500	1,800		
30	1,330	1,170	15,700	6,220	96,900	10,500	10,500	4,600	4,600	3,110	11,800	3,350		
31	1,170		12,800	6,220		76,700		4,090		3,840	9,840			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					2,470		700		1,422		0.133		0.15	
November					44,000		842		1,612		.151		.17	
December					26,800		930		10,800		1.01		1.16	
January					74,100		6,220		19,020		1.78		2.05	
February					75,400		2,650		10,640		.994		1.04	
March					135,000		13,200		80,930		7.56		8.72	
April					48,800		10,500		16,960		1.59		1.77	
May					10,500		4,090		6,407		.599		.69	
June					24,800		2,540		7,386		.690		.77	
July					11,500		3,110		5,449		.509		.59	
August					11,800		2,760		5,351		.500		.58	
September					7,370		1,430		2,944		.275		.31	
The year.					135,000		700		14,180		1.33		18.00	

Cumberland River at Dam 3, near Old Hickory, Tenn.

Location.— Water-stage recorder at old intake tower 300 feet above Dam 3, 1 mile north of Old Hickory, Davidson County, and 4 miles below mouth of Drake Creek. Prior to Nov. 16, 1933, staff gage on upper lock wall of Dam 3 used. Zero of both gages is 390.85 feet above mean sea level.

Drainage area.— 11,700 square miles.

Records available.— October 1931 to September 1934.

Extremes.— Maximum discharge during year, 128,000 second-feet Mar. 8 (gage height, 36.6 feet); minimum, about 150 second-feet Oct. 19 (gage height, 6.7 feet) caused by manipulation of valves in locks upstream.

1931-34: Maximum, 150,000 second-feet Feb. 7, 1932 (gage height, 41.6 feet); minimum, that of Oct. 19, 1933.

Maximum stage known, 50.7 feet Jan. 1, 1927.

Remarks.— Records good except those for Oct. 14-22, which are fair, owing to manipulation of valves at locks in Dam 3 and other dams upstream. From 40 to 50 second-feet that is diverted above gage and returned to river below dam is included in discharge records. Daily diversion record furnished by Du Pont Rayon Co. Gage-height record at lock gage furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,520	1,660	1,140	12,800	6,180	72,900	86,300	10,500	4,230	5,830	3,600	9,610
2	2,520	1,330	1,080	11,400	5,920	82,000	55,000	10,500	3,630	4,960	3,220	7,540
3	1,640	1,230	1,340	10,300	5,290	106,000	30,600	10,300	3,460	4,460	3,630	5,830
4	1,440	1,440	1,880	10,500	4,960	113,000	24,000	9,180	3,300	3,780	3,970	5,130
5	1,350	11,400	1,760	13,300	4,790	117,000	20,000	8,760	2,790	3,220	3,910	4,790
6	2,140	7,940	15,300	15,100	4,610	122,000	16,800	8,760	3,630	4,460	3,540	4,290
7	2,520	4,620	17,800	37,500	4,610	124,000	14,700	7,940	3,660	5,830	3,010	4,000
8	2,260	4,290	14,700	43,900	4,610	125,000	15,300	6,960	3,690	4,960	2,790	3,420
9	2,260	3,510	12,600	53,500	4,610	124,000	12,500	6,760	3,780	4,160	2,960	2,870
10	2,010	2,660	11,400	67,400	4,120	117,000	11,400	6,200	3,880	3,910	3,270	2,790
11	1,890	2,520	10,300	71,100	4,020	106,000	11,800	5,660	3,630	3,660	2,900	2,790
12	1,770	2,140	6,140	66,000	4,180	90,200	14,700	6,010	3,420	4,230	2,660	2,870
13	1,770	2,260	6,940	39,200	3,710	75,000	17,300	6,010	6,010	4,460	3,150	2,790
14	1,330	1,890	6,370	24,000	3,250	51,300	17,300	6,010	8,760	4,030	3,600	2,960
15	2,060	1,660	5,640	17,800	3,150	30,600	16,300	5,480	7,740	4,880	4,290	2,990
16	2,160	1,700	5,820	14,700	3,200	22,800	14,200	5,660	9,180	10,000	4,960	2,630
17	1,960	1,660	8,960	13,300	2,980	18,400	13,300	5,660	7,940	11,600	5,480	2,290
18	1,540	1,460	9,380	11,800	2,840	15,200	12,300	6,010	15,600	11,200	6,010	2,060
19	160	1,190	26,300	11,200	2,750	17,600	11,800	6,010	24,000	10,600	6,960	1,790
20	1,130	1,130	30,000	10,700	2,640	41,200	12,300	5,660	23,400	9,400	6,570	2,080
21	760	1,070	29,400	10,000	2,540	62,100	12,300	5,130	15,800	8,350	6,960	2,390
22	860	1,050	28,200	9,600	2,620	72,300	13,800	4,790	11,600	6,380	6,010	2,210
23	2,520	1,290	27,000	9,380	2,890	77,400	20,500	5,830	9,400	4,960	5,300	2,210
24	1,660	1,460	20,600	8,960	2,980	81,000	25,700	7,340	7,740	4,620	5,480	2,060
25	1,540	1,250	15,200	8,540	9,260	96,300	23,400	7,740	7,150	3,970	6,960	1,680
26	1,330	1,040	13,300	7,930	41,900	105,000	18,900	7,150	7,740	3,420	8,140	1,580
27	1,440	1,050	11,800	7,740	61,600	112,000	16,200	6,380	9,970	3,300	8,760	1,820
28	1,660	1,050	11,400	7,140	69,300	118,000	13,300	6,010	7,540	4,620	10,300	1,690
29	2,010	959	12,800	6,940		119,000	12,300	5,480	5,830	6,010	8,760	1,890
30	1,770	997	16,300	6,560		116,000	11,600	5,300	5,300	4,070	11,200	2,630
31	2,260		15,800	6,370		102,000		4,620		3,480	11,800	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,520			150			1,744			0.149	0.17	
November	11,400			969			2,297			1.10	1.27	
December	30,000			1,080			12,860			1.10	1.27	
January	71,100			6,370			20,760			1.77	2.04	
February	68,300			2,540			9,798			.837	.87	
March	125,000			15,200			84,890			7.25	8.36	
April	86,300			11,400			19,760			1.69	1.99	
May	10,500			4,620			6,766			.678	.67	
June	24,000			2,790			7,756			.663	.74	
July	11,800			3,220			5,671			.476	.56	
August	11,800			2,790			6,495			.470	.50	
September	9,610			1,520			3,187			.272	.34	
The year	125,000			150			15,190			1.30	17.62	

Cumberland River at Clarksville, Tenn.

Location.- Staff gage at Louisville & Nashville Railroad bridge at Clarksville, Montgomery County, $1\frac{1}{4}$ miles above mouth of Red River. Zero of gage is 331.31 feet above mean sea level.

Drainage area.- 16,000 square miles, including Red River.

Records available.- October 1924 to September 1934, October 1922 to September 1923 (gage height only).

Average discharge.- 10 years, 25,510 second-feet.

Extremes.- Maximum discharge recorded during year, 142,000 second-feet Mar. 10 (gage height, 49.2 feet); minimum recorded, 1,150 second-feet Oct. 22 (gage height, 11.9 feet).
1924-34: Maximum discharge recorded, about 216,000 second-feet Jan. 2, 1927 (gage height, 60.0 feet); minimum recorded, 780 second-feet Sept. 3, 1925, and Aug. 13, 14, 1930.

Remarks.- Records good Oct. 1 to June 30 and fair thereafter. Discharge estimated May 26, July 2, Aug. 9-15, and 19-23. Records include flow of Red River. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	4,520	2,700	1,780	20,000	8,410	76,200	128,000	14,900	5,420	7,370	5,110	15,200		
2	3,970	2,460	1,560	17,400	8,410	81,400	122,000	13,400	4,810	6,500	4,810	13,000		
3	3,440	2,230	2,000	15,200	8,060	106,000	104,000	13,100	4,520	7,710	4,520	10,900		
4	2,940	3,970	2,460	13,800	7,710	122,000	72,200	12,700	4,240	6,370	4,240	9,120		
5	2,460	7,710	3,700	15,200	7,030	129,000	42,900	12,000	4,520	5,110	4,520	7,370		
6	2,230	20,400	4,810	19,200	6,700	130,000	28,100	10,900	4,520	4,240	4,810	6,370		
7	2,700	19,200	31,800	39,200	6,370	131,000	22,200	11,300	4,520	4,240	4,520	6,050		
8	2,940	10,200	28,900	48,800	6,050	134,000	22,600	10,200	4,520	6,700	4,240	5,730		
9	2,940	7,370	21,500	66,800	5,730	140,000	20,400	9,120	4,520	7,030	3,600	4,810		
10	2,940	6,050	17,400	64,800	6,050	142,000	18,500	8,760	4,810	5,730	3,600	3,970		
11	2,700	4,810	14,900	72,900	5,730	141,000	17,400	7,710	4,810	5,420	3,800	3,440		
12	2,700	3,970	10,200	76,800	5,420	136,000	17,000	7,030	5,110	4,810	3,800	3,440		
13	2,460	3,440	12,000	72,900	5,420	129,000	19,200	7,030	4,810	5,420	3,600	3,440		
14	2,460	3,700	9,840	51,800	5,110	117,000	22,200	7,370	5,370	6,050	3,600	3,190		
15	2,230	3,190	8,760	32,900	5,110	94,000	21,500	9,480	11,600	5,110	4,800	3,700		
16	2,230	2,940	8,410	25,200	4,520	69,200	20,400	8,060	9,480	5,110	5,110	3,700		
17	2,700	2,700	16,700	21,100	4,520	41,400	18,900	7,710	10,600	10,600	6,050	4,810		
18	2,230	2,700	23,000	18,500	4,240	26,300	17,400	7,370	40,700	13,400	6,760	4,240		
19	1,780	2,460	27,000	16,700	3,970	23,000	16,300	7,370	37,000	13,800	9,800	3,440		
20	1,560	2,230	50,000	15,600	3,970	27,400	16,000	7,030	31,600	14,900	9,400	2,700		
21	1,350	2,230	50,700	14,900	3,970	61,400	16,000	6,700	29,200	13,100	7,600	2,460		
22	1,150	2,000	42,600	14,200	3,970	78,800	15,600	6,370	21,500	11,300	7,400	2,460		
23	1,350	2,000	37,800	13,800	3,700	82,800	17,000	5,730	16,500	9,120	7,700	2,700		
24	2,700	1,780	35,900	13,400	3,970	87,000	22,600	6,050	14,900	6,370	10,600	2,700		
25	3,190	2,230	31,100	12,700	4,810	101,000	28,500	7,710	12,400	5,730	16,000	2,700		
26	2,940	2,230	24,400	12,400	34,400	113,000	27,000	8,200	10,600	5,110	12,700	2,230		
27	2,700	2,230	19,600	11,300	65,900	117,000	23,000	8,410	9,840	4,520	12,700	2,000		
28	2,460	2,000	17,400	11,300	72,200	125,000	20,000	7,710	7,710	4,240	14,500	2,460		
29	2,700	2,000	18,000	11,300		128,000	17,400	6,700	9,840	5,110	14,500	3,190		
30	2,700	2,000	16,300	9,480		130,000	16,000	6,370	8,760	9,120	13,100	6,700		
31	2,700		19,600	9,120		130,000		6,050		7,030	13,500			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					4,520		1,150		2,593		0.161		0.19	
November					20,400		1,780		4,504		.262		.31	
December					50,700		1,560		19,620		1.23		1.42	
January					76,600		9,120		27,690		1.73		1.99	
February					72,200		3,700		11,120		.695		.72	
March					142,000		23,000		101,600		6.35		7.32	
April					128,000		15,600		32,540		2.02		2.25	
May					14,900		5,730		6,663		.541		.62	
June					40,700		4,240		11,650		.728		.81	
July					14,900		4,240		7,302		.466		.53	
August					16,000		3,600		7,525		.470		.54	
September					15,200		2,000		4,941		.309		.34	
The year.					142,000		1,150		20,100		1.26		17.04	

New River near New River, Tenn.

Location.- Staff gage at highway bridge $1\frac{1}{4}$ miles east of New River, Scott County, and 2 miles above mouth of Brimstone Creek. Zero of gage is 1,095.84 feet above mean sea level.

Drainage area.- 312 square miles.

Records available.- November 1922 to September 1934.

Average discharge.- 11 years (1923-34), 623 second-feet.

Extremes.- Maximum discharge recorded during year, 21,000 second-feet Mar. 2 (gage height, 25.8 feet); minimum, 2.7 second-feet Oct. 15, 16, Nov. 2, 3 (gage height, 0.42 foot).

1922-34: Maximum discharge, determined by slope-area method, about 70,000 second-feet Mar. 23, 1929 (gage height, from flood marks, 44.8 feet); minimum, 0.2 second-foot Aug. 6, 7, 1925 (gage height, 0.22 foot).
Flood of Mar. 23, 1929, is highest known.

Remarks.- Records good below and fair above 15,000 second-feet.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	8.5	3.2	9.4	300	92	840	640	250	30	193	78	103		
2	7.7	2.7	9.4	1,160	109	1,340	500	206	27	1,390	62	82		
3	7.7	3.7	12	800	115	15,700	405	193	22	480	47	68		
4	10	6.9	66	600	113	4,010	318	193	17	250	133	74		
5	9.4	105	220	500	105	1,950	282	180	21	144	440	84		
6	7.7	76	440	560	96	1,240	250	156	25	94	300	88		
7	7.7	90	680	13,300	88	920	220	151	21	92	103	66		
8	6.2	62	422	2,960	82	1,240	206	133	24	352	84	57		
9	6.2	47	250	1,340	76	1,240	265	115	32	265	111	49		
10	5.5	32	168	880	70	1,000	265	105	43	220	76	60		
11	4.9	27	129	640	70	680	234	154	149	640	62	35		
12	3.7	22	105	480	70	520	220	140	109	335	70	30		
13	6.9	18	103	440	74	388	206	103	88	282	84	47		
14	4.9	17	111	405	70	309	193	98	78	282	98	42		
15	2.7	16	115	352	74	282	168	98	62	300	154	28		
16	4.9	15	118	300	70	250	156	206	59	4,250	168	25		
17	8.5	13	126	265	66	234	180	133	51	960	680	27		
18	11	12	144	234	62	206	206	115	40	500	352	24		
19	7.7	11	640	220	62	680	800	96	1,000	282	220	21		
20	7.7	9.4	1,490	220	66	6,750	2,070	80	405	180	156	18		
21	6.2	9.4	880	180	64	2,130	1,160	66	206	140	111	16		
22	4.9	9.4	600	168	68	1,160	840	96	126	105	82	13		
23	3.7	9.4	370	168	86	2,310	760	124	94	84	118	11		
24	9.4	9.4	265	149	103	3,310	680	92	78	78	149	9.4		
25	6.9	9.4	220	142	388	5,530	600	70	84	55	760	18		
26	6.2	10	1,240	147	9,360	2,820	480	55	64	40	1,640	10		
27	4.9	11	1,590	142	2,680	2,750	422	45	43	32	720	8.5		
28	4.3	13	840	135	1,120	2,310	388	40	35	57	560	7.7		
29	4.3	11	600	129		1,490	300	42	38	640	282	22		
30	4.3	9.4	388	115		1,040	250	38	154	180	180	80		
31	3.7		300	96		840		35		107	131			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					11		2.7		6.34		0.020		0.02	
November					105		2.7		23.0		.074		.08	
December					1,590		9.4		408		1.31		1.51	
January					13,300		96		888		2.85		3.29	
February					9,360		62		554		1.78		1.85	
March					15,700		206		2,112		6.77		7.80	
April					2,070		156		455		1.46		1.63	
May					280		35		116		.372		.43	
June					1,000		17		107		.343		.38	
July					4,250		32		420		1.35		1.56	
August					1,640		47		265		.849		.98	
September					103		7.7		40.8		.131		.15	
The year					15,700		2.7		452		1.45		19.68	

New River at New River, Tenn.

Location.- Water-stage recorder 1,000 feet below highway bridge at New River, Scott County, 1,000 feet below mouth of Phillips Creek, and 1½ miles below mouth of Brimstone Creek. Zero of gage is 1,061.80 feet above mean sea level.

Drainage area.- 383 square miles.

Records available.- August to September 1934.

Extremes.- Maximum discharge during period, 2,870 second-feet Aug. 26 (gage height, 7.05 feet); minimum, 14 second-feet Sept. 25 (gage height, 1.67 feet).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												127
2												110
3												91
4												95
5												104
6												122
7												90
8												72
9												66
10												56
11												46
12												42
13												57
14												60
15												46
16												41
17											688	34
18											420	31
19											286	30
20											199	29
21											140	25
22											110	22
23											154	18
24											407	17
25											999	30
26											2,000	17
27											889	18
28											510	20
29											356	41
30											229	110
31											168	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October												
November												
December												
January												
February												
March												
April												
May												
June												
July												
August 17-31				2,000		110		510		1.35		0.74
September				127		17		55.5		.145		.16
The year												

South Fork of Cumberland River at Nevelsville, Ky.

Location.— Water-stage recorder three-quarters of a mile below Turkey Creek Ferry on Greenwood-Monticello pike, half a mile west of Nevelsville, McCreary County, and 2½ miles below mouth of Little South Fork. Prior to Apr. 10, 1934, staff gage half a mile upstream was used. Zero of both gages is 637.29 feet above mean sea level.

Drainage area.— 1,260 square miles.

Records available.— March 1915 to September 1934.

Average discharge.— 18 years (1915-31, 1932-34), 2,378 second-feet.

Extremes.— Maximum discharge during year, 46,000 second-feet Mar. 3 (gage height, 36.12 feet); minimum, 78 second-feet Oct. 15, 18 (gage height, 1.88 feet).
1915-34: Maximum discharge, about 110,000 second-feet Mar. 23, 1929 (gage height, from high-water mark, 69.0 feet); minimum, 13 second-feet Sept. 3, 1925 (gage height, 1.39 feet).

Remarks.— Records fair Oct. 1 to Apr. 9 and good Apr. 10 to Sept. 30. Discharge estimated Mar. 19 to Apr. 9. Operation of a small power plant a short distance above gage may affect flow at extremely low water.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	88	99	1,150	555	4,500	3,000	1,020	292	466	493	412
2	115	88	95	910	630	5,770	2,200	960	249	1,310	364	314
3	115	95	115	1,150	505	39,000	1,700	370	232	2,360	272	266
4	105	99	172	1,390	580	21,400	1,500	840	355	946	240	240
5	99	166	208	1,210	555	9,040	1,300	780	412	666	192	266
6	99	262	480	2,250	530	4,700	1,160	780	355	542	566	300
7	95	340	2,090	21,300	505	3,170	1,100	744	383	402	483	266
8	92	408	2,020	20,200	455	10,400	1,000	702	364	350	369	270
9	88	340	970	5,780	430	10,400	1,600	618	355	727	309	224
10	88	262	685	3,710	408	5,780	1,610	594	364	810	278	188
11	88	198	580	2,570	408	4,000	1,500	708	553	954	309	162
12	88	178	505	2,090	385	2,900	1,360	990	570	1,300	270	147
13	88	157	430	1,880	385	2,330	1,260	900	594	1,320	224	154
14	81	139	430	1,810	385	1,810	1,120	750	457	870	220	332
15	78	123	408	1,600	385	1,600	1,020	810	350	1,640	287	318
16	78	117	656	1,330	385	1,460	930	750	267	2,270	336	249
17	81	119	480	1,210	362	1,330	900	870	257	3,380	452	192
18	83	111	505	1,090	340	1,150	870	810	676	1,400	1,040	162
19	85	103	1,090	1,090	340	2,600	1,160	690	1,470	900	810	132
20	90	99	2,990	1,030	320	15,000	5,660	588	1,680	636	559	118
21	85	95	2,730	910	300	11,000	4,260	504	990	498	437	104
22	88	95	1,880	795	320	6,800	2,940	467	664	388	341	94
23	88	94	1,330	850	460	6,400	2,500	636	792	318	323	111
24	90	119	1,090	795	480	15,000	2,060	990	1,220	261	403	118
25	85	115	1,030	795	2,730	17,000	1,750	702	750	204	930	90
26	90	111	1,270	740	21,900	13,000	1,500	542	514	165	2,500	80
27	88	103	2,330	685	14,100	11,000	1,360	374	447	140	3,140	108
28	88	107	2,330	668	5,780	9,500	1,360	383	346	143	1,470	162
29	85	103	1,670	605		7,100	1,260	346	274	615	930	311
30	88	103	1,460	605		5,000	1,120	327	232	1,380	654	1,190
31	92		1,530	555		3,600		309		738	504	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					121	78	91.1	0.072		0.08		
November					408	88	151	.120		.13		
December					2,990	95	1,079	.856		.99		
January					21,300	555	2,669	2.12		2.44		
February					21,900	300	1,968	1.65		1.81		
March					39,000	1,150	8,214	6.52		7.52		
April					5,660	870	1,722	1.37		1.53		
May					1,020	309	669	.547		.63		
June					1,680	232	550	.437		.49		
July					3,380	140	906	.719		.83		
August					3,140	192	636	.505		.58		
September					1,190	80	236	.187		.21		
The year.					39,000	78	1,582	1.26		17.04		

Clear Fork near Robbins, Tenn.

Location.- Staff gage at Burnt Mill Bridge, $3\frac{1}{2}$ miles northwest of Robbins, Scott County, and 4 miles above confluence with New River. Zero of gage is 1,082.46 feet above mean sea level.

Drainage area.- 278 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 14,600 second-feet Mar. 3 (gage height, 12.3 feet); minimum, 12 second-feet Oct. 18 (gage height, 0.66 foot). 1930-34: Maximum discharge recorded, 20,400 second-feet Feb. 3, 1932 (gage height, 14.9 feet); minimum, 0.2 second-foot Sept. 19-21, 1932 (gage height, 0.34 foot).

Remarks.- Records good at medium stages and fair at others.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	15	24	173	126	795	540	208	62	97	58	35
2	26	14	24	232	129	1,720	472	189	52	1,140	46	29
3	24	20	31	208	140	12,200	385	170	71	305	39	26
4	22	45	38	189	134	3,620	325	151	85	123	40	29
5	19	78	50	215	131	1,640	285	143	69	87	45	31
6	19	123	182	246	118	960	268	160	90	62	60	30
7	18	97	518	7,110	105	550	268	145	115	73	42	29
8	17	75	268	3,100	102	1,340	243	126	90	151	32	29
9	17	54	166	1,340	97	1,410	268	110	71	157	26	36
10	16	46	118	550	85	960	250	208	83	120	27	29
11	15	40	105	615	92	690	222	385	166	157	26	26
12	15	36	92	518	87	565	243	405	107	163	24	27
13	14	35	95	565	92	472	198	250	80	118	32	129
14	14	32	107	460	90	405	185	198	67	97	64	62
15	14	31	123	385	85	365	163	189	62	87	71	50
16	12	29	118	345	90	325	148	268	60	97	71	39
17	14	26	129	285	78	295	154	229	48	97	113	34
18	15	25	123	250	73	250	166	185	78	69	176	30
19	19	26	208	250	78	1,720	365	154	250	56	97	26
20	16	25	495	243	83	6,610	1,640	126	163	45	78	24
21	14	26	385	229	78	2,620	905	107	102	38	67	23
22	14	29	285	229	90	1,340	615	180	73	34	52	19
23	15	29	218	222	131	1,340	565	472	58	31	50	22
24	15	31	176	198	126	2,400	472	285	64	23	52	17
25	23	30	160	182	690	5,490	365	179	113	18	87	17
26	26	26	179	179	5,970	2,740	305	134	75	15	236	18
27	20	26	325	179	1,900	2,400	285	107	54	13	137	22
28	18	26	268	170	1,020	2,090	305	90	49	52	92	42
29	17	25	208	154		1,340	246	80	48	123	65	87
30	15	24	170	134		905	218	73	185	143	51	285
31	15		151	126		740		69		85	40	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					29	12	17.6	0.063		0.07		
November					123	14	38.1	.137		.15		
December					518	24	179	.644		.74		
January					7,110	126	651	2.27		2.62		
February					5,970	73	429	1.54		1.60		
March					12,200	250	1,954	7.03		9.10		
April					1,640	148	569	1.33		1.48		
May					472	69	185	.669		.77		
June					250	48	89.3	.321		.36		
July					1,140	13	125	.450		.52		
August					236	24	67.6	.243		.28		
September					285	17	43.4	.156		.17		
The year					12,200	12	346	1.24		16.86		

Obey River near Byrdstown, Tenn.

Location.- Water-stage recorder at bridge on State Highway 24, $1\frac{1}{2}$ miles above mouth of Eagle Creek and $3\frac{1}{2}$ miles southwest of Byrdstown, Pickett County. Prior to Nov. 15, 1933, chain gage was used at same site. Zero of gage is 577.08 feet above mean sea level.

Drainage area.- 452 square miles.

Records available.- March 1919 to September 1934.

Average discharge.- 15 years, 868 second-feet.

Extremes.- Maximum discharge during year, 23,100 second-feet Mar. 3 (gage height, 28.1 feet); minimum recorded, 33 second-feet Oct. 22 (gage height, 1.59 feet). 1919-34: Maximum discharge, about 35,000 second-feet June 29, 1928, Mar. 23, 1929 (gage height, 35.9 feet); minimum, 7 second-feet Nov. 3, 1920 (gage height, 0.90 foot).

Remarks.- Records good below and fair above 15,000 second-feet except those for Oct. 6, Dec. 19, 20, July 15, 27, 28, Aug. 13, 14, 23-31, Sept. 30, which are estimated and are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	34	40	236	192	1,280	1,050	466	162	198	258	150
2	57	34	40	244	205	2,750	830	435	138	144	180	130
3	57	34	54	275	205	19,400	705	399	165	141	150	110
4	59	52	63	264	202	8,490	615	368	223	118	115	159
5	54	170	68	268	192	2,690	550	345	206	110	176	183
6	50	176	685	462	179	1,700	555	329	189	98	141	156
7	48	163	805	7,630	173	1,300	530	325	189	95	141	144
8	48	115	526	4,900	160	3,510	490	297	209	161	165	265
9	42	88	331	1,940	147	3,280	500	256	189	490	318	186
10	44	74	240	1,240	138	1,830	540	437	251	305	325	141
11	40	66	186	885	135	1,300	520	942	226	220	638	112
12	39	59	163	705	135	1,020	555	912	198	193	471	99
13	40	59	154	650	141	830	500	630	342	317	592	95
14	37	57	147	576	136	730	471	500	325	358	532	92
15	36	52	157	504	132	625	426	444	350	455	273	105
16	34	47	173	436	124	570	390	390	230	868	317	130
17	40	45	195	391	124	500	394	350	183	337	1,170	90
18	37	42	212	351	115	482	381	333	2,220	212	780	81
19	34	42	325	339	118	4,480	1,550	305	1,520	165	490	72
20	36	40	706	331	112	15,000	2,300	251	885	132	399	65
21	34	44	630	323	115	4,700	1,340	216	535	110	337	63
22	33	47	512	315	124	2,360	995	754	354	95	240	61
23	57	45	409	323	141	2,720	830	1,790	352	85	269	59
24	68	45	331	311	205	3,610	780	940	730	78	968	52
25	50	47	283	291	1,880	8,750	655	625	555	67	705	50
26	40	45	591	283	12,400	4,620	575	462	368	65	1,830	63
27	37	45	409	275	3,670	3,680	540	345	258	83	912	58
28	36	45	555	264	1,760	3,760	690	273	202	262	505	98
29	34	44	299	247		2,440	545	226	174	2,470	325	269
30	36	40	261	212		1,700	490	202	171	780	240	858
31	36		240	186		1,300		186		453	189	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	68	33	43.7	0.097	0.11
November	176	34	63.1	.140	.16
December	805	40	303	.670	.77
January	7,630	186	827	1.83	2.11
February	12,400	112	834	1.85	1.93
March	19,400	462	3,600	7.96	9.18
April	2,300	381	699	1.55	1.73
May	1,790	186	475	1.05	1.21
June	2,220	158	410	.907	1.01
July	2,470	65	311	.688	.79
August	1,630	115	456	1.01	1.16
September	858	50	140	.310	.36
The year	19,400	33	683	1.51	20.51

Roaring River near Hilham, Tenn.

Location.- Staff gage at Crawford Mill, 1½ miles above mouth of Flat Creek, 4 miles south of Hilham, Overton County, and 15 miles north of Cookeville. Gage moved 150 feet upstream Nov. 7, 1933.

Drainage area.- 70.8 square miles.

Records available.- July 1932 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,200 second-feet Mar. 3 (gage height, 6.80 feet); minimum recorded, 3.5 second-feet Nov. 25 (gage height, 0.24 foot); minimum daily discharge, 7.0 second-feet July 27.
1932-34: Maximum discharge, 4,330 second-feet Mar. 19, 1933 (gage height, 8.00 feet on former gage); minimum recorded, 3.4 second-feet Aug. 11, 1932 (gage height, 1.22 feet on former gage); minimum daily discharge, 5.0 second-feet Aug. 11, 1932.

Remarks.- Records fair. Operation of gristmills upstream causes considerable diurnal fluctuation during low water.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	9.0	11	52	35	174	164	62	20	18	15	16
2	14	10	12	40	33	315	134	56	16	18	14	14
3	13	12	14	36	34	2,420	124	51	18	17	12	15
4	15	17	17	37	30	805	104	49	38	18	9.0	37
5	13	65	17	49	31	412	92	49	25	14	5.6	23
6	13	30	245	58	28	300	84	46	41	16	11	16
7	13	17	70	755	30	245	80	45	45	16	17	14
8	13	16	44	315	28	710	75	41	36	22	25	57
9	9.5	14	32	186	26	430	78	40	27	20	14	26
10	13	14	27	134	23	330	76	46	56	18	9.7	26
11	13	14	26	108	24	245	75	61	31	15	61	20
12	13	14	22	95	26	174	70	43	38	15	16	28
13	13	12	26	84	26	144	63	39	49	15	42	23
14	12	14	24	72	23	132	63	36	31	63	42	20
15	11	12	25	62	23	104	60	37	23	20	24	23
16	11	12	22	56	21	94	56	35	20	40	26	22
17	16	12	24	52	22	81	56	39	18	22	80	21
18	12	13	29	49	19	61	52	30	270	18	28	16
19	8.2	10	46	54	23	805	315	28	164	23	20	12
20	9.5	12	74	50	20	1,190	186	26	84	23	26	10
21	14	14	57	50	23	500	132	25	63	17	22	10
22	11	15	49	49	25	315	106	63	46	14	18	11
23	37	12	41	44	26	330	101	65	44	12	113	10
24	18	14	37	42	24	465	83	37	37	9.7	166	9.0
25	15	12	34	41	155	805	74	32	34	8.6	63	8.2
26	13	9.3	74	40	960	448	69	27	30	10	119	7.6
27	13	11	51	38	300	540	80	25	26	7.0	54	7.6
28	13	10	42	36	220	395	70	24	26	14	39	24
29	10	9.3	38	35		315	65	27	27	30	30	95
30	11	9.0	37	31		258	66	29	23	16	28	119
31	9.0		36	32		209		23		15	20	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						37	6.2	13.4	0.189		0.22	
November						65	9.0	14.8	.209		.23	
December						245	11	42.0	.593		.68	
January						755	31	59.7	1.27		1.46	
February						960	19	80.6	1.14		1.19	
March						2,420	81	444	6.27		7.23	
April						315	52	95.3	1.35		1.61	
May						65	23	39.6	.659		.64	
June						270	18	47.0	.684		.74	
July						63	7.0	18.9	.267		.31	
August						186	8.6	38.4	.542		.62	
September						119	7.6	24.7	.549		.59	
The year						2,420	7.0	79.4	1.12		15.22	

Caney Fork at Clifty, Tenn.

Location.— Water-stage recorder at county highway bridge 150 feet above Pilot Falls, three-quarters of a mile south of Clifty, White County, and 3 miles above mouth of Clifty Creek.

Drainage area.— 114 square miles.

Records available.— September 1930 to September 1934.

Extremes.— Maximum discharge during year, 5,100 second-feet Mar. 3 (gage height, 4.61 feet); minimum, 0.5 second-foot Aug. 1 (gage height, 0.25 foot).
1930-34: Maximum discharge, that of Mar. 3, 1934; minimum, 0.1 second-foot Oct. 19, 1931 (gage height, 0.21 foot).

Remarks.— Records good above 5 second-feet and fair below.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	34	6.8	5.6	386	52	332	226	122	34	43	0.6	9.8		
2	34	5.6	4.6	421	58	2,270	188	102	96	26	.6	8.2		
3	26	12	19	312	61	3,920	162	91	271	21	.8	6.8		
4	24	9.8	68	260	58	1,620	141	87	208	14	87	4.6		
5	19	26	58	273	55	778	212	79	126	8.2	24	6.8		
6	14	40	555	812	52	438	226	87	122	6.8	6.8	6.8		
7	12	36	379	3,910	49	325	172	83	102	16	3.7	3.7		
8	12	24	207	1,460	46	286	156	72	68	40	3.7	3.1		
9	9.8	16	141	692	46	232	151	64	52	38	3.7	3.1		
10	6.8	14	102	439	40	204	141	89	173	24	3.1	3.1		
11	6.8	12	83	312	38	183	146	1,140	188	16	17	2.6		
12	5.6	9.8	72	273	40	156	136	371	190	9.8	38	2.6		
13	4.6	8.2	87	260	40	136	117	243	301	6.8	24	2.1		
14	5.6	6.8	79	226	40	126	102	183	183	5.6	109	1.7		
15	3.7	5.6	75	189	38	107	98	151	107	4.6	46	1.4		
16	3.7	4.6	72	167	38	102	98	141	68	4.6	21	1.4		
17	3.7	4.6	72	136	36	91	112	209	49	3.7	89	1.1		
18	3.7	4.6	75	122	29	83	122	183	143	3.1	98	1.1		
19	4.6	4.6	311	117	31	1,172	266	151	156	3.1	86	1.1		
20	4.6	3.7	364	112	34	1,940	325	117	102	2.1	117	1.1		
21	5.6	4.6	292	102	31	837	238	97	64	2.1	58	1.1		
22	3.7	5.6	199	117	38	457	215	212	46	2.1	38	1.1		
23	4.6	8.2	162	102	77	627	238	346	34	1.7	27	1.1		
24	4.6	9.8	131	91	58	3,320	215	226	36	1.4	52	1.1		
25	3.7	12	107	87	785	2,570	141	162	40	1.1	215	1.1		
26	5.6	8.2	437	91	2,400	1,360	162	122	29	1.1	194	.8		
27	6.8	8.2	396	83	850	1,620	162	91	21	.8	94	.8		
28	6.8	8.2	280	75	458	994	167	68	26	.6	58	.6		
29	6.8	5.6	210	69		514	156	52	44	.6	40	.8		
30	6.8	4.6	146	55		340	126	49	99	.6	29	2.6		
31	12		136	70		266		40		.8	21			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					34		3.7		9.85		0.066		0.10	
November					40		3.7		11.0		.096		.111	
December					555		4.6		172		1.51		1.74	
January					3,910		55		332		3.35		3.86	
February					2,400		29		199		1.75		1.62	
March					3,920		83		884		7.75		8.94	
April					325		98		170		1.49		1.66	
May					1,140		40		168		1.47		1.70	
June					301		21		106		.930		1.04	
July					43		.6		9.98		.088		.10	
August					215		.6		51.8		.454		.52	
September					9.8		.6		2.78		.024		.05	
The year.					3,920		.6		162		1.60		21.62	

Caney Fork near Rock Island, Tenn.

Location.— Water-stage recorder 180 feet below power house of Tennessee Electric Power Co., half a mile downstream from storage dam at mouth of Collins River, and 1 mile northwest of Rock Island, Warren County. Zero of gage is 649.46 feet above mean sea level.

Drainage area.— 1,640 square miles.

Records available.— November 1911 to March 1924, April 1925 to September 1934.

Average discharge.— 15 years (1914-20, 1925-34). 3,562 second-feet.

Extremes.— Maximum discharge during year, 66,800 second-feet Mar. 3 (gage height, 22.8 feet); minimum, 68 second-feet Dec. 4, 5, represents leakage below dam when power plant was shut down.

1911-34: Maximum discharge, about 210,000 second-feet Mar. 23, 1929 (gage height, 40.6 feet, present datum); minimum, 45 second-feet, represents leakage prior to raising of dam in 1925.

Flood of Mar. 23, 1929 reached highest stage known.

Remarks.— Records good. Discharge estimated Apr. 23-26. Flow almost completely regulated at dam and power house immediately above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	662	110	1,420	1,470	4,800	4,770	2,810	1,680	1,160	1,350	1,650
2	617	448	133	1,940	1,370	19,000	4,220	2,480	872	748	1,300	1,530
3	1,810	178	110	2,770	1,540	61,000	3,760	2,340	601	997	1,160	2,060
4	1,930	78	511	2,400	1,460	53,100	3,020	2,370	727	2,000	690	1,210
5	1,540	994	500	2,080	1,150	15,500	3,030	1,960	1,770	1,520	734	1,860
6	1,720	1,110	656	1,550	1,440	8,920	2,780	1,120	1,570	1,290	1,260	997
7	1,080	385	885	7,970	1,370	5,900	2,540	1,900	1,710	1,570	1,300	1,040
8	1,280	300	1,060	20,400	1,020	5,490	2,120	1,030	2,090	824	1,140	1,170
9	1,110	204	355	8,870	1,350	4,050	2,980	1,070	628	1,190	1,050	1,030
10	617	692	1,260	4,380	1,520	3,700	2,590	1,180	745	1,350	1,140	1,140
11	253	100	1,070	3,650	592	3,490	2,810	1,230	2,330	1,460	760	1,480
12	260	124	1,410	3,580	432	3,590	2,940	1,090	2,520	1,540	599	1,460
13	294	557	1,420	3,360	710	2,680	3,250	962	2,370	1,820	684	1,490
14	153	532	1,380	3,100	696	2,760	3,110	1,090	4,219	1,100	1,260	1,200
15	161	80	1,390	2,860	665	2,850	3,160	1,160	2,790	802	1,220	957
16	177	84	1,580	2,530	354	2,610	3,000	1,270	2,640	1,520	1,230	366
17	234	81	1,550	2,990	410	2,140	2,880	1,320	2,360	1,530	564	884
18	184	115	693	3,250	223	1,150	3,180	1,390	2,820	1,420	809	1,200
19	194	69	474	3,200	412	7,700	3,140	476	2,200	1,560	244	1,230
20	130	679	813	3,160	419	25,500	2,710	598	1,970	1,230	702	1,120
21	151	596	1,110	3,180	570	15,600	2,590	2,340	2,160	724	762	1,090
22	137	96	1,640	3,120	182	12,200	2,280	2,770	2,050	2,030	734	430
23	186	106	1,220	2,920	126	8,950	2,300	3,120	1,910	1,030	698	545
24	723	110	1,410	2,430	104	38,500	2,800	3,080	1,000	1,550	798	1,180
25	979	126	1,680	2,720	252	50,000	3,250	3,100	1,920	1,160	1,340	774
26	1,170	290	1,180	1,890	1,960	9,760	3,200	2,850	1,270	1,060	878	642
27	1,120	298	1,660	2,500	2,480	20,900	3,300	2,540	1,140	812	590	368
28	552	455	2,090	2,400	5,270	16,600	3,100	2,690	919	543	2,480	472
29	562	195	2,340	2,270		10,700	1,920	2,140	1,040	571	2,810	378
30	851	318	1,880	2,340		9,610	2,560	1,910	755	646	2,010	142
31	1,010		1,810	1,950		5,990		1,550		968	1,090	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	1,950			130			689			0.420		0.48
November	1,110			69			355			.204		.23
December	2,340			110			1,155			.692		.80
January	20,400			1,420			3,551			2.23		2.57
February	5,270			104			1,055			.643		.67
March	61,000			1,150			13,370			8.15		9.40
April	4,770			1,920			2,978			1.81		2.02
May	3,120			389			1,629			1.12		1.29
June	4,210			601			1,759			1.07		1.19
July	2,030			543			1,218			.743		.86
August	2,480			244			1,050			.640		.74
September	2,050			142			1,036			.832		.71
The year	61,000			69			2,531			1.54		20.96

Caney Fork near Silver Point, Tenn.

Location.- Water-stage recorder at Johnson's ferry, 4 miles south of Silver Point, Putnam County, and 4 miles below mouth of Falling Water River. Zero of gage is 499.80 feet above mean sea level.

Drainage area.- 2,100 square miles.

Records available.- November 1922 to September 1934.

Average discharge.- 11 years (1923-34), 3,772 second-feet.

Extremes.- Maximum discharge during year, 75,600 second-feet Mar. 4 (gage height, 38.2 feet); minimum, 176 second-feet Nov. 19, 20 (gage height, 1.13 feet).

1922-34: Maximum discharge, determined by slope-area method, about 220,000 second-feet Mar. 23, 1929 (gage height, 80.1 feet); minimum, 25 second-feet on several days in November 1924 and August, September, and October 1925 (gage height, 0.00 foot).

Flood of Mar. 23, 1929, reached highest stage known.

Remarks.- Records good. Flow largely regulated by Great Falls hydroelectric plant near Rock Island, 36 miles upstream, and to slight extent by small plant or Falling Water River.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	658	1,150	382	2,340	1,860	8,830	6,390	3,336	1,800	1,210	1,170	2,180
2	491	972	318	1,610	1,700	8,420	5,450	2,920	1,740	1,340	1,460	2,060
3	593	852	273	2,790	1,740	55,900	4,720	2,720	1,090	1,040	1,360	1,650
4	2,190	602	316	2,770	1,710	65,600	3,650	2,620	1,020	1,360	1,320	2,480
5	2,080	600	634	2,720	1,640	30,700	3,680	2,610	1,060	2,200	820	1,470
6	1,920	1,360	2,070	3,130	1,480	12,000	3,420	2,200	2,140	1,370	832	1,970
7	2,010	1,320	1,470	6,260	1,890	7,980	3,100	1,820	1,740	1,160	1,310	1,170
8	1,450	662	1,440	19,400	1,430	6,720	3,010	2,050	2,210	1,640	1,600	1,210
9	1,410	558	1,640	15,300	1,320	5,140	3,070	1,390	2,140	1,020	1,200	1,250
10	1,400	402	1,640	7,610	1,690	4,360	3,210	1,660	1,270	1,400	1,150	1,140
11	914	866	1,650	4,350	1,570	4,200	3,230	1,780	1,330	1,600	1,210	1,260
12	466	346	1,380	4,470	818	4,200	3,340	1,770	4,000	1,960	937	1,650
13	398	236	1,900	4,190	756	3,100	3,590	1,410	3,440	1,800	724	1,740
14	466	616	2,010	3,660	1,090	3,030	3,590	1,340	4,100	2,000	1,400	1,610
15	297	727	1,740	3,560	802	3,220	3,690	1,420	3,590	1,330	1,380	1,310
16	278	306	1,820	2,920	824	3,030	3,330	1,390	3,010	1,420	1,420	1,070
17	344	207	1,680	3,200	622	2,780	3,400	1,650	3,220	1,840	3,270	528
18	348	188	1,110	3,680	516	2,330	3,470	1,660	6,380	1,750	1,470	842
19	316	189	1,200	3,560	412	6,490	3,780	1,890	3,390	1,850	1,140	1,260
20	318	204	1,100	3,490	567	26,600	3,180	822	2,750	1,770	580	1,240
21	294	679	1,410	3,460	685	22,400	3,070	756	2,470	1,410	857	1,100
22	257	859	1,590	3,450	686	13,200	2,990	3,650	2,390	1,330	1,070	1,060
23	274	294	2,010	3,560	452	9,090	2,800	3,940	2,540	1,930	903	548
24	269	229	1,690	2,860	316	22,100	3,360	3,650	2,100	1,130	961	530
25	762	247	1,960	2,770	1,010	61,600	3,620	3,470	1,370	1,860	963	1,180
26	1,180	276	1,890	2,850	5,110	49,300	3,510	3,390	2,190	1,110	1,640	864
27	1,370	314	1,390	2,330	4,340	26,200	3,650	3,070	1,480	1,280	1,330	782
28	1,310	416	2,180	2,650	4,720	22,100	3,630	2,870	1,460	1,430	2,920	468
29	801	688	2,410	2,580		15,100	2,980	2,790	1,220	970	2,460	796
30	718	329	2,360	2,600		9,840	2,290	2,450	1,620	731	2,380	1,110
31	1,020		2,040	2,420		8,630		2,060		757	2,230	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,190	257	867	0.413	0.48
November	1,360	188	556	.265	.30
December	2,410	273	1,500	.714	.82
January	19,400	1,610	4,272	2.03	2.34
February	5,110	316	1,491	.710	.74
March	65,600	2,330	16,810	8.00	9.22
April	8,390	2,290	3,530	1.68	1.87
May	5,940	756	2,246	1.07	1.25
June	6,380	1,020	2,342	1.12	1.25
July	2,200	731	1,444	.688	.79
August	3,270	580	1,401	.667	.77
September	2,460	468	1,250	.595	.66
The year	65,600	188	3,170	1.51	20.47

Bee Creek at Herbert, Tenn.

Location.- Water-stage recorder 500 feet below mouth of Glade Creek and three-quarters of a mile northwest of Herbert, Bledsoe County. Zero of gage is 1,476.93 feet above mean sea level.

Drainage area.- 108 square miles.

Records available.- August 1930 to September 1934.

Extremes.- Maximum discharge during year, about 7,120 second-feet Mar. 3 (gage height, 9.25 feet); minimum, 1.2 second-feet Nov. 2, 3 (gage height, 0.38 foot).

1930-34: Maximum discharge, that of Mar. 3, 1934; no flow Aug. 16 to

Sept. 9, 1930, Sept. 29 to Oct. 27, Nov. 20-22, 1931.

Maximum stage known, 15.7 feet, from high-water mark, Mar. 23, 1929 (discharge not determined).

Remarks.- Records poor. Discharge estimated Mar. 24, June 2-4, Aug. 25, 26, Sept. 1-7.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	12	1.5	5.3	252	46	284	188	46	26	118	16	106		
2	16	1.2	4.7	292	46	2,310	131	41	41	70	16	120		
3	12	1.8	6.8	220	44	5,360	103	38	348	46	440	97		
4	11	2.7	13	184	45	1,630	84	32	288	33	628	59		
5	9.5	3.9	18	292	44	672	79	30	280	24	160	45		
6	9.0	7.4	110	532	37	404	67	32	388	19	67	33		
7	8.4	9.0	128	4,280	34	288	59	38	420	84	40	22		
8	7.4	9.0	68	1,330	30	224	59	35	172	440	44	17		
9	6.8	7.4	50	578	30	194	53	28	147	208	53	15		
10	6.3	5.3	42	360	28	147	49	26	785	108	29	12		
11	5.8	4.2	37	248	27	116	50	28	587	113	208	9.5		
12	4.2	4.2	30	224	27	97	59	27	628	110	160	9.5		
13	3.3	4.2	27	244	30	86	46	25	480	70	364	7.9		
14	3.3	3.9	24	204	29	75	40	19	244	46	224	14		
15	3.3	3.9	22	164	26	68	36	18	118	40	88	15		
16	3.0	3.6	20	141	25	60	36	19	53	52	300	12		
17	3.0	3.3	20	118	25	54	60	184	49	40	740	11		
18	3.0	3.0	23	99	25	53	70	204	113	28	412	10		
19	3.0	2.7	296	90	24	508	138	99	97	25	276	9.5		
20	2.7	2.7	460	82	30	1,530	212	77	49	22	212	7.4		
21	2.7	3.6	236	77	26	695	164	54	34	18	86	6.3		
22	2.7	6.3	131	75	25	404	134	184	24	12	52	5.8		
23	2.7	10	101	70	38	440	128	244	19	9.5	33	6.3		
24	2.4	9.5	84	60	37	3,760	110	157	46	7.4	64	15		
25	2.4	7.4	74	56	284	3,230	88	95	50	5.3	898	9.0		
26	2.4	6.8	528	56	1,760	1,240	74	60	25	35	762	6.3		
27	2.1	6.3	464	53	672	1,380	68	54	25	131	292	5.8		
28	1.8	6.3	292	52	392	755	62	47	68	59	99	5.8		
29	2.1	6.3	188	52		460	56	41	288	36	50	3.6		
30	2.1	5.8	134	47		280	52	36	392	29	28	95		
31	1.8		116	46		228		33		21	22			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					16		1.2		5.10		0.047		0.05	
November					10		1.2		5.11		.047		.05	
December					528		4.7		121		1.12		1.29	
January					4,280		46		341		3.16		3.64	
February					1,780		23		137		1.27		1.32	
March					5,360		53		889		8.23		9.49	
April					212		36		85.2		.789		.88	
May					244		18		66.2		.613		.71	
June					628		19		269		1.94		2.16	
July					440		5.3		66.4		.615		.71	
August					898		16		221		2.05		2.36	
September					120		3.6		26.3		.244		.27	
The year					5,360		1.2		185		1.69		22.93	

Calfkiller River at Sparta, Tenn.

Location.- Staff gage at Sparta Water Co.'s pumping station in Sparta, White County, 1 mile above Town Creek and 7 miles below Cherry Creek.

Drainage area.- 150 square miles.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge during year, 7,420 second-feet Mar. 3 (gage height, 17.30 feet); minimum, 23 second-feet Sept. 21-25 (gage height, 1.92 feet).
1932-34: Maximum discharge, that of Mar. 3, 1934; minimum discharge, 21 second-feet July 23-25, 1933; minimum gage height, 1.70 feet July 21, 1933.

Remarks.- Records good between 250 and 5,000 second-feet, fair above and below. Discharge estimated Oct. 8, Nov. 25, Jan. 24, May 27, June 24, July 6, 21, Aug. 8.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	39	32	164	101	520	520	228	82	60	53	31
2	49	36	34	228	98	1,240	436	216	74	47	52	27
3	49	88	39	215	98	6,250	382	192	78	45	47	26
4	44	96	58	190	96	2,460	350	180	72	41	67	48
5	39	121	73	190	94	1,210	304	168	84	39	45	45
6	39	133	640	240	92	790	330	157	88	36	34	39
7	42	110	610	3,080	88	640	317	157	78	50	33	30
8	39	81	346	1,800	81	520	304	131	70	68	39	33
9	38	67	228	940	75	464	304	115	64	66	41	27
10	35	58	166	640	75	408	317	128	111	60	52	24
11	35	53	137	490	75	356	304	850	111	50	50	23
12	34	48	121	402	75	317	304	610	187	180	87	38
13	36	42	137	360	75	291	278	356	216	82	93	41
14	35	41	126	318	71	253	253	253	180	66	74	26
15	36	39	117	266	69	240	216	216	117	50	52	24
16	38	36	112	240	67	228	216	192	72	86	45	24
17	41	38	121	202	66	204	253	192	78	68	111	26
18	39	39	124	190	58	192	253	180	128	56	133	26
19	39	39	190	178	62	1,420	730	146	192	45	105	26
20	31	32	450	166	62	3,180	820	128	142	39	81	24
21	34	29	374	159	64	1,350	550	115	105	39	89	23
22	35	34	292	161	66	850	436	304	86	39	64	21
23	36	26	228	154	75	790	436	492	72	36	43	21
24	39	30	190	146	88	2,320	436	330	64	33	45	23
25	39	32	164	137	402	3,860	382	228	124	34	93	23
26	39	31	164	133	3,130	1,840	317	180	102	31	120	33
27	39	34	181	128	1,210	1,560	304	168	80	39	93	45
28	39	34	149	121	700	1,490	304	122	62	192	74	34
29	41	34	137	117		1,040	266	113	52	291	43	80
30	39	36	126	101		790	240	107	47	144	43	192
31	39		119	96		640		96		70	33	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					60	31	39.3	0.262		0.30		
November					133	26	51.9	.346		.39		
December					640	32	193	1.29		1.49		
January					3,080	98	386	2.57		2.96		
February					3,130	58	261	1.74		1.81		
March					6,250	192	1,217	8.11		9.35		
April					820	216	361	2.41		2.69		
May					850	96	227	1.51		1.74		
June					216	47	99.4	.663		.74		
July					221	31	70.4	.469		.54		
August					133	33	66.0	.440		.51		
September					192	21	36.8	.245		.27		
The year.					6,250	21	252	1.68		22.79		

Collins River near McMinnville, Tenn.

Location.- Water-stage recorder at highway bridge half a mile below mouth of Barren Fork and $2\frac{1}{2}$ miles northeast of McMinnville, Warren County. Zero of gage is 825.73 feet above mean sea level.

Drainage area.- 624 square miles.

Records available.- April 1925 to September 1934.

Extremes.- Maximum discharge during year, 31,100 second-feet Mar. 25 (gage height, 23.45 feet); minimum, 48 second-feet Oct. 30 (gage height, 0.80 foot).
1925-34: Maximum discharge, about 75,300 second-feet Mar. 23, 1929 (gage height, 39.1 feet); minimum, 35 second-feet Sept. 21, 1930.
Maximum stage known, that of Mar. 23, 1929.

Remarks.- Records good except those estimated, Nov. 18-23, Dec. 8-11, Mar. 3-6, 29-31, Apr. 17-25, which are fair. Considerable regulation during low water caused by operation of power plant on Barren Fork, at McMinnville.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	166	60	90	394	274	1,480	1,940	450	232	502	412	242
2	154	74	99	637	274	4,580	1,590	420	239	302	335	168
3	132	177	114	770	294	25,100	1,350	412	344	276	264	147
4	158	213	110	634	268	12,400	1,170	435	745	249	243	228
5	80	352	123	636	282	6,010	1,060	502	482	218	218	298
6	105	344	1,580	1,010	250	3,350	980	342	427	240	199	128
7	111	192	756	7,300	234	2,250	898	405	531	276	176	147
8	106	146	446	7,620	240	1,760	845	412	643	552	166	195
9	100	124	342	3,480	228	1,690	820	496	661	490	154	98
10	102	113	304	2,050	214	1,410	770	376	980	373	221	100
11	124	113	268	1,450	165	1,220	795	398	1,290	415	159	262
12	74	98	204	1,140	254	1,050	770	390	6,990	720	120	290
13	93	136	212	1,060	217	942	720	356	4,100	541	128	381
14	92	103	178	957	214	840	622	339	1,980	387	390	615
15	93	66	168	901	214	770	599	391	1,260	316	226	367
16	96	84	185	696	183	714	554	339	970	276	161	302
17	100	82	108	627	212	646	770	599	813	246	215	222
18	90	89	193	560	140	584	1,060	952	1,330	215	280	195
19	83	80	183	530	222	2,670	952	795	770	221	1,120	179
20	106	90	340	500	202	7,780	925	622	670	224	745	210
21	64	85	695	442	202	5,480	925	636	519	224	390	119
22	86	139	553	471	232	3,550	845	949	466	218	334	110
23	84	134	429	440	198	2,900	770	820	356	161	190	117
24	94	69	282	413	240	13,700	695	599	509	194	187	117
25	62	58	294	392	400	25,900	670	507	352	147	531	110
26	94	90	378	357	4,330	11,900	576	383	243	144	1,108	151
27	86	84	890	366	3,400	8,840	567	309	289	239	670	98
28	136	97	829	338	2,060	6,620	563	289	213	426	515	159
29	84	99	600	346		4,280	478	276	355	745	306	155
30	98	99	480	311		3,050	490	261	348	870	282	409
31	91		404	290		2,340		276		563	213	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	166	64	101	0.162	0.19
November	352	56	122	.196	.22
December	1,580	90	382	.612	.71
January	7,620	290	1,193	1.91	2.20
February	4,330	140	599	.896	.93
March	25,800	584	5,346	8.57	9.68
April	1,940	478	856	1.38	1.54
May	952	261	485	.752	.87
June	6,990	213	957	1.53	1.71
July	870	144	346	.558	.64
August	1,120	120	343	.550	.63
September	615	98	211	.338	.38
The year	25,800	56	914	1.46	19.90

Barren Fork near Trousdale, Tenn.

Location.- Staff gage 200 feet below highway bridge on Trousdale-McMinnville Pike, 3 miles east of Trousdale, Warren County, and 4 miles below junction of South Prong and Figgs Branch.

Drainage area.- 132 square miles.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge during year, about 6,650 second-feet Mar. 24 (gage height, 10.40 feet); minimum discharge, 40 second-feet Oct. 3, Sept. 3; minimum gage height, 1.06 feet Sept. 3.
1932-34: Maximum discharge, that of Mar. 24, 1934; minimum, that of Oct. 3, 1933, Sept. 3, 1934.

Remarks.- Records good below and fair above 4,000 second-feet. Slight regulation at extremely low water due to operation of gristmills on tributaries.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	50	46	92	71	165	258	100	62	68	58	44
2	58	82	48	79	71	910	232	98	64	66	55	45
3	40	55	60	71	71	3,860	208	91	68	65	57	41
4	46	77	66	77	71	855	185	88	88	65	52	77
5	46	282	61	121	71	462	174	88	66	64	50	55
6	55	118	910	143	71	316	163	107	77	61	49	48
7	50	85	212	1,090	66	256	163	110	69	74	48	44
8	50	71	131	356	65	272	152	98	66	86	52	44
9	48	68	105	240	65	258	163	91	66	66	57	45
10	49	65	89	200	61	208	162	91	142	64	52	43
11	48	58	87	165	61	185	174	91	105	64	46	43
12	44	57	79	154	61	163	152	85	3,050	196	48	86
13	44	55	73	154	61	163	142	80	540	80	49	52
14	44	52	71	131	60	142	132	77	232	71	220	48
15	43	52	68	119	57	142	123	78	163	64	75	45
16	46	50	68	112	61	132	123	75	132	72	57	45
17	50	50	63	103	55	125	185	80	112	84	57	45
18	48	50	86	103	55	119	163	77	174	59	102	45
19	48	48	84	94	58	582	142	77	132	88	66	45
20	48	48	107	91	55	910	132	72	107	61	59	43
21	48	52	89	87	57	462	132	69	95	59	57	44
22	48	60	81	98	61	301	121	132	88	55	54	43
23	46	55	74	92	61	286	119	123	83	53	52	45
24	50	52	73	85	61	4,260	116	98	95	52	52	43
25	49	49	69	85	133	2,300	107	82	85	52	59	45
26	49	48	69	87	510	1,030	102	72	75	49	54	44
27	49	46	65	77	226	1,560	103	74	71	132	52	43
28	50	49	65	76	176	605	103	66	69	90	49	44
29	50	50	60	77		428	102	66	71	75	48	77
30	49	48	58	71		346	98	66	69	72	46	98
31	52		60	68		301		64		61	44	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	71	40	48.9	0.370	0.43
November	282	46	65.1	.493	.55
December	910	46	105	.795	.92
January	1,090	68	148	1.12	1.29
February	510	55	91.1	.690	.72
March	4,260	119	713	5.40	6.23
April	258	98	147	1.11	1.24
May	132	64	86.9	1.651	1.75
June	3,050	82	211	1.60	1.78
July	196	49	71.9	.545	.63
August	220	44	60.6	.459	.53
September	98	41	50.3	.381	.43
The year	4,260	40	151	1.14	15.50

Falling Water River near Cookeville, Tenn.

Location.- Staff gage at Burgess Mill, 1 mile above mouth of Post Oak Creek and 5 miles south of Cookeville, Putnam County.

Drainage area.- 73.3 square miles.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge during year, 3,780 second-feet Mar. 2 (gage height, 20.2 feet, from flood marks); minimum, 1.1 second-feet Aug. 25 (gage height, 1.08 feet); minimum daily discharge, 4.4 second-feet several days in August and September. 1932-34: Maximum discharge, that of Mar. 2, 1934; minimum, that of Aug. 25, 1934; minimum daily discharge, 4.2 second-feet several days in August and September 1932. Flood of June 28, 1928, reached a stage of 24.1 feet and that of Mar. 23, 1929, 23.5 feet, from flood marks.

Remarks.- Records good except those below 20 second-feet, which are fair. Regulation caused by operation of small mill just above gage. Discharge represents unregulated flow.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	8.5	8.2	33	33	187	185	44	24	20	15	4.4
2	20	8.5	8.2	30	33	465	149	41	24	20	12	4.4
3	20	15	9.7	30	33	2,810	122	40	24	15	10	4.4
4	18	33	9.7	32	29	1,130	104	39	21	15	10	16
5	16	30	8.2	51	26	537	95	36	21	15	10	20
6	15	26	285	86	22	285	86	35	26	12	10	20
7	15	21	122	1,320	22	248	82	31	24	12	10	18
8	15	18	58	625	22	230	72	31	21	14	8.5	14
9	15	15	54	315	22	187	72	31	16	15	8.5	8.5
10	15	14	37	185	22	168	72	33	16	15	8.5	7.0
11	12	10	26	140	22	131	65	194	18	15	7.0	7.0
12	12	10	26	113	19	113	65	72	140	26	7.0	7.0
13	12	10	25	104	19	100	61	51	140	21	7.0	7.0
14	10	10	23	90	19	90	52	40	60	15	7.0	7.0
15	10	10	20	72	19	82	49	39	35	15	7.0	7.0
16	14	8.5	20	69	19	77	48	35	31	113	8.5	8.5
17	13	7.0	23	50	18	72	44	35	24	38	14	7.0
18	15	5.7	23	54	16	68	44	31	175	15	10	7.0
19	12	5.7	37	50	22	581	86	31	113	15	30	5.7
20	12	5.7	90	48	19	1,390	90	28	64	15	30	5.7
21	12	6.5	67	48	19	592	61	26	43	12	15	5.7
22	12	10	56	48	19	365	52	315	35	10	15	20
23	10	7.0	45	44	20	315	82	168	35	10	11	9.4
24	10	8.5	41	42	19	713	68	86	35	10	8.5	7.0
25	10	8.5	40	36	167	1,550	61	60	38	10	7.0	4.4
26	10	8.2	37	36	1,180	680	56	47	30	10	5.7	4.4
27	10	8.2	33	36	425	680	54	39	27	11	5.7	4.4
28	10	8.2	33	36	248	559	52	35	24	42	5.7	4.9
29	8.5	8.2	30	36		385	52	30	24	50	5.7	158
30	8.5	8.2	30	36		285	52	28	20	20	4.9	90
31	8.5		26	34		230		26		18	4.4	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					20	8.5	13.1	0.179	0.21			
November					33	5.7	11.9	.162	.18			
December					285	8.2	43.6	.595	.69			
January					1,320	30	127	1.73	1.99			
February					1,180	16	91.1	1.24	1.29			
March					2,810	69	486	6.63	7.64			
April					185	44	74.4	1.02	1.14			
May					315	26	57.0	.778	.90			
June					176	16	44.4	.606	.68			
July					113	10	20.8	.284	.33			
August					30	4.4	10.3	.141	.16			
September					158	4.4	16.5	.225	.25			
The year					2,810	4.4	83.4	1.14	15.46			

Stone River near Smyrna, Tenn.

Location.- Water-stage recorder at highway bridge at Jefferson Springs, 1 mile below confluence of East and West Forks and 4 miles east of Smyrna, Rutherford County. Zero of gage is 459.76 feet above mean sea level.

Drainage area.- 552 square miles.

Records available.- July 1925 to September 1934.

Extremes.- Maximum discharge during year, 31,500 second-feet Mar. 25 (gage height, 28.00 feet); minimum, 29 second-feet Oct. 17-19, Sept. 29 (gage height, 0.98 foot).
1925-34: Maximum discharge, about 37,600 second-feet Mar. 23, 1929 (gage height, 36.5 feet); 0.8 second-foot Aug. 17, 22, 1925 (gage height, 0.50 foot).
Maximum stage known, 43.4 feet in March 1902.

Remarks.- Records good below and fair above 20,000 second-feet; discharge estimated Jan. 29 to Feb. 14. Low-water flow regulated by operation of small power developments on both forks.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	62	54	290	190	998	1,320	135	57	440	69	57
2	98	48	62	390	210	10,500	1,120	132	80	456	74	54
3	95	1,660	82	308	190	21,400	960	126	90	259	57	44
4	78	1,350	226	318	170	5,950	870	110	308	146	78	50
5	66	7,480	277	850	170	3,030	768	110	116	107	54	48
6	66	2,470	10,300	1,690	163	1,990	692	110	90	79	36	44
7	57	1,180	3,080	9,480	142	1,490	616	110	93	71	36	36
8	52	810	1,530	3,290	135	1,360	574	110	76	425	38	36
9	46	592	1,040	1,890	135	1,440	495	113	74	494	205	36
10	58	462	754	1,440	110	1,120	512	90	364	178	140	32
11	50	365	610	1,120	107	915	484	84	617	132	76	78
12	44	308	517	945	98	796	435	87	4,570	104	59	56
13	34	259	478	922	108	694	400	84	2,680	79	57	107
14	42	230	400	775	104	586	350	104	868	71	1,550	98
15	42	198	350	656	104	622	313	231	506	54	315	132
16	34	170	322	550	98	478	295	170	355	52	138	98
17	32	149	304	495	96	451	290	116	261	54	823	54
18	30	135	316	440	90	405	277	93	398	48	1,280	57
19	32	135	4,220	395	82	5,980	254	84	415	81	444	57
20	36	116	2,850	380	79	9,840	230	76	272	110	226	38
21	34	126	1,620	340	76	4,620	218	66	202	98	142	44
22	44	104	1,160	365	87	2,540	210	171	160	64	101	42
23	774	129	900	350	93	2,140	198	271	135	50	79	52
24	234	115	727	318	93	14,500	190	198	126	50	115	42
25	135	111	586	286	1,020	17,700	178	135	196	38	131	48
26	114	92	517	264	8,160	6,360	166	104	166	36	946	36
27	76	82	451	280	2,250	5,540	182	76	104	38	298	36
28	69	93	390	242	1,320	3,480	160	69	136	324	170	36
29	52	76	345	210		2,440	149	66	107	250	123	49
30	44	83	295	210		1,900	135	64	76	87	84	138
31	52		295	206		1,580		52		76	64	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				774	30	88.7	0.161	0.19				
November				7,480	48	640	1.16	1.29				
December				10,300	54	1,131	2.05	2.36				
January				9,480	206	960	1.74	2.01				
February				8,160	76	560	1.01	1.05				
March				21,400	405	4,282	7.76	8.95				
April				1,320	135	433	.784	.87				
May				271	52	114	.207	.24				
June				4,570	57	458	.830	.93				
July				494	36	147	.266	.31				
August				1,550	36	258	.467	.54				
September				158	32	57.8	.105	.12				
The year.				21,400	30	766	1.39	18.86				

West Fork of Stone River near Murfreesboro, Tenn.

Location.— Water-stage recorder at bridge on State Highway 99, three-quarters of a mile below mouth of Middle Fork and 2½ miles southwest of Murfreesboro, Rutherford County. Prior to July 1, 1934, staff gage at same site was used.

Drainage area.— 119 square miles.

Records available.— June 1932 to September 1934.

Extremes.— Maximum discharge recorded during year, about 13,100 second-feet Mar. 24 (gage height, 16.90 feet); minimum, 2.4 second-feet Aug. 8, Sept. 11, 12 (gage height, 0.75 foot).

1932-34: Maximum discharge, that of Mar. 24, 1934; minimum, that of Aug. 8, Sept. 11, 12, 1934.

Maximum stage known, 25.0 feet in March 1902.

Remarks.— Records fair below and poor above 5,000 second-feet. Discharge estimated November 5-14, Feb. 25, Mar. 4-6, Aug. 2.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	26	4.1	13	108	30	135	216	17	9.7	10	9.7	4.6		
2	20	4.1	11	69	34	300	182	15	11	108	8.1	4.0		
3	17	320	144	54	30	9,050	144	13	47	33	6.5	3.5		
4	15	119	90	69	27	1,100	130	15	34	19	4.6	4.1		
5	12	2,500	54	130	27	500	112	17	17	13	3.9	3.7		
6	9.7	580	3,450	157	26	320	104	26	14	10	3.4	3.1		
7	9.2	200	492	2,510	22	223	87	18	13	10	2.9	3.1		
8	8.6	140	253	610	21	399	78	17	11	11	2.6	3.9		
9	7.4	100	172	402	21	216	75	14	9.2	9.2	3.5	3.3		
10	7.4	80	135	206	18	172	75	14	90	7.9	6.6	2.8		
11	6.5	64	94	126	17	126	82	15	130	7.4	5.2	2.6		
12	6.5	54	78	144	16	112	75	13	1,390	7.0	3.9	4.2		
13	6.0	47	73	182	17	104	63	13	402	6.7	72	82		
14	5.6	40	63	150	15	94	59	18	163	5.8	572	32		
15	4.1	35	54	112	15	82	52	15	108	5.5	49	14		
16	4.1	28	52	94	14	75	47	14	82	4.7	22	10		
17	4.8	27	47	82	13	75	61	13	63	4.2	29	7.9		
18	4.8	24	50	75	13	75	52	12	73	28	97	6.9		
19	4.1	21	1,240	65	13	8,390	47	11	65	48	47	6.0		
20	4.1	20	320	56	13	850	42	11	54	32	22	4.8		
21	4.1	19	253	63	11	360	38	10	33	6.6	15	4.1		
22	4.1	44	182	63	17	292	42	10	27	13	10	11		
23	11	33	126	61	15	470	38	104	20	10	9.4	12		
24	7.0	26	108	54	13	8,390	27	42	17	8.3	13	6.1		
25	5.6	21	78	52	150	2,970	24	34	15	6.9	91	5.6		
26	5.3	19	78	47	2,370	1,270	22	26	21	5.6	40	5.2		
27	4.8	17	73	42	280	1,120	28	19	16	5.0	20	4.2		
28	4.8	16	63	38	172	610	27	15	14	5.6	13	4.0		
29	4.8	15	52	34		434	21	9.7	11	24	9.2	24		
30	4.1	13	52	34		348	19	9.7	9.7	14	6.9	23		
31	4.1		47	33		253		9.7		9.7	5.3			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					26		4.1		7.83		0.066		0.08	
November					2,500		4.1		154		1.29		1.44	
December					3,450		11		253		2.17		2.50	
January					2,510		33		190		1.80		1.84	
February					2,370		11		122		1.03		1.07	
March					9,050		75		1,255		10.5		12.11	
April					216		19		68.9		.579		.65	
May					104		9.7		19.0		.160		.18	
June					1,390		9.2		99.0		.832		.93	
July					108		4.2		15.8		.133		.15	
August					572		2.6		38.8		.326		.38	
September					82		2.6		10.2		.066		.10	
The year					9,050		2.6		188		1.58		21.43	

West Fork of Stone River below Murfreesboro, Tenn.

Location.- Water-stage recorder three-quarters of a mile below highway bridge on U. S. Highway 42, 2 miles northwest of Murfreesboro, Rutherford County.

Drainage area.- 157 square miles.

Records available.- July to October 1934 (discontinued).

Extremes.- Maximum gage height, 6.68 feet Aug. 14 (discharge not determined); minimum not recorded.

Remarks.- Records good July 15-18, 21-27, Aug. 5-13, 21-24, 27-31, Sept. 5-7, Oct. 3-31; others poor. Flow regulated to some extent by a mill upstream.

Discharge, in second-feet, 1934

Day	July	Aug.	Sept.	Oct.							
1			2.1								
2				16							
3				30							
4		9.3	10	15							
5		7.0	3.6	13							
6		6.3	7.0	9.3							
7		14	7.0	8.5							
8	10	8.5	1.2	16							
9	10	4.2		7.0							
10	8.5	7.7		16							
11	8.5	3.0		8.5							
12	7.7	3.6		7.7							
13	7.0	10		7.0							
14	7.7			7.0							
15	7.7			12							
16	7.7			8.5							
17	8.5			10							
18	14		5.6	5.6							
19			14	7.7							
20			30	4.9							
21	23	23		5.6							
22	15	15	3.0	9.3							
23	13	15		8.5							
24	6.3	12	23	7.0							
25	4.2		18	4.9							
26											
27	7.0			4.2							
28	2.5	41		4.2							
29	8.5	23		4.9							
30		12	1.5	4.9							
31		6.3		4.2							
		5.6		12							

Harpeth River at Bellevue, Tenn.

Location.- Water-stage recorder at highway bridge on Nashville-Centerville road, three-eighths of a mile below mouth of Little Harpeth River and 1 mile south-east of Bellevue, Davidson County. Prior to Oct. 1, 1933, staff gage 2½ miles downstream used.

Drainage area.- 404 square miles.

Records available.- October 1933 to September 1934. April 1920 to October 1929, January 1932 to September 1933, 2½ miles downstream.

Extremes.- Maximum discharge during year, 12,300 second-feet Mar. 25 (gage height, 18.32 feet); minimum, 11 second-feet Aug. 16 (gage height, 0.92 foot).
1920-29, 1932-34: Maximum discharge, about 22,100 second-feet Mar. 13, 1927; maximum gage height, 22.3 feet (former site) Mar. 23, 1929; no flow several days in October 1932.

Maximum stage known, that of Mar. 23, 1929.

Remarks.- Records good except those for estimated periods Oct. 1-4, Aug. 18-20, which are fair.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	21	32	309	147	731	905	90	22	177	29	30
2	31	21	34	273	154	2,900	787	90	18	452	25	25
3	26	806	503	254	154	9,140	695	90	18	162	36	22
4	22	476	450	254	144	5,790	621	80	18	83	24	21
5	21	653	249	560	131	1,940	572	80	99	67	20	126
6	21	675	3,800	1,450	121	1,340	522	80	85	49	15	64
7	19	297	2,660	8,570	118	1,080	484	80	42	41	15	38
8	20	184	995	3,320	115	1,240	450	72	65	47	14	26
9	19	141	654	1,870	106	1,080	406	65	32	178	13	20
10	19	106	456	1,370	95	875	396	57	156	103	30	20
11	19	87	406	1,060	92	755	368	53	314	56	31	18
12	18	74	387	875	92	660	368	47	112	38	18	18
13	18	67	304	785	84	577	355	47	202	34	15	117
14	17	59	234	665	84	511	268	60	150	35	40	90
15	17	51	204	560	80	445	249	208	79	25	18	44
16	17	46	249	544	77	418	225	207	44	22	14	35
17	50	38	278	434	74	374	221	104	121	20	30	74
18	44	36	786	390	72	330	204	74	1,570	38	434	53
19	24	38	4,160	362	70	645	204	67	594	39	151	38
20	22	36	3,240	335	70	2,560	184	57	292	133	47	31
21	20	36	1,540	304	72	3,190	158	51	138	48	36	29
22	29	35	1,120	314	72	1,800	147	47	92	24	38	28
23	328	38	875	293	82	1,500	138	46	67	20	409	29
24	226	40	701	268	90	6,310	128	44	100	18	216	40
25	82	35	582	254	848	12,000	115	44	74	15	96	28
26	52	32	588	230	3,450	5,880	109	41	57	15	912	24
27	35	32	506	212	1,400	3,670	112	29	49	20	200	18
28	31	30	384	203	965	2,150	112	26	66	42	90	19
29	25	31	387	191		1,570	101	24	45	328	55	48
30	24	31	309	161		1,280	92	24	136	83	41	478
31	23		299	144		1,060		24		36	35	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					328	17	45.9	0.109		0.13		
November					806	21	142	.351		.39		
December					4,160	32	881	2.15		2.51		
January					8,570	144	865	2.14		2.47		
February					3,450	70	324	.802		.83		
March					12,000	330	2,513	5.73		6.61		
April					905	92	322	.797		.89		
May					208	24	68.0	.168		.19		
June					1,570	18	161	.399		.45		
July					452	15	79.0	.196		.28		
August					912	13	102	.252		.29		
September					478	18	55.0	.136		.15		
The year					12,000	13	450	1.11		15.14		

Harpeth River near Kingston Springs, Tenn.

Location.— Staff gage just above bridge on State Highway 1, 2 miles northeast of Kingston Springs, Cheatham County, and 3 miles below mouth of Turnbull Creek. Zero of gage is 447.81 feet above mean sea level.

Drainage area.— 687 square miles.

Records available.— July 1925 to September 1934.

Discharge.— Maximum discharge during year, 19,400 second-feet Mar. 3 (gage height, 18.78 feet); minimum, 44 second-feet Aug. 11 (gage height, 0.77 foot).
1925-34: Maximum discharge, about 32,500 second-feet Mar. 13, 1927 (gage height, about 28.0 feet); minimum discharge, 18 second-feet Sept. 9, 10, 1925; minimum gage height, 0.26 foot Sept. 24, 1931.

Remarks.— Records good. Slight regulation during low-water season caused by operation of milldam at Newsom, 15 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	75	98	515	297	1,240	1,460	195	75	274	246	118
2	100	68	104	490	315	2,230	1,240	189	72	680	134	72
3	85	73	250	415	315	16,400	1,100	177	75	415	100	65
4	72	1,100	915	490	288	6,640	975	171	1,170	246	108	189
5	67	855	490	915	284	3,300	915	165	306	168	83	104
6	62	1,310	4,560	1,040	262	2,180	795	171	254	139	75	183
7	59	570	3,430	12,600	242	1,680	765	165	155	149	65	106
8	55	365	1,460	6,310	238	2,920	708	165	130	130	61	89
9	56	250	975	2,820	223	2,360	652	155	130	132	59	72
10	58	202	735	2,020	209	1,760	625	139	142	279	54	65
11	55	165	598	1,600	202	1,380	570	130	266	165	48	62
12	56	144	515	1,310	209	1,170	542	121	315	130	72	59
13	65	132	490	1,170	209	1,040	515	112	189	108	61	68
14	58	121	415	1,040	198	915	465	160	238	92	51	125
15	56	116	340	915	195	765	415	415	189	82	68	139
16	83	104	795	795	177	680	390	415	130	177	65	297
17	155	100	1,100	708	171	652	390	340	238	100	72	160
18	82	100	1,530	625	171	570	340	195	4,360	82	82	155
19	96	94	5,580	625	177	795	340	165	1,240	144	415	116
20	75	94	5,580	570	171	2,640	340	134	708	310	155	94
21	72	92	2,640	570	171	5,260	297	125	440	223	98	85
22	65	98	1,840	598	209	3,300	274	149	297	116	82	270
23	220	96	1,380	570	220	2,180	262	130	223	98	254	104
24	515	92	1,170	515	226	8,700	242	121	238	78	915	85
25	202	92	975	465	765	14,400	220	112	288	76	254	92
26	134	87	855	440	6,310	9,920	202	108	183	192	652	82
27	106	85	855	440	2,540	5,060	230	98	149	82	680	75
28	91	85	652	415	1,530	3,480	264	89	132	132	226	67
29	80	83	570	365		2,540	230	85	134	116	144	102
30	80		515	315		2,020	206	87	415	465	104	415
31	75		515	288		1,760		92		160	89	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					515	55	102	0.148		0.17		
November					1,310	68	231	.356		.37		
December					5,580	98	1,354	1.97		2.27		
January					12,600	288	1,333	1.97		2.27		
February					6,310	171	590	.859		.89		
March					16,400	570	3,548	5.16		5.95		
April					1,460	202	532	.774		.86		
May					415	85	164	.239		.28		
June					4,360	72	429	.624		.70		
July					465	76	185	.269		.31		
August					915	48	180	.262		.30		
September					415	59	124	.180		.20		
The year					16,400	48	738	1.07		14.57		

Red River near Adams, Tenn.

Location.- Water-stage recorder at site of former highway bridge half a mile below mouth of Elk Creek and $1\frac{1}{4}$ miles northwest of Adams, Robertson County. Zero of gage is 398.34 feet above mean sea level.

Drainage area.- 678 square miles.

Records available.- June 1920 to September 1934.

Average discharge.- 14 years, 1,048 second-feet.

Extremes.- Maximum discharge during year, 9,300 second-feet Mar. 3 (gage height, 15.16 feet); minimum, 82 second-feet Nov. 28 (gage height, 1.67 feet).
1920-34: Maximum discharge, about 20,800 second-feet Dec. 22, 1926 (gage height, 31.0 feet); minimum, 23 second-feet Sept. 10, 1925 (gage height, 1.28 feet).

Remarks.- Records fair below and good above 2,000 second-feet. Discharge estimated Nov. 12-17, Jan. 2-6, 9-12, Jan. 20 to Feb. 3, Feb. 5-9.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	226	119	90	532	251	1,960	1,400	342	160	312	200	288
2	195	124	95	486	276	2,900	1,260	320	157	475	198	241
3	167	126	95	453	284	7,940	1,120	300	152	410	186	222
4	155	118	99	526	273	6,280	1,020	288	157	292	173	241
5	155	723	95	844	266	3,980	948	284	215	251	155	215
6	152	824	101	878	248	2,970	912	288	303	231	143	212
7	143	406	221	2,970	241	2,540	1,050	262	290	222	126	225
8	140	269	175	3,540	233	4,980	1,050	230	206	215	126	238
9	133	212	135	2,390	218	6,420	912	251	186	206	119	200
10	119	183	119	1,890	234	4,120	844	244	192	200	115	180
11	112	167	108	1,610	231	3,180	804	218	178	192	110	167
12	108	157	99	1,360	228	2,610	752	244	165	248	101	162
13	117	135	99	1,220	225	2,250	690	200	157	258	88	155
14	103	128	99	1,080	218	1,890	629	212	157	231	86	138
15	99	115	99	912	203	1,720	592	330	150	198	88	140
16	101	110	388	818	195	1,540	550	468	150	180	123	296
17	110	110	2,030	732	166	1,400	515	329	736	170	594	384
18	103	110	3,040	674	189	1,300	469	273	6,420	165	476	218
19	99	115	3,400	642	189	1,190	447	244	2,390	323	251	178
20	101	115	3,690	586	186	1,220	410	228	1,330	520	180	184
21	103	103	2,610	550	152	1,540	390	215	912	306	150	145
22	97	112	1,890	532	195	1,500	390	225	752	206	135	112
23	165	119	1,500	515	192	1,440	375	203	636	170	682	126
24	231	110	1,260	458	196	1,400	375	186	598	152	3,040	124
25	206	106	1,080	420	998	1,500	347	178	556	138	2,540	117
26	173	103	946	390	6,280	1,720	334	173	453	135	1,160	112
27	156	95	824	365	3,690	2,320	380	173	400	128	732	108
28	150	88	706	352	2,390	2,390	464	165	352	196	544	115
29	143	103	629	316	1,960	1,960	442	165	308	485	416	505
30	133	95	580	273	1,750	1,750	370	165	296	408	338	1,640
31	122		556	251	1,590	1,590		180		238	296	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				231	97	139	0.205		0.24			
November				824	88	180	.265		.30			
December				3,690	90	866	1.28		1.43			
January				3,540	251	821	1.36		1.57			
February				6,280	152	867	.984		1.02			
March				7,940	1,190	2,629	3.88		4.47			
April				1,400	334	674	.994		1.11			
May				468	160	247	.364		.42			
June				6,420	150	637	.940		1.05			
July				520	128	254	.375		.43			
August				3,040	86	440	.649		.75			
September				1,640	108	246	.363		.40			
The year.				7,940	86	661	.975		13.24			

French Broad River at Calvert, N. C.

Location.- Water-stage recorder at township bridge 1 mile below mouth of East Fork and 1 mile southeast of railroad station at Calvert, Transylvania County. Prior to July 18, 1934, chain gage at same site with same datum was used. Zero of gage is 2,155.03 feet above mean sea level.

Drainage area.- 104 square miles.

Records available.- October 1924 to September 1934.

Average discharge.- 10 years, 326 second-feet.

Extremes.- Maximum discharge during year, 3,700 second-feet Sept. 29 (gage height, 6.10 feet); minimum, 99 second-feet Nov. 18 (gage height, 0.59 foot).
1924-34: Maximum discharge recorded, 16,100 second-feet, estimated, Aug. 15, 1928 (gage height, 13.0 feet); minimum, 54 second-feet Sept. 17-23, 1925 (gage height, 0.28 foot).
Maximum stage known, 18.3 feet July 1916.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	120	107	501	262	323	450	310	274	318	191	262
2	163	120	107	266	254	673	398	300	250	318	183	238
3	139	141	168	217	203	2,960	373	296	296	314	185	224
4	136	134	146	217	188	2,960	348	282	323	310	205	220
5	136	151	129	398	188	1,380	348	270	580	287	233	217
6	129	173	141	373	182	860	323	266	689	278	197	197
7	124	146	224	1,190	176	662	323	266	501	274	210	287
8	120	136	165	554	168	554	424	258	475	270	231	238
9	120	132	146	398	165	501	373	254	745	287	205	203
10	122	127	132	348	149	450	348	246	980	300	183	194
11	120	124	129	274	149	450	323	238	580	310	242	168
12	120	124	124	278	206	434	296	234	501	292	267	186
13	116	124	112	278	176	398	287	234	450	274	22	267
14	116	116	105	262	170	373	282	234	368	266	270	495
15	116	112	144	246	165	373	282	717	348	262	223	348
16	149	107	132	228	162	348	450	373	323	254	205	515
17	254	103	122	220	160	323	501	348	323	231	380	527
18	165	107	118	220	161	323	450	323	860	224	360	348
19	141	116	129	210	141	323	398	310	527	242	278	292
20	139	109	251	220	136	373	373	300	424	224	23	258
21	139	109	179	210	134	348	373	296	398	206	214	287
22	139	132	168	203	132	314	348	310	323	203	220	342
23	134	134	157	191	129	318	314	310	323	191	759	266
24	134	118	151	188	124	424	310	300	424	194	428	250
25	127	116	141	203	136	450	310	250	318	191	447	234
26	122	112	242	200	870	501	300	238	305	203	33	364
27	120	112	179	185	475	1,520	300	238	296	246	282	278
28	120	112	167	175	348	860	292	234	287	268	292	328
29	120	107	146	160		607	300	292	296	264	266	1,640
30	120	107	139	160		554	314	262	323	228	380	554
31	120		144	203		501		254		210	292	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					254	116	134	1.29		1.49		
November					173	103	123	1.18		1.32		
December					242	105	149	1.43		1.65		
January					1,190	160	289	2.78		3.20		
February					870	124	211	2.03		2.11		
March					2,960	314	691	6.64		7.66		
April					501	282	350	3.37		3.76		
May					717	234	292	2.81		3.24		
June					980	250	438	4.21		4.70		
July					318	191	255	2.45		2.82		
August					759	185	279	2.68		3.09		
September					1,640	185	341	3.28		3.66		
The year.					2,960	103	297	2.86		38.70		

French Broad River at Blantyre, N. C.

Location.— Water-stage recorder at highway bridge 700 feet east of Blantyre railroad station. Transylvania County, and 3 miles below mouth of Little River. Zero of gage is 2,060.76 feet above mean sea level.

Drainage area.— 296 square miles.

Records available.— December 1920 to September 1934.

Average discharge.— 13 years (1921-34), 908 second-feet.

Extremes.— Maximum discharge during year, 6,110 second-feet Mar. 5 (gage height, 17.32 feet); minimum, 318 second-feet Dec. 3 (gage height, 3.17 feet).
1920-34: Maximum discharge (estimated), 26,500 second-feet Aug. 16, 1928 (gage height, 22.9 feet); minimum, 143 second-feet Sept. 21, 1925 (gage height, 1.83 feet).

Remarks.— Records good except those estimated Oct. 1, Dec. 11-17, July 24 to Aug. 8, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	500	364	327	775	650	942	1,240	965	726	868	566	778		
2	626	364	327	953	726	1,320	1,150	886	818	859	532	700		
3	465	413	345	700	602	4,040	1,090	832	1,030	862	520	650		
4	434	413	487	626	602	5,420	1,030	805	1,100	886	520	626		
5	423	610	393	1,040	602	5,840	1,000	778	1,420	778	565	626		
6	403	745	374	1,080	578	4,330	971	778	1,740	700	565	578		
7	393	520	566	2,250	544	2,280	942	752	1,710	700	566	1,300		
8	393	454	498	2,600	532	1,760	914	726	1,690	700	650	1,000		
9	383	423	423	1,480	520	1,520	1,390	700	2,250	771	602	700		
10	374	403	393	1,150	497	1,360	1,060	700	3,130	958	532	626		
11	374	393	363	971	498	1,270	971	726	2,160	866	541	602		
12	374	393	380	942	555	1,150	942	675	1,560	778	673	602		
13	364	393	390	1,000	544	1,090	886	650	1,390	752	700	650		
14	364	374	380	886	498	1,060	859	650	1,180	700	602	1,100		
15	364	364	390	805	498	1,000	832	1,190	1,090	650	650	1,150		
16	397	354	400	752	487	942	1,200	1,480	1,000	650	566	1,180		
17	1,320	345	400	700	476	914	1,180	1,390	964	602	580	1,320		
18	591	364	374	675	465	886	1,460	1,120	1,960	768	1,040	1,160		
19	454	354	439	650	498	886	1,240	971	1,620	718	988	914		
20	413	354	993	626	498	1,030	1,150	886	1,210	760	700	778		
21	413	345	696	602	465	942	1,030	832	1,060	602	602	805		
22	423	413	555	602	465	859	971	805	971	578	555	914		
23	434	403	498	602	476	859	942	859	914	555	1,250	859		
24	423	364	465	578	444	1,020	1,040	778	1,210	532	1,620	752		
25	403	354	444	566	633	1,620	1,060	805	971	566	1,140	700		
26	374	345	602	602	3,220	1,390	914	726	859	578	1,390	828		
27	374	345	626	566	1,750	2,310	886	700	805	602	1,090	802		
28	374	336	509	555	1,090	3,130	859	675	605	650	971	726		
29	364	336	476	532	1,900	832	859	859	859	675	859	3,090		
30	374	327	454	476	1,520	966	859	859	859	650	1,030	2,610		
31	364		454	454	1,350		778			602	914			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					1,320		364		443		1.50		1.73	
November					745		327		398		1.34		1.50	
December					993		327		465		1.57		1.81	
January					2,600		454		864		2.92		3.37	
February					3,220		444		692		2.34		2.44	
March					5,840		859		1,800		6.08		7.01	
April					1,390		832		1,030		3.48		3.88	
May					1,480		650		848		2.86		3.30	
June					3,130		726		1,300		4.39		4.90	
July					958		532		708		2.39		2.76	
August					1,620		520		783		2.65		3.06	
September					3,090		578		971		3.28		3.66	
The year					5,840		327		860		2.91		39.42	

French Broad River at Bent Creek, N. C.

Location.- Water-stage recorder 100 feet below mouth of Bent Creek, 6 miles above mouth of Hominy Creek, and 7 miles south of Asheville, Buncombe County. Zero of gage is 1,996.06 feet above mean sea level.

Drainage area.- 681 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 6,040 second-feet June 10 (gage height, 5.98 feet); minimum, 906 second-feet July 25, Sept. 7, 12, 13 (gage height, 2.70 feet).

Remarks.- Records excellent.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									1,330	1,410	1,340	1,280
2									1,480	1,840	1,280	1,140
3									1,650	1,480	1,060	1,070
4									1,650	1,590	1,040	1,000
5									2,240	1,400	1,130	991
6									2,780	1,240	1,030	953
7									3,110	1,180	1,060	2,530
8									2,460	1,220	1,480	1,940
9									3,170	1,320	1,160	1,220
10									6,690	1,530	1,010	1,050
11									4,060	1,590	953	981
12									2,780	1,390	1,320	925
13									2,380	1,300	1,280	991
14									1,960	1,210	1,120	1,280
15								1,630	1,770	1,150	1,120	1,770
16								2,380	1,690	1,120	1,020	1,900
17								2,170	1,680	1,090	972	1,900
18								1,840	3,540	1,200	1,310	1,540
19								1,590	3,200	1,310	1,590	1,420
20								1,420	2,170	1,280	1,200	1,260
21								1,340	1,770	1,100	1,020	1,230
22								1,330	1,630	1,030	960	1,270
23								1,390	1,330	991	1,200	1,330
24								1,350	1,960	981	2,460	1,200
25								1,340	1,680	944	1,770	1,120
26								1,220	1,480	1,010	1,900	1,120
27								1,180	1,380	1,110	1,690	1,300
28								1,160	1,380	1,240	1,650	1,330
29								1,400	1,420	1,300	1,320	4,090
30								1,650	1,390	1,410	1,690	4,620
31								1,410		1,380	1,480	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October												
November												
December												
January												
February												
March												
April												
May 15-31												
June									2,380	1,160	1,520	2.23
July									3,390	1,390	2,210	3.26
August									1,840	944	2,270	1.86
September									2,460	953	1,300	1.91
The year									4,620	925	1,540	2.26

French Broad River at Asheville, N. C.

Location.- Water-stage recorder at Bingham School Bridge, 2½ miles below Southern Railway station at Asheville, Buncombe County. Zero of gage is 1,950.3 feet above mean sea level.

Drainage area.- 949 square miles.

Records available.- September 1895 to December 1901, October 1922 to September 1934. January 1905 to September 1922 at Smith Bridge, 1½ miles upstream.

Average discharge.- 33 years (1895-1901, 1905-15, 1917-34), 2,190 second-feet.

Extremes.- Maximum discharge during year, 11,500 second-feet March 4 (gage height, 5.97 feet); minimum, 841 second-feet Dec. 1, 2 (gage height, 0.69 foot).
1895-1901, 1905-34: Maximum discharge (estimated), 110,000 second-feet July 18, 1918 (gage height, 23.1 feet, from flood marks at present site); minimum, 239 second-feet at times in August and September 1925 (gage height, 0.16 foot).

Remarks.- Records good. Discharge estimated Dec. 2-6, Jan. 17-21, Apr. 23, 24. Slight diversion for water supply from tributaries.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	710	650	975	929	1,900	2,650	1,850	1,580	1,640	1,540	1,370
2	1,020	710	650	1,580	1,340	1,620	2,380	1,710	1,680	2,140	1,500	1,280
3	1,040	720	650	1,340	1,350	7,240	2,220	1,620	1,900	1,610	1,230	1,090
4	883	794	650	1,140	1,110	10,500	2,040	1,580	1,880	1,770	1,100	1,040
5	827	883	900	1,350	1,080	9,120	1,950	1,570	2,500	1,570	1,310	1,020
6	805	1,370	750	1,900	1,070	8,020	1,880	1,430	3,150	1,560	1,150	997
7	783	1,110	940	2,820	1,010	5,850	1,820	1,440	3,800	1,270	1,030	2,500
8	761	929	1,020	4,820	975	3,600	1,780	1,410	3,060	1,360	1,740	2,400
9	740	827	883	2,940	952	2,970	2,600	1,350	3,510	1,430	1,370	1,350
10	720	794	794	2,120	883	2,630	2,630	1,320	6,320	1,800	1,180	1,180
11	710	750	761	1,710	883	2,380	2,120	1,530	4,780	1,890	1,040	1,070
12	680	750	740	1,540	952	2,140	1,960	1,350	3,530	1,570	1,310	1,020
13	700	750	730	1,690	1,010	2,030	1,840	1,240	2,800	1,460	1,440	1,030
14	720	740	720	1,670	952	1,990	1,760	1,220	2,500	1,340	1,370	1,230
15	805	710	720	1,380	894	1,350	1,660	1,460	2,060	1,450	1,180	1,940
16	783	680	740	1,290	894	1,740	1,860	2,720	1,860	1,390	1,150	2,220
17	1,970	660	740	1,200	883	1,640	2,460	2,540	2,060	1,240	1,040	2,140
18	2,510	880	720	1,200	849	1,530	3,600	2,220	4,680	1,350	1,280	2,220
19	1,060	690	761	1,100	838	1,500	2,800	1,840	3,980	1,500	1,800	1,620
20	918	690	1,280	1,100	872	1,780	2,880	1,580	2,630	1,400	1,390	1,360
21	872	690	1,500	1,100	838	1,820	2,380	1,470	2,220	1,230	1,120	1,280
22	849	730	1,150	1,070	838	1,620	2,220	1,400	1,940	1,190	1,020	1,340
23	827	783	987	1,070	838	1,600	2,200	1,510	1,770	1,080	1,100	1,400
24	838	740	929	1,040	827	1,770	2,200	1,479	2,120	1,030	2,670	1,270
25	805	690	894	1,010	918	2,940	2,380	1,510	1,980	1,020	1,980	1,190
26	740	670	918	1,020	5,890	3,060	2,010	1,340	1,650	1,070	2,060	1,130
27	730	680	1,170	1,040	4,980	3,880	1,800	1,240	1,500	1,260	1,740	1,390
28	750	650	1,040	999	2,420	6,720	1,720	1,200	1,430	1,240	1,760	1,280
29	720	660	940	940		4,370	1,650	1,430	1,640	1,450	1,450	3,900
30	710	650	853	838		5,330	1,650	1,480	1,610	1,540	1,650	6,120
31	720		860	952		2,880	1,660	1,710		1,740	1,620	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	2,510			680			898			0.946	1.09	
November	1,370			850			782			.803	.90	
December	1,500			650			871			.918	1.06	
January	4,820			838			1,479			1.55	1.79	
February	5,890			827			1,330			1.40	1.46	
March	10,500			1,500			3,430			3.61	4.16	
April	3,600			1,650			2,170			2.29	2.56	
May	2,720			1,200			1,590			1.68	1.94	
June	6,320			1,430			2,580			2.72	3.04	
July	2,140			1,020			1,430			1.51	1.74	
August	2,670			1,020			1,430			1.51	1.74	
September	6,120			997			1,650			1.74	1.94	
The year	10,300			650			1,640			1.73	23.42	

French Broad River at Hot Springs, N. C.

Location.- Water-stage recorder at Hot Springs, Madison County, a quarter of a mile above bridge on U. S. Highways 25 and 70, and half a mile above Spring Creek. Zero of gage is 1,311.85 feet above mean sea level.

Drainage area.- 1,570 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 7,830 second-feet June 10 (gage height, 4.33 feet); minimum, 662 second-feet Aug. 24 (gage height, 2.34 feet).

Remarks.- Records good. Slight diversion from tributaries for water supply.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									2,010	1,870	1,920	1,690
2									2,050	3,280	2,170	1,480
3									1,950	2,230	1,690	1,330
4									2,230	2,120	1,460	1,270
5									2,230	2,150	1,720	1,250
6									3,580	1,740	1,460	1,210
7									3,970	1,620	1,360	1,350
8									2,360	1,720	1,690	3,760
9									4,140	2,500	1,870	1,950
10									6,410	2,780	1,510	1,420
11									5,720	3,460	1,310	1,270
12									4,050	2,760	1,780	1,210
13									3,210	2,090	1,870	1,290
14									2,860	1,950	1,950	1,530
15									2,230	3,120	1,480	1,820
16								2,490	1,950	2,570	1,440	2,320
17								2,930	1,950	1,900	1,920	2,380
18								2,760	3,210	1,690	1,530	2,570
19								2,420	5,260	1,980	2,200	2,010
20								2,090	3,580	1,770	1,900	1,690
21								1,920	2,760	1,640	1,460	1,510
22								1,950	2,380	1,770	1,290	1,680
23								2,090	2,170	1,460	1,290	1,510
24								1,900	2,670	1,560	2,200	1,550
25								1,620	2,480	1,270	2,670	1,440
26								1,740	2,030	1,330	2,200	1,510
27								1,620	1,850	1,850	2,200	1,460
28								1,530	1,740	1,620	2,010	2,090
29								1,620	2,170	1,900	1,870	3,680
30								2,120	1,920	2,230	1,640	6,410
31								2,550		2,180	1,950	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October												
November												
December												
January												
February												
March												
April												
May 16-31					2,930	1,530	2,080	1.32		0.78		
June					6,410	1,740	2,940	1.87		2.09		
July					3,460	1,270	2,060	1.51		1.51		
August					2,670	1,290	1,770	1.13		1.30		
September					6,410	1,210	1,910	1.22		1.36		
The year												

French Broad River near Newport, Tenn.

Location.- Water-stage recorder at highway bridge at Oldtown, on Newport-Morristown road 2½ miles northeast of Newport, Cocke County, and 4 miles above mouth of Pigeon River. Zero of gage is 1,012.89 feet above mean sea level.

Drainage area.- 1,860 square miles.

Records available.- September 1900 to November 1901, November 1902 to December 1905, August to December 1907, November 1920 to September 1934.

Average discharge.- 13 years (1921-34), 2,773 second-feet.

Extremes.- Maximum discharge during year, 23,800 second-feet Mar. 3 (gage height, 8.65 feet); minimum, 455 second-feet Nov. 27 (gage height, 1.35 feet).
1900-1905, 1907, 1920-34: Maximum discharge, about 62,200 second-feet Apr. 8, 1903 (gage height, 12.0 feet); minimum, 210 second-feet Sept. 9, 1923.

Remarks.- Records good. Diurnal fluctuation during low water caused by operation of water-power plants above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	902	903	1,300	1,110	3,270	3,950	2,370	2,210	2,020	2,000	1,860
2	1,170	902	866	1,780	1,270	2,980	3,550	2,460	2,210	3,950	2,570	1,590
3	1,280	905	889	2,170	1,900	11,000	3,160	2,260	2,150	2,950	1,900	1,410
4	1,250	919	856	1,680	1,760	19,000	2,930	2,150	2,460	2,190	1,540	1,310
5	1,090	1,100	945	1,540	1,430	15,100	2,600	2,060	2,630	2,460	1,620	1,270
6	1,000	1,100	1,160	1,690	1,350	11,600	2,650	2,190	3,550	1,960	1,550	1,200
7	953	1,760	1,150	2,700	1,270	9,070	2,550	1,980	4,230	1,660	1,410	1,160
8	949	1,360	1,260	5,060	1,220	5,880	2,530	1,880	4,370	1,700	1,410	3,500
9	951	1,120	1,280	4,900	1,160	4,510	6,230	1,760	4,090	2,170	2,060	2,220
10	865	1,020	1,100	3,300	1,070	3,950	6,690	1,700	6,690	2,730	1,590	1,540
11	845	997	1,030	2,550	1,030	3,420	4,510	1,880	7,020	3,910	1,390	1,270
12	859	1,110	974	2,190	1,130	3,130	3,820	1,960	4,600	3,160	1,640	1,140
13	872	946	1,020	2,130	1,190	2,900	3,420	1,720	3,680	2,580	1,760	1,130
14	834	1,010	988	2,170	1,200	2,680	3,060	1,540	3,190	2,190	2,630	1,480
15	945	931	947	1,940	1,140	2,460	2,720	1,570	2,700	2,690	1,820	1,590
16	710	919	934	1,740	1,130	2,430	2,700	2,370	2,390	3,130	1,630	2,390
17	999	833	908	1,630	1,070	2,260	3,320	3,430	2,190	2,130	2,730	2,680
18	2,590	905	960	1,520	1,060	2,110	4,230	3,000	3,500	1,760	2,020	2,680
19	1,750	1,060	938	1,480	1,040	2,000	4,800	2,510	6,200	1,640	2,320	2,370
20	1,180	762	988	1,450	1,030	2,210	5,560	2,170	4,230	1,980	2,230	1,820
21	988	889	1,530	1,360	1,020	2,510	4,660	1,960	3,110	1,740	1,680	1,570
22	1,100	1,020	1,660	1,380	1,100	2,390	3,820	1,860	2,500	1,960	1,410	1,460
23	875	1,050	1,310	1,310	1,030	2,410	3,400	2,230	2,300	1,590	1,300	1,640
24	1,130	1,060	1,140	1,330	1,020	3,110	3,130	1,900	2,650	1,350	1,650	1,630
25	1,070	966	1,100	1,270	1,210	7,450	3,240	1,800	2,650	1,250	3,320	1,460
26	993	1,070	1,130	1,270	11,100	6,690	3,190	1,760	2,260	1,300	2,530	1,350
27	911	737	1,200	1,270	8,830	5,940	2,780	1,610	1,980	1,960	2,510	1,410
28	917	864	1,390	1,240	4,620	11,600	2,630	1,490	1,780	1,780	2,150	1,760
29	919	836	1,220	1,180		8,720	2,390	1,610	2,150	2,080	2,080	3,320
30	934	872	1,120	993		5,720	2,340	2,260	2,500	2,630	1,670	6,360
31	892		1,100	856		4,660		2,650		2,360	2,020	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October					2,590		710		1,062		0.571	0.66
November					1,750		737		993		.537	.60
December					1,680		656		1,097		.590	.68
January					5,060		865		1,886		1.01	1.16
February					11,100		1,020		1,954		1.05	1.09
March					19,000		2,000		5,686		3.00	3.46
April					6,690		2,340		3,559		1.91	2.13
May					3,430		1,480		2,067		1.11	1.28
June					7,020		1,780		3,282		1.76	1.96
July					3,950		1,260		2,236		1.20	1.38
August					3,320		1,300		1,940		1.04	1.20
September					6,360		1,130		1,916		1.03	1.15
The year.					19,000		710		2,300		1.24	16.75

French Broad River at Dandridge, Tenn.

Location.- Water-stage recorder at highway bridge at Dandridge, Jefferson County.
Zero of gage is 902.83 feet above mean sea level.

Drainage area.- 4,450 square miles.

Records available.- October 1918 to September 1934.

Average discharge.- 16 years, 6,707 second-feet.

Extremes.- Maximum discharge during year, 48,200 second-feet Mar. 4 (gage height, 12.5 feet); minimum, 1,140 second-feet Dec. 1 (gage height, -0.08 foot).
1918-34: Maximum stage, 18.7 feet Apr. 2, 1920 (discharge not determined);
minimum discharge, 360 second-feet Sept. 9, 10, 1925 (gage height, -0.6 foot).
Maximum stage known, 28.0 feet May 21, 1901.

Remarks.- Records excellent below and good above 30,000 second-feet, and fair for estimated periods, Dec. 14-29, Apr. 9-11, 17-29, May 18-20, 22-26. Diurnal fluctuation during low stages caused by regulation upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,690	2,320	1,360	2,510	1,880	7,810	9,070	5,070	4,790	3,720	5,460	3,720
2	2,550	1,780	1,390	3,720	2,170	9,750	8,120	5,070	5,350	4,410	4,930	3,340
3	2,360	1,570	1,670	3,850	2,690	19,600	7,510	5,070	4,650	5,350	4,360	2,800
4	2,170	1,530	1,860	3,980	3,290	45,100	7,060	4,790	4,380	4,790	3,880	2,620
5	1,970	1,730	2,280	3,850	2,360	37,000	6,630	4,930	5,210	4,380	3,260	3,040
6	1,800	2,090	2,630	3,720	2,690	26,900	6,480	4,930	5,490	4,520	2,960	3,120
7	1,800	2,500	2,510	5,520	2,970	19,200	6,200	4,240	6,340	3,960	3,560	3,070
8	1,670	3,040	2,150	7,210	2,690	13,900	5,910	4,360	6,680	3,240	3,880	3,890
9	1,710	2,620	2,110	7,810	2,490	11,400	6,030	4,110	6,340	3,160	3,460	4,380
10	1,550	2,670	1,950	6,200	2,360	9,730	14,400	3,980	8,220	4,950	3,960	2,990
11	1,530	2,620	2,150	5,350	1,880	8,430	19,600	4,110	11,400	6,340	3,460	2,870
12	1,660	2,380	2,550	4,930	1,750	7,210	11,400	4,110	9,730	6,050	3,040	3,070
13	1,660	2,260	2,970	4,790	1,920	6,780	9,400	3,720	7,510	6,480	3,260	3,020
14	2,240	2,620	3,000	4,520	2,580	6,340	8,120	3,220	6,480	5,910	6,810	2,670
15	2,400	2,300	2,900	4,110	2,580	6,050	6,630	3,590	5,910	5,070	7,560	2,420
16	2,050	1,840	2,800	4,240	2,360	5,770	6,050	3,700	5,350	18,000	5,350	2,320
17	2,340	1,600	2,600	4,110	2,320	5,490	6,400	4,400	4,650	9,730	7,510	2,530
18	3,140	1,600	2,100	3,980	1,930	5,070	7,700	5,700	4,380	6,780	7,210	3,590
19	3,720	1,490	2,200	3,220	1,640	5,070	9,600	5,000	8,440	5,210	6,340	4,110
20	3,040	2,050	1,900	2,920	1,820	6,630	11,000	4,300	9,730	5,210	5,460	3,850
21	2,550	2,240	1,700	2,560	2,210	6,780	12,200	3,240	7,060	4,520	4,650	3,260
22	1,840	2,580	2,300	1,800	2,250	6,480	10,600	4,100	5,770	4,790	3,960	3,070
23	1,750	2,300	2,400	2,810	2,300	7,020	8,400	4,400	5,070	4,790	3,560	2,780
24	1,550	2,360	2,000	2,500	2,580	10,700	8,100	4,400	4,520	4,240	3,460	2,420
25	1,970	2,300	1,420	2,440	2,700	18,100	7,200	4,000	3,980	3,720	5,060	2,870
26	1,710	2,110	1,900	2,400	13,600	17,700	7,200	3,900	4,930	3,590	5,770	3,020
27	1,600	2,190	2,700	2,400	18,800	15,800	7,000	3,290	4,520	4,240	4,930	2,990
28	1,530	1,820	3,100	2,270	13,400	21,200	6,200	2,600	4,240	4,110	4,930	3,020
29	1,840	1,670	3,300	1,970		22,400	5,300	3,340	4,240	4,380	4,380	3,850
30	1,880	1,550	2,970	2,110		15,400	4,110	4,110	5,070	5,770	3,880	6,810
31	2,460		2,740	1,780		11,100	4,650	4,790	6,340	3,560		
Month	Maximum					Minimum		Mean		Per square mile	Run-off in inches	
October	3,720					1,530		2,088		0.469	0.54	
November	3,040					1,490		2,124		.477	.53	
December	3,300					1,360		2,316		.520	.60	
January	7,810					1,780		3,699		.831	.96	
February	18,800					1,640		3,722		.856	.87	
March	45,100					5,070		13,420		3.02	3.48	
April	19,600					4,650		8,339		1.37	2.09	
May	5,700					2,600		4,222		.949	1.09	
June	11,400					3,980		6,013		1.35	1.51	
July	18,000					3,160		5,412		1.22	1.41	
August	7,510					2,990		4,640		1.04	1.20	
September	6,810					2,320		3,250		0.730	.81	
The year	45,100					1,360		4,947		1.11	15.09	

Tennessee River at Knoxville, Tenn.

Location.- Water-stage recorder at old pumping plant of city of Knoxville, half a mile above Gay Street Bridge, Knoxville, Knox County. Zero of gage is 797.59 feet above mean sea level.

Drainage area.- 8,990 square miles.

Records available.- January 1899 to December 1912, October 1918 to September 1934. Records January 1899 to December 1930 published in reports of State geologist.

Average discharge.- 35 years, 13,290 second-feet.

Extremes.- Maximum discharge during year, 82,000 second-feet Mar. 5 (gage height, 15.57 feet); minimum, 2,340 second-feet Dec. 2 (gage height, -0.73 foot). 1899-1934: Maximum discharge recorded, about 195,000 second-feet Mar. 1, 1902 (gage height, 36.4 feet); minimum, 1,390 second-feet Sept. 11, 1925 (gage height, -1.7 feet). Maximum stage known, 44.4 feet Mar. 10, 1867.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,790	3,630	2,580	5,140	3,180	19,300	21,900	9,310	7,570	7,030	10,300	7,380
2	3,790	3,400	2,520	5,890	3,330	21,500	18,400	9,310	8,630	5,370	7,980	6,820
3	3,710	2,840	2,580	6,660	3,480	38,900	16,500	9,080	7,780	7,520	7,780	5,990
4	3,400	2,700	2,770	6,820	4,050	64,700	15,100	8,630	6,820	7,380	7,520	5,140
5	3,330	2,770	2,770	6,820	4,610	78,700	13,700	8,410	7,920	6,490	6,180	5,140
6	3,040	3,040	3,630	6,820	3,630	61,500	12,700	8,630	8,410	6,820	12,000	5,600
7	2,900	3,110	4,510	13,200	4,140	44,400	12,200	8,200	9,310	6,340	9,310	5,260
8	2,900	3,880	3,790	15,100	4,320	30,600	11,800	7,570	9,560	5,890	8,850	5,030
9	2,770	4,320	3,400	14,200	3,960	25,500	14,200	7,380	9,800	5,620	6,960	7,150
10	2,840	3,880	3,330	12,200	3,790	28,300	26,900	7,180	10,800	5,260	9,310	5,630
11	2,770	3,790	3,180	9,800	3,560	24,200	41,400	7,180	14,600	7,840	7,390	4,610
12	2,700	3,710	3,330	8,410	3,110	18,400	29,700	7,180	13,700	9,800	6,490	4,920
13	2,770	3,400	3,790	7,570	2,970	15,600	21,900	6,820	11,500	10,300	6,180	4,820
14	2,700	3,110	4,140	7,180	3,180	13,700	18,800	6,490	9,800	11,500	12,000	4,710
15	3,330	3,630	4,140	6,820	3,710	12,700	15,600	6,180	8,630	10,000	13,700	4,050
16	3,560	3,040	3,880	6,180	3,790	11,800	13,700	6,820	8,410	18,800	10,500	3,790
17	3,180	2,770	3,880	6,180	3,630	11,300	13,200	8,630	7,570	23,700	10,500	4,050
18	3,530	2,700	3,790	6,040	3,560	10,300	14,600	8,630	6,820	12,700	12,200	4,510
19	4,610	2,700	3,180	5,890	3,180	10,000	18,800	7,980	9,450	10,800	14,600	6,130
20	4,610	2,640	3,330	4,920	3,040	12,700	26,400	7,380	12,700	8,850	12,700	7,000
21	4,230	3,040	3,330	4,710	3,180	14,600	24,200	6,490	10,800	7,980	11,300	6,180
22	3,710	3,630	3,400	3,960	3,480	14,200	20,600	6,820	9,310	6,820	8,630	5,260
23	3,040	3,790	4,140	3,480	3,480	15,100	17,500	7,570	7,980	7,570	7,180	4,920
24	2,840	3,480	3,880	3,960	3,560	28,300	16,100	7,180	7,180	7,980	8,000	4,510
25	2,700	3,480	3,480	3,960	4,800	45,400	14,200	7,000	6,660	6,490	9,080	4,050
26	3,040	3,330	3,790	3,960	19,700	41,900	13,200	6,490	6,340	5,620	13,200	4,610
27	2,700	3,180	4,320	3,880	31,600	42,900	12,700	6,040	6,490	5,890	14,200	4,610
28	2,770	3,180	5,140	3,960	32,100	40,400	11,800	5,370	6,180	6,820	13,200	4,710
29	2,700	2,840	5,370	3,630		46,900	10,500	4,820	5,760	7,780	11,300	5,030
30	3,040	2,640	5,370	3,330		41,400		6,490	6,490	10,800	9,310	8,420
31	2,970		4,920	3,480		27,800		7,180		11,800	7,980	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	4,610			2,700			3,228			0.359		0.41
November	4,320			2,640			3,255			.362		.40
December	5,370			2,520			3,731			.415		.48
January	15,100			3,330			6,585			.732		.84
February	32,100			2,970			6,219			.692		.72
March	78,700			10,000			29,450			3.28		3.78
April	41,400			9,800			17,600			1.96		2.19
May	9,310			4,820			7,359			.820		.95
June	14,600			5,760			8,768			.975		1.09
July	23,700			5,260			8,825			.982		1.13
August	14,600			6,180			9,865			1.10		1.27
September	8,420			3,790			5,328			.593		.66
The year	78,700			2,520			9,215			1.03		13.92

Tennessee River at Loudon, Tenn.

Location.- Water-stage recorder at highway bridge at Loudon, Loudon County. Zero of gage is 726.15 feet above mean sea level.

Drainage area.- 12,300 square miles.

Records available.- October 1922 to September 1934.

Average discharge.- 12 years, 19,120 second-feet.

Extremes.- Maximum discharge during year, 125,000 second-feet Mar. 5 (gage height, 19.72 feet); minimum, 4,080 second-feet Dec. 2 (gage height, 2.38 feet).
1922-34: Maximum discharge, 165,000 second-feet Dec. 29, 1932 (gage height, 24.7 feet); minimum, 2,190 second-feet Sept. 12, 1925 (gage height, at Huffs Ferry, 0.82 feet).

Remarks.- Records excellent. Discharge estimated Feb. 17-19. Low-water flow affected by power regulation and storage on Little Tennessee and Cheoah Rivers.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,130	5,500	4,280	7,680	7,000	31,000	33,800	14,300	12,500	12,200	14,600	11,700
2	5,920	5,920	4,150	13,500	6,780	30,600	28,400	14,600	13,100	11,400	12,800	10,900
3	6,780	5,710	4,220	12,500	6,780	75,100	25,100	14,300	12,200	10,400	11,400	9,850
4	6,780	5,300	4,410	10,900	6,780	114,000	22,500	14,000	12,000	11,700	12,200	9,350
5	6,340	4,520	4,900	11,200	7,450	122,000	21,200	13,700	12,500	11,400	10,900	9,100
6	6,130	4,750	5,500	11,400	7,910	97,200	19,900	13,700	13,100	11,200	12,300	9,100
7	5,920	4,900	6,560	22,000	7,000	70,200	18,600	13,100	18,000	11,400	14,000	8,660
8	5,100	5,300	7,220	35,200	7,450	49,200	18,000	12,500	17,400	11,700	13,400	8,620
9	4,790	5,920	6,130	24,400	7,680	38,700	19,900	12,500	17,400	10,400	12,000	8,860
10	5,710	6,340	5,300	20,600	7,000	36,600	28,400	12,200	19,300	9,350	11,700	10,400
11	5,300	5,920	5,100	16,100	6,340	35,900	44,300	12,800	23,200	9,850	12,500	8,380
12	5,100	5,710	5,100	14,000	6,130	28,400	42,800	12,000	23,200	13,100	10,600	7,450
13	5,300	5,500	5,500	12,800	5,920	23,500	31,000	11,700	20,600	13,400	9,850	7,680
14	5,300	5,500	6,130	12,200	5,710	21,200	25,800	11,400	16,700	14,600	17,400	7,680
15	4,670	5,300	6,560	11,400	5,920	19,300	22,500	10,600	14,900	15,800	22,500	7,450
16	5,300	5,710	6,130	10,400	6,560	18,000	19,900	11,400	13,400	15,500	17,400	6,780
17	6,130	5,100	5,710	10,100	6,600	16,700	19,300	15,200	13,100	31,700	14,900	6,560
18	5,920	4,750	5,710	10,100	6,200	15,800	20,600	14,300	12,800	19,900	21,200	7,000
19	6,780	4,560	5,920	10,100	5,900	15,500	24,400	12,500	18,600	15,800	21,200	7,450
20	7,680	4,300	5,500	9,600	6,130	19,900	35,900	12,500	18,600	13,700	18,600	9,350
21	7,450	4,410	5,710	9,100	5,500	23,200	35,200	11,400	17,400	12,000	16,700	9,600
22	6,340	5,100	5,710	8,860	5,920	21,900	30,300	11,700	15,200	10,600	14,000	8,620
23	5,500	5,920	5,710	7,450	6,130	21,200	25,800	13,100	13,400	10,400	11,700	7,910
24	5,710	5,920	6,340	7,220	6,130	34,600	23,200	13,100	12,800	11,200	12,200	7,450
25	5,500	5,300	5,920	7,450	6,780	69,500	21,200	12,200	12,500	10,900	16,100	7,000
26	5,300	5,300	6,340	7,680	31,600	72,500	19,300	12,000	10,600	10,400	19,300	7,000
27	5,500	5,100	7,000	7,450	51,500	62,000	18,600	10,600	11,200	9,350	19,900	7,450
28	5,300	5,100	7,450	7,220	45,000	62,000	18,000	9,850	10,600	10,100	18,600	7,450
29	4,670	4,900	7,680	6,780		61,200	16,100	9,350	10,400	12,200	16,100	7,910
30	4,520	4,670	8,140	7,000		59,800	14,900	10,400	10,100	15,100	14,000	9,850
31	5,500		7,680	7,000		44,300		12,200		15,500	12,500	
Month	Maximum				Minimum		Mean		Per square mile		Run-off in inches	
October	7,680				4,520		5,754		0.468		0.54	
November	6,340				4,300		5,274		.429		.48	
December	5,140				4,150		5,325		.452		.56	
January	35,200				6,780		11,920		.957		1.11	
February	51,500				5,500		10,420		.847		.88	
March	122,000				15,500		45,520		3.70		4.27	
April	44,300				14,900		24,830		2.02		2.25	
May	15,200				9,350		12,430		1.01		1.16	
June	23,200				10,100		14,890		1.21		1.35	
July	31,700				9,350		12,910		1.05		1.21	
August	22,500				9,850		14,920		1.21		1.40	
September	11,700				6,560		8,425		.685		.76	
The year	122,000				4,150		14,480		1.18		15.97	

Tennessee River at Breedenton, Tenn.

Location.- Water-stage recorder at Breedenton, Meigs County, $1\frac{1}{2}$ miles below mouth of Suck Creek and $2\frac{1}{4}$ miles north of Decatur. Prior to Apr. 22, 1934, staff gage at same site was used. Zero of both gages is 665.22 feet above mean sea level.

Drainage area.- 17,600 square miles.

Records available.- February to September 1934.

Extremes.- Maximum discharge recorded during period of record, 170,000 second-feet Mar. 6 (gage height, 23.9 feet); minimum recorded, 6,570 second-feet Feb. 20, 22, 23 (gage height, 2.5 feet).

Remarks.- Records good prior to May 2 and excellent thereafter.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					8,430	72,600	64,800	19,000	13,000	11,300	16,400	15,400
2					8,430	55,000	49,800	17,900	13,000	14,900	14,900	13,500
3					8,050	105,000	36,500	17,900	13,500	14,400	13,500	12,200
4					8,050	149,000	35,200	17,400	13,000	12,600	14,000	11,700
5					8,050	167,000	30,700	16,400	13,000	12,600	13,500	10,800
6					8,430	170,000	27,600	16,400	13,500	12,200	11,700	10,000
7					9,210	141,000	25,700	15,900	14,900	12,200	14,000	10,000
8					8,050	101,000	24,000	15,400	19,500	12,600	14,400	9,610
9					8,430	69,400	23,400	14,400	18,400	13,500	14,400	9,410
10					8,430	54,200	25,700	14,400	20,000	12,200	12,600	9,610
11					8,050	57,200	33,900	14,400	21,700	10,800	13,500	10,400
12					7,670	56,600	53,500	14,900	26,300	11,700	14,400	6,820
13					6,930	44,800	52,700	14,400	25,700	14,400	12,200	8,050
14					6,930	35,200	39,900	14,400	22,800	14,400	14,900	8,050
15					6,930	29,400	33,200	13,500	19,000	15,900	22,800	8,050
16					7,300	25,700	28,800	12,600	16,400	16,900	24,600	8,050
17					7,300	24,000	25,700	15,400	14,400	22,600	20,600	7,300
18					7,300	21,700	24,000	19,000	14,400	33,200	21,100	6,930
19					6,930	20,600	26,300	16,900	14,900	21,100	24,000	7,120
20					6,570	25,700	33,200	15,400	20,000	16,900	24,600	7,480
21					6,930	44,100	46,900	14,400	20,600	14,400	21,100	9,610
22					6,570	42,700	46,900	14,000	17,900	12,600	19,000	9,610
23					6,570	38,600	44,800	14,900	15,900	11,300	16,900	8,820
24					6,930	44,800	37,800	15,900	14,000	10,800	15,400	8,050
25					7,300	95,300	32,000	14,900	13,500	11,300	17,400	7,670
26					14,400	130,000	28,200	14,000	13,000	11,700	30,000	7,300
27					63,200	129,000	25,700	13,000	11,700	11,300	29,400	6,930
28					72,600	110,000	24,000	11,700	11,700	9,820	25,700	7,300
29						97,000	22,200	10,800	11,300	10,800	23,400	7,670
30						88,500	20,000	10,400	10,800	12,600	19,500	9,210
31						85,100		11,700		14,900	17,400	
Month					Maximum		Minimum		Mean		Per square mile	Run-off in inches
October												
November												
December												
January												
February					72,600		6,570		12,140		0.690	0.72
March					170,000		20,600		75,230		4.27	4.92
April					64,800		20,000		34,100		1.94	2.16
May					19,000		10,400		14,850		.848	.96
June					26,300		10,800		16,250		.924	1.03
July					33,200		9,620		14,130		.803	.93
August					30,000		11,700		18,300		1.04	1.20
September					15,400		6,930		9,155		.520	.58
The year.												

Tennessee River at Hales Bar, near Chattanooga, Tenn.

Location.— Water-stage recorder at new State highway bridge half a mile below Hales Bar Lock and Dam, 5 miles east of Jasper, Marion County, 5½ miles above mouth of Sequatchie River, and 33½ miles below Chattanooga. Zero of gage is 588.23 feet above mean sea level.

Drainage area.— 22,000 square miles.

Records available.— July 1930 to September 1934. April 1874 to October 1913, March 1915 to June 1940 at Chattanooga.

Average discharge.— 60 years, 38,450 second-feet.

Extremes.— Maximum discharge during year, 231,000 second-feet Mar. 6 (gage height, 28.9 feet); minimum, 5,450 second-feet Oct. 31 (gage height, 1.59 feet).
1874-1934: Maximum discharge, about 361,000 second-feet Mar. 1, 1875 (gage height, at Chattanooga, 54.0 feet); minimum (estimated), 3,300 second-feet Sept. 13, 1925.

Remarks.— Records good. Flow regulated to some extent by operation of hydroelectric plant just above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,200	6,800	8,200	18,400	12,000	80,500	88,500	27,000	15,600	15,600	20,800	24,100
2	9,800	7,200	7,800	19,400	11,400	87,700	69,300	25,600	17,400	18,000	21,200	20,300
3	9,200	8,800	7,200	22,200	12,000	141,000	55,600	24,600	18,000	20,800	19,800	18,000
4	9,400	9,200	7,200	25,100	12,000	193,000	47,800	24,100	19,400	18,900	18,000	17,000
5	9,600	9,000	7,400	25,600	11,400	222,000	42,700	22,200	20,500	16,600	18,400	17,000
6	10,200	8,400	7,400	26,100	11,400	229,000	38,800	21,200	21,800	16,100	18,400	15,600
7	9,000	8,000	7,800	43,800	11,600	215,000	35,600	21,800	26,100	16,600	17,000	14,800
8	8,000	8,000	9,000	85,300	12,000	176,000	33,500	21,800	29,000	18,000	18,900	14,300
9	7,800	8,600	10,700	100,000	10,900	124,000	31,500	20,800	30,500	19,800	20,800	13,400
10	7,200	9,000	11,600	78,900	10,900	80,500	31,000	20,500	31,500	19,800	20,300	12,500
11	7,000	9,000	10,000	56,200	11,400	62,900	33,500	20,500	36,100	18,400	18,000	12,500
12	7,800	9,600	9,000	43,800	10,900	63,600	43,200	19,800	35,000	17,000	19,400	15,200
13	8,200	8,400	8,000	34,500	10,500	59,400	56,200	19,400	35,000	18,000	20,300	13,800
14	8,000	8,400	8,200	31,500	10,000	46,600	53,200	18,900	33,500	20,300	18,000	12,000
15	7,400	8,200	8,200	31,000	10,200	42,200	44,900	18,900	30,000	19,800	21,800	12,000
16	7,800	7,800	8,600	27,600	9,600	37,200	38,800	19,400	26,600	21,200	25,600	11,600
17	8,200	8,000	9,000	25,100	9,200	33,000	35,000	20,800	24,100	23,200	29,000	11,600
18	7,600	7,800	9,600	21,800	9,600	31,000	33,500	24,100	20,500	25,100	27,600	10,700
19	8,200	7,800	11,400	20,800	9,600	30,500	35,600	24,600	20,500	32,500	30,000	10,500
20	9,000	7,000	14,300	18,400	9,400	38,800	40,500	21,200	23,600	27,600	33,000	10,500
21	9,400	7,400	15,200	17,000	9,000	51,400	46,600	19,800	24,600	24,100	32,000	10,700
22	9,800	7,200	14,800	17,000	9,200	57,400	52,600	21,800	25,600	18,900	28,000	13,000
23	9,800	8,000	13,800	17,000	9,000	53,800	52,000	22,700	24,600	16,600	25,600	13,000
24	9,000	8,000	12,500	17,000	9,000	70,100	49,600	22,200	20,300	14,800	25,100	11,400
25	8,200	8,800	11,400	14,800	11,600	116,000	44,400	21,800	18,400	14,800	26,600	11,200
26	7,800	8,800	11,400	14,300	26,100	153,000	38,800	20,500	18,000	15,200	33,500	10,700
27	8,000	8,200	13,000	13,800	46,000	168,000	35,000	18,900	17,400	14,800	37,800	10,700
28	7,800	8,000	16,600	13,800	80,500	158,000	33,500	17,000	15,600	16,100	37,200	10,200
29	7,800	7,200	18,900	13,400		138,000	31,000	15,600	16,100	21,200	32,500	11,200
30	6,800	7,200	18,000	12,800		115,000	29,000	15,200	15,600	22,200	29,000	12,500
31	6,600		17,000	11,600		101,000		14,300		20,800	26,100	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	11,200	6,600	8,413	0.382	0.44
November	9,600	6,800	8,127	.369	.41
December	18,900	7,200	11,070	.503	.58
January	100,000	11,600	29,600	1.36	1.56
February	80,500	9,000	14,980	.681	.71
March	229,000	30,500	102,600	4.66	5.37
April	88,500	29,000	43,370	1.97	2.20
May	27,000	14,300	20,650	.948	1.09
June	36,100	15,600	25,680	1.08	1.20
July	32,500	14,800	19,450	.884	1.02
August	37,800	17,000	24,830	1.13	1.30
September	24,100	10,200	13,400	.609	.68
The year	229,000	6,600	26,850	1.22	16.56

Tennessee River at Gunter'sville, Ala.

Location.- Water-stage recorder at highway bridge at mouth of Big Spring Creek, at Gunter'sville, Marshall County. Zero of gage is 546.30 feet (revised) above mean sea level.

Drainage area.- 24,200 square miles.

Records available.- May 1930 to September 1934.

Extremes.- Maximum discharge during year, 228,000 second-feet Mar. 8 (gage height, 32.7 feet); minimum, 7,720 second-feet Nov. 1 (gage height, 2.13 feet).
1930-34: Maximum discharge (revised), 244,000 second-feet Jan. 3, 1933; minimum, 5,590 second-feet Oct. 28, 1931; minimum stage, 1.2 feet Sept. 8, Oct. 27, 1930.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,200	7,880	8,200	19,800	13,400	89,400	129,000	31,900	15,100	16,900	21,800	28,100
2	12,600	7,720	9,210	22,300	13,400	95,000	108,000	29,700	16,900	18,300	21,800	25,400
3	11,400	8,040	9,210	23,300	13,000	137,000	80,300	28,100	13,300	19,800	21,800	21,300
4	10,600	9,210	8,360	25,900	13,400	185,000	63,100	27,000	20,300	22,300	20,500	19,800
5	10,600	10,600	8,360	29,100	13,400	205,000	58,300	25,900	23,300	20,300	18,800	18,800
6	10,600	10,300	8,870	30,800	13,000	218,000	47,200	24,400	25,400	17,800	19,300	17,800
7	11,000	9,210	8,870	42,800	12,600	224,000	43,200	23,300	30,800	18,300	19,300	16,900
8	10,600	8,870	9,210	75,800	13,000	224,000	40,000	23,800	34,100	19,300	23,300	15,500
9	9,560	8,530	10,600	109,000	13,400	213,000	37,700	23,300	36,200	22,300	25,900	15,100
10	8,870	9,210	11,800	116,000	12,600	183,000	35,200	22,800	39,600	22,800	22,800	14,200
11	8,530	9,560	12,600	93,600	12,600	137,000	34,700	22,300	45,900	22,800	21,300	13,400
12	8,530	9,560	11,400	87,300	13,000	98,000	38,700	22,300	47,800	20,300	20,900	13,800
13	8,530	10,300	10,600	50,600	13,000	77,000	48,400	21,800	44,800	19,300	23,800	16,900
14	9,210	9,210	9,560	41,400	12,600	66,700	58,900	21,300	42,200	20,300	21,800	15,100
15	8,870	8,870	9,210	36,700	11,800	54,400	55,600	20,300	39,100	21,800	19,800	13,800
16	8,530	8,870	9,210	35,700	11,800	46,200	47,200	22,300	34,700	21,300	23,300	13,800
17	8,200	8,530	9,560	31,400	11,400	40,900	42,800	23,300	30,800	22,300	27,500	13,000
18	8,870	8,870	10,600	28,100	10,600	37,200	40,400	25,400	28,100	24,400	31,400	13,000
19	8,530	8,530	11,000	24,400	11,400	37,700	40,000	28,100	23,800	27,000	30,800	11,800
20	8,870	8,530	13,400	22,300	11,000	45,200	48,200	27,000	23,300	33,600	34,100	11,800
21	9,910	8,200	17,400	20,300	10,600	55,000	50,000	23,300	25,900	29,100	40,400	11,800
22	9,910	8,870	17,400	18,800	10,600	68,000	55,500	22,300	27,000	25,900	36,200	11,800
23	10,600	8,360	16,400	19,300	10,600	69,900	59,500	24,400	27,500	20,300	31,400	13,800
24	10,600	8,870	15,100	18,800	10,600	68,600	59,500	24,900	25,900	17,400	29,100	13,800
25	10,300	9,210	13,800	18,300	11,000	97,300	55,500	25,800	21,800	16,000	30,200	12,600
26	9,210	9,910	13,000	16,400	22,300	134,000	48,900	23,300	19,800	16,900	30,200	12,200
27	8,530	9,560	13,000	16,000	41,400	160,000	43,200	21,300	19,800	16,400	34,700	12,200
28	8,870	9,210	14,600	15,500	69,200	174,000	39,600	19,800	17,400	17,400	41,800	12,200
29	8,870	9,210	18,300	15,100		176,000	37,200	18,300	17,400	18,800	40,400	11,800
30	8,870	8,530	20,300	14,600		187,000	34,700	16,900	17,400	24,400	36,700	12,200
31	8,040	19,300	13,800	13,800		149,000		16,000		24,400	31,900	
Month	Maximum					Minimum		Mean		Per square mile		Run-off in inches
October	14,200					8,040		9,691		0.400		0.46
November	10,600					7,720		9,011		.372		.42
December	20,300					8,200		12,210		.505		.58
January	116,000					13,600		35,890		1.48		1.71
February	69,200					10,600		15,600		.645		.87
March	224,000					37,200		120,200		4.97		5.73
April	129,000					34,700		52,350		2.16		2.41
May	31,900					16,000		23,500		.971		1.12
June	47,800					15,100		27,960		1.16		1.29
July	33,600					16,000		21,250		.878		1.01
August	41,800					18,800		27,470		1.14		1.31
September	28,100					11,800		15,120		.625		.70
The year	224,000					7,720		31,030		1.28		17.41

Tennessee River at Decatur, Ala.

Location.- Water-stage recorder at highway bridge at Decatur, Morgan County, 2,500 feet upstream from Louisville & Nashville Railroad bridge. Zero of gage is 534.28 feet (revised) above mean sea level.

Drainage area.- 26,300 square miles.

Records available.- October 1924 to September 1934.

Average discharge.- 10 years, 43,010 second-feet.

Extremes.- Maximum discharge during year, 224,000 second-feet Mar. 8, 9 (gage height, 20.5 feet); minimum, 7,620 second-feet Nov. 3 (gage height, 1.57 feet).
1924-34: Maximum discharge, 233,000 second-feet Jan. 1, 1927 (gage height, 23.2 feet); minimum, 3,520 second-feet Aug. 19-24, Sept. 7-13, 19, 1925 (gage height, -0.4 foot).

Remarks.- Records good. Discharge estimated Apr. 21-28.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,700	8,290	8,960	20,400	14,900	85,300	153,000	34,700	17,000	18,600	24,800	30,300
2	12,000	7,840	8,290	21,600	14,900	98,700	159,000	31,700	16,400	19,200	22,600	27,500
3	12,500	7,620	8,740	24,800	14,900	142,000	101,000	30,300	17,600	19,800	22,800	24,200
4	12,000	7,840	9,190	25,500	14,900	135,000	77,300	28,900	20,400	21,600	22,800	21,600
5	11,000	9,190	8,740	28,200	14,900	211,000	62,600	27,500	24,200	22,200	20,400	20,400
6	10,800	10,600	9,190	31,000	14,400	217,000	54,000	26,200	27,500	20,400	19,800	19,200
7	10,800	11,000	9,190	41,000	14,400	222,000	48,600	25,500	30,300	18,600	19,800	18,600
8	11,000	10,100	9,650	66,400	13,900	224,000	44,400	24,800	34,700	19,800	19,800	17,600
9	10,800	9,650	10,100	104,000	13,900	224,000	41,000	24,800	37,800	22,200	26,200	15,900
10	9,420	9,190	11,000	121,000	14,400	217,000	37,800	24,200	39,400	24,200	24,800	15,400
11	8,740	9,190	12,000	113,000	13,900	197,000	36,200	23,600	46,000	24,200	22,800	14,400
12	8,290	9,650	12,500	85,300	13,900	139,000	37,000	23,600	50,400	23,600	21,600	14,400
13	8,290	9,650	12,200	62,600	14,400	98,700	42,600	22,900	48,600	21,600	22,200	15,900
14	8,290	9,650	11,000	48,600	14,400	80,600	55,000	22,200	46,000	20,400	24,200	17,000
15	8,740	9,650	10,100	41,000	13,900	66,600	59,700	21,600	42,600	21,000	21,600	16,400
16	8,740	9,190	9,650	37,800	13,400	55,000	54,000	23,600	37,800	22,200	21,000	15,400
17	8,740	8,960	9,420	34,700	13,400	46,900	48,600	27,500	33,200	22,200	24,200	15,400
18	8,520	8,740	9,890	31,700	12,500	41,800	46,000	28,200	30,300	22,900	30,300	14,400
19	8,740	8,740	11,300	28,200	12,900	40,200	43,500	28,900	27,500	24,800	32,400	13,400
20	8,740	8,740	13,900	25,500	12,500	46,900	46,000	29,500	24,200	30,300	32,400	12,500
21	8,740	8,740	17,000	23,600	12,500	57,800	51,500	27,500	24,200	31,700	39,400	12,200
22	9,420	8,740	18,600	22,200	12,500	70,700	57,000	24,800	25,500	28,200	41,000	12,000
23	9,890	9,420	18,600	20,400	12,200	77,300	62,000	26,800	27,500	24,200	36,200	12,500
24	10,600	9,420	17,600	20,400	12,200	75,100	65,000	27,500	27,500	20,400	31,000	13,400
25	10,800	9,190	16,400	20,400	12,500	87,700	65,000	26,800	24,800	18,100	30,300	13,900
26	10,300	9,890	15,400	19,800	20,300	123,000	58,500	24,800	22,200	17,600	31,700	12,900
27	9,650	10,100	14,900	17,600	38,400	153,000	51,000	23,600	19,800	17,600	33,200	12,500
28	8,960	9,890	14,900	17,600	58,800	179,000	42,600	22,200	19,800	17,600	38,600	12,500
29	8,740	9,650	16,400	17,000		181,000	39,400	20,400	18,600	18,600	42,600	12,200
30	8,740	9,420	18,600	16,400		182,000	36,200	19,200	18,100	22,200	38,600	12,500
31	8,740		20,400	15,400		172,000		18,100		26,200	34,000	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12,500	8,290	9,749	0.371	0.43
November	11,000	7,620	9,264	.352	.39
December	20,400	8,290	12,700	.483	.56
January	121,000	15,400	36,610	1.48	1.71
February	58,800	12,200	16,430	.625	.65
March	224,000	40,200	128,700	4.89	5.64
April	153,000	36,200	58,150	2.21	2.47
May	34,700	18,100	25,550	.971	1.12
June	50,400	16,400	29,330	1.12	1.25
July	31,700	17,600	22,010	.337	.98
August	42,600	19,200	28,120	1.07	1.23
September	30,300	12,000	16,220	.617	.69
The year	224,000	7,620	33,160	1.26	17.10

Tennessee River at Florence, Ala.

Location.— Water-stage recorder 700 feet above Southern Railway bridge at lower end of Patton's Island, 1 mile south of Florence, Lauderdale County, and 2½ miles below Wilson Dam. Zero of gage is 400.85 feet above mean sea level.

Drainage area.— 30,800 square miles.

Records available.— November 1871 to September 1934.

Average discharge.— 40 years (1894-1934), 51,970 second-feet.

Extremes.— Maximum discharge during year, 286,000 second-feet Mar. 5 (gage height, 21.2 feet); minimum, 8,340 second-feet Oct. 13 (gage height, -0.73 foot).
1871-1934: Maximum discharge, about 444,000 second-feet Mar. 19, 1897 (gage height, 32.5 feet); minimum, 2,400 second-feet Oct. 8, 1925 (gage height, -3.0 feet).

Remarks.— Records good. Flow somewhat regulated by operation of power plant and gates at Wilson Dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,200	9,780	9,760	22,400	17,300	94,200	174,000	36,500	17,900	20,400	26,000	36,600
2	12,600	9,560	9,560	21,700	16,700	155,000	149,000	34,100	17,300	19,700	23,800	34,000
3	13,000	9,540	10,800	25,800	14,000	221,000	121,000	31,700	17,900	21,000	23,100	23,700
4	13,000	9,740	11,500	28,000	13,400	256,000	94,200	29,400	26,000	21,000	22,400	17,600
5	13,000	9,970	10,600	28,700	16,700	265,000	75,100	27,200	27,200	22,400	21,100	21,700
6	11,500	11,000	15,500	37,400	16,800	260,000	63,800	25,800	33,300	21,000	19,300	20,500
7	10,800	12,000	17,900	55,800	15,000	256,000	55,500	25,100	35,700	20,400	19,300	18,700
8	11,000	12,000	13,400	85,100	15,000	244,000	48,300	24,400	39,900	21,000	22,400	21,700
9	11,300	11,500	12,000	115,000	14,000	242,000	46,100	25,800	41,600	22,400	27,500	17,600
10	11,000	11,000	12,000	135,000	14,400	236,000	41,600	25,800	43,400	25,800	29,900	13,200
11	10,200	11,000	13,000	132,000	15,000	224,000	38,200	25,100	45,200	26,500	25,200	15,000
12	9,560	10,600	13,400	102,000	15,000	170,000	35,700	24,400	56,500	25,100	23,100	17,600
13	9,350	10,400	13,400	73,900	14,000	119,000	40,800	24,400	56,500	24,400	21,700	19,900
14	9,350	10,600	13,000	56,500	13,400	94,200	53,500	23,000	53,500	21,700	24,500	21,700
15	9,350	10,400	12,000	46,100	14,000	78,700	62,700	23,700	48,800	21,000	24,500	22,600
16	11,000	10,200	11,500	39,900	13,400	62,700	59,500	24,400	44,300	23,000	23,100	22,400
17	10,800	10,200	10,600	35,200	14,000	52,500	52,500	37,600	39,000	20,400	25,200	15,000
18	9,760	10,200	13,400	34,100	13,400	47,000	50,600	19,200	33,300	21,700	33,200	16,000
19	9,760	9,760	16,700	30,200	14,000	44,300	48,800	37,200	30,200	25,100	35,700	15,500
20	9,760	9,760	23,000	27,200	12,200	53,500	50,600	28,000	25,100	29,400	36,600	15,100
21	9,760	10,200	21,700	25,800	12,500	69,300	55,500	26,000	23,000	34,900	39,100	12,700
22	10,200	10,600	21,700	23,700	12,500	65,100	60,500	29,000	24,400	30,200	44,400	12,700
23	11,000	10,200	22,400	21,700	12,500	92,900	64,900	26,800	25,800	27,200	40,800	12,700
24	10,600	11,000	20,400	21,700	13,400	96,800	67,100	28,200	27,200	21,700	35,700	13,600
25	11,000	11,000	19,100	21,000	14,000	121,000	67,100	27,500	28,000	18,700	32,300	14,600
26	11,300	10,200	19,500	20,400	27,300	161,000	60,500	26,200	25,800	16,700	33,200	14,100
27	10,800	9,760	16,700	19,800	47,900	192,000	52,500	33,500	23,000	17,900	29,900	12,300
28	9,970	10,200	16,100	17,300	62,700	206,000	46,100	20,400	22,400	16,500	35,700	13,600
29	9,760	10,200	16,100	17,900		210,000	43,400	18,500	19,800	19,100	44,400	13,600
30	9,760	9,760	19,800	17,900		202,000	39,900	18,500	20,400	25,100	41,700	13,600
31	9,350		21,700	17,900		191,000		18,500		28,300	36,600	
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	13,000					9,350	10,690	0.347		0.40		
November	12,000					8,540	10,340	.336		.37		
December	23,000					9,560	15,380	.499		.58		
January	135,000					17,300	43,970	1.42		1.64		
February	62,700					12,200	17,660	.573		.60		
March	265,000					44,300	154,400	5.01		5.78		
April	174,000					35,700	63,980	2.08		2.32		
May	37,600					15,500	26,710	.867		1.00		
June	56,500					17,300	32,410	1.05		1.17		
July	34,900					16,700	22,930	.744		.86		
August	44,400					19,300	29,720	.965		1.11		
September	36,600					12,300	17,990	.584		.65		
The year	265,000					8,540	37,400	1.21		16.48		

Tennessee River at Riverton, Ala.

Location.- Water-stage recorder at Government lock at foot of Colbert Shoals Canal, three-quarters of a mile northeast of Riverton, Colbert County, and 1½ miles above mouth of Bear Creek. Zero of gage is 355.5 feet above mean sea level.

Drainage area.- 31,300 square miles.

Records available.- October 1926 to September 1934.

Extremes.- Maximum stage during year, 41.7 feet Mar. 6; minimum, 7.28 feet Oct. 15, 1926-34: Maximum stage, 50.1 feet Dec. 30, 1926; minimum, 6.5 feet Nov. 15, 1931.

The U. S. Weather Bureau reports a maximum stage of 58.4 feet Mar. 20, 1897, and a minimum of 4.3 feet Oct. 12, 1925.

Remarks.- Rating curve not developed because of lack of facilities for making discharge measurements. Gage-height record estimated Apr. 18-21. Considerable regulation during low water caused by operations at Wilson Dam.

Gage height, in feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.62	7.61	7.63	10.89	9.94	20.46	33.50	13.90	9.92	10.37	12.13	13.38
2	8.56	7.65	7.57	10.88	9.70	25.32	31.02	13.39	9.78	10.62	11.48	13.75
3	8.62	7.53	7.97	11.30	9.18	34.75	27.80	12.92	9.61	10.27	11.01	11.97
4	8.68	7.37	8.20	12.13	8.90	39.23	23.95	12.58	11.07	10.72	11.05	9.81
5	8.68	7.58	8.19	12.14	9.22	41.26	20.46	12.02	11.69	11.15	10.78	10.45
6	8.32	7.87	9.52	13.40	9.50	41.66	18.55	11.86	13.72	10.84	10.29	10.51
7	7.97	8.28	10.40	16.26	9.50	41.58	17.28	11.55	15.35	10.70	10.14	10.31
8	7.84	8.36	9.50	20.31	9.30	40.80	16.08	11.54	16.07	10.78	10.42	10.13
9	7.98	8.20	8.66	23.30	9.20	40.27	15.39	11.52	16.16	10.87	11.06	10.79
10	8.09	8.04	8.54	25.92	9.12	39.95	14.81	11.61	15.68	11.69	12.24	8.86
11	7.82	7.93	8.67	26.35	9.32	39.02	14.27	11.48	15.99	12.01	11.60	8.78
12	7.60	7.96	8.87	23.85	9.38	36.48	13.58	11.32	17.05	11.77	10.95	9.53
13	7.34	7.72	8.99	20.22	9.21	31.22	13.99	11.30	17.30	11.50	10.68	10.10
14	7.52	7.78	8.88	17.68	9.00	25.72	15.73	11.25	16.82	10.87	10.76	10.76
15	7.39	7.79	8.46	15.68	9.08	21.70	17.41	10.98	16.19	10.53	10.95	10.49
16	7.68	7.78	8.27	14.48	9.04	18.62	17.41	11.25	15.43	10.92	10.98	11.68
17	8.26	7.75	8.08	14.00	8.84	16.85	16.67	12.10	14.92	10.56	11.01	9.16
18	7.74	7.73	8.80	13.47	8.85	15.70	16.10	12.20	14.21	10.66	12.04	9.40
19	7.62	7.60	9.50	12.68	9.03	15.12	15.75	11.53	13.21	11.14	13.13	9.50
20	7.65	7.54	10.94	12.22	8.65	15.82	15.75	13.40	12.15	12.18	12.94	9.08
21	7.63	7.60	11.14	11.70	8.45	17.90	16.22	11.80	11.53	13.48	14.14	9.10
22	7.70	8.06	10.96	11.35	8.50	20.08	17.07	11.82	11.46	12.98	15.06	8.47
23	8.02	7.84	11.04	10.85	8.50	21.32	17.90	11.80	11.71	12.27	14.86	8.56
24	7.97	7.97	10.64	10.80	8.60	21.82	18.30	11.80	11.92	11.14	13.89	8.65
25	7.95	8.14	10.26	10.68	9.26	23.98	18.25	11.88	12.12	10.34	13.04	9.01
26	8.08	7.86	9.89	10.58	12.00	27.86	17.68	11.95	12.04	9.77	13.19	9.03
27	8.09	7.63	9.80	10.51	15.18	32.20	16.76	12.74	11.41	9.70	12.35	8.72
28	7.79	7.67	9.60	9.94	17.30	34.58	15.54	11.95	10.97	9.77	12.93	8.73
29	7.64	7.80	9.48	9.92		35.60	14.90	10.22	10.78	9.81	14.62	8.69
30	7.57	7.65	9.90	9.93		35.67	14.28	9.84	10.52	10.84	14.74	9.20
31	7.46		10.72	9.85		34.85		9.90		11.84	13.84	

Tennessee River at Savannah, Tenn.

Location.— Water-stage recorder at highway bridge a quarter of a mile west of Savannah, Hardin County. Zero of gage is 341.13 feet above mean sea level.

Drainage area.— 33,100 square miles.

Records available.— September 1930 to September 1934.

Extremes.— Maximum discharge during year, 239,000 second-feet Mar. 8, 9; maximum gage height, 40.85 feet Mar. 8; minimum, 10,100 second-feet Oct. 14 (gage height, 0.54 foot).

1930-34: Maximum discharge, 246,000 second-feet Feb. 23, 1933 (gage height, 41.75 feet); minimum, 7,990 second-feet Oct. 20, 1931 (gage height, -0.41 foot).

Remarks.— Records good. Low-water flow regulated slightly by operation at Wilson Dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,800	10,600	11,400	23,700	19,600	70,600	192,000	42,000	19,900	22,900	29,200	36,900
2	15,100	10,900	11,700	24,100	19,600	98,300	181,000	39,600	19,600	22,200	27,200	37,300
3	14,400	11,400	12,600	24,400	19,500	160,000	161,000	36,900	18,800	21,800	25,200	32,000
4	14,100	11,400	13,200	27,600	16,400	198,000	134,000	34,600	20,300	22,900	23,700	24,800
5	14,100	12,300	13,800	28,800	15,800	218,000	102,000	32,000	25,000	23,700	22,500	19,900
6	13,800	12,000	19,200	33,300	17,400	230,000	80,600	30,400	33,700	24,100	21,400	22,200
7	12,600	12,600	23,700	51,300	18,500	236,000	66,300	29,200	43,400	23,700	19,900	21,400
8	11,700	13,500	24,100	72,800	17,800	239,000	56,800	27,600	56,800	23,700	19,900	20,300
9	11,700	13,500	18,200	94,100	17,400	239,000	52,300	27,600	53,800	24,100	22,200	22,200
10	12,000	12,900	15,100	114,000	16,800	237,000	48,900	28,000	52,800	25,200	26,800	19,200
11	12,000	12,300	14,400	124,000	16,100	235,000	44,500	28,000	54,800	28,000	28,400	14,800
12	11,400	12,000	14,800	119,000	16,800	228,000	41,100	27,600	54,800	28,400	25,600	15,400
13	10,900	11,700	15,100	97,700	16,800	208,000	39,600	26,800	52,400	27,600	23,500	18,500
14	10,400	11,400	15,400	72,800	15,800	173,000	44,500	26,800	57,800	25,600	22,900	21,000
15	10,400	11,400	14,800	56,900	15,400	135,000	37,300	26,800	53,800	23,500	23,700	22,900
16	10,600	11,400	13,800	48,400	15,800	100,000	63,000	26,000	49,800	23,300	24,100	25,200
17	12,000	11,400	13,500	42,500	15,400	74,400	60,400	26,400	47,900	24,100	23,700	22,900
18	12,600	11,400	15,100	38,700	15,100	59,900	56,300	35,500	53,300	22,500	26,400	17,100
19	11,400	11,200	20,300	36,000	15,400	50,300	53,300	25,600	44,000	23,300	32,000	17,100
20	11,200	10,900	23,700	33,300	15,800	50,800	52,300	36,400	36,400	26,800	35,600	16,800
21	11,200	10,900	26,800	30,000	14,100	60,400	54,300	31,200	29,600	32,000	38,200	15,800
22	11,200	11,400	26,000	29,400	14,100	72,800	59,400	30,400	26,800	35,500	43,500	14,800
23	12,000	12,900	25,200	26,400	14,100	85,700	65,200	31,200	27,600	32,000	45,900	13,500
24	12,900	12,300	24,400	24,400	14,100	97,100	67,900	29,200	28,000	28,400	42,000	13,900
25	12,300	12,600	22,500	24,100	15,400	112,000	69,000	30,800	29,200	23,700	36,900	14,400
26	12,000	12,600	21,000	23,700	24,400	130,000	66,800	29,600	30,000	20,700	35,000	15,400
27	12,300	12,000	20,300	23,500	41,100	165,000	61,500	30,400	28,400	18,500	33,300	15,100
28	12,300	11,700	19,200	21,800	55,300	184,000	54,800	33,500	25,200	18,500	31,600	14,100
29	11,400	11,400	18,200	19,900		193,000	48,900	24,100	24,100	18,800	37,800	14,800
30	11,200		18,200	19,600		198,000	45,400	20,700	23,700	18,900	44,000	15,800
31	10,900		21,000	19,600		198,000		19,600		25,200	41,500	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				15,800	10,400	12,190	0.368		0.42			
November				13,500	10,600	11,850	.358		.40			
December				26,800	11,400	18,280	.552		.64			
January				124,000	19,600	45,969	1.39		1.60			
February				55,300	14,100	18,890	.571		.69			
March				239,000	50,500	152,800	4.62		5.33			
April				192,000	39,600	72,680	2.20		2.46			
May				42,000	19,600	29,820	.901		1.04			
June				59,400	18,800	37,890	1.14		1.27			
July				35,500	18,600	24,530	.741		.85			
August				45,900	19,900	30,110	.910		1.05			
September				37,300	13,500	19,860	.600		.67			
The year.				239,000	10,400	39,780	1.20		16.32			

Tennessee River near Johnsonville, Tenn.

Location.- Water-stage recorder at bridge on U. S. Highway 70, 6 miles upstream from Johnsonville, Humphreys County, 6 miles east of Camden, and 10 miles below mouth of Duck River. Zero of gage is 319.82 feet above mean sea level.

Drainage area.- 38,500 square miles.

Records available.- October 1931 to September 1934. October 1875 to September 1931 at Johnsonville, 6 miles downstream.

Average discharge.- 45 years (1889-1934), 63,710 second-feet.

Extremes.- Maximum discharge during year, 253,000 second-feet Mar. 10 (gage height, 33.88 feet); minimum, 11,900 second-feet Oct. 14-17, Nov. 2, 3.
1889-1934: Maximum discharge, about 410,000 second-feet Mar. 24, 1897 (gage height, at Johnsonville, 48.0 feet); minimum, 3,500 second-feet Sept. 11, 1925 (gage height, at Johnsonville, -2.0 feet), caused by filling Wilson Dam pool.

Remarks.- Records excellent below and good above 50,000 second-feet. Low-water flow slightly regulated by hydroelectric plant at Wilson Dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19,100	12,300	12,700	24,600	22,500	69,100	218,000	48,500	22,000	26,700	28,400	43,400
2	18,100	11,900	12,300	26,700	22,500	90,800	213,000	45,300	22,000	26,200	31,900	39,700
3	16,300	11,900	13,000	27,300	22,500	155,000	201,000	42,800	21,500	26,700	30,700	39,700
4	15,400	12,300	14,600	27,900	21,500	199,000	181,000	39,700	21,000	25,100	28,400	35,500
5	15,000	14,600	15,900	30,700	20,000	222,000	151,000	37,900	23,000	25,100	26,700	27,900
6	15,400	15,900	21,000	33,700	19,100	235,000	120,000	35,500	30,100	26,200	26,200	23,500
7	15,000	15,400	30,700	46,600	20,000	245,000	97,500	33,100	41,000	26,700	24,100	24,100
8	14,200	15,400	37,300	74,200	20,500	251,000	81,800	31,900	54,300	27,300	23,000	23,500
9	13,400	15,900	35,500	102,000	20,500	252,000	69,100	30,100	59,500	26,700	22,000	22,500
10	12,700	15,900	27,300	119,000	20,000	253,000	60,800	30,100	60,800	27,300	23,500	23,500
11	12,700	15,000	22,000	131,000	19,100	252,000	56,200	30,700	60,200	28,400	27,900	22,000
12	13,000	14,200	19,500	135,000	18,600	252,000	51,700	30,700	59,500	30,700	29,600	19,100
13	12,700	13,800	19,100	126,000	18,600	247,000	47,200	29,600	63,500	30,700	27,300	19,100
14	11,900	13,000	19,100	104,000	19,100	234,000	46,600	29,600	65,600	30,100	25,100	22,500
15	11,900	12,700	19,100	83,200	18,600	206,000	52,300	29,600	64,200	27,900	24,600	24,100
16	11,900	12,700	21,000	66,300	18,100	164,000	62,800	29,000	60,800	26,200	25,100	25,700
17	11,900	12,700	28,400	55,500	17,700	123,000	67,000	29,000	56,900	26,200	25,700	29,000
18	12,300	12,300	31,900	49,800	17,700	93,000	64,800	30,700	67,700	25,700	25,700	26,200
19	13,400	12,300	39,100	45,900	17,200	74,200	60,800	35,500	66,300	25,100	29,000	22,000
20	13,000	12,300	42,200	41,600	17,700	62,100	58,200	31,300	55,600	25,700	34,300	20,500
21	12,300	12,300	45,300	35,500	17,700	62,800	57,500	37,300	45,300	29,600	36,700	19,500
22	12,300	12,300	44,700	34,900	16,700	79,500	59,500	34,900	36,100	35,500	39,700	19,100
23	12,300	12,300	39,100	33,100	16,300	95,200	64,200	34,300	31,900	37,300	45,900	18,600
24	12,700	13,400	34,900	30,700	16,300	121,000	69,100	34,300	31,300	34,900	47,900	17,200
25	13,400	13,800	31,900	29,000	17,700	162,000	72,000	32,500	31,300	30,700	44,700	16,300
26	13,800	13,800	29,600	27,900	25,100	154,000	72,800	32,500	31,900	27,300	40,300	16,300
27	13,400	13,800	27,300	27,300	36,100	199,000	70,500	32,500	32,500	24,100	38,500	16,700
28	13,400	13,400	25,700	26,200	56,200	215,000	64,900	33,700	30,700	22,000	36,700	16,700
29	13,400	12,700	24,100	25,100	224,000	58,200	34,300	28,400	22,000	22,000	35,500	16,700
30	13,000	12,300	23,000	23,500	227,000	52,300	27,900	27,900	22,500	41,600	18,600	
31	12,300		22,500	22,500	223,000		23,500		24,600	45,900		
Month					Maximum		Minimum		Mean		Per square mile Run-off in inches	
October					19,100		11,900		13,600		0.353 0.41	
November					15,900		11,900		13,420		.349 .59	
December					45,300		12,300		26,770		.695 .80	
January					135,000		22,500		53,860		1.40 1.61	
February					56,200		16,300		21,200		.551 .51	
March					253,000		62,100		175,200		4.55 5.25	
April					218,000		46,600		96,730		2.25 2.51	
May					48,500		23,500		33,490		.870 1.00	
June					67,700		21,000		43,420		1.13 1.26	
July					37,300		22,000		27,430		.712 .82	
August					47,900		22,000		32,020		.832 .96	
September					43,400		16,300		23,640		.614 .68	
The year.					253,000		11,900		46,140		1.20 16.26	

Tennessee River at Shannon dam site, near Murray, Ky.

Location.- Staff gage at mouth of Shannon Creek (Rowlatts Landing), where river forms Tennessee-Kentucky State line, 3 miles north of south boundary of Kentucky, 15 miles south of Aurora Landing, and 15 miles southeast of Murray, Calloway County. Zero of gage is 306.6 feet above mean sea level.

Drainage area.- 39,700 square miles.

Records available.- October 1931 to September 1934. At Aurora Landing, 15 miles downstream, from July 1930 to September 1931.

Extremes.- Maximum discharge recorded during year, 282,000 second-feet Mar. 10; maximum gage height recorded, 32.1 feet Mar. 12, 13; minimum discharge recorded, 12,500 second-feet Oct. 14-17, Nov. 2-4; minimum gage height recorded, 0.6 foot Oct. 18, 17.

1930-34: Maximum discharge, 293,000 second-feet Feb. 23, 24, 1933; maximum gage height, 35.8 feet Feb. 12, 1932; minimum discharge, 8,850 second-feet Oct. 24-27, 1931; minimum gage height, -0.45 foot Oct. 21-23, 1931.

Remarks.- Records fair. Discharge determined by slope method from gages at Shannon dam site and at highway bridge at mouth of Big Sandy River, 7½ miles upstream.

Discharge, in second-feet, 1935-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	20,700	*13,000	*13,000	*24,500	23,500	66,600	228,000	55,100	23,200	*39,000	30,000	46,000	
2	20,300	*12,500	*13,000	25,600	23,700	81,600	216,000	52,500	23,700	*28,000	*33,000	46,700	
3	16,700	*12,500	*14,000	27,800	23,500	135,000	212,000	50,400	23,100	27,400	*33,000	39,400	
4	16,900	*12,500	*15,000	28,400	*23,000	193,000	194,000	43,100	21,700	26,800	*31,000	37,700	
5	*16,000	13,000	*16,000	28,200	*21,500	216,000	169,000	38,800	21,400	26,300	28,600	32,800	
6	*16,000	18,300	17,100	32,300	*20,500	237,000	129,000	38,300	*27,000	*27,000	26,300	*26,000	
7	*16,000	18,600	22,500	39,500	20,800	253,000	107,000	*36,000	32,800	*38,000	25,200	*25,000	
8	*16,500	16,800	36,000	64,100	*21,500	251,000	87,000	*34,000	46,700	*38,500	25,300	*24,500	
9	14,200	15,800	39,500	96,700	*21,500	250,000	78,600	*32,000	61,200	*38,500	25,000	*23,500	
10	*13,500	15,200	30,100	113,000	*21,000	282,000	70,800	*32,000	64,600	*39,000	27,500	23,000	
11	*13,000	14,700	*25,000	131,000	*20,500	289,000	59,400	*32,000	64,900	*30,000	28,800	23,200	
12	*13,500	14,700	*21,000	136,000	*19,500	280,000	58,300	*32,000	61,800	*32,000	28,200	21,300	
13	*13,000	14,100	*20,000	132,000	*19,500	255,000	50,000	*31,000	65,500	32,200	26,700	20,600	
14	*12,500	*13,500	*20,000	113,000	*20,000	249,000	50,500	*31,000	66,900	31,200	25,800	*22,000	
15	*12,500	*13,000	*20,000	89,500	*20,000	213,000	49,700	*31,000	66,500	*30,000	*25,500	*24,000	
16	*12,500	*13,000	22,400	77,400	*19,000	190,000	59,400	30,700	71,400	*38,000	*26,000	*26,000	
17	12,500	*13,000	31,600	74,100	*19,500	135,000	*55,000	31,100	72,800	*37,000	*26,500	27,600	
18	12,500	*13,000	37,900	59,400	*18,000	103,000	*68,000	32,000	67,500	*37,000	*27,000	*29,000	
19	13,800	*13,000	*42,000	49,900	*19,000	74,600	63,900	33,900	73,500	*36,500	29,800	*25,000	
20	*13,500	*13,000	*45,000	44,500	*16,500	64,000	60,800	*33,000	66,800	*37,000	34,300	*22,000	
21	*13,000	*13,000	*47,500	37,100	*18,500	63,800	57,100	*39,000	64,000	*38,000	37,100	*20,500	
22	*13,000	*13,000	*47,000	37,800	*19,000	69,500	58,300	*37,000	*45,000	35,800	39,500	19,400	
23	*13,000	*13,000	*44,000	36,000	*17,000	83,700	63,300	*36,000	*36,000	37,800	44,800	*19,000	
24	*13,500	*14,000	*39,000	31,600	*17,500	103,000	69,600	*36,000	*32,500	35,500	48,400	18,300	
25	*14,000	*14,500	*34,000	31,600	19,300	161,000	72,300	36,000	*33,000	34,900	*49,000	*17,500	
26	*14,000	*14,500	*31,000	31,400	27,200	158,000	71,500	34,800	*33,000	*32,000	*45,000	*17,000	
27	*14,000	*14,500	28,100	28,600	34,400	187,000	*72,000	34,800	*33,500	*37,000	40,100	*17,000	
28	*14,000	*14,000	*27,000	27,200	44,300	216,000	*69,000	32,300	33,800	*35,000	39,300	17,300	
29	*14,000	*13,500	*25,500	25,800		223,000	*64,000	35,100	30,600	*33,000	39,400	*17,500	
30	*13,500	*13,000	*24,500	25,800		232,000	60,300	34,800	30,000	23,800	40,000	*19,500	
31	*13,000		*23,500	25,000		229,000		*26,000		24,700	42,900		
Month						Maximum		Minimum		Mean		Per square mile	Run-off in inches
October						20,700		12,500		14,390		0.362	0.42
November						18,600		12,500		14,010		.383	.39
December						47,500		28,140		35,630		.709	.62
January						136,000		24,500		55,630		1.40	1.61
February						44,300		17,000		21,720		.547	.57
March						282,000		63,600		176,400		4.44	5.12
April						228,000		49,700		90,790		2.29	2.56
May						55,100		26,000		35,950		.906	1.04
June						73,500		21,400		46,360		1.17	1.30
July						37,800		23,000		28,930		.729	.84
August						49,000		25,000		33,130		.855	.96
September						46,700		17,000		24,940		.628	.70
The year.						262,000		12,500		47,790		1.20	16.33

*Estimated.

Davidson River near Brevard, N. C.

Location.- Water-stage recorder at bridge on State Highway 284, $1\frac{1}{2}$ miles above confluence with French Broad River, 2 miles below mouth of Avery Creek, and $3\frac{1}{2}$ miles northeast of Brevard, Transylvania County. Prior to May 18, 1934, chain gage on bridge (same datum) was used. Zero of present gage and chain gage is 2,115.52 feet above mean sea level.

Drainage area.- 41 square miles.

Records available.- December 1920 to September 1934.

Average discharge.- 13 years (1921-34), 131 second-feet.

Extremes.- Maximum discharge during year, 1,070 second-feet Mar. 3 (gage height, 4.00 feet); minimum, 40 second-feet Oct. 13-15 (gage height, 0.70 foot).
1920-34: Maximum discharge (estimated), 8,400 second-feet Aug. 15, 1928 (gage height, 11.8 feet); minimum, 15 second-feet Sept. 19-21, 1925 (gage height, 0.34 foot).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	46	42	162	100	103	155	106	73	137	72	76
2	36	45	42	106	74	286	142	100	85	123	73	87
3	64	48	53	98	70	1,000	134	97	83	111	61	61
4	56	55	55	97	66	892	127	94	178	104	56	58
5	51	150	46	174	62	508	123	91	194	91	56	56
6	50	113	61	212	60	325	117	91	152	84	51	51
7	47	106	82	622	57	258	113	91	142	90	72	62
8	47	77	57	266	56	215	111	86	168	80	88	53
9	46	64	55	174	56	183	178	82	284	166	62	47
10	46	60	52	133	53	166	130	80	238	188	56	44
11	42	57	48	116	57	145	125	88	165	160	56	44
12	42	55	46	144	60	132	119	82	136	130	67	50
13	41	52	47	129	56	123	115	79	125	108	62	49
14	40	51	47	105	52	121	106	76	104	96	60	260
15	40	50	46	90	52	110	106	179	94	91	58	224
16	76	47	46	86	51	106	162	150	85	90	55	181
17	113	46	46	92	50	104	155	142	202	93	60	145
18	74	45	47	78	50	100	136	115	334	107	124	111
19	58	45	84	74	52	106	134	94	175	97	96	94
20	53	45	108	74	50	121	123	85	132	84	66	85
21	58	47	70	72	50	98	113	80	113	74	56	104
22	61	72	64	71	52	96	110	90	100	82	53	115
23	58	53	61	70	51	110	106	84	104	66	138	98
24	53	51	68	66	48	207	140	79	216	64	170	86
25	51	50	57	66	120	263	119	76	115	73	88	84
26	48	47	109	66	339	204	106	69	97	67	74	91
27	47	45	72	62	146	682	100	67	92	81	95	82
28	45	44	62	61	116	338	97	67	109	78	94	80
29	46	42	58	57		238	100	91	110	78	88	301
30	47	42	57	92		202	119	85	104	69	122	155
31	45		68	97		175		80		64	88	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				113	40	54.2	1.32	1.52				
November				150	42	58.3	1.42	1.58				
December				109	42	59.6	1.45	1.67				
January				622	57	122	2.98	3.44				
February				339	48	75.2	1.83	1.91				
March				1,000	96	248	6.05	6.98				
April				178	97	124	3.02	3.37				
May				178	67	92.7	2.26	2.61				
June				334	73	144	3.51	3.62				
July				188	64	97.6	2.38	2.74				
August				138	51	75.8	1.85	2.13				
September				301	44	101	2.46	2.75				
The year				1,000	40	105	2.56	34.62				

South Fork of Mills River at The Pink Beds, N. C.

Location.- Water-stage recorder at The Pink Beds, in Pisgah National Forest, 400 feet below mouth of Thompson Creek and 9 miles north of Brevard, Transylvania County.

Drainage area.- 9.87 square miles.

Records available.- February 1926 to September 1934.

Extremes.- Maximum discharge during year, 331 second-feet Mar. 3 (gage height, 4.47 feet); minimum, 8.0 second-feet Sept. 11 (gage height, 2.15 feet).

1926-34: Maximum discharge (estimated), 2,220 second-feet Aug. 15, 1928 (gage height, 8.0 feet); minimum, 1.8 second-feet Sept. 3, 1930.

Remarks.- Records good except those estimated for Dec. 18 to Jan. 8, Feb. 27, 28, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17.2	9.5	8.6	40	28	31	42	24	19.5	40	16.6	9.5
2	18.0	9.2	8.6	22	22	32	39	25	35	40	16.2	8.3
3	15.2	12.6	11.8	18	20	277	37	22	35	32	14.0	8.0
4	11.8	14.0	13.2	25	20	219	35	20	55	28	12.6	8.0
5	11.2	35	10.1	45	20	144	34	20	64	25	11.5	8.0
6	10.4	22	10.4	60	19.0	94	32	20	54	22	11.2	7.5
7	10.4	16.6	16.6	200	17.1	71	31	19.5	46	22	14.3	12.2
8	9.8	14.0	11.8	80	17.6	59	32	19.0	47	21	13.6	9.2
9	9.5	13.2	10.8	57	17.6	51	53	18.0	109	29	12.2	7.5
10	9.5	11.8	10.1	44	17.1	45	37	18.0	145	29	11.2	7.0
11	9.5	11.5	10.1	37	17.1	41	35	18.5	74	26	10.8	6.8
12	9.9	11.2	10.1	36	17.6	37	33	17.1	54	25	11.5	8.0
13	9.9	10.8	10.1	35	16.6	36	31	16.6	43	22	10.1	9.8
14	9.6	10.1	10.1	31	16.2	34	30	16.6	37	19.5	11.2	85
15	9.6	9.8	10.8	27	16.2	32	29	29	34	18.5	10.8	64
16	36	10.1	10.4	26	15.8	30	40	29	29	17.1	9.8	48
17	32	9.5	9.5	24	15.3	29	34	29	31	15.8	11.5	31
18	15.6	10.1	10	23	15.8	27	36	22	92	16.2	13.2	25
19	11.5	9.8	15	22	16.6	29	36	20	49	22	13.6	19.5
20	10.8	9.5	14	21	11.2	34	36	19.0	39	17.1	13.6	19.5
21	11.5	9.5	11	20	9.2	29	34	18.0	33	15.8	9.5	22
22	11.8	11.8	10	21	10.4	27	31	19.0	29	18.5	9.5	18.0
23	11.2	9.8	10	20	10.1	29	30	17.6	44	14.0	16.6	20
24	10.8	9.5	10	19.5	8.6	39	31	16.6	53	12.9	13.2	18.0
25	9.5	9.2	10	19.5	44	43	29	15.8	34	12.9	12.6	16.2
26	9.5	9.2	20	19.0	126	41	26	14.8	29	12.6	11.2	17.1
27	9.5	8.6	15	18.5	45	146	26	14.4	32	35	10.8	15.8
28	9.5	8.6	13	18.0	34	91	24	14.0	29	23	11.5	15.5
29	9.5	8.6	11	15.3		63	24	23	26	20	10.1	36
30	9.2	8.6	10	15.8		53	29	23	35	17.6	12.2	22
31	9.5		15	18.0		47		22		15.3	10.8	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				36		8.6		12.3		1.25		1.44
November				38		8.6		11.9		1.21		1.35
December				20		8.6		11.5		1.17		1.35
January				200		15.3		35.4		3.59		4.14
February				126		8.6		23.0		2.33		2.43
March				277		27		64.8		6.57		7.57
April				53		24		33.5		3.37		3.76
May				29		14.0		20.0		2.03		2.34
June				145		19.5		47.9		4.85		6.41
July				40		12.8		22.0		2.23		2.57
August				16.6		9.5		12.2		1.24		1.43
September				35		8.8		20.0		2.03		2.27
The year				277		6.8		26.2		2.65		36.06

Mills River near Mills River, N. C.

Location.- Water-stage recorder at ford $1\frac{1}{2}$ miles below junction of North and South Forks, 2 miles above village of Mills River, Henderson County, and $4\frac{1}{2}$ miles northwest of Horse Shoe. Prior to reestablishment, May 1934, staff gage 500 feet upstream was used. Zero of present gage is 2,088.42 feet and of former gage 2,090.39 feet above mean sea level.

Drainage area.- 67.5 square miles.

Records available.- September 1924 to September 1928; May to September 1934.

Extremes.- Maximum discharge during period, 854 second-feet June 10 (gage height, 3.57 feet); minimum, 64 second-feet Sept. 11, 12 (gage height, 1.78 feet).
1924-28, 1934: Maximum discharge recorded, 2,870 second-feet Jan. 18, 1928 (gage height, 4.65 feet, old site and datum); minimum, 20 second-feet Sept. 20, 21, Oct. 7, 1928.

Remarks.- Records good including those estimated for Aug. 21, 22, 29, Sept. 2-6, 9.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									120	175	153	85
2									120	240	152	72
3									147	174	132	70
4									164	160	127	70
5									234	142	116	70
6									221	130	109	66
7									205	125	114	156
8								112	186	127	116	95
9								107	376	137	105	76
10								105	576	171	99	69
11								114	351	177	99	65
12								103	266	155	101	65
13								101	228	152	93	72
14								99	196	132	91	131
15								155	174	130	91	229
16								152	160	130	89	208
17								166	183	162	91	189
18								134	400	142	112	134
19								120	262	150	101	114
20								114	211	147	89	101
21								107	186	125	78	134
22								127	169	132	78	118
23								120	172	116	114	105
24								118	235	109	107	105
25								109	172	105	93	87
26								101	152	119	89	103
27								99	147	123	93	108
28								97	152	176	93	123
29								144	137	166	80	285
30								142	134	172	105	169
31								132		142	89	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May 8-31				166	97	120	1.78		1.59			
June				576	120	214	3.17		3.54			
July				240	105	147	2.18		2.61			
August				155	78	103	1.55		1.76			
September				286	65	116	1.72		1.92			
The year												

Swannanoa River at Biltmore, N. C.

Location.- Water-stage recorder 100 feet below Biltmore Avenue concrete bridge, 200 feet above Southern Railway bridge at Biltmore, Buncombe County, 700 feet below Foster Mill Creek, and $1\frac{1}{2}$ miles above junction with French Broad River. Prior to reestablishment, May 1934, staff gage at Biltmore Avenue concrete bridge with same datum was used. Zero of gage is 1,976.77 feet above mean sea level.

Drainage area.- 128 square miles.

Records available.- December 1920 to September 1926; May to September 1934.

Extremes.- Maximum discharge during period, 950 second-feet June 18 (gage height, 3.60 feet); minimum, 29 second-feet Sept. 12 (gage height, 1.00 foot); minimum daily discharge, 33 second-feet Sept. 13.
1920-26, 1934: Maximum discharge recorded, 6,240 second-feet May 29, 1923 (gage height, 8.2 feet); minimum, 7.7 second-feet Aug. 31, 1925 (gage height, 0.82 foot); minimum daily discharge, 12 second-feet Aug. 31, 1925.

Remarks.- Records good. Regulation during low stages caused by hydroelectric plant 3 miles upstream.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									135	156	83	54
2									132	141	74	53
3									190	125	60	51
4									142	146	57	52
5									207	107	57	51
6									206	85	46	54
7									341	76	57	119
8								81	243	101	163	56
9								72	198	82	100	54
10								105	446	133	92	44
11								118	282	129	88	41
12								82	212	131	107	36
13								73	175	116	117	33
14								67	142	102	166	34
15								94	122	284	78	37
16								93	109	268	67	165
17								97	141	158	77	146
18								79	706	232	105	106
19								75	555	156	84	80
20								64	297	120	65	66
21												
22								54	222	100	58	58
23								60	180	120	55	57
24								73	155	85	61	56
25								67	144	69	63	60
26								61	117	76	62	54
27								62	108	55	62	53
28								54	89	71	61	53
29								50	86	55	66	66
30								87	109	70	56	97
31								195	115	109	60	120
								188		73	54	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October												
November												
December												
January												
February												
March												
April												
May 8-31						195	50	84.2	0.658	0.59		
June						706	86	210	1.64	1.83		
July						284	55	120	.938	1.08		
August						166	46	77.5	.605	.70		
September						165	33	66.9	.523	.58		
The year												

North Fork of Swannanoa River near Black Mountain, N. C.

Location.- Water-stage recorder a quarter of a mile below emergency pumping plant of Asheville Water Department, 3 miles below forks of river, and 3 miles northwest of Black Mountain, Buncombe County. Zero of gage is 2,427.73 feet above mean sea level.

Drainage area.- 23 square miles.

Records available.- January 1926 to September 1934.

Extremes.- Maximum discharge during year, 1,840 second-feet July 15 (gage height, 4.58 feet); minimum, 3.55 second-feet Oct. 13 (gage height, 1.13 feet).
1926-34: Maximum discharge (estimated), 5,050 second-feet Aug. 15, 1928 (gage height, 7.04 feet); minimum, 0.73 second-foot July 20, 21, 1926 (gage height, 0.88 foot).

Remarks.- Records good except those above 1,200 second-feet and those estimated Dec. 23-26, which are fair. The city of Asheville diverted an average of 3,480,000 gallons (5.4 second-feet) daily 3 miles above station for water supply. Emergency pumping plant not in operation during year.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	4.60	5.2	17	14.6	51	72	31	51	31	30	12.0
2	5.6	4.45	5.2	23	14.3	106	65	30	64	58	29	10.5
3	5.4	4.45	5.2	17.3	12.1	813	57	23	76	46	24	9.7
4	4.98	5.4	5.2	15.4	11.5	507	52	26	60	45	21	9.2
5	4.98	6.3	4.98	41	11.8	295	47	23	67	35	17.8	9.4
6	4.45	16.5	5.6	43	11.5	164	42	22	118	30	16.5	8.4
7	4.30	10.7	8.6	126	11.0	116	40	21	118	32	59	11.7
8	4.15	8.1	9.3	74	10.7	103	39	19.5	82	34	64	10.5
9	4.00	7.4	9.1	50.0	10.7	85	60	18.0	136	35	68	9.2
10	4.00	6.5	8.3	39.0	10.7	72	55	17.6	180	42	52	8.2
11	4.00	6.1	7.4	31.0	9.9	62	46	18.4	110	65	42	7.8
12	4.00	5.7	7.2	29	11.0	54	45	16.9	80	60	37	8.4
13	3.85	5.6	7.2	26	10.4	50	41	15.7	65	48	31	12.4
14	3.85	5.2	6.7	22	9.9	46	38	15.0	69	42	29	13.7
15	3.65	4.98	6.5	18.4	9.3	41	37	18.0	46	378	24	17.8
16	6.2	5.4	6.5	16.9	9.6	38	57	17.3	40	128	21	71
17	12.4	5.4	6.5	15.7	9.6	36	62	18.0	40	86	24	42
18	9.3	5.4	6.3	14.3	9.1	33	69	16.5	437	68	23	34
19	7.4	5.4	7.0	14.0	8.8	32	74	14.3	209	59	21	24
20	6.5	4.98	24	13.4	8.6	33	82	13.4	118	51	16.9	18.2
21	5.9	5.2	21	12.7	8.1	30	67	12.7	87	44	14.8	16.1
22	5.6	7.6	14.6	12.1	8.3	30	60	18.6	69	49	14.1	14.8
23	5.4	6.7	14	13.7	8.3	32	54	26	60	38	14.4	21
24	5.2	7.4	13	13.7	7.9	64	51	17.6	50	32	14.8	14.8
25	4.45	7.0	13	12.7	108	124	47	15.7	43	30	14.4	13.0
26	4.60	6.7	12	13.4	342	100	42	14.0	38	40	16.5	13.4
27	4.60	6.3	13	13.4	89	378	40	13.4	34	61	13.7	13.0
28	4.60	5.7	11.2	12.7	60	217	37	13.0	34	52	14.6	16.5
29	4.79	5.6	10.4	11.8		132	35	62	43	43	12.7	41
30	4.60	5.6	9.6	9.9		100	33	103	40	42	15.7	51
31	4.60		9.3	9.6		85		72		32	13.0	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	12.4			3.85			5.25			0.228		0.26
November	16.5			4.45			6.41			.279		.31
December	24			4.98			9.45			.411		.47
January	126			9.6			25.2			1.10		1.27
February	342			7.9			30.2			1.31		1.36
March	813			30			130			5.65		6.51
April	82			33			51.6			2.24		2.50
May	103			12.7			24.8			1.08		1.24
June	437			34			88.8			3.86		4.31
July	376			30			59.2			2.57		2.96
August	68			12.7			26.0			1.13		1.30
September	71			7.8			18.8			.817		.91
The year.	813			3.85			39.7			1.73		23.40

Beetree Creek near Swannanoa, N. C.

Location.- Water-stage recorder 200 feet above intake to Asheville water supply, 1,000 feet above Beetree Reservoir, and 4 miles north of Swannanoa, Buncombe County.

Drainage area.- 5.7 square miles.

Records available.- February 1926 to September 1954.

Extremes.- Maximum discharge during year, 204 second-feet Mar. 3 (gage height, 3.56 feet); minimum, 1.02 second-feet Oct. 13 (gage height, 0.45 foot).
1926-34: Maximum discharge, 1,060 second-feet Aug. 15, 1928 (gage height, 5.40 feet); minimum, 0.67 second-foot July 22, 1926 (gage height, 0.34 foot).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.41	1.16	1.37	2.80	3.65	10.2	16.7	8.1	5.0	5.6	3.10	2.35
2	1.56	1.16	1.37	2.90	3.05	14.9	14.3	7.4	5.3	7.2	3.10	2.25
3	1.37	1.26	1.45	2.55	2.85	106	12.8	7.0	5.6	8.2	2.80	2.10
4	1.34	1.53	1.53	2.45	2.95	70	11.6	6.6	4.75	9.0	2.70	2.00
5	1.30	2.40	1.45	3.05	3.00	47	10.5	6.3	4.70	8.3	2.60	2.00
6	1.23	2.15	1.76	3.60	2.80	29	9.9	6.0	5.7	5.9	2.45	1.95
7	1.19	1.60	2.70	8.0	2.55	22	9.6	5.6	7.8	6.2	4.90	2.70
8	1.16	1.45	1.85	6.5	2.60	19.2	9.3	5.3	8.2	6.7	4.10	2.35
9	1.12	1.45	1.64	5.0	2.45	16.2	16.4	5.0	13.4	6.4	3.60	2.00
10	1.12	1.30	1.53	4.50	2.15	13.9	13.9	4.95	22	7.4	3.85	1.90
11	1.12	1.30	1.53	4.15	2.35	11.8	12.4	5.1	16.0	9.9	3.50	1.90
12	1.12	1.30	1.49	4.20	2.95	10.5	11.8	4.60	12.6	8.1	3.90	2.00
13	1.08	1.34	1.56	4.15	2.50	9.7	11.1	4.35	10.1	7.0	3.50	3.70
14	1.05	1.26	1.53	3.80	2.35	8.8	10.4	4.20	8.3	5.9	3.40	3.10
15	1.08	1.16	1.53	3.40	2.60	8.1	10.1	5.3	7.2	6.2	3.05	3.50
16	1.45	1.16	1.53	3.35	2.55	7.4	12.2	4.85	6.0	4.95	3.00	5.20
17	3.50	1.16	1.49	3.10	2.40	7.0	13.4	4.95	6.3	4.35	3.35	3.45
18	1.56	1.26	1.49	2.95	2.30	6.5	14.7	4.40	30	4.20	3.20	2.50
19	1.37	1.26	1.72	3.00	2.30	6.4	17.8	3.95	30	4.20	3.50	1.95
20	1.34	1.23	2.50	3.00	2.05	7.0	20	3.75	19.4	4.00	3.00	1.80
21	1.30	1.45	1.95	2.85	2.25	6.5	17.8	3.60	14.3	3.60	2.75	1.70
22	1.34	2.85	1.76	2.85	2.30	6.3	16.0	3.85	11.3	4.00	2.70	1.65
23	1.37	1.80	1.68	3.00	2.15	6.7	14.5	3.75	9.4	3.30	2.70	1.91
24	1.37	1.56	1.64	2.90	1.90	14.8	13.4	3.35	8.2	3.10	2.55	1.65
25	1.26	1.53	1.60	2.85	10.6	26	12.0	3.20	7.1	3.20	2.60	1.52
26	1.26	1.49	1.90	2.85	48	22	10.9	3.10	6.4	3.85	2.60	1.52
27	1.26	1.41	1.80	2.75	18.0	59	10.1	3.10	5.2	4.00	2.40	1.90
28	1.26	1.37	1.56	2.60	13.8	51	9.3	3.05	5.1	3.40	2.45	2.00
29	1.26	1.37	1.60	2.30		31	8.4	6.5	9.6	3.40	2.40	4.75
30	1.23	1.37	1.60	2.10		24	8.8	7.1	7.2	3.60	2.40	5.60
31	1.23		1.64	2.20		19.4		5.8		3.00	2.40	
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	3.50					1.05	1.34	0.235		0.27		
November	2.85					1.16	1.47	.258		.29		
December	2.70					1.37	1.67	.253		.34		
January	8.0					2.10	3.41	.598		.69		
February	48					1.90	5.41	.949		.99		
March	106					6.3	22.5	3.95		4.55		
April	20					8.4	12.7	2.23		2.49		
May	8.1					3.05	4.97	.872		1.01		
June	30					4.70	10.4	1.82		2.03		
July	9.9					3.00	5.42	.951		1.10		
August	4.90					2.40	3.04	.533		.61		
September	5.6					1.52	2.50	.439		.49		
The year.	106					1.05	6.23	1.09		14.86		

Ivy River near Marshall, N. C.

Location.- Water-stage recorder 100 yards below county bridge, 2 miles above junction with French Broad River, and 4 miles southeast of Marshall, Madison County. Zero of gage is 1,700.65 feet above mean sea level.

Drainage area.- 158 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 2,330 second-feet July 15 (gage height, 7.34 feet); minimum, 25 second-feet Sept. 12 (gage height, 1.70 feet).

Remarks.- Records good. Discharge estimated May 30.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									84	63	79	34
2									83	84	73	32
3									103	100	61	31
4									52	87	55	30
5									103	73	49	34
6												
7									90	68	44	30
8									87	56	56	28
9									100	55	122	26
10								71	122	194	71	34
11								68	138	231	58	31
12												
13								75	93	166	171	28
14								67	76	104	182	26
15								62	70	92	83	41
16								59	59	128	67	49
17								63	55	885	61	42
18												
19								71	49	262	51	64
20								84	46	174	115	56
21								70	144	121	73	52
22								61	186	111	66	39
23								61	103	87	55	35
24												
25								52	79	73	47	34
26								95	67	82	45	33
27								87	118	64	43	31
28								62	117	56	45	32
29								56	57	66	50	32
30												
31								52	59	63	56	31
								50	47	317	45	33
								49	84	75	51	162
								66	119	119	41	190
								100	68	200	36	199
								106		112	36	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May 9-31				106	49	69.0	0.437		0.37			
June				186	46	88.6	.561		.63			
July				885	55	141	.892		1.03			
August				182	36	67.3	.426		.49			
September				199	26	52.9	.335		.37			
The year												

TENNESSEE RIVER BASIN

Big Laurel Creek near Stackhouse, N. C.

Location.- Water-stage recorder midway between Big Hurricane and Little Hurricane Creeks and 3 miles north of Stackhouse, Madison County. Zero of gage is 1,595.74 feet above mean sea level.

Drainage area.- 129 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 1,320 second-feet July 15 (gage height, 3.78 feet); minimum, 37 second-feet Sept. 12 (gage height, 1.40 feet).

Remarks.- Records excellent.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1									80	80	166	59		
2									93	89	148	54		
3									72	70	107	50		
4									156	76	91	50		
5									200	126	80	58		
6									187	74	72	49		
7									127	59	74	52		
8									159	102	76	76		
9									177	114	72	50		
10								100	193	219	64	44		
11								114	158	342	64	40		
12								93	135	467	89	43		
13								89	114	237	70	64		
14								84	93	219	121	77		
15								86	80	658	70	70		
16								100	70	402	64	76		
17								127	64	233	428	66		
18								100	156	167	214	64		
19								66	274	140	170	48		
20								89	167	132	127	42		
21								76	122	105	102	41		
22								130	95	174	91	42		
23								99	89	105	84	40		
24								76	112	89	93	41		
25								68	74	80	100	39		
26								64	62	84	124	73		
27								61	56	193	95	68		
28								59	77	122	84	115		
29								66	147	186	74	165		
30								105	146	211	66	280		
31								91		150	64			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October														
November														
December														
January														
February														
March														
April														
May 10-31					130		59		90.1		0.698		0.57	
June					274		56		124		.961		1.07	
July					658		58		178		1.36		1.59	
August					428		64		106		.837		.96	
September					280		39		67.6		.526		.59	
The year														

Pigeon River at Canton, N. C.

Location.- Water-stage recorder a third of a mile above State highway bridge at Canton, Haywood County.

Drainage area.- 134 square miles.

Records available.- May 1907 to June 1909, December 1928 to September 1934.

Extremes.- Maximum discharge during year, 4,860 second-feet Mar. 3 (gage height, 7.10 feet); minimum, 84 second-feet Jan. '30 (gage height, 0.68 foot).

1907-9, 1928-34: Maximum discharge, 7,340 second-feet Oct. 17, 1933; minimum, 39 second-feet Sept. 3, 1930.

Remarks.- Records good. Slight regulation from operation of gristmill at Woodrow.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	104	81	77	496	144	326	459	258	309	317	149	100		
2	283	80	77	309	139	468	420	237	321	457	188	92		
3	132	81	83	206	129	2,780	388	223	338	360	146	87		
4	113	113	120	182	132	2,100	365	213	360	293	154	83		
5	102	233	94	343	136	1,310	401	209	411	256	149	83		
6	96	200	94	289	126	595	425	213	435	237	129	80		
7	92	132	173	1,330	117	712	401	203	365	226	181	81		
8	89	111	120	630	115	530	392	206	450	247	197	100		
9	87	102	104	440	113	548	508	203	723	244	142	81		
10	87	96	94	351	98	498	411	191	995	321	129	75		
11	85	92	91	297	111	435	383	213	589	266	126	72		
12	83	92	89	285	134	401	360	182	474	258	152	70		
13	81	92	91	301	124	383	313	176	406	226	132	100		
14	80	91	89	273	109	360	237	171	356	216	120	140		
15	78	83	89	223	111	330	230	233	321	191	117	266		
16	83	76	89	200	111	317	262	251	297	194	113	273		
17	310	78	87	185	106	301	255	317	297	173	117	157		
18	134	65	85	176	102	285	266	233	900	171	144	132		
19	104	85	94	173	106	285	281	206	469	213	134	113		
20	94	81	162	168	94	343	266	188	365	176	113	104		
21	91	80	120	160	98	297	270	182	321	157	102	104		
22	96	129	102	160	104	297	277	191	299	258	98	102		
23	98	104	96	162	100	297	262	213	346	165	109	96		
24	98	89	94	149	87	478	266	179	969	149	154	96		
25	91	85	92	144	354	712	289	173	430	142	146	92		
26	85	85	120	149	1,750	553	251	165	365	227	144	91		
27	85	78	129	142	488	1,370	233	162	330	257	115	91		
28	87	77	104	134	365	928	223	160	309	266	111	94		
29	61	77	96	120		679	230	325	334	223	100	157		
30	61	77	94	89		573	285	449	305	182	109	154		
31	85		98	136		508		392		154	109			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					310		78		106		0.791		0.91	
November					233		77		98.9		.738		.82	
December					173		77		102		.761		.88	
January					1,330		89		271		2.02		2.33	
February					1,750		87		204		1.62		1.53	
March					2,780		285		658		4.91		5.66	
April					508		223		320		2.39		2.67	
May					449		160		223		1.66		1.91	
June					995		289		439		3.28		3.66	
July					457		142		233		1.74		2.01	
August					197		98		133		.993		1.14	
September					273		70		112		.856		.93	
The year					2,780		70		242		1.81		24.50	

Pigeon River near Hepco, N. C.

Location.- Water-stage recorder three-quarters of a mile below Jonathan Creek and 2½ miles above Hepco and mouth of Fines Creek, Haywood County.

Drainage area.- 342 square miles.

Records available.- July 1927 to September 1934.

Extremes.- Maximum discharge during year, 13,800 second-feet Mar. 5 (gage height, 9.88 feet); minimum, 160 second-feet Nov. 17 (gage height, 1.14 feet).
1927-34: Maximum discharge (estimated), 30,300 second-feet Aug. 16, 1928; minimum, 106 second-feet Sept. 3, 4, 1930.

Remarks.- Records good except those estimated for Oct. 26-28, Nov. 9-11, Dec. 28, 31, Feb. 17-24, Apr. 20, 22-24, which are fair. Some regulation from storage at Lake Junaluska and operation of mill at Canton.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	259	180	177	785	330	617	900	453	526	671	380	258
2	422	180	174	649	272	879	808	423	530	933	408	242
3	320	183	166	436	265	6,980	706	436	545	601	338	224
4	275	204	242	397	275	5,150	663	423	502	502	485	218
5	252	259	226	511	286	3,540	672	427	682	432	422	227
6	239	390	236	555	265	2,180	718	488	708	403	334	212
7	233	262	352	2,070	249	1,480	689	423	460	379	368	206
8	226	252	295	1,290	242	1,340	697	407	689	688	471	227
9	217	233	242	808	242	1,130	1,100	411	1,140	471	345	212
10	213	220	220	633	223	965	808	391	1,670	826	334	194
11	213	201	210	550	229	869	748	415	1,060	802	354	189
12	213	195	204	530	272	778	701	383	808	554	416	186
13	210	198	210	530	272	718	666	364	695	554	338	300
14	207	195	210	466	246	660	555	356	601	510	345	282
15	204	183	210	436	242	611	535	391	550	433	323	430
16	204	177	210	419	249	586	617	506	502	482	323	477
17	441	174	204	407	239	560	718	622	488	400	326	349
18	327	183	204	391	236	545	772	466	1,170	384	353	326
19	265	192	220	387	239	540	718	403	672	450	345	252
20	233	186	334	333	229	633	580	379	596	400	323	230
21	220	189	299	371	236	555	521	360	535	353	320	236
22	220	286	252	364	249	540	506	387	488	529	320	239
23	226	256	236	371	239	580	521	407	466	334	281	221
24	233	210	226	352	229	934	535	356	1,250	338	388	218
25	229	198	249	349	486	1,520	530	338	622	316	376	212
26	217	189	356	349	3,930	1,160	439	327	526	371	334	206
27	207	183	375	341	1,020	2,320	419	324	488	638	295	215
28	198	180	296	330	683	2,010	403	320	461	472	281	236
29	186	180	259	313		1,370	399	518	479	472	255	234
30	180	177	252	265		1,130	423	778	512	408	283	406
31	183		256	279		998		701		353	285	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					441	180	241	0.705	0.81			
November					390	174	210	.614	.68			
December					375	174	246	.719	.83			
January					2,070	265	526	1.54	1.78			
February					3,930	223	435	1.27	1.32			
March					6,980	540	1,420	4.15	4.78			
April					1,100	399	635	1.86	2.08			
May					778	320	432	1.26	1.45			
June					1,670	460	687	2.01	2.24			
July					933	316	500	1.46	1.68			
August					486	256	348	1.02	1.18			
September					477	186	257	.751	.84			
The year.					6,980	174	495	1.45	19.67			

Pigeon River at Hartford, Tenn.

Location.- Water-stage recorder 600 feet below highway bridge at Hartford, Cocke County. Zero of gage is 1,245.84 feet above mean sea level.

Drainage area.- 538 square miles.

Records available.- August 1925 to September 1934.

Extremes.- Maximum discharge during year, 11,500 second-feet Mar. 3 (gage height, 8.24 feet); minimum, 28 second-feet Dec. 17 (gage height, 0.80 foot).

1925-34: Maximum discharge, about 17,200 second-feet Aug. 16, 1928 (gage height, 10.2 feet); minimum, 11 second-feet Aug. 17, 18, 1930 (gage height, 0.62 foot).

Remarks.- Records good. Discharge estimated July 1-3. Considerable regulation caused by operation of hydroelectric plant 5 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	372	418	298	574	562	1,170	1,050	696	978	300	683	412
2	424	381	324	584	651	1,460	1,380	684	752	200	676	114
3	368	399	140	764	555	4,510	1,490	797	474	700	662	130
4	386	247	324	846	88	7,400	1,490	986	852	916	585	644
5	338	68	399	925	367	5,030	1,460	868	912	1,010	250	693
6	386	191	376	670	455	3,180	1,520	416	936	850	454	654
7	332	228	512	1,650	489	2,230	1,370	690	694	323	564	556
8	348	226	469	1,420	464	2,120	1,220	696	1,010	124	516	356
9	407	359	392	1,280	455	1,650	2,210	694	872	829	436	101
10	373	371	342	1,160	142	1,480	2,170	716	1,630	1,180	346	601
11	376	260	416	1,220	39	1,250	1,900	641	2,040	1,210	203	628
12	357	301	510	1,290	337	1,520	1,720	553	1,920	1,140	206	618
13	402	440	538	1,210	534	1,370	1,650	380	1,780	1,140	449	459
14	446	462	478	1,120	592	1,420	974	563	1,730	1,080	660	463
15	213	462	568	1,140	441	1,520	196	614	1,720	1,120	686	273
16	401	444	257	958	496	1,260	787	656	1,370	453	690	86
17	347	462	33	826	305	1,160	1,180	695	1,080	1,160	494	419
18	240	328	322	812	44	1,180	1,430	726	1,210	1,010	214	444
19	250	280	473	777	359	1,680	1,790	320	1,510	716	166	449
20	262	340	460	464	467	1,850	2,040	132	1,210	612	585	463
21	337	374	456	87	373	1,850	1,570	729	1,210	572	589	446
22	354	342	420	507	378	1,720	932	992	1,190	340	580	292
23	402	466	398	561	404	1,610	1,380	812	838	454	565	122
24	433	442	66	618	141	1,400	1,140	808	215	468	606	344
25	389	319	64	609	269	1,926	1,150	756	799	642	414	232
26	357	269	387	588	2,220	2,090	1,140	525	1,140	538	139	271
27	327	346	506	446	1,420	2,560	995	149	1,120	450	604	241
28	329	376	492	308	1,240	2,240	470	624	1,120	128	620	243
29	108	406	494	576		2,120	188	818	1,190	215	593	232
30	469	258	448	511		1,670	683	1,080	807	669	632	300
31	497		374	490		1,370		1,080		708	630	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	497	108	357	0.664	0.77
November	466	68	342	.636	.71
December	538	33	372	.691	.80
January	1,650	87	805	1.500	1.73
February	2,220	39	510	.948	.99
March	7,400	1,160	2,073	3.850	4.44
April	2,210	1,288	2,288	2.390	2.67
May	1,080	132	674	1.260	1.44
June	2,040	215	1,137	2.110	2.36
July	1,210	124	686	1.280	1.48
August	686	139	499	.928	1.07
September	693	86	376	.699	.78
The year	7,400	33	762	1.420	19.23

Jonathan Creek near Cove Creek, N. C.

Location.- Water-stage recorder 500 yards below ford, three-quarters of a mile above confluence with Pigeon River, and 2 miles below mouth of Cove Creek post office, Haywood County.

Drainage area.- 67 square miles.

Records available.- May 1930 to September 1934.

Extremes.- Maximum discharge during year, 1,600 second-feet Mar. 3 (gage height, 5.10 feet); minimum, 32 second-feet Sept. 11, 26 (gage height, 0.90 foot).
1930-34: Maximum discharge, 1,930 second-feet Dec. 28, 1932 (gage height, 5.64 feet); minimum, 22 second-feet Sept. 19, 1932 (gage height, 0.73 foot).

Remarks.- Records good except those estimated for Mar. 3-6, which are fair. Slight regulation from operation of gristmills above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	42	40	260	60	143	184	103	91	192	81	44
2	61	42	39	132	70	300	171	99	87	140	70	49
3	59	45	46	95	67	1,100	166	95	83	92	57	45
4	52	50	50	83	72	700	149	92	90	90	78	46
5	50	57	42	105	71	500	149	94	95	74	70	50
6	49	53	55	116	66	400	139	111	105	70	57	44
7	48	46	70	563	61	333	136	95	125	66	81	43
8	46	42	50	277	60	345	172	90	124	74	69	41
9	46	40	44	182	59	274	228	88	178	76	67	38
10	47	39	41	141	55	243	162	86	278	94	59	37
11	45	40	41	118	58	213	151	91	169	112	83	36
12	44	40	41	123	72	191	137	82	149	87	97	38
13	44	44	43	114	59	179	134	77	130	98	66	57
14	44	42	42	98	57	171	126	77	114	61	93	50
15	44	38	41	90	57	158	121	88	105	79	68	52
16	48	38	40	86	58	149	134	118	96	86	59	51
17	72	40	39	81	54	141	149	132	107	74	66	44
18	48	42	43	77	53	136	151	96	226	83	60	41
19	44	41	49	78	58	139	151	85	145	90	67	36
20	44	40	85	76	51	149	145	80	111	72	56	36
21	44	45	55	74	54	128	128	77	98	64	52	44
22	44	102	48	74	57	121	123	101	90	110	51	43
23	44	53	45	80	53	145	121	86	88	68	72	38
24	44	46	44	71	49	264	128	76	85	60	96	36
25	41	44	44	71	236	310	119	72	77	57	86	35
26	42	43	76	71	525	241	111	70	72	64	68	34
27	43	41	60	68	208	356	109	69	77	88	61	37
28	43	41	52	66	158	296	109	68	70	92	57	50
29	42	44	49	59		246	105	124	67	76	53	57
30	42	39	47	62		220	109	126	105	76	78	68
31	42		52	50		203		109		62	60	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						72	41	47.4	.707		.82	
November						102	38	45.2	.675		.75	
December						85	39	48.9	.728		.84	
January						563	50	117	1.75		2.02	
February						525	49	91.4	1.36		1.42	
March						1,100	121	274	4.09		4.72	
April						228	105	140	2.09		2.33	
May						132	68	92.2	1.38		1.59	
June						278	67	115	1.72		1.92	
July						192	57	85.1	1.27		1.46	
August						97	51	69.7	1.04		1.20	
September						88	34	44.7	.667		.74	
The year.						1,100	34	97.8	1.46		19.81	

Cataloochee Creek near Cataloochee, N. C.

Location.- Water-stage recorder at bridge on State Highway 284, 500 feet above Little Cataloochee Creek and 2 miles north of Cataloochee, Haywood County. Zero of gage is 2,457.05 feet above mean sea level.

Drainage area.- 50.4 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 629 second-feet June 10 (gage height, 3.86 feet); minimum, 25 second-feet Sept. 25, 26 (gage height, 1.91 feet).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									71	97	54	40
2									71	97	55	37
3									67	71	48	36
4									79	65	70	37
5									80	71	71	38
6									78	64	54	34
7									75	62	71	34
8									126	67	61	33
9									201	69	54	30
10									453	64	55	29
11									303	71	51	29
12								64	217	61	51	33
13								62	169	77	45	37
14								61	142	126	70	37
15								69	125	76	53	36
16												
17								93	110	71	45	37
18								98	108	62	59	34
19								71	153	62	57	33
20								64	118	87	50	29
21								61	95	59	45	28
22								76	82	90	43	34
23								64	78	56	64	30
24								59	76	51	61	29
25								56	71	50	56	27
26												
27								54	67	45	50	29
28								54	73	60	47	36
29								53	75	86	44	33
30								112	75	71	41	38
31								120	79	61	43	70
								78		54	43	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October					
November					
December					
January					
February					
March					
April					
May 12-31	120	53	71.0	1.41	1.05
June	453	67	120	2.38	2.66
July	126	45	68.9	1.37	1.68
August	71	41	53.3	1.06	1.22
September	70	27	34.7	.688	.77
The year					

Nolichucky River at Poplar, N. C.

Location.- Water-stage recorder at Poplar, Mitchell County, 4 miles below Cane River and 5 miles above State line. Prior to May 19, 1934, staff gage with same datum at same site was used.

Drainage area.- 609 square miles.

Records available.- July 1925 to September 1934.

Extremes.- Maximum discharge during year, 23,500 second-feet July 15 (gage height, 10.95 feet); minimum recorded, 170 second-feet Jan. 30 (gage height, 1.08 feet). 1925-34: Maximum discharge recorded, 34,600 second-feet Aug. 16, 1928 (gage height, 14.7 feet); minimum, 89 second-feet Sept. 7, 1925.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	313	333	339	402	510	963	1,320	796	828	554	711	402
2	326	313	333	963	475	1,660	1,200	742	873	940	742	387
3	410	308	359	574	426	7,660	1,080	742	796	764	621	372
4	395	387	326	466	475	6,620	1,020	691	774	660	592	366
5	353	441	359	466	466	4,540	963	691	895	583	621	379
6	302	640	387	691	426	3,280	963	691	940	483	483	366
7	286	554	395	906	387	2,010	963	640	936	426	1,020	359
8	286	418	395	1,260	402	1,720	906	612	936	794	1,420	428
9	280	379	379	850	395	1,450	3,080	554	918	1,070	850	366
10	274	359	353	691	475	1,260	3,080	556	1,300	1,210	764	313
11	269	339	313	592	402	1,140	2,010	554	975	1,480	660	313
12	280	339	291	536	366	963	1,650	554	774	1,220	582	291
13	269	313	434	602	387	906	1,610	519	711	940	554	320
14	274	302	426	527	353	906	1,320	457	592	701	986	379
15	286	353	366	475	353	850	1,200	519	554	10,100	772	501
16	475	313	296	441	372	742	1,140	621	519	3,060	612	2,060
17	742	353	296	418	372	691	1,580	640	527	1,480	1,260	1,300
18	640	366	302	402	333	691	1,720	621	3,350	1,300	975	906
19	475	359	410	410	308	630	1,650	545	2,340	1,340	829	671
20	269	326	434	359	379	850	1,720	501	1,220	1,070	660	545
21	353	320	564	395	434	850	1,720	457	906	850	545	501
22	410	359	395	366	353	742	1,450	453	732	1,130	601	527
23	339	353	359	410	418	796	1,200	722	671	828	462	483
24	395	366	333	410	519	963	1,140	602	650	681	574	501
25	353	379	346	457	621	2,340	1,140	475	592	612	640	466
26	326	346	410	426	6,090	2,170	1,080	441	527	612	612	434
27	326	296	510	410	2,520	3,140	906	402	441	774	527	441
28	308	302	418	379	1,260	5,210	850	402	564	952	519	449
29	326	291	372	326		2,890	850	574	1,090	1,090	427	722
30	326	302	359	176		2,170	742	1,220	701	1,370	441	975
31	313		353	302		1,790		1,130		884	357	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					742	269	354	0.581		0.67		
November					640	291	358	.588		.66		
December					564	291	375	.616		.71		
January					1,260	176	519	.652		.99		
February					6,090	308	723	1.19		1.24		
March					7,660	630	2,020	3.32		3.83		
April					3,080	742	1,370	2.25		2.61		
May					1,220	402	617	1.01		1.16		
June					3,350	441	925	1.52		1.70		
July					10,100	426	1,290	2.12		2.44		
August					1,420	387	690	1.13		1.30		
September					2,060	291	551	.905		1.01		
The year					10,100	176	817	1.34		18.21		

Nolichucky River at Embreeville, Tenn.

Location.- Water-stage recorder a quarter of a mile above county highway bridge at Embreeville, Washington County, and $3\frac{1}{4}$ miles northwest of Erwin. Zero of gage is 1,519.37 feet above mean sea level.

Drainage area.- 795 square miles.

Records available.- July 1920 to September 1934.

Average discharge.- 14 years, 1,326 second-feet.

Extremes.- Maximum discharge during year, 35,000 second-feet July 15 (gage height, 10.30 feet); minimum, 105 second-feet Jan. 31 (gage height, 0.67 foot).
1920-34: Maximum discharge, 35,300 second-feet Aug. 16, 1928 (gage height, 13.8 feet, old gage datum); minimum, 85 second-feet Sept. 8, 9, 1925 (gage height, 1.60 feet, old gage datum).

Remarks.- Records good between 200 and 10,000 second-feet; others fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	360	367	360	559	436	1,330	1,830	1,020	976	804	1,010	548
2	390	360	380	928	466	1,650	1,590	988	988	899	1,040	506
3	436	374	374	741	566	7,540	1,440	928	894	1,050	894	506
4	422	374	360	584	491	9,400	1,320	882	894	783	783	490
5	394	436	374	539	566	7,170	1,230	848	976	804	826	490
6	354	707	387	687	557	3,930	1,160	882	1,060	690	710	482
7	354	690	466	914	474	2,720	1,160	948	1,140	584	789	474
8	334	514	482	1,530	466	2,260	1,120	783	1,120	657	1,790	584
9	328	460	443	1,040	450	2,080	3,590	741	1,000	1,390	1,120	530
10	328	408	408	814	391	1,760	4,940	710	1,430	1,280	952	443
11	380	380	360	720	386	1,580	2,940	720	1,190	1,980	917	436
12	328	390	360	660	474	1,560	2,320	720	952	1,730	814	408
13	328	394	422	690	498	1,250	1,990	670	871	1,360	710	436
14	328	436	466	650	422	1,190	1,720	640	762	1,060	1,150	482
15	328	401	429	593	422	1,100	1,520	660	690	13,100	940	602
16	309	334	374	557	458	1,000	1,480	762	620	4,460	836	1,250
17	613	334	387	530	482	952	1,810	825	566	2,170	1,500	1,620
18	798	408	387	458	443	906	2,130	794	2,250	1,600	1,900	1,120
19	506	422	415	482	429	871	2,130	700	3,000	1,750	1,440	825
20	408	397	458	492	408	1,050	2,170	620	1,580	1,370	1,070	690
21	380	360	602	466	348	1,120	1,880	575	1,160	1,060	848	620
22	408	394	530	450	458	988	1,670	602	964	1,370	762	620
23	408	436	466	474	490	1,100	1,540	772	856	1,120	730	611
24	415	422	422	498	394	1,440	1,460	814	908	917	948	602
25	394	401	401	498	578	2,970	1,430	611	720	814	1,030	566
26	374	394	450	530	6,420	3,160	1,250	566	670	825	1,060	539
27	360	360	611	614	2,690	4,790	1,180	548	611	1,000	848	539
28	367	348	539	490	1,460	7,120	1,150	530	630	1,110	741	548
29	360	341	474	443		3,930	1,070	548	1,030	1,590	630	774
30	354	348	443	282		2,720	1,020	1,190	1,010	1,800	602	1,160
31	360		436	218		2,190		1,230		1,320	575	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					798	309	393	0.494		0.57		
November					707	334	412	.518		.59		
December					611	360	434	.546		.63		
January					1,530	218	614	.772		.89		
February					6,420	348	790	.994		1.04		
March					9,400	971	2,665	3.35		3.86		
April					4,940	1,020	1,775	2.23		2.49		
May					1,230	530	765	.962		1.11		
June					3,000	566	1,060	1.32		1.47		
July					13,100	584	1,691	2.13		2.46		
August					1,800	675	960	1.21		1.40		
September					1,620	408	661	.819		.91		
The year					13,100	216	1,019	1.28		17.41		

Nolichucky River near Morristown, Tenn.

Location.- Water-stage recorder at Jones Bridge, on main Morristown-Newport road, 3 miles below mouth of Bent Creek and 9 miles southeast of Morristown, Hamblen County. Zero of gage is 1,004.40 feet above mean sea level.

Drainage area.- 1,690 square miles.

Records available.- November 1920 to September 1934.

Average discharge.- 13 years (1921-34), 2,260 second-feet.

Extremes.- Maximum discharge during year, 22,800 second-feet July 16 (gage height, 16.14 feet); minimum, 74 second-feet Nov. 17, 18 (gage height, 1.23 feet).
1920-34: Maximum discharge, about 27,700 second-feet Feb. 24, 1927, Aug. 16, 1928; maximum gage height, 16.9 feet Aug. 16, 1928; minimum discharge, 22 second-feet Sept. 7, 28, 1925 (gage height, 1.00 foot).

Remarks.- Records good. Considerable regulation at low water caused by operation of power plant 22 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	397	90	970	304	2,140	3,070	1,640	1,520	958	1,960	1,140
2	546	144	91	1,260	251	4,120	2,770	1,590	1,810	1,160	1,590	1,010
3	244	113	800	1,160	513	8,210	2,430	1,530	1,270	1,170	1,460	810
4	243	182	724	1,160	782	16,800	2,200	1,450	1,330	1,200	1,160	1,140
5	250	794	1,070	1,210	580	12,000	2,050	1,400	1,330	1,100	1,060	1,260
6	228	672	1,010	1,220	952	8,210	1,900	1,300	1,410	1,180	1,260	1,110
7	268	972	340	2,020	926	4,570	1,780	1,470	1,390	1,060	1,550	1,070
8	206	1,010	158	1,500	660	3,640	1,780	1,380	1,880	870	1,080	1,020
9	230	1,030	116	1,310	640	3,690	4,890	1,240	1,510	642	1,750	860
10	176	1,020	566	1,220	566	3,120	9,030	1,210	1,570	1,750	1,560	798
11	240	972	699	1,120	438	2,510	6,390	1,180	2,000	1,650	1,320	1,120
12	235	862	1,130	1,130	202	2,330	4,150	1,090	1,710	2,480	1,250	1,280
13	510	752	1,210	1,070	630	2,010	3,350	1,050	1,390	2,470	1,700	1,120
14	1,030	998	1,220	864	628	1,860	2,880	1,140	1,160	1,880	4,700	358
15	898	292	1,260	746	676	1,730	2,520	1,200	1,090	3,980	3,370	157
16	796	122	1,170	1,150	624	1,610	2,450	1,160	1,000	14,200	2,260	108
17	1,170	84	992	1,440	599	1,460	2,650	1,120	892	4,630	3,280	166
18	906	82	717	1,230	414	1,400	3,060	1,130	921	3,030	2,970	1,150
19	1,140	544	274	372	182	1,550	3,460	1,150	2,780	2,220	3,080	1,420
20	1,140	698	144	444	667	2,280	3,520	1,010	2,960	2,150	2,370	1,160
21	562	1,030	125	178	642	2,080	3,210	1,080	1,880	1,840	1,780	1,040
22	174	772	100	164	642	1,770	2,760	1,200	1,490	2,420	1,490	970
23	98	724	93	168	769	3,620	2,620	1,010	1,240	2,410	1,350	813
24	126	668	90	302	931	5,550	2,360	1,010	1,180	1,850	1,410	676
25	150	624	586	258	1,270	7,280	2,180	1,080	1,270	1,610	1,770	1,060
26	143	816	973	284	3,630	6,830	2,080	962	1,190	1,430	2,280	1,170
27	113	650	1,120	290	7,430	5,830	1,920	825	1,090	1,620	2,350	1,080
28	236	288	1,110	262	3,810	8,050	1,730	862	1,020	1,660	1,710	1,010
29	853	130	1,070	186		8,050	1,720	1,100	1,040	2,960	1,470	1,090
30	764	100	1,080	238		5,020	1,730	1,060	1,030	3,250	1,310	1,350
31	1,040		980	334		3,680		1,060		2,900	1,200	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					1,170	98	509	0.301		0.36		
November					1,030	82	585	.346		.39		
December					1,260	90	681	.403		.46		
January					2,020	154	814	.482		.56		
February					7,430	182	1,084	.641		.67		
March					16,800	1,400	4,610	2.73		3.15		
April					9,030	1,720	2,951	1.75		1.95		
May					1,640	825	1,183	.700		.81		
June					2,960	882	1,445	.855		.95		
July					14,200	642	2,375	1.41		1.63		
August					4,700	1,060	1,890	1.12		1.29		
September					1,420	108	950	.562		.63		
The year.					16,800	82	1,595	.944		12.64		

TENNESSEE RIVER BASIN

South Toe River at Newdale, N. C.

Location.- Water-stage recorder at bridge on State Highway 69 at Newdale, Yancey County, $1\frac{1}{4}$ miles above mouth of Little Crabtree Creek and $6\frac{1}{4}$ miles east of Burnsville. Zero of gage is 2,443.60 feet above mean sea level.

Drainage area.- 58.6 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 3,040 second-feet June 18 (gage height, 4.74 feet); minimum, 19 second-feet Sept. 6 (gage height, 1.02 feet).

Remarks.- Records good except those estimated for June 10-26, which are fair.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									177	157	153	64
2									180	314	125	58
3									211	163	109	54
4									195	227	111	51
5									231	144	98	53
6									211	125	86	53
7									199	114	109	45
8									185	137	141	96
9									296	157	174	56
10								86	381	207	123	47
11								93	283	343	109	44
12								79	219	248	96	40
13								77	181	181	111	66
14								75	147	150	103	148
15								86	131	594	93	208
16								93	117	307	86	756
17								125	103	207	114	307
18								101	790	188	111	219
19								84	486	192	123	163
20								77	283	153	93	157
21								64	219	155	79	123
22								79	181	247	75	109
23								125	183	144	98	106
24								81	163	114	86	98
25								73	147	111	75	89
26								64	147	109	84	86
27								62	144	114	73	86
28								60	181	132	79	93
29								211	248	222	66	141
30								341	147	185	64	137
31								293		131	73	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October												
November												
December												
January												
February												
March												
April												
May 10-31						341	60	110	1.88		1.54	
June						790	144	224	3.82		4.26	
July						594	109	193	3.29		3.79	
August						174	64	101	1.72		1.98	
September						756	40	125	2.13		2.38	
The year												

Cane River near Sioux, N. C.

Location.- Water-stage recorder, 1.4 miles above mouth of Cane River and about 1½ miles east of Sioux, Yancey County. Zero of gage is 2,045.21 feet above mean sea level.

Drainage area.- 157 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period (estimated), 9,010 second-feet July 15 (gage height, 12.10 feet); minimum, 87 second-feet Sept. 7, 10, 12 (gage height, 1.58 feet).

Remarks.- Records excellent except those above 1,200 second-feet, which are good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1									246	175	170	101		
2									225	284	205	101		
3									255	211	162	109		
4									228	160	144	106		
5									228	160	132	99		
6									231	148	126	110		
7									208	126	280	88		
8									192	226	359	124		
9									137	286	208	80		
10									234	339	200	81		
11									198	472	170	93		
12									175	369	139	80		
13									162	270	148	96		
14									146	214	279	101		
15									132	3,360	221	114		
16									99	891	160	234		
17									110	434	438	208		
18									524	448	286	160		
19									472	410	246	126		
20									264	296	170	110		
21									205	264	155	112		
22									175	312	146	116		
23									160	225	146	101		
24									160	195	175	93		
25									141	178	175	96		
26								107	132	180	128	96		
27								104	126	217	101	98		
28								106	161	274	126	109		
29								209	287	315	114	192		
30								430	208	286	124	240		
31								362		205	94			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October														
November														
December														
January														
February														
March														
April														
May 26-31					430		104		220		1.40		0.31	
June					524		99		207		1.32		1.47	
July					3,560		126		386		2.46		2.84	
August					438		94		186		1.18		1.36	
September					240		80		119		.768		.85	
The year														

Little Pigeon River at Sevierville, Tenn.

Location.- Water-stage recorder at Eckel's farmhouse, half a mile below Sevierville, Sevier County, and confluence of East and West Forks. Zero of gage is 882.26 feet above mean sea level.

Drainage area.- 346 square miles.

Records available.- November 1920 to September 1934.

Average discharge.- 13 years (1921-34), 589 second-feet.

Extremes.- Maximum discharge during year, about 16,000 second-feet Mar. 3 (gage height, 10.5 feet); minimum, 16 second-feet Oct. 18 (gage height, 0.62 foot).
1920-34: Maximum discharge, about 28,300 second-feet June 29, 1928 (gage height, 15.4 feet); minimum, 5 second-feet Oct. 12, Nov. 3, 1923.

Remarks.- Records fair. Discharge estimated July 19-22. Low-water flow is regulated by power plants on both forks of river.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108	72	72	753	138	557	898	342	466	428	225	154
2	182	67	72	604	128	2,770	583	320	418	300	201	144
3	160	70	60	350	131	9,720	505	305	691	246	186	131
4	122	72	83	283	131	5,290	446	290	670	237	161	138
5	105	70	83	326	131	2,460	410	285	754	233	154	179
6	74	86	128	326	125	1,350	428	440	656	358	151	141
7	89	80	287	2,320	113	930	374	356	635	258	320	128
8	83	74	167	1,160	110	970	422	295	749	505	368	128
9	88	87	111	616	110	908	1,640	287	609	609	225	110
10	80	67	83	428	101	747	1,480	246	994	364	186	107
11	80	77	74	320	95	616	994	392	1,060	672	161	95
12	74	57	70	280	113	512	782	310	670	512	237	101
13	83	77	77	280	131	428	642	267	518	310	197	101
14	70	67	80	246	113	386	550	246	410	524	315	95
15	72	99	77	221	107	352	486	258	342	410	290	98
16	72	60	77	197	107	315	460	446	300	392	374	118
17	118	72	80	175	113	290	590	677	267	280	531	135
18	111	92	118	164	95	280	705	460	862	229	538	122
19	83	62	132	157	113	300	1,540	358	1,120	215	342	107
20	83	72	193	171	125	1,000	2,540	805	550	205	275	95
21	67	67	197	171	107	858	1,350	315	392	190	225	84
22	72	153	142	161	113	712	938	712	315	180	201	90
23	77	122	118	184	122	1,010	754	740	271	168	213	98
24	72	80	108	168	119	2,960	635	479	472	182	320	110
25	77	72	89	187	816	4,760	564	364	336	161	518	90
26	57	67	167	161	6,290	2,160	479	310	271	157	434	113
27	67	70	287	161	1,440	2,660	446	271	229	275	285	131
28	70	64	182	147	768	2,360	428	254	221	486	241	147
29	67	72	149	131		1,530	392	352	254	590	186	179
30	74	43	132	113		1,090	369	1,090	531	428	175	691
31	67		149	90		842		596		275	164	
Month				Maximum		Minimum		Mean		For square mile	Run-off in inches	
October				182		57		97.2		0.252	0.29	
November				153		43		75.3		.218	.24	
December				287		60		123		.355	.41	
January				2,320		90		355		1.03	1.19	
February				6,290		95		432		1.25	1.30	
March				9,720		280		1,649		4.77	5.60	
April				2,540		369		754		2.18	2.43	
May				1,090		246		306		1.15	1.33	
June				1,120		221		534		1.54	1.72	
July				672		157		335		.968	1.12	
August				538		151		272		.786	.91	
September				691		84		139		.402	.45	
The year				9,720		43		430		1.24	16.89	

South Fork of Holston River at Vestal, Va.

Location.- Water-stage recorder at highway bridge at Vestal, Washington County, three-quarters of a mile below Laurel Creek and $4\frac{1}{2}$ miles above Middle Fork of Holston River.

Drainage area.- 320 square miles.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 3,040 second-feet Mar. 5 (gage height, 7.65 feet); minimum, 33 second-feet Feb. 10 (gage height, 2.29 feet); minimum daily discharge, 80 second-feet Oct. 22.
1931-34: Maximum discharge, 5,900 second-feet Feb. 3, 1932 (gage height, 10.58 feet); minimum, that of Feb. 10, 1934; minimum daily discharge, 64 second-feet Sept. 18, 1932.

Remarks.- Records excellent. Flow regulated by power plant above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	85	86	218	120	404	665	345	145	212	157	241
2	114	84	82	264	124	1,070	564	324	154	200	173	212
3	98	90	86	208	120	2,930	468	309	143	180	304	198
4	88	104	102	186	112	2,540	417	295	147	144	1,060	194
5	90	100	102	170	122	2,680	410	274	168	127	660	242
6	84	112	94	159	123	1,650	363	263	158	120	390	186
7	86	110	116	172	102	1,130	345	258	162	112	563	175
8	82	102	104	204	116	1,600	336	238	144	110	612	186
9	84	96	94	186	108	1,780	1,260	224	147	192	363	170
10	86	88	88	174	86	1,270	1,840	222	186	372	283	154
11	84	88	86	153	104	929	1,200	252	183	567	283	145
12	86	82	90	152	112	674	864	216	156	364	234	136
13	84	98	100	166	103	559	700	208	234	370	223	140
14	86	116	108	154	98	496	569	196	160	355	220	178
15	84	94	110	140	116	438	480	198	138	252	203	176
16	98	82	102	136	136	396	473	206	126	196	293	504
17	104	81	96	130	118	356	620	248	124	214	593	330
18	104	90	140	117	109	330	1,010	209	152	226	1,040	490
19	88	82	165	136	122	327	1,060	200	427	160	683	366
20	84	90	218	124	105	412	1,220	196	258	156	433	288
21	83	82	172	120	104	391	1,080	204	193	144	328	243
22	80	100	140	119	120	404	840	186	161	152	283	216
23	86	102	124	138	130	694	688	184	150	126	333	234
24	106	92	114	138	101	1,280	809	172	162	116	543	226
25	94	86	104	127	149	2,140	953	166	140	109	364	194
26	87	84	184	123	1,420	1,740	685	160	124	198	623	182
27	88	84	233	122	846	1,660	574	153	116	322	737	192
28	86	88	180	120	492	2,360	491	154	115	352	512	208
29	82	86	147	114		1,570	415	156	144	291	383	288
30	86	81	136	128		1,060	374	174	236	209	314	524
31	88		132	108		837		166		169	263	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	114	80	88.8	0.278	0.32
November	118	81	92.0	.288	.32
December	233	82	124	.388	.45
January	264	108	162	.475	.55
February	1,420	86	201	.628	.65
March	2,930	327	1,182	3.63	4.18
April	1,840	336	726	2.27	2.63
May	345	153	218	.681	.79
June	427	115	169	.628	.59
July	567	109	220	.688	.79
August	1,060	157	436	1.36	1.57
September	530	136	247	.772	.86
The year.	2,930	80	321	1.00	13.60

South Fork of Holston River at Bluff City, Tenn.

Location.— Water-stage recorder at highway bridge at Bluff City, Sullivan County, 250 feet below Virginia & Southwestern Railroad bridge and 1 mile below mouth of Indian Creek. Zero of gage is 1,368.09 feet above mean sea level.

Drainage area.— 828 square miles.

Records available.— July 1900 to September 1934.

Average discharge.— 34 years, 1,226 second-feet.

Extremes.— Maximum discharge during year, 10,600 second-feet Aug. 4 (gage height, 8.54 feet); minimum, 67 second-feet Jan. 31 (gage height, 0.23 foot).
1900-34: Maximum stage, 15.0 feet May 22, 1901 (discharge not determined); minimum discharge, that of Jan. 31, 1934.

Remarks.— Records good except those for estimated period Mar. 10-17, which are fair. Operation of small mills upstream causes some diurnal fluctuation.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	184	177	331	306	939	1,590	858	373	616	508	716
2	194	178	170	576	257	1,590	1,470	804	352	411	446	644
3	194	176	178	496	255	6,910	1,420	752	365	435	602	576
4	189	172	202	435	240	7,010	1,130	708	360	356	4,900	550
5	188	196	190	378	222	6,770	1,040	686	356	294	2,060	576
6	167	190	206	355	244	4,190	980	637	360	268	1,170	556
7	185	212	226	401	232	2,660	915	616	365	260	939	502
8	170	202	236	569	214	3,930	910	602	392	258	1,350	556
9	161	180	226	490	217	5,080	3,310	569	343	271	944	479
10	150	186	210	435	201	2,850	4,650	556	348	360	737	441
11	156	184	193	378	197	2,150	3,070	589	382	672	679	416
12	166	174	182	343	216	1,730	2,200	576	420	991	623	401
13	161	191	213	373	227	1,490	1,730	537	416	737	531	378
14	175	206	224	369	197	1,270	1,420	490	435	708	651	369
15	192	224	222	351	200	1,130	1,220	462	356	993	569	406
16	188	182	220	351	226	1,020	1,170	387	310	569	686	514
17	210	159	219	327	242	920	1,330	369	287	596	1,590	1,140
18	227	159	268	298	244	850	2,160	569	514	569	2,390	970
19	222	198	318	279	238	812	2,310	496	576	406	1,860	774
20	207	166	441	318	226	980	2,750	466	496	352	1,200	616
21	207	159	406	298	217	1,100	2,510	452	441	360	897	525
22	206	192	343	258	259	1,040	2,020	484	378	576	760	473
23	215	198	275	275	271	2,150	1,670	462	351	360	665	468
24	213	192	279	298	271	3,720	1,490	441	310	351	2,060	462
25	238	202	260	283	275	5,140	2,160	396	314	287	2,750	430
26	238	200	323	264	3,150	4,490	1,520	365	279	298	2,670	411
27	208	163	490	279	2,510	3,640	1,290	365	268	983	2,420	396
28	206	166	406	263	1,260	5,420	1,150	356	247	905	1,610	446
29	190	190	318	264		3,790	1,010	348	246	1,110	1,170	616
30	180	184	263	214		2,660	897	378	323	782	956	967
31	172		268	112		2,040		392		537	812	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					238	160	192	0.232		0.27		
November					224	163	185	.223		.25		
December					490	170	263	.318		.37		
January					576	112	343	.414		.48		
February					3,150	197	468	.553		.58		
March					7,010	812	2,997	3.49		4.02		
April					4,650	897	1,750	2.11		2.35		
May					858	348	522	.630		.73		
June					576	246	358	.432		.48		
July					1,110	258	537	.649		.75		
August					4,900	446	1,329	1.60		1.84		
September					1,140	369	559	.675		.75		
The year					7,010	112	785	.948		12.86		

South Fork of Holston River at Kingsport, Tenn.

Location.- Water-stage recorder half a mile downstream from Carolina, Clinchfield & Ohio Railway bridge and 1 mile upstream from Eastman Kodak plant at Kingsport, Sullivan County. Zero of gage is 1,188.79 feet above mean sea level.

Drainage area.- 1,960 square miles.

Records available.- September 1925 to September 1934.

Extremes.- Maximum discharge during year, 17,900 second-feet Apr. 10 (gage height, 8.08 feet); minimum, 323 second-feet Feb. 1 (gage height, 0.06 foot).
1925-34: Maximum discharge, about 43,200 second-feet Feb. 24, 1927 (gage height, 13.9 feet); minimum, that of Feb. 1, 1934.

Remarks.- Records good except those estimated, Nov. 8-12, June 7, 8, 20, 21, 25-27, 30, July 1-20, 28-31, Aug. 1-8, 17. Slight regulation during low water caused by operation of power plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	530	499	415	765	468	2,290	4,000	1,950	1,090	1,190	1,530	1,500
2	520	499	458	1,130	646	2,540	3,470	1,870	1,100	1,220	1,540	1,360
3	570	497	500	1,220	590	10,600	3,040	1,780	1,060	1,110	1,530	1,220
4	570	496	530	975	623	15,000	2,700	1,670	962	1,000	8,400	1,180
5	550	580	520	894	612	13,600	2,460	1,620	1,040	930	4,900	1,180
6	520	623	550	828	623	9,470	2,390	1,540	1,070	920	3,150	1,190
7	520	668	623	1,000	668	5,770	2,210	1,500	1,270	910	2,600	1,090
8	500	610	612	1,420	612	5,170	2,130	1,470	1,700	1,100	3,000	1,180
9	466	540	590	1,300	570	8,110	6,070	1,360	1,500	1,480	2,770	1,070
10	463	490	483	1,070	560	5,770	14,300	1,310	1,200	1,600	2,130	948
11	474	490	510	962	492	4,450	7,890	1,330	1,250	2,400	1,890	894
12	492	490	492	880	500	3,560	5,570	1,340	1,280	2,950	1,750	867
13	500	550	530	890	612	2,960	4,540	1,280	1,140	3,020	1,650	854
14	458	646	590	867	550	2,700	3,910	1,200	1,190	2,950	2,050	815
15	510	602	634	790	530	2,460	3,470	1,220	1,040	6,200	1,770	939
16	432	588	560	765	540	2,210	3,220	1,260	908	3,600	1,760	1,090
17	540	556	560	828	590	2,050	3,300	1,340	894	2,540	2,420	2,090
18	772	526	612	704	590	1,890	4,810	1,360	854	2,040	3,660	1,990
19	740	483	692	650	580	1,850	4,990	1,260	1,580	1,750	3,650	1,670
20	560	570	752	681	570	2,050	4,990	1,140	1,800	1,540	2,620	1,260
21	550	570	872	737	590	2,460	4,630	1,100	1,300	1,400	1,990	1,100
22	588	600	610	606	530	2,290	4,000	1,070	1,120	2,210	1,640	1,020
23	449	600	668	645	590	3,320	3,470	1,780	1,040	1,580	1,470	1,000
24	522	590	550	655	590	7,450	3,040	1,360	1,030	1,300	1,850	908
25	558	580	590	692	684	10,600	3,470	1,140	1,020	1,220	3,450	908
26	570	530	680	641	5,520	10,000	3,040	1,020	940	1,190	5,460	867
27	530	530	975	662	6,020	7,450	2,540	975	970	2,210	4,000	894
28	510	510	1,040	823	3,150	12,800	2,460	934	989	2,540	3,040	1,000
29	540	507	854	612		9,590	2,210	934	948	2,550	2,360	1,310
30	466	552	752	570		6,370	2,050	1,030	940	2,150	1,850	1,650
31	500		680	449		4,810		1,180		1,790	1,670	
Month	Maximum					Minimum			Mean		Per square mile	Run-off in inches
October	772					432			532		0.271	0.31
November	668					483			551		.281	.31
December	1,040					415			635		.324	.37
January	1,420					449			823		.420	.48
February	6,020					463			1,042		.532	.55
March	15,000					1,850			5,869		2.99	3.45
April	14,300					2,050			4,012		2.05	2.69
May	1,950					934			1,333		.680	.78
June	1,800					854			1,141		.582	.65
July	6,200					910			1,955		.997	1.15
August	8,400					1,470			2,702		1.38	1.59
September	2,090					815			1,168		.596	.66
The year	15,000					415			1,820		.929	12.59

Holston River near Rogersville, Tenn.

Location.- Water-stage recorder at highway bridge 1,600 feet downstream from Austin mill and dam and 3 miles south of Rogersville, Hawkins County. Zero of gage is 1,057.04 feet above mean sea level.

Drainage area.- 3,060 square miles.

Records available.- March 1902 to September 1934.

Average discharge.- 32 years, 4,176 second-feet.

Extremes.- Maximum discharge during year, 38,700 second-feet Mar. 4 (gage height, 12.2 feet); minimum, 467 second-feet Oct. 24 (gage height, -0.17 foot).
1902-34: Maximum discharge, about 70,900 second-feet Jan. 29, 1918 (gage height, 20.0 feet, old gage); minimum, 436 second-feet Sept. 9, 1925.
Maximum stage known, 38.4 feet at U. S. Weather Bureau gage at railroad bridge half a mile downstream Mar. 10, 1867.

Remarks.- Records excellent except those for Dec. 27-29, Jan. 29-31, Feb. 13-24, 27, which are good. Some diurnal fluctuation during low water caused by operation of power plants upstream.

Discharge, in second-feet, 1935-54

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	660	670	740	1,560	660	4,440	7,110	2,850	1,440	1,260	2,360	2,220
2	700	690	630	1,740	690	5,350	5,960	2,670	1,370	1,760	2,130	1,970
3	650	690	660	2,090	875	15,800	5,120	2,580	1,360	1,650	1,660	1,800
4	800	720	730	1,770	831	27,400	4,440	2,420	1,340	1,530	2,430	1,680
5	750	740	730	1,600	553	24,600	4,120	2,330	1,280	1,260	9,440	1,620
6	700	810	780	1,460	842	16,300	3,600	2,250	1,390	1,200	4,700	1,530
7	660	842	2,850	551	11,500	3,500	2,170	1,360	1,100	3,020	1,620	
8	650	853	875	3,300	864	9,270	3,500	2,090	1,580	1,060	3,740	1,550
9	650	810	653	3,030	820	14,700	5,240	1,980	1,970	995	4,250	1,560
10	620	780	842	2,330	740	12,600	19,900	1,890	1,760	1,650	3,020	1,380
11	650	710	720	1,890	740	8,740	14,400	1,890	1,600	1,700	2,470	1,250
12	620	680	730	1,640	700	6,590	9,670	1,920	1,600	2,630	2,130	1,200
13	660	710	750	1,530	720	5,360	7,640	1,890	1,590	3,610	2,470	1,160
14	620	690	760	1,470	770	4,550	6,340	1,740	1,490	3,720	3,920	1,150
15	611	770	800	1,420	600	4,120	5,480	1,680	2,030	5,470	2,920	1,110
16	650	720	842	1,300	730	3,600	4,890	1,740	1,510	7,950	2,470	1,200
17	640	720	800	1,220	740	3,300	4,890	1,780	1,260	3,510	3,150	1,820
18	690	670	864	1,200	820	3,030	5,840	1,800	1,250	3,980	6,290	2,560
19	930	640	908	1,090	831	3,030	8,740	1,800	1,240	2,650	5,900	2,560
20	875	640	1,030	1,030	842	4,550	9,020	1,660	2,100	2,130	4,700	1,970
21	700	700	1,150	1,000	800	5,000	8,460	1,530	2,130	1,780	3,310	1,600
22	710	750	1,300	1,070	770	5,120	7,110	1,480	1,740	2,320	2,560	1,440
23	740	770	1,170	954	710	8,150	5,960	1,690	1,410	2,560	2,470	1,540
24	630	780	1,070	954	810	16,600	5,120	2,020	1,290	1,740	2,220	1,290
25	650	770	886	966	1,440	19,000	4,780	1,620	1,200	1,480	5,220	1,200
26	670	780	1,200	1,040	8,160	19,000	4,780	1,440	1,250	1,490	7,690	1,200
27	700	720	1,430	966	13,200	15,000	4,010	1,330	1,040	1,870	6,910	1,180
28	670	710	1,620	966	6,850	17,300	3,600	1,260	1,030	3,210	5,410	1,210
29	640	720	1,470	920		16,300	3,500	1,260	1,200	4,930	3,920	1,410
30	670	690	1,270	890		12,200	3,030	1,280	1,280	4,140	3,120	1,910
31	660		1,150	830		9,020		1,360		3,020	2,560	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					930	611	684	0.224		0.26		
November					853	640	732	.239		.27		
December					1,820	630	961	.314		.36		
January					3,300	830	1,486	.486		.56		
February					13,200	660	1,730	.565		.59		
March					27,400	3,030	10,940	3.54		4.08		
April					19,900	3,030	6,332	2.07		2.31		
May					2,650	1,250	1,852	.605		.70		
June					2,130	1,030	1,468	.480		.54		
July					7,950	995	2,566	.639		.97		
August					9,440	1,860	3,631	1.25		1.44		
September					2,560	1,110	1,545	.505		.56		
The year					27,400	611	2,848	.931		12.64		

Holston River at Strawberry Plains, Tenn.

Location.- Water-stage recorder just below county highway bridge, 1 mile below Southern Railway bridge at Strawberry Plains, Jefferson County, and 17 miles above mouth of river. Zero of gage is 838.38 feet above mean sea level.

Drainage area.- 3,650 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 32,700 second-feet Mar. 5 (gage height, 10.83 feet); minimum, 712 second-feet Oct. 27 (gage height, 0.88 foot).
1930-34: Maximum discharge, 56,300 second-feet Feb. 5, 1932 (gage height, 16.6 feet); minimum, that of Oct. 27, 1933.

Remarks.- Records good except those estimated Oct. 11-22, 27, Nov. 1, July 8-13, Sept. 10, 12, 13, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	830	820	874	1,650	1,140	7,030	9,770	3,550	1,590	1,520	3,230	2,820
2	830	800	841	2,000	1,060	6,430	7,960	3,340	1,770	1,500	2,630	2,450
3	780	790	929	2,100	952	12,700	6,730	3,120	1,680	1,800	2,270	2,200
4	820	830	841	2,360	1,000	23,800	5,990	2,920	1,620	1,900	2,250	2,050
5	790	863	852	2,250	1,150	31,100	5,280	2,820	1,740	1,740	3,190	1,910
6	907	874	976	2,070	1,120	25,300	4,880	2,820	1,680	1,700	8,180	1,800
7	863	885	1,020	3,180	1,110	17,900	4,500	2,630	2,050	1,470	4,750	1,740
8	830	952	1,020	5,280	1,100	11,800	4,370	2,540	1,850	1,370	3,230	1,910
9	780	940	1,010	4,250	1,110	11,800	4,500	2,450	1,790	1,300	3,550	1,980
10	750	988	1,020	3,660	1,110	16,100	9,000	2,360	2,270	1,200	4,130	1,740
11	750	929	1,020	2,920	1,050	12,900	21,200	2,360	2,360	1,800	3,120	1,660
12	780	918	1,010	2,450	1,000	9,100	14,000	2,220	2,020	2,100	2,630	1,580
13	740	830	918	2,180	988	7,180	10,100	2,180	2,080	3,200	2,450	1,440
14	760	841	952	1,980	896	5,840	8,120	2,200	1,900	3,890	4,600	1,390
15	730	820	929	1,880	940	5,150	6,880	2,170	1,770	3,780	4,250	1,300
16	740	820	929	1,820	988	4,620	5,990	2,170	2,220	6,580	3,340	1,260
17	740	885	988	1,700	976	4,010	5,560	2,200	1,870	7,300	3,020	1,330
18	760	863	1,010	1,580	940	3,660	5,560	2,180	1,680	3,840	3,880	1,460
19	900	841	988	1,580	988	3,550	7,030	2,220	1,660	4,030	6,580	2,410
20	1,100	790	1,070	1,430	1,020	4,010	9,430	2,200	1,530	2,920	5,990	2,540
21	1,000	800	1,140	1,330	1,010	5,840	9,430	2,080	2,060	2,450	4,750	2,200
22	880	874	1,260	1,300	1,000	5,840	8,770	2,000	2,450	2,100	3,440	1,800
23	852	918	1,430	1,340	988	6,280	7,540	1,870	2,050	2,270	2,820	1,620
24	841	929	1,430	1,300	976	15,100	6,280	1,850	2,080	2,820	3,190	1,500
25	863	940	1,270	1,220	1,250	21,500	5,560	2,360	1,740	2,050	3,020	1,470
26	810	940	1,430	1,230	4,870	22,300	5,280	2,070	1,500	1,740	6,280	1,360
27	750	929	1,760	1,260	12,200	20,500	5,020	1,790	1,470	1,650	8,120	1,360
28	830	929	1,720	1,250	12,200	17,900	4,500	1,660	1,370	1,770	6,580	1,360
29	780	896	2,030	1,190		21,200	4,130	1,600	1,250	3,180	5,420	1,440
30	830	874	1,910	1,190		18,300	3,890	1,590	1,390	4,920	4,130	1,900
31	800		1,620	1,150		12,600		1,580		4,130	3,340	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,100	730	820	0.225	0.26
November	988	790	877	.240	.27
December	2,030	841	1,170	.321	.37
January	5,280	1,150	2,000	.549	.63
February	12,200	896	1,970	.559	.66
March	31,100	3,550	12,600	3.46	3.99
April	21,200	3,890	7,240	1.98	2.21
May	3,550	1,580	2,290	.627	.72
June	2,450	1,250	1,820	.498	.56
July	7,300	1,200	2,710	.743	.86
August	8,180	2,250	4,140	1.13	1.30
September	2,820	1,260	1,770	.484	.54
The year.	31,100	730	3,300	.904	12.27

Middle Fork of Holston River near Meadowview, Va.

Location.- Water-stage recorder at highway bridge half a mile above Cedar Creek and 4 miles southeast of Meadowview, Washington County.

Drainage area.- 207 square miles.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 2,550 second-feet Aug. 24 (gage height, 6.55 feet); minimum, 6 second-feet Nov. 10 (gage height, 1.43 feet); minimum daily discharge, 35 second-feet Oct. 8.
1931-34: Maximum discharge, 3,870 second-feet Feb. 3, 1932 (gage height, 8.40 feet); minimum, that of Nov. 10, 1933; minimum daily discharge, 23 second-feet July 16, 1933.

Remarks.- Records excellent. Flow regulated by power plant above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	46	42	69	38	137	328	164	86	78	86	138
2	42	48	44	86	36	323	288	139	88	122	86	128
3	49	46	45	93	36	1,720	250	130	60	82	114	120
4	51	41	40	84	44	1,420	230	138	72	58	586	113
5	48	57	44	67	42	1,370	214	130	72	80	256	119
6	42	50	54	58	42	711	200	122	112	60	173	121
7	44	50	47	59	38	447	180	134	130	62	186	104
8	35	46	48	86	54	1,090	178	116	182	42	177	99
9	36	60	50	86	38	1,160	300	116	78	96	144	100
10	40	46	42	64	40	608	536	104	78	90	130	94
11	38	48	53	61	43	412	415	114	96	158	111	96
12	43	44	51	58	36	304	320	120	96	130	96	80
13	40	50	45	42	38	259	266	90	102	84	107	65
14	43	46	36	52	38	226	230	111	103	82	124	73
15	45	46	42	56	40	200	200	104	88	77	111	86
16	43	46	42	55	48	180	198	100	74	60	80	219
17	46	46	45	48	53	165	244	126	58	56	206	281
18	52	42	47	48	42	150	486	101	83	88	394	159
19	54	40	83	67	51	155	411	104	158	61	253	122
20	52	42	58	42	43	212	487	87	120	73	190	108
21	49	44	78	44	46	267	454	104	104	66	156	90
22	53	44	71	44	46	232	352	108	78	37	135	105
23	48	58	67	44	40	338	296	106	75	66	198	86
24	56	53	55	38	39	615	274	88	52	54	1,480	82
25	46	42	46	48	62	1,100	237	62	72	57	484	84
26	44	45	55	48	302	914	208	77	57	96	362	56
27	45	48	108	43	266	922	197	68	53	162	355	80
28	44	50	98	44	150	1,390	186	80	53	163	269	93
29	44	50	66	48		710	167	87	57	226	216	146
30	48	41	52	54		496	167	84	143	126	174	264
31	46		43	51		392		82		100	153	
Month	Maximum				Minimum			Mean		Per square mile	Run-off in inches	
October	56				35			45.3		0.219	0.25	
November	60				40			47.2		.228	.26	
December	108				36			54.7		.264	.30	
January	98				38			57.8		.279	.32	
February	302				36			64.0		.309	.32	
March	1,720				137			601		2.90	3.34	
April	536				167			283		1.37	1.53	
May	164				62			106		.512	.59	
June	182				52			89.3		.431	.48	
July	226				37			89.4		.432	.50	
August	1,490				80			245		1.18	1.36	
September	281				56			117		.565	.63	
The year	1,720				35			151		.729	9.87	

Watauga River at Stump Knob, Tenn.

Location.- Water-stage recorder 300 feet above Stump Knob, Johnson County, a quarter of a mile below Dugger Bridge, $2\frac{1}{4}$ miles above mouth of Elk Creek, and $4\frac{1}{2}$ miles above Butler. Zero of gage is 1,869.38 feet above mean sea level. Prior to Sept. 30, 1931, a staff gage 700 feet downstream at datum 0.44 foot lower was used.

Drainage area.- 177 square miles.

Records available.- October 1927 to September 1931, May to September 1934.

Extremes.- Maximum discharge during period May to September 1934, 2,320 second-feet Aug. 2 (gage height, 4.62 feet); minimum, 48 second-feet Sept. 12 (gage height, 1.04 foot).
1927-31, 1934: Maximum discharge recorded, about 10,700 second-feet Nov. 17, 1927 (gage height, 9.2 feet, old site and datum); minimum, 28 second-feet Aug. 4, 5, 13, 1930 (gage height, 0.70 foot, old site and datum).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									111	122	138	117
2									108	151	168	103
3									98	117	125	93
4									131	114	174	93
5									161	106	128	98
6									189	117	106	91
7									390	128	883	78
8									501	164	654	78
9									297	277	355	80
10								119	263	212	259	71
11								132	219	232	223	71
12								117	175	396	182	66
13								108	158	678	168	84
14								106	144	422	266	104
15								111	125	404	244	108
16								135	114	293	193	524
17								135	106	239	197	267
18								119	381	260	197	204
19								106	408	235	193	151
20								98	223	178	154	125
21								89	178	151	128	122
22								96	148	161	122	119
23								227	135	125	119	108
24								125	163	117	164	119
25								108	119	103	269	108
26								95	135	103	259	100
27								87	267	198	197	125
28								87	169	171	172	158
29								93	148	201	144	155
30								141	135	219	125	193
31								132		154	122	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October												
November												
December												
January												
February												
March												
April												
May 10-31					227	87	117	0.661		0.54		
June					501	98	197	1.11		1.24		
July					678	103	211	1.19		1.38		
August					883	119	220	1.24		1.43		
September					524	66	130	.734		.82		
The year												

Watauga River at Butler, Tenn.

Location.— Water-stage recorder at Butler, Johnson County, 1,000 feet below county highway bridge and mouth of Roane Creek. Zero of gage is 1,809.22 feet above mean sea level.

Drainage area.— 427 square miles.

Records available.— August 1900 to December 1901, November 1920 to September 1934.

Average discharge.— 13 years (1921-34), 676 second-feet.

Extremes.— Maximum discharge during year, 7,980 second-feet Apr. 9 (gage height, 6.73 feet); minimum, 76 second-feet Feb. 10 (gage height, 0.21 foot).
1900-1901, 1920-34: Maximum stage, 16.27 feet, original gage datum, May 21, 1901 (discharge not determined); minimum discharge, that of Feb. 10, 1934.

Remarks.— Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	147	164	241	153	560	925	441	238	300	337	804
2	167	160	160	346	164	1,020	785	427	312	354	380	280
3	170	170	164	268	195	3,890	685	408	272	304	398	260
4	157	268	167	241	184	3,740	620	389	308	300	1,910	256
5	153	218	167	237	218	3,330	584	380	346	300	727	280
6	153	316	170	260	222	1,920	526	376	399	316	477	249
7	147	256	199	325	170	1,260	493	363	675	276	1,740	237
8	147	210	192	403	195	1,060	488	346	737	367	1,660	229
9	147	192	167	325	195	990	4,040	316	493	693	889	225
10	150	178	160	284	134	861	4,160	312	472	599	659	203
11	147	174	153	260	164	758	2,200	341	441	816	560	195
12	153	170	160	252	184	627	1,580	304	367	1,180	467	192
13	150	181	199	268	184	602	1,300	288	389	1,660	458	222
14	147	195	203	241	124	537	1,140	280	320	1,030	554	241
15	147	170	184	222	210	477	1,030	288	280	1,070	589	264
16	147	137	174	210	214	451	990	346	260	771	588	847
17	440	150	167	203	199	417	1,340	341	245	584	805	548
18	288	192	174	178	178	403	1,850	325	544	606	918	456
19	206	181	192	225	170	389	1,430	276	750	560	691	337
20	188	170	237	210	153	643	1,220	268	417	432	515	288
21	181	170	256	195	150	614	1,030	241	346	358	417	268
22	178	184	203	184	203	554	889	319	304	403	380	264
23	195	184	184	199	184	892	792	589	280	320	354	249
24	222	181	178	203	144	1,560	731	350	449	292	403	264
25	203	174	170	158	162	3,250	678	300	300	268	644	245
26	181	167	203	199	2,320	2,290	590	272	252	276	640	237
27	170	164	288	203	958	3,240	548	252	445	455	532	268
28	170	160	225	192	596	4,400	537	245	312	469	446	312
29	167	160	206	164		2,270	488	264	312	498	385	329
30	164	164	192	104		1,480	451	350	304	488	341	427
31	167		195	130		1,140		329		380	329	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					440	147	179	0.419		0.48		
November					316	137	185	.433		.46		
December					288	153	189	.443		.51		
January					403	104	231	.541		.62		
February					2,320	124	298	.698		.73		
March					4,400	389	1,472	3.45		3.98		
April					4,160	451	1,137	2.66		2.97		
May					441	241	333	.780		.90		
June					750	245	387	.906		1.01		
July					1,660	268	539	1.26		1.45		
August					1,910	329	651	1.52		1.75		
September					847	192	299	.70		.78		
The year.					4,400	104	493	1.15		15.66		

Watauga River at Elizabethton, Tenn.

Location.- Water-stage recorder at Virginia & Southwestern Railroad bridge at Elizabethton, Carter County, half a mile below mouth of Doe River. Zero of gage is 1,486.03 feet above mean sea level.

Drainage area.- 703 square miles.

Records available.- February 1926 to September 1934.

Extremes.- Maximum discharge during year, 10,900 second-feet Apr. 9 (gage height, 9.51 feet); minimum, 48 second-feet Nov. 17 (gage height, 1.57 feet).
1926-34: Maximum discharge, 20,300 second-feet (revised) Feb. 3, 1932 (gage height, 11.8 feet); minimum, that of Nov. 17, 1933.
Maximum stage known, 22.0 feet Feb. 27 or 28, 1902.

Remarks.- Records good. Discharge estimated Feb. 26-28. Considerable diurnal fluctuation caused by operation of Watauga Power Co.'s plant, 7 miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	264	292	248	422	296	974	1,490	764	542	556	731	568
2	310	270	276	594	299	1,310	1,290	739	552	631	762	511
3	292	280	291	482	335	5,370	1,130	712	460	582	683	508
4	294	329	272	448	338	5,640	1,030	696	480	472	1,960	462
5	282	384	282	378	351	5,020	965	616	599	472	1,220	460
6	268	420	337	396	371	2,960	912	620	601	538	846	472
7	266	388	322	468	348	1,950	848	668	871	410	1,390	421
8	250	350	338	658	311	1,680	775	564	994	692	1,250	486
9	286	286	244	552	298	1,670	4,340	546	719	1,080	1,310	390
10	256	304	284	494	320	1,420	6,160	488	695	1,030	960	360
11	260	298	280	447	248	1,240	3,260	553	687	1,560	880	385
12	270	292	283	424	364	1,080	2,400	550	630	1,820	760	348
13	250	360	328	438	320	998	2,000	470	548	2,090	682	370
14	266	326	376	423	294	954	1,760	484	648	1,770	860	463
15	231	310	291	384	306	636	1,560	464	428	3,680	790	487
16	292	264	298	446	356	762	1,540	552	436	2,010	892	730
17	428	248	292	323	316	720	1,720	577	360	1,390	1,070	942
18	597	224	326	266	308	658	2,560	566	478	1,160	1,280	746
19	312	294	336	324	323	678	2,180	497	1,220	1,110	1,100	478
20	294	300	356	382	316	886	1,880	475	696	890	887	469
21	312	302	406	280	328	923	1,600	450	540	767	703	454
22	250	326	321	316	299	876	1,410	718	472	850	635	465
23	298	314	272	316	301	1,410	1,310	919	434	727	588	431
24	328	324	305	359	352	2,500	1,230	592	532	597	704	446
25	322	278	300	324	3,360	4,350	1,150	524	466	556	1,340	430
26	292	280	356	332	2,060	3,480	972	487	395	532	1,520	398
27	268	292	514	328	1,360	3,400	928	462	524	928	1,250	468
28	300	289	386	328	1,050	6,180	1,010	436	632	1,150	940	630
29	258	321	347	289		3,340	754	458	528	1,140	776	551
30	287	200	338	227		2,270	863	564	500	1,020	687	871
31	280		324	216		1,790		582		874	606	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					597	231	296	0.421		0.49		
November					420	200	305	.434		.48		
December					514	244	320	.456		.52		
January					658	216	399	.553		.64		
February					3,360	248	555	.789		.82		
March					6,180	658	2,171	3.09		3.56		
April					6,160	754	1,701	2.42		2.70		
May					919	436	574	.817		.94		
June					1,220	360	586	.834		.93		
July					3,960	410	1,067	1.52		1.75		
August					1,960	598	969	1.38		1.69		
September					942	348	506	.720		.80		
The year					6,180	200	789	1.12		15.22		

Roane Creek at Butler, Tenn.

Location.- Water-stage recorder on Butler-Doeville road, half a mile northeast of Butler, Johnson County, and 1 mile above confluence of Roane Creek and Watauga River. Zero of gage is 1,828.62 feet above mean sea level.

Drainage area.- 161 square miles.

Records available.- May to September 1934. August 1900 to November 1901 at site half a mile downstream.

Extremes.- Maximum discharge during period May to September 1934, 2,330 second-feet Aug. 4 (gage height, 5.18 feet); minimum, 35 second-feet July 7 (gage height, 0.53 foot).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									60	51	72	93
2									63	51	76	84
3									56	58	174	80
4									57	43	1,340	78
5									62	63	435	83
6									60	50	235	73
7									71	37	606	70
8									59	45	616	67
9									52	123	358	63
10								72	60	175	231	59
11								83	83	362	160	57
12								73	64	468	148	55
13								70	109	658	158	59
14								69	70	400	156	60
15								70	57	280	226	57
16								72	51	169	166	120
17								78	47	131	430	96
18								69	63	139	574	90
19								64	97	114	353	67
20								67	59	93	228	60
21								60	50	81	166	59
22								115	46	99	145	57
23								168	44	73	127	59
24								95	189	66	131	62
25								81	78	63	211	53
26								70	59	63	197	51
27								66	52	104	180	59
28								64	52	127	150	55
29								66	65	113	127	75
30								73	69	84	112	110
31								67		72	102	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October .												
November												
December												
January												
February												
March												
April												
May 10-31				168		60		78		0.484		0.40
June				189		44		67		.416		.46
July				668		37		144		.894		1.03
August				1,340		72		269		1.67		1.92
September				120		51		70		.435		.49
The year												

Doe River at Elizabethton, Tenn.

Location.- Water-stage recorder a quarter of a mile above covered highway bridge at Elizabethton, Carter County, and 1 mile above mouth. Prior to Feb. 1, 1934, staff gage at same site used.

Drainage area.- 139 square miles.

Records available.- June 1907 to June 1908, September to December 1912, June 1932 to September 1934.

Extremes.- Maximum discharge during year, 3,940 second-feet July 15 (gage height, 4.98 feet); minimum, 38 second-feet Feb. 21 (gage height, 0.37 foot).
1932-34: Maximum and minimum discharges, those of July 15 and Feb. 21, 1934, respectively.

Remarks.- Records fair October to January and good thereafter.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	52	58	68	60	161	283	147	131	154	144	102
2	55	54	61	78	63	339	236	144	138	172	142	96
3	51	54	63	76	70	1,130	210	137	100	132	122	92
4	51	51	61	71	75	1,080	186	132	105	98	120	94
5	54	58	58	71	68	1,120	176	127	123	84	108	102
6	52	63	63	71	71	586	170	127	129	90	100	90
7	56	71	63	127	62	362	159	130	143	76	189	86
8	56	68	63	121	72	345	161	127	142	179	186	90
9	54	68	61	71	74	336	1,240	123	114	208	126	84
10	51	71	65	58	78	279	1,100	119	127	316	120	78
11	52	66	60	71	70	232	666	127	119	424	123	76
12	54	51	65	71	67	191	480	121	107	410	124	81
13	52	57	71	98	56	179	400	119	100	392	109	95
14	51	66	78	75	78	164	356	109	89	272	114	62
15	51	67	75	74	80	142	300	109	83	1,960	116	98
16	54	57	61	82	74	134	297	132	77	790	108	182
17	72	47	66	82	71	127	398	121	76	413	130	159
18	82	66	58	67	62	123	490	108	108	290	126	161
19	68	56	66	71	60	121	445	92	182	259	113	107
20	65	55	63	68	50	194	405	92	104	181	104	96
21	51	61	71	71	58	167	358	84	90	176	94	88
22	56	66	65	71	71	159	308	128	80	222	84	96
23	51	62	61	71	56	391	279	146	76	145	96	83
24	62	62	63	74	56	600	259	98	76	129	156	84
25	66	51	68	76	109	755	228	98	70	114	316	84
26	51	52	61	76	903	564	203	84	65	119	274	79
27	54	56	68	71	312	803	192	80	62	216	181	91
28	54	57	71	74	186	1,040	189	78	92	196	146	109
29	56	57	66	72		606	164	88	126	230	124	109
30	51	66	61	68		425	155	122	103	224	110	202
31	51		78	54		331		102		166	105	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						82	51	56.2	0.404		0.47	
November						71	47	59.6	.429		.46	
December						78	58	65.0	.466		.54	
January						127	54	75.8	.545		.63	
February						903	50	112	.906		.94	
March						1,130	121	425	3.06		3.53	
April						1,240	155	348	2.50		2.79	
May						147	78	114	.820		.95	
June						182	62	105	.755		.84	
July						1,860	76	281	2.02		2.33	
August						316	94	136	.978		1.13	
September						202	76	102	.734		.82	
The year.						1,860	50	157	1.13		15.35	

Brush Creek at Johnson City, Tenn.

Location.- Staff gage at Carr Brothers Lumber Co. in Johnson City, Washington County, half a mile below Crane Creek.

Drainage area.- 8.9 square miles.

Records available.- June 1932 to December 1933 (discontinued).

Extremes.- 1932-33: Maximum gage height, 2.70 feet July 20, 1933 (discharge not determined); minimum discharge recorded, 1.6 second-feet several days in October and November 1933 (gage height, 0.18 foot).

Remarks.- Records fair. Discharge Dec. 31 estimated.

Discharge, in second-feet, 1933

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.6	2.0									
2	1.6	1.6	2.0									
3	1.6	1.6	2.0									
4	1.6	1.6	2.0									
5	1.6	1.6	2.0									
6	1.6	2.0	6.6									
7	1.6	2.0	2.4									
8	1.6	2.0	2.4									
9	1.6	2.0	2.4									
10	1.6	1.6	2.4									
11	1.6	1.6	2.4									
12	1.6	1.6	6.6									
13	1.6	1.4	2.8									
14	1.6	2.4	2.4									
15	1.6	2.0	2.4									
16	1.6	1.6	2.4									
17	3.2	1.6	2.4									
18	2.8	1.6	3.2									
19	2.4	1.6	4.8									
20	2.4	1.6	2.4									
21	2.0	7.0	2.4									
22	1.6	2.4	2.4									
23	1.6	2.0	2.4									
24	1.6	2.0	2.4									
25	1.6	2.0	2.4									
26	1.6	2.0	1.6									
27	1.6	2.0	6.2									
28	1.6	2.0	4.4									
29	1.6	2.0	3.2									
30	1.6	2.0	2.8									
31	1.6		2.8									
Month				Maximum		Minimum		Mean		Per square mile		Rin-off in inches
October				3.2		1.6		1.75		0.197		0.23
November				14		1.6		2.42		.272		.30
December				16		2.0		3.40		.362		.44
January												
February												
March												
April												
May												
June												
July												
August												
September												
The year.												

North Fork of Holston River near Saltville, Va.

Location.- Water-stage recorder 800 feet above Cedar Branch Bridge, $1\frac{1}{2}$ miles north-east of Saltville, Smyth County, and 3 miles upstream from Sturgeon Creek. Prior to May 23, 1934, chain gage at bridge with same datum used.

Drainage area.- 222 square miles, at recorder site; 224 square miles (revised) at chain gage site; about 228 square miles at site used 1907-8.

Records available.- November 1920 to September 1934. June 1907 to November 1908 at station $1\frac{1}{2}$ miles downstream.

Average discharge.- 13 years (1921-34), 296 second-feet.

Extremes.- Maximum discharge recorded during period, 3,850 second-feet Mar. 3 (gage height, 8.40 feet); minimum, 25 second-feet Feb. 10 (gage height, 1.22 feet). 1907-8, 1920-34: Maximum discharge recorded, 8,220 second-feet Feb. 3, 1923 (gage height, 13.97 feet); minimum, 19 second-feet Sept. 30, 1930.

Remarks.- Records good prior to May 23, excellent thereafter. Discharge estimated Apr. 15, 23, May 20, 21. Possibly some regulation from mills above station during periods of extremely low water.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	34	33	75	47	270	400	180	69	53	89	124
2	32	34	36	115	43	510	332	132	64	57	102	104
3	31	34	34	124	46	3,490	285	150	60	56	163	87
4	34	35	35	92	44	3,130	242	141	61	60	509	65
5	32	34	37	83	45	2,970	216	132	58	52	296	81
6	33	36	43	79	47	1,320	204	104	65	48	160	76
7	31	39	40	105	47	870	192	115	78	46	140	71
8	32	36	42	192	49	1,940	181	99	69	50	167	66
9	30	36	38	170	41	2,010	383	115	68	46	130	64
10	32	33	37	132	32	920	820	101	69	51	96	60
11	31	34	42	95	47	590	635	124	69	64	81	54
12	32	34	37	89	43	400	510	112	74	63	74	58
13	34	34	34	81	40	316	418	98	313	61	68	53
14	32	32	37	80	42	270	383	95	137	58	71	58
15	32	33	37	70	48	229	320	92	94	52	71	63
16	30	31	34	62	45	204	270	95	69	48	88	219
17	35	30	39	49	49	181	349	98	64	47	398	372
18	34	34	36	54	51	160	400	102	98	45	1,210	188
19	34	34	43	48	48	170	680	85	262	46	444	127
20	31	32	74	48	48	970	770	79	188	53	239	102
21	32	34	107	46	46	770	680	80	124	58	163	85
22	30	37	71	53	56	510	454	79	92	54	130	76
23	33	40	65	62	56	725	418	75	76	50	221	69
24	34	37	54	51	45	1,200	349	74	71	46	1,300	66
25	34	42	42	53	75	2,090	316	74	63	43	680	64
26	34	37	58	60	770	1,590	285	72	56	50	710	61
27	34	34	112	58	510	1,660	256	71	57	118	565	63
28	34	34	83	46	285	2,650	229	68	58	92	382	72
29	34	34	65	45		1,200	204	71	54	198	257	160
30	34	36	57	42		770	181	72	54	150	181	252
31	32		55	41		510		71		94	146	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					35	30	32.5	0.145		0.17		
November					42	30	34.8	.155		.17		
December					112	33	50.2	.224		.26		
January					192	41	77.1	.344		.40		
February					770	32	98.0	.438		.46		
March					3,490	160	1,116	4.98		5.74		
April					820	181	379	1.69		1.89		
May					160	68	97.9	.437		.50		
June					313	54	91.7	.413		.46		
July					198	43	64.8	.292		.34		
August					1,300	68	301	1.36		1.87		
September					372	53	103	.464		.52		
The year					3,490	30	205	.915		12.48		

Note.- Used 224 square miles for run-off computations October to May and the year; 222 square miles June to September.

North Fork of Holston River near Gate City, Va.

Location.- Water-stage recorder at highway bridge 1 mile below Big Moccasin Creek and 2 miles southeast of Gate City, Scott County.

Drainage area.- 875 square miles.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, 8,650 second-feet Mar. 4 (gage height, 8.98 feet); minimum, 62 second-feet Oct. 11 (gage height, 1.16 feet).
1931-34: Maximum discharge, 11,200 second-feet Jan. 30, 1932 (gage height, 10.64 feet); minimum, 55 second-feet Sept. 21, 22, 1932 (gage height, 1.18 feet).

Remarks.- Records excellent except those above 5,000 second-feet, those estimated for Nov. 12-17, and those for period of ice effect, Jan. 31, which are fair. Low-water flow slightly regulated by small dam above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	78	86	283	127	1,040	1,440	471	178	350	362	356
2	110	84	86	592	140	1,740	1,180	442	170	254	325	306
3	146	93	91	564	140	6,550	984	414	148	316	376	273
4	109	114	93	483	140	8,500	815	403	145	197	1,800	236
5	91	127	104	375	136	6,850	816	376	138	189	1,960	223
6	84	114	127	328	130	4,720	732	361	163	142	862	202
7	84	101	146	754	130	2,630	676	340	163	129	545	193
8	84	106	161	1,240	127	4,120	622	320	202	111	442	185
9	80	101	164	935	124	5,650	1,920	296	202	106	448	178
10	80	96	133	678	109	3,470	4,520	287	193	106	371	170
11	76	91	120	510	100	2,140	2,630	320	179	111	361	152
12	80	90	106	413	124	1,490	1,630	320	202	219	268	142
13	80	90	104	386	106	1,140	1,400	311	210	236	311	132
14	82	90	101	370	120	940	1,140	277	823	287	522	125
15	80	90	106	323	120	802	948	259	426	483	414	129
16	82	90	109	279	120	697	837	306	292	296	340	129
17	98	90	109	251	120	616	844	306	206	268	1,080	170
18	96	84	136	224	124	545	1,280	311	210	340	1,140	496
19	101	86	164	216	127	839	2,360	306	245	178	1,640	321
20	101	82	233	195	120	1,040	2,520	273	483	136	863	273
21	96	86	344	195	117	1,930	2,140	241	436	138	576	214
22	96	98	323	183	124	1,580	1,690	223	301	442	420	185
23	86	98	269	179	124	2,410	1,310	219	236	241	361	163
24	86	111	204	176	130	5,650	1,100	210	185	163	647	152
25	86	114	168	179	265	5,800	916	202	163	129	1,860	142
26	86	106	260	172	3,740	4,800	816	182	135	125	1,360	132
27	80	98	646	172	3,080	3,730	746	174	125	250	1,440	132
28	82	93	480	176	1,500	5,220	690	170	111	499	1,100	145
29	84	96	366	157		4,250	616	155	114	1,110	774	185
30	80	86	274	133		2,580	532	170	142	806	570	340
31	80		220	110		1,830		170		507	436	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				146		76		89.4		0.132		0.15
November				127		78		96.1		.142		.16
December				646		86		195		.289		.33
January				1,240		110		361		.535		.62
February				3,740		100		413		.612		.64
March				8,500		538		3,064		4.54		5.23
April				4,520		532		1,333		1.97		2.20
May				471		155		284		.421		.49
June				623		111		230		.341		.38
July				1,110		106		286		.424		.49
August				1,880		268		772		1.14		1.31
September				496		125		208		.308		.34
The year.				8,500		76		614		.910		12.34

Mossy Creek at Jefferson City, Tenn.

Location.- Staff gage at bridge 600 feet below Southern Railway culvert at Jefferson City, Jefferson County.

Drainage area.- 25.4 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period Oct. 1, 1933 to Mar. 17, 1934, 166 second-feet Mar. 3 (gage height, 1.85 feet); minimum recorded, 10 second-feet Mar. 3 (gage height, 1.85 feet); minimum recorded, 10 second-feet several days in December and February (gage height, 0.20 foot).
1932-34: Maximum discharge, 400 second-feet Feb. 15, 1933 (gage height, 2.80 feet); minimum, that of December 1933 and February 1934.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	15	13	14	12	33						
2	18	17	14	14	11	91						
3	21	12	10	14	12	156						
4	22	11	10	18	11	156						
5	21	15	10	17	10	138						
6	18	12	13	18	10	122						
7	14	12	11	76	10	107						
8	12	12	10	58	10	100						
9	16	12	10	56	10	87						
10	18	12	10	45	11	87						
11	18	12	10	35	10	83						
12	18	13	11	26	10	79						
13	17	13	13	19	10	72						
14	17	13	13	18	11	68						
15	17	13	16	17	12	68						
16	18	14	14	15	14	62						
17	19	13	16	15	14	56						
18	15	17	17	15	12							
19	12	12	15	15	13							
20	11	12	13	15	12							
21	11	12	13	15	13							
22	12	12	15	15	13							
23	12	15	15	17	13							
24	14	12	15	17	13							
25	14	12	15	17	19							
26	15	12	15	15	93							
27	15	12	12	13	83							
28	15	12	13	14	47							
29	14	13	15	14								
30	14	16	14	12								
31	14		14	12								
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					22	11	15.8	0.622		0.72		
November					17	11	13.0	.512		.57		
December					17	10	13.1	.516		.59		
January					76	12	22.0	.866		1.00		
February					93	10	18.5	.728		.78		
March 1-17					153	33	92.1	3.65		2.30		
April												
May												
June												
July												
August												
September												
The year.												

First Creek at Knoxville, Tenn.

Location.- Staff gage at McCalla Avenue Bridge, in Knoxville, Knox County.

Drainage area.- 16.8 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period Oct. 1, 1933, to Mar. 31, 1934, about 548 second-feet Mar. 2 (gage height, 8.80 feet); minimum recorded, 3.5 second-feet Feb. 10 (gage height, 0.58 foot).

1932-34: Maximum discharge recorded, about 560 second-feet Feb. 20, 1933 (gage height, 6.90 feet); minimum, that of Feb. 10, 1933.

Remarks.- Records fair. Regulation during low stages caused by operation of mill-dam upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	6.9	6.1	42	13	56						
2	8.8	7.1	6.9	19	13	341						
3	11	6.6	9.4	13	8.8	319						
4	9.9	8.6	4.9	11	12	159						
5	9.6	8.3	5.3	33	17	95						
6	8.8	10	19	27	10	71						
7	10	6.4	6.4	204	6.1	59						
8	10	5.5	5.7	74	13	59						
9	7.8	5.6	7.8	47	7.8	44						
10	6.1	5.6	5.7	36	6.9	42						
11	10	5.9	5.7	36	9.9	39						
12	8.3	5.9	9.4	34	10	34						
13	8.6	7.1	4.9	30	5.9	28						
14	7.3	5.1	5.9	24	11	28						
15	6.4	4.9	8.8	17	5.1	28						
16	7.6	5.5	5.3	26	7.8	27						
17	11	6.1	6.6	18	8.6	26						
18	7.8	5.6	9.9	18	9.4	26						
19	6.1	6.1	7.1	16	9.4	39						
20	5.9	7.8	8.1	15	8.8	68						
21	5.9	7.8	6.4	17	4.9	39						
22	7.8	5.1	6.4	13	6.4	34						
23	9.9	5.7	6.6	16	8.1	78						
24	5.1	5.5	6.9	18	8.8	159						
25	6.4	5.5	7.1	13	59	117						
26	8.3	5.1	65	14	168	78						
27	5.9	5.1	17	11	42	117						
28	11	4.7	11	9.9	33	84						
29	6.9	4.3	12	9.4		68						
30	5.3	4.9	17	10		56						
31	8.8		24	8.3		47						
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	11					5.1	8.1	0.482		0.56		
November	10					4.3	6.2	.369		.41		
December	65					4.9	10.6	.631		.73		
January	204					8.3	28.4	1.69		1.95		
February	168					4.9	18.7	1.11		1.16		
March	341					26	79.5	4.73		5.45		
April												
May												
June												
July												
August												
September												
The year.												

Little River near Walland, Tenn.

Location.-- Water-stage recorder half a mile above concrete bridge over Little River on State Highway 73, 1½ miles above mouth of Ellejoy Creek, and 3 miles below Walland, Blount County. Zero of gage is 876.89 feet above mean sea level.

Drainage area.-- 190 square miles.

Records available.-- July 1931 to September 1934.

Extremes.-- Maximum discharge during year, 9,040 second-feet Mar. 3 (gage height, 8.96 feet); minimum, 22 second-feet Nov. 16 (gage height, 1.00 foot).
1931-34: Maximum discharge, 10,200 second-feet Jan. 30, 1932 (gage height, 9.7 feet); minimum, 7.8 second-feet Sept. 23, 1932 (gage height, 0.96 foot).

Remarks.-- Records good except those estimated Jan. 27, 28, May 20, 21, June 16-21, July 8-11, which are fair. Low-water flow affected by operation of power plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	50	46	878	107	397	502	238	186	301	190	100
2	62	47	42	615	96	881	427	220	190	251	172	95
3	68	52	46	340	92	6,250	367	206	231	208	164	92
4	54	43	69	238	92	3,710	328	195	346	190	152	98
5	52	44	70	245	92	2,050	304	194	416	175	138	140
6	50	56	100	255	88	1,190	308	302	517	189	120	103
7	46	54	170	2,030	80	795	275	227	531	176	148	94
8	50	54	108	1,130	78	766	330	198	408	190	186	88
9	47	48	78	597	78	656	718	182	364	220	132	87
10	48	45	66	410	74	535	562	202	576	210	117	78
11	46	44	57	312	73	469	492	340	631	230	111	74
12	46	48	57	272	86	388	412	252	482	196	109	73
13	42	48	56	264	88	340	382	204	389	174	110	75
14	46	51	54	223	72	302	355	186	315	620	160	76
15	43	42	52	193	70	266	326	193	272	428	146	74
16	50	47	52	172	70	246	316	326	240	346	127	60
17	74	46	52	158	68	225	414	523	210	256	212	85
18	70	36	74	142	68	220	496	363	540	214	242	82
19	54	42	80	138	82	252	856	301	700	175	176	71
20	51	44	110	141	92	673	1,150	260	450	164	146	66
21	50	53	104	126	74	600	806	270	320	148	128	66
22	46	104	78	120	80	487	602	383	258	148	121	64
23	46	76	72	120	88	644	514	369	234	128	112	66
24	54	56	70	114	70	2,260	420	270	752	116	123	62
25	44	54	65	110	281	2,740	374	217	448	112	183	68
26	50	52	166	108	2,790	1,510	327	186	346	138	190	80
27	41	50	188	108	949	1,570	308	166	276	190	146	78
28	52	49	130	103	535	1,530	305	156	242	580	126	80
29	42	48	109	97		1,080	272	179	248	516	118	116
30	48	38	98	74		774	250	252	260	344	108	303
31	46		91	67		623		188		239	109	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					74	41	50.7	0.267		0.31		
November					104	36	50.7	.267		.30		
December					188	42	84.8	.446		.51		
January					2,030	67	319	1.68		1.94		
February					2,790	68	233	1.23		1.28		
March					6,250	220	1,110	5.84		6.73		
April					1,150	250	450	2.37		2.64		
May					523	156	260	1.32		1.52		
June					752	186	379	1.99		2.22		
July					620	112	244	1.28		1.48		
August					242	108	146	.788		.89		
September					303	62	90.5	.476		.53		
The year.					6,250	36	285	1.50		20.35		

Little Tennessee River at Iotla, N. C.

Location.- Water-stage recorder 500 feet above Iotla Creek and 1,000 feet above State highway crossing at Iotla, Macon County.

Drainage area.- 326 square miles.

Records available.- June 1929 to September 1934.

Extremes.- Maximum discharge during year, 6,320 second-feet Mar. 4 (gage height, 6.80 feet); minimum, 31 second-feet Nov. 26 (gage height, 0.56 foot); minimum daily discharge, 31 second-feet Nov. 26.
1929-34: Maximum discharge (estimated), 10,100 second-feet Sept. 28, 1929 (gage height, 8.52 feet); minimum, that of Nov. 26, 1933; minimum daily discharge, that of Nov. 26, 1933.

Remarks.- Records good except those estimated Jan. 30 to Feb. 3, Feb. 7-11, which are fair. Flow regulated by power plant $2\frac{1}{2}$ miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	218	215	1,260	400	758	984	818	426	700	443	400
2	269	216	215	944	400	930	992	686	466	614	374	330
3	266	224	288	596	360	3,940	944	619	476	589	363	335
4	226	405	390	460	370	6,130	785	586	530	552	311	311
5	237	120	243	591	388	4,160	764	587	538	514	358	329
6	240	326	297	634	365	2,290	728	603	600	468	307	307
7	266	238	364	1,630	400	1,660	694	592	736	412	560	301
8	172	240	294	1,270	360	1,400	696	515	1,000	460	517	314
9	220	235	402	854	340	1,230	778	532	1,340	482	338	280
10	219	280	108	660	340	1,050	660	520	1,040	544	338	261
11	229	316	311	556	360	943	656	544	866	651	557	285
12	200	86	508	899	344	868	608	500	812	552	605	264
13	190	161	348	628	404	796	608	453	706	454	413	326
14	215	260	204	532	354	771	574	467	612	410	517	408
15	229	173	174	482	326	736	570	808	567	432	442	448
16	242	190	96	447	338	687	712	772	540	542	382	390
17	378	223	177	447	334	638	717	722	488	418	535	325
18	247	348	193	397	311	626	834	608	1,330	397	460	311
19	250	86	246	392	314	670	730	582	888	541	389	285
20	244	206	440	380	330	836	667	512	678	460	370	286
21	430	215	323	390	311	680	627	502	608	371	316	300
22	73	271	302	367	322	665	583	542	552	372	301	303
23	246	231	271	358	350	625	589	624	546	354	497	288
24	248	215	278	358	307	1,270	652	508	554	362	898	316
25	218	293	267	355	624	1,640	667	508	524	420	726	288
26	228	31	346	348	3,140	1,300	608	484	458	414	596	292
27	288	133	354	376	1,380	2,090	560	419	440	422	485	336
28	338	200	296	332	892	1,970	541	478	464	460	450	343
29	96	216	298	318		1,450	570	474	516	458	408	465
30	196	215	294	300		1,200	781	488	706	439	424	443
31	214		293	270		1,060		462		448	398	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	430			73			237			0.727	0.84	
November	405			31			220			.675	.75	
December	508			96			284			.871	1.00	
January	1,630			270			565			1.73	1.99	
February	3,140			307			517			1.59	1.66	
March	6,130			625			1,450			4.45	5.13	
April	984			541			689			2.11	2.35	
May	818			419			564			1.73	1.99	
June	1,340			426			669			2.05	2.29	
July	700			354			475			1.46	1.68	
August	898			371			454			1.39	1.60	
September	465			261			329			1.01	1.13	
The year	6,130			31			539			1.65	22.41	

Little Tennessee River at Judson, N. C.

Location.- Water-stage recorder a quarter of a mile below highway bridge at railroad station at Judson, Swain County, a quarter of a mile above Sawyer Branch and half a mile below Talaka Creek. Prior to June 5, 1934, staff gage at same site and datum was used. Zero of gage is 1,520.7 feet above mean sea level.

Drainage area.- 668 square miles.

Records available.- April 1912 to September 1934. June 1896 to September 1913 at Southern Railway bridge 1 mile downstream.

Average discharge.- 38 years, 1,820 second-feet.

Extremes.- Maximum discharge recorded during year, 17,500 second-feet Mar. 3 (gage height, 28.58 feet); minimum, estimated, 210 second-feet Nov. 20 (gage height, 16.90 feet); minimum daily discharge, estimated, 210 second-feet Nov. 20.
1896-1934: Maximum discharge recorded, 40,800 second-feet Feb. 28, 1902 (gage height, 16.19 feet, old datum); minimum, 165 second-feet Oct. 10, 1925 (gage height, 16.70 feet); minimum daily discharge, 200 second-feet Sept. 6, 7, 1925.

Remarks.- Records good. Discharge estimated Nov. 20, 27. Slight diurnal fluctuation during low water, owing to power operations at Franklin.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	480	432	400	2,920	775	1,660	2,120	1,770	855	1,500	855	920
2	480	426	336	3,200	855	2,120	2,000	1,350	855	1,250	879	799
3	660	426	432	1,560	815	10,500	1,880	1,350	938	1,180	735	705
4	515	622	735	1,060	735	12,000	1,660	1,250	980	1,250	728	712
5	490	585	550	698	735	8,310	1,660	1,250	1,110	1,050	698	712
6	515	350	515	1,250	815	5,120	1,660	1,250	1,450	980	675	675
7	515	550	895	2,780	698	4,190	1,560	1,250	1,720	954	881	652
8	480	515	622	3,200	855	3,480	1,560	1,450	1,900	963	1,400	645
9	356	480	515	2,000	660	2,780	1,880	1,160	3,340	1,050	904	630
10	480	412	445	1,560	660	2,510	1,560	1,110	2,380	1,090	751	585
11	480	480	368	1,350	660	2,250	1,450	1,200	2,060	1,500	735	578
12	480	445	775	1,250	735	1,880	1,450	1,160	2,280	1,400	1,180	565
13	380	235	735	1,350	735	1,770	1,350	1,110	1,770	1,060	963	578
14	386	350	480	1,160	660	1,770	1,360	980	1,500	972	1,060	622
15	419	393	480	1,060	622	1,660	1,350	1,200	1,350	920	1,040	698
16	480	350	438	938	698	1,560	1,560	1,660	1,250	938	831	895
17	550	374	515	895	660	1,450	1,450	1,560	1,130	929	1,790	735
18	585	445	480	938	735	1,350	1,770	1,350	2,740	815	1,300	585
19	480	438	445	895	660	1,450	1,880	1,250	2,320	904	980	585
20	480	210	775	815	660	1,770	1,660	1,200	1,610	972	895	550
21	480	432	698	815	660	1,660	1,450	1,060	1,450	815	751	550
22	515	895	550	815	660	1,350	1,450	1,200	1,350	751	728	660
23	266	550	550	775	660	1,350	1,350	1,250	1,250	735	791	585
24	550	480	515	775	622	2,780	1,350	1,110	1,250	720	1,350	622
25	432	426	515	735	815	4,640	1,660	1,060	1,140	720	1,720	622
26	426	515	660	698	6,600	3,480	1,350	980	1,010	963	1,350	585
27	480	220	855	660	3,060	4,040	1,350	938	920	946	1,060	660
28	515	426	698	898	2,120	4,340	1,250	815	912	1,160	972	751
29	480	386	550	698		3,340	1,350	1,110	1,250	1,110	855	698
30	255	393	550	622		2,780	1,450	1,020	1,500	963	895	1,060
31	480		660	585		2,380		1,020		879	946	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October				860		255		470		0.704		0.81
November				995		210		441		0.660		.74
December				895		368		574		.859		.99
January				3,200		585		1,250		1.87		2.16
February				6,600		622		1,060		1.59		1.66
March				12,000		1,350		3,280		4.91		5.66
April				2,120		1,250		1,560		2.34		2.61
May				1,770		815		1,210		1.81		2.09
June				3,340		855		1,520		2.28		2.54
July				1,500		720		1,010		1.51		1.74
August				1,790		675		990		1.48		1.71
September				1,060		550		675		1.01		1.13
The year				12,000		210		1,170		1.75		23.84

Little Tennessee River at Calderwood, Tenn.

Location.- Water-stage recorder at pump house of Knoxville Power Co. at Calderwood, Blount County, 2½ miles downstream from Calderwood Dam. Zero of gage is 861.78 feet above mean sea level.

Drainage area.- 1,870 square miles.

Records available.- January 1912 to December 1918, January 1921 to September 1934.

Average discharge.- 18 years (1912-18, 1922-34), 4,325 second-feet.

Extremes.- Maximum discharge during year ending Sept. 30, 1933, 87,500 second-feet Dec. 28 (gage height, 9.80 feet); minimum, 618 second-feet Aug. 11 (gage height, 0.52 foot).

Maximum discharge during year ending Sept. 30, 1934, 46,700 second-feet Mar. 3 (gage height, 8.07 feet); minimum, 525 second-feet Jan. 30 (gage height, 0.45 foot).

1912-18, 1921-34: Maximum daily discharge, about 70,000 second-feet Mar. 4, 1917; minimum (estimated), 50 second-feet Apr. 16-18, 1930 (gage height, -0.12 foot, caused by closing of gates in dam).

Remarks.- Records good. Flow is very largely regulated by three large power developments upstream.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,730	8,390	3,620	17,400	5,670	6,310	6,140	4,340	3,500	2,080	2,220	2,700
2	1,620	5,850	3,290	13,700	5,820	5,940	5,720	4,910	3,310	2,470	2,500	2,800
3	1,500	4,280	3,150	11,800	5,440	5,740	5,280	7,490	3,200	2,400	2,570	1,580
4	1,870	3,730	3,210	11,000	5,720	5,520	4,790	5,340	3,060	1,660	3,340	1,740
5	2,500	3,460	3,120	9,800	5,400	5,460	4,690	6,900	3,050	2,120	2,580	1,740
6	5,160	3,440	2,940	8,780	5,000	5,090	5,310	15,300	2,860	2,080	1,960	2,500
7	2,900	3,190	2,920	8,180	8,080	5,640	6,690	8,580	3,040	2,110	2,237	2,140
8	2,120	3,050	3,320	7,980	10,700	7,220	5,300	10,600	3,360	2,080	2,237	1,810
9	1,730	3,550	3,000	11,900	8,200	5,680	4,970	9,340	3,400	2,040	2,220	2,020
10	2,010	3,700	3,880	11,000	8,280	5,980	4,920	11,100	3,940	2,020	1,937	1,830
11	2,200	3,050	7,610	9,500	7,710	5,430	4,640	11,900	4,670	2,100	1,680	1,680
12	1,980	3,080	17,800	9,340	7,320	5,240	4,940	11,600	4,510	2,800	2,050	1,560
13	1,740	2,780	15,200	7,950	6,570	5,140	4,250	9,010	4,100	2,460	1,960	1,640
14	1,700	2,700	18,200	7,340	14,300	5,640	4,240	7,690	4,080	2,020	2,040	1,920
15	1,700	2,650	17,500	7,020	26,300	7,790	4,180	6,830	3,670	2,090	2,080	1,680
16	2,040	2,800	11,600	6,700	17,000	6,540	9,460	6,420	2,500	2,080	2,010	1,640
17	13,200	2,950	15,900	6,510	12,900	5,820	10,100	5,990	2,510	2,100	2,010	1,360
18	8,680	3,000	14,300	6,300	10,900	6,620	7,790	5,350	2,350	2,490	2,540	2,080
19	5,060	6,400	10,600	5,960	8,640	8,000	7,040	5,020	2,210	2,170	2,200	1,760
20	3,330	6,260	9,270	5,640	14,600	11,600	6,690	4,780	2,320	2,500	1,880	1,900
21	3,080	4,440	8,000	5,380	13,700	10,900	5,570	4,540	2,550	2,270	2,040	1,740
22	2,810	3,330	7,320	5,360	10,800	8,690	5,540	4,760	2,500	2,360	2,000	1,660
23	2,460	3,540	7,170	6,470	9,960	7,730	5,190	4,650	2,120	2,300	1,980	1,740
24	2,560	3,300	7,410	5,320	8,750	6,640	5,360	4,440	1,540	2,170	1,980	1,650
25	2,590	3,220	12,300	6,720	8,280	6,750	6,180	4,510	2,160	1,800	1,940	1,760
26	2,240	6,490	17,000	8,940	8,320	6,680	5,150	4,360	2,340	2,200	1,790	1,840
27	4,690	6,200	19,100	7,340	7,540	5,890	4,790	4,760	2,620	3,180	1,780	1,960
28	3,930	4,430	56,300	6,910	6,830	5,700	4,590	4,880	2,450	3,260	1,920	2,080
29	2,960	3,910	35,900	6,220	5,340	5,400	4,530	4,000	2,260	2,300	2,000	2,150
30	2,610	3,760	21,400	5,900	5,160	5,160	4,150	3,750	1,980	1,810	2,340	1,440
31	2,900		20,900	5,760	5,260			3,740		2,090	4,180	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	13,200			1,500			3,152			1.69	1.95	
November	8,390			2,650			4,048			2.16	2.41	
December	56,300			2,920			12,370			6.61	7.62	
January	17,400			5,320			8,210			4.39	5.06	
February	26,300			5,000			9,955			5.32	5.54	
March	11,600			5,090			6,488			3.47	4.00	
April	10,100			4,150			5,606			3.00	3.35	
May	13,300			3,740			6,606			3.53	4.07	
June	4,670			1,540			2,940			1.57	1.75	
July	3,260			1,660			2,245			1.20	1.38	
August	4,180			1,680			2,199			1.18	1.36	
September	2,800			1,360			1,877			1.00	1.12	
The year	56,300			1,360			5,458			2.92	39.61	

Note.- Records Dec. 29, 1932, to Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Little Tennessee River at Calderwood, Tenn.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,200	1,770	934	2,260	2,230	3,740	5,070	3,210	2,550	3,300	2,280	2,280
2	1,930	1,600	1,000	5,980	2,210	5,200	4,570	3,320	2,440	3,580	2,540	2,240
3	2,180	1,710	1,120	3,320	2,020	29,100	4,150	3,340	1,910	2,700	2,200	2,340
4	2,230	1,280	1,160	2,510	2,000	32,200	3,970	3,300	2,320	2,520	2,160	2,340
5	2,160	1,270	1,410	2,480	2,180	21,000	3,780	3,250	2,360	3,060	2,300	2,300
6	2,050	1,280	1,480	2,470	2,070	12,500	3,770	2,260	3,410	3,230	2,160	2,020
7	1,650	1,390	1,530	8,950	2,070	9,100	3,420	2,980	4,860	3,500	2,300	2,200
8	1,190	1,470	1,240	8,050	2,090	7,860	3,560	3,210	4,430	2,860	2,700	2,340
9	1,910	1,470	1,070	4,780	2,180	6,660	4,590	3,260	6,610	2,520	2,440	2,200
10	1,900	1,500	1,010	3,540	1,610	5,640	3,980	3,220	6,830	2,300	2,410	1,920
11	1,730	1,180	1,110	2,950	1,400	5,010	3,700	2,640	6,510	2,640	2,020	1,700
12	1,660	1,090	1,230	2,680	1,730	4,200	3,360	2,520	5,240	2,760	1,680	1,700
13	1,760	1,340	1,370	2,810	1,720	4,350	3,240	3,220	4,600	2,340	1,680	1,730
14	1,500	1,360	1,330	2,540	1,580	4,090	3,130	2,710	3,960	3,220	2,340	1,720
15	1,150	1,340	1,080	2,540	1,700	3,200	3,110	2,430	3,580	2,520	2,580	1,720
16	1,580	1,240	944	1,880	1,590	3,560	3,220	2,980	3,280	2,830	2,500	1,700
17	1,820	1,160	870	2,050	1,380	3,410	3,650	2,420	3,310	2,970	4,180	1,740
18	2,190	1,240	1,030	2,600	1,240	3,170	4,060	1,680	6,500	3,000	4,820	1,690
19	2,210	1,040	1,080	2,670	1,670	3,520	4,670	2,280	7,050	2,940	3,580	1,660
20	2,160	1,030	1,260	2,460	1,470	3,870	4,960	2,410	4,360	2,660	2,760	1,740
21	1,590	1,060	1,430	2,890	1,480	3,380	4,040	2,620	3,790	2,140	2,450	1,720
22	1,120	1,400	1,330	2,370	1,510	3,060	3,600	2,630	3,440	2,260	2,270	1,630
23	1,700	1,340	1,350	2,240	1,520	3,390	3,670	3,070	3,440	2,350	2,320	1,650
24	1,850	1,190	1,170	2,220	1,310	6,830	3,420	3,370	3,600	2,420	3,570	1,630
25	1,650	1,020	1,270	2,580	1,360	12,100	3,520	3,400	2,940	2,230	5,340	1,700
26	1,960	985	1,370	2,220	13,500	8,880	3,270	2,660	3,160	2,390	3,900	1,750
27	1,850	1,090	1,410	2,140	7,660	9,500	3,140	2,460	2,910	2,340	3,180	1,660
28	1,500	1,060	1,330	1,600	4,430	11,100	3,060	2,450	3,060	2,900	2,560	1,680
29	1,250	1,060	1,450	2,170		7,900	2,640	2,820	2,800	3,000	2,300	1,740
30	1,620	985	1,380	2,220		6,500	2,820	3,700	3,060	2,400	2,190	2,000
31	1,720		1,190	2,210		5,590		3,620		2,400	2,980	
Month	Maximum					Minimum	Mean	Per square mile		Run-off in inches		
October	2,230					1,120	1,751	0.936		1.08		
November	1,770					985	1,264	.676		.75		
December	1,530					870	1,223	.654		.75		
January	8,950					1,600	3,038	1.62		1.87		
February	13,500					1,240	2,462	1.32		1.38		
March	32,200					3,080	8,053	4.31		4.97		
April	5,070					2,640	3,705	1.98		2.21		
May	3,700					1,680	2,885	1.54		1.78		
June	7,050					1,910	3,944	2.11		2.35		
July	3,520					2,140	2,717	1.45		1.67		
August	5,340					1,880	2,735	1.46		1.68		
September	2,340					1,630	1,881	1.01		1.13		
The year	32,200					870	2,979	1.59		21.60		

Little Tennessee River at McGhee, Tenn.

Location.- Water-stage recorder at junction of Little Tennessee and Tellico Rivers, 100 feet above highway bridge and half a mile south of McGhee, Monroe County. Zero of gage is 760.07 feet above mean sea level.

Drainage area.- 2,470 square miles, including Tellico River.

Records available.- January 1905 to December 1913, October 1918 to September 1934. November 1904 to December 1930 in reports of State geologist.

Average discharge.- 29 years (1905-34), 6,037 second-feet.

Extremes.- Maximum discharge during year, 54,800 second-feet Mar. 4 (gage height, 21.97 feet); minimum, 835 second-feet Dec. 1 (gage height, 3.25 feet). 1904-34: Maximum discharge, about 92,000 second-feet Apr. 2, 1920 (gage height, 30.5 feet); minimum, 480 second-feet Oct. 2, 1925. Maximum stage known, 39.0 feet March 1867.

Remarks.- Records good. Discharge estimated June 24 to July 1, 1933, Mar. 28-30, 1934. Flow regulated somewhat by large power developments upstream.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,110	8,940	4,440	24,000	6,990	8,190	7,710	5,310	4,360	2,500	2,507	3,670
2	1,920	7,420	4,120	18,700	6,990	7,710	7,950	5,790	4,020	2,570	3,447	3,670
3	1,760	5,320	3,810	15,900	6,750	7,230	6,990	9,650	3,900	2,540	3,327	2,450
4	1,730	4,440	3,700	14,200	6,750	6,990	6,510	7,230	3,670	2,450	4,487	2,290
5	2,620	4,120	3,810	12,600	6,990	6,750	6,030	7,230	3,670	1,840	3,677	2,860
6	5,820	3,920	3,700	11,200	6,270	6,510	6,510	14,800	3,440	2,200	2,577	4,020
7	3,920	3,700	3,500	10,400	7,920	6,750	8,430	10,200	3,440	2,180	2,577	3,320
8	2,720	3,700	4,020	10,200	24,800	8,430	6,990	13,400	3,900	2,150	2,577	2,360
9	2,180	5,440	3,700	15,400	16,200	6,990	6,510	12,400	4,130	2,150	2,527	2,640
10	2,210	5,440	4,340	15,400	10,400	7,470	6,030	12,600	4,360	2,060	2,297	2,450
11	2,440	4,230	8,860	12,400	9,900	6,990	5,910	17,700	5,310	2,400	2,347	2,040
12	2,440	3,920	21,400	12,400	9,150	6,510	6,030	15,600	5,070	2,680	2,247	1,910
13	2,060	3,500	21,500	10,900	8,190	6,270	5,670	12,400	4,950	3,210	2,610	1,800
14	1,950	3,500	24,200	9,650	15,900	7,230	5,310	9,900	4,690	2,310	2,647	2,150
15	1,920	3,200	26,200	9,150	45,100	10,900	5,190	8,670	4,480	2,310	2,387	2,020
16	2,620	3,300	15,600	8,670	31,600	9,150	10,200	7,950	3,210	2,360	2,367	1,960
17	12,400	3,400	16,600	8,190	19,200	7,710	13,200	7,470	2,860	2,270	2,687	1,740
18	11,100	3,400	17,400	7,950	15,200	8,430	9,900	6,750	2,560	2,680	3,907	2,110
19	6,470	8,160	13,000	7,470	12,900	10,600	8,910	6,270	2,680	2,450	3,107	2,150
20	4,880	9,340	11,100	6,990	16,400	15,900	8,190	5,910	2,610	2,860	2,297	2,060
21	3,700	6,010	9,590	6,750	19,200	15,600	6,990	5,670	2,660	2,570	2,310	2,020
22	3,500	4,990	9,340	6,990	14,400	12,200	6,990	5,670	2,980	2,520	2,297	1,910
23	2,900	4,550	9,340	8,190	12,400	10,200	6,510	5,670	2,760	2,660	2,247	1,930
24	2,900	4,020	8,860	6,990	10,900	8,910	6,750	5,550	2,000	2,580	2,247	1,860
25	2,900	3,920	12,600	7,470	10,400	8,430	7,950	5,310	2,500	2,220	2,247	1,800
26	2,900	7,590	18,700	10,600	10,400	8,910	6,990	5,190	2,700	2,680	2,110	1,950
27	4,620	9,340	17,900	9,150	9,400	7,710	6,270	5,550	3,100	4,130	1,937	2,040
28	5,100	6,240	55,300	8,670	8,670	7,230	5,910	6,510	2,900	4,240	2,067	2,290
29	3,600	5,210	61,300	7,710		6,750	5,550	4,950	2,700	3,100	2,297	2,310
30	3,100	4,660	31,900	7,230		6,510	5,190	4,710	2,400	2,270	3,447	1,840
31	3,200		27,600	7,230		6,510		4,360		2,150	6,510	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12,400	1,730	3,661	1.48	1.71
November	9,340	3,200	5,157	2.09	2.33
December	61,300	3,500	15,400	6.23	7.18
January	24,000	6,750	10,600	4.29	4.95
February	45,100	6,270	13,550	5.49	5.72
March	15,900	6,270	9,441	3.42	3.94
April	13,200	5,190	7,109	2.88	3.21
May	17,700	4,360	8,283	3.35	3.86
June	5,310	2,000	3,450	1.40	1.56
July	4,240	1,840	2,558	1.04	1.20
August	6,510	1,930	2,778	1.12	1.29
September	4,020	1,740	2,317	.938	1.05
The year	61,300	1,730	6,915	2.80	38.00

Note.- Records Dec. 29, 1932, to Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Little Tennessee River at McGhee, Tenn.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,260	1,910	978	2,310	2,610	5,070	6,990	3,900	3,560	4,020	2,570	2,980
2	1,590	1,800	995	7,470	2,640	9,450	6,270	4,130	2,860	4,020	2,590	2,760
3	2,270	1,760	1,120	4,360	2,450	31,900	5,670	4,130	3,100	3,440	2,700	2,730
4	2,360	1,670	1,300	3,320	2,360	47,300	5,070	4,130	3,560	2,540	3,100	2,860
5	2,310	1,260	1,570	3,100	2,500	31,100	4,950	4,130	3,440	3,320	2,640	2,980
6	2,240	1,480	1,760	3,440	2,450	17,700	4,830	3,440	4,360	3,670	2,470	2,610
7	2,060	1,330	1,860	11,200	2,450	12,200	4,590	3,440	7,470	3,670	2,700	2,380
8	1,300	1,590	1,630	12,700	2,450	9,900	4,360	3,900	6,030	3,780	3,210	2,680
9	1,690	1,540	1,240	6,510	2,590	8,670	6,030	3,900	7,710	3,320	2,980	2,590
10	2,150	1,740	1,060	4,830	2,240	7,230	5,430	4,020	8,430	2,750	2,860	2,430
11	1,840	1,330	1,190	3,900	1,690	6,510	4,950	3,900	8,430	2,980	2,660	1,970
12	1,970	1,260	1,240	3,560	1,950	5,430	4,590	3,100	6,750	2,980	2,310	1,860
13	1,910	1,330	1,460	3,670	2,110	5,430	4,360	3,670	5,790	2,980	2,560	1,910
14	1,860	1,480	1,460	3,440	1,950	4,950	4,130	3,560	5,070	3,100	7,230	1,930
15	1,190	1,480	1,370	3,440	2,020	4,360	4,130	3,210	4,360	3,440	5,670	2,020
16	1,440	1,400	1,010	2,430	1,930	4,360	4,130	4,240	4,130	3,210	3,670	1,950
17	2,060	1,300	944	2,570	1,740	4,130	4,830	5,190	4,020	3,780	5,320	1,970
18	2,560	1,280	1,080	3,100	1,520	3,900	5,430	2,980	5,920	2,980	7,710	1,910
19	2,380	1,220	1,220	3,100	1,670	4,360	7,710	2,980	9,660	3,670	3,560	1,840
20	2,310	1,100	1,350	2,860	2,020	6,990	8,670	3,210	8,190	3,100	4,020	1,880
21	2,200	1,080	1,630	3,320	1,740	5,790	6,510	3,320	4,590	2,520	3,670	1,930
22	1,220	1,650	1,610	3,210	1,740	4,630	5,430	3,900	4,240	2,310	2,980	1,860
23	1,260	1,870	1,480	2,760	1,780	5,190	5,070	4,360	3,780	2,570	3,100	1,820
24	2,060	1,480	1,370	2,730	1,630	12,400	4,710	4,360	4,240	2,570	4,590	1,760
25	2,080	1,120	1,390	2,860	2,740	21,800	4,710	4,360	3,670	2,750	6,510	1,840
26	2,130	1,080	1,670	2,640	19,000	14,400	4,360	3,670	3,320	2,680	6,270	1,860
27	2,110	1,120	1,820	2,590	13,100	11,600	4,130	3,100	3,320	2,540	4,590	1,880
28	1,990	1,130	1,670	2,110	6,750	14,900	4,240	3,100	3,210	2,980	3,670	1,930
29	1,330	1,190	1,540	2,430		10,900	3,560	3,100	3,440	4,240	3,100	2,060
30	1,550	1,050	1,630	2,540		8,910	3,670	4,480	3,210	3,210	2,750	2,860
31	1,950		1,420	2,520		7,710		4,360		2,980	2,440	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						2,380	1,190	1,885	0.763		0.88	
November						1,910	1,050	1,394	.564		.63	
December						1,880	944	1,390	.563		.65	
January						12,700	2,110	3,904	1.58		1.82	
February						19,000	1,520	3,279	1.33		1.38	
March						47,300	3,900	11,270	4.56		5.26	
April						8,670	3,560	5,117	2.07		2.31	
May						5,190	2,980	3,783	1.53		1.76	
June						9,650	2,860	4,995	2.02		2.25	
July						4,240	2,310	3,165	1.28		1.48	
August						7,710	2,310	3,781	1.53		1.76	
September						2,980	1,780	2,201	.891		.99	
The year.						47,300	944	3,856	1.56		21.17	

Cullasaja Creek at Highlands, N. C.

Location.- Water-stage recorder a quarter of a mile below municipal dam, half a mile below Big Creek, and 2 miles northwest of Highlands, Macon County. Zero of gage is 3,373.63 feet above mean sea level.

Drainage area.- 13.5 square miles.

Records available.- December 1927 to September 1934.

Extremes.- Maximum discharge during year, 590 second-feet Mar. 3 (gage height, 2.81 foot); minimum, 4.9 second-feet Nov. 14 (gage height, 0.26 foot); minimum daily discharge, 7.9 second-feet Nov. 16.

1927-34: Maximum discharge (estimated), 2,420 second-feet Aug. 15, 1928; minimum, 2.1 second-feet Sept. 11, 18, 1932 (gage height, 0.14 foot); minimum daily discharge, 5.4 second-feet Nov. 9, 10, 1930, Jan. 3, 1931.

Remarks.- Records good except those estimated Nov. 1, 2, Dec. 26-29, Mar. 11-16, July 18-20, Aug. 9-11, 30, 31, Sept. 1, 29, which are fair. Flow regulated during low stages by power plant upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	9	8.5	156	24	58	79	52	38	85	27	25
2	9.3	9	8.8	75	33	150	73	47	43	69	28	25
3	9.3	14.9	22	51	30	474	69	45	52	70	23	24
4	10.2	14.9	23	47	31	475	65	42	58	69	25	24
5	8.2	32	12.9	102	32	264	61	42	52	58	26	24
6	9.7	22	15.7	83	31	175	58	43	70	51	23	22
7	10.2	14.2	33	274	29	139	54	39	72	49	46	27
8	10.2	11.6	18.0	133	28	120	55	36	93	56	33	23
9	9.7	11.1	16.4	94	26	105	61	36	139	54	20	20
10	9.7	10.2	13.4	76	24	94	50	35	102	54	15	19.5
11	9.3	10.2	13.4	65	29	85	50	36	77	52	20	18.7
12	8.8	9.7	13.4	63	35	80	45	33	68	47	32	18.7
13	8.8	9.7	12.9	63	30	70	45	33	58	43	26	19.5
14	8.8	9.3	12.9	52	27	70	41	38	51	39	82	32
15	8.2	8.5	13.4	47	28	65	46	101	47	36	43	54
16	8.8	7.9	12.9	47	28	60	68	62	43	47	36	30
17	14.2	8.2	12.9	43	26	58	87	56	42	36	40	24
18	13.4	9.3	12.9	41	24	55	73	51	162	35	35	22
19	9.7	9.3	38	40	32	63	62	45	72	45	34	24
20	8.8	9.3	56	38	27	65	52	41	58	40	28	33
21	10.2	9.7	31	36	24	58	50	41	51	36	25	33
22	12.9	16.4	25	36	28	52	50	71	47	40	23	28
23	12.0	12.5	21	36	26	52	48	58	54	33	87	55
24	11.6	13.4	18.7	33	23	85	51	46	67	32	66	40
25	12.5	10.2	17.2	35	105	94	51	42	42	28	52	23
26	10.6	9.3	40	38	239	82	45	41	39	34	41	24
27	8.8	8.8	30	33	83	295	43	41	36	40	38	36
28	8.8	8.8	25	31	63	150	35	40	35	35	34	26
29	8.8	8.5	25	24		109	46	42	98	39	32	80
30	9.3	8.2	18.0	25		94	68	40	100	34	30	47
31	9.3		31	23		85		38		30	25	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	14.2	8.2	9.98	0.739	0.85
November	32	7.9	11.5	.852	.95
December	56	8.5	21.0	1.56	1.80
January	274	23	62.7	4.64	5.35
February	239	23	41.6	3.08	3.21
March	475	52	125	9.26	10.68
April	87	41	56.0	4.15	4.63
May	101	33	45.5	3.37	3.88
June	162	55	65.6	4.86	5.41
July	85	28	45.6	3.38	3.90
August	97	15	35.4	2.62	3.02
September	80	18.7	30.0	2.22	2.48
The year.	475	7.9	45.9	3.40	46.16

Cullasaja Creek at Cullasaja, N. C.

Location.- Water-stage recorder at Cullasaja, Macon County, 1 mile below mouth of Ellijay Creek and $\frac{3}{4}$ miles above mouth. Prior to May 23, 1934, staff gage at same site and datum was used. Zero of gage is 2,023.50 feet above mean sea level.

Drainage area.- 87 square miles.

Records available.- June 1907 to December 1909, February 1921 to September 1934.

Average discharge.- 15 years, 327 second-feet.

Extremes.- Maximum discharge recorded during year, 2,740 second-feet Mar. 3 (gage height, 8.30 feet); minimum, 38 second-feet Nov. 30, Dec. 1 (gage height, 0.70 foot).

1907-9, 1921-34: Maximum discharge recorded, 9,080 second-feet, estimated, Aug. 15, 1928 (gage height, 17.04 feet); minimum, 19 second-feet Sept. 18-22, 1925 (gage height, 0.32 foot).

Maximum stage known, 17.2 feet in July 1916.

Remarks.- Records good. Slight diurnal fluctuation from power operations upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	43	42	444	109	202	294	173	113	281	97	112
2	44	43	41	202	102	319	257	155	134	188	98	102
3	44	54	116	130	90	1,940	246	146	150	204	96	98
4	43	68	73	116	90	1,700	223	138	173	206	96	96
5	43	73	54	223	90	942	212	138	169	174	121	95
6	43	73	55	182	84	629	202	155	179	148	90	88
7	43	56	109	473	84	473	192	146	208	143	138	88
8	42	48	68	359	78	444	182	146	258	148	138	92
9	40	48	57	234	78	346	212	138	439	163	101	86
10	41	47	52	182	78	319	182	123	332	198	91	79
11	41	45	51	155	78	257	173	123	262	196	114	79
12	40	44	52	173	102	234	155	116	219	171	112	81
13	40	44	54	164	96	223	155	109	192	154	105	81
14	40	44	54	138	78	212	146	116	169	133	243	95
15	40	41	52	123	78	192	138	246	152	188	151	144
16	40	41	52	116	78	192	223	223	135	178	114	105
17	73	43	52	109	78	173	192	192	128	146	200	91
18	50	43	52	102	78	164	257	164	404	132	144	88
19	47	44	68	96	84	164	223	146	216	151	122	83
20	45	43	138	96	78	223	192	138	171	141	108	84
21	43	43	78	96	78	173	182	130	150	118	96	92
22	52	68	60	96	78	164	164	182	143	116	91	88
23	51	52	52	96	78	173	164	173	129	108	250	100
24	46	47	52	90	68	359	192	136	182	103	347	100
25	41	46	51	90	269	534	173	128	128	100	265	89
26	41	45	96	96	905	281	155	120	115	100	194	81
27	41	44	73	84	332	869	155	120	122	151	161	101
28	41	41	63	84	234	695	146	116	113	130	149	97
29	41	40	60	73		473	182	130	168	130	130	196
30	42	39	59	73		359	173	123	319	120	121	141
31	43		78	90		332		116		110	112	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					73	40	44.0	0.506		0.58		
November					73	39	46.3	.555		.62		
December					138	41	65.0	.747		.86		
January					473	73	154	1.77		2.04		
February					905	68	134	1.54		1.60		
March					1,940	164	444	5.10		5.88		
April					294	138	191	2.20		2.46		
May					246	109	145	1.67		1.92		
June					439	113	192	2.21		2.47		
July					281	100	155	1.76		2.03		
August					347	90	142	1.63		1.88		
September					196	79	98.4	1.13		1.26		
The year					1,940	39	151	1.74		23.60		

Nantahala River at Almond, N. C.

Location.- Water-stage recorder at concrete highway bridge at Almond, Swain County, about a quarter of a mile above confluence with Little Tennessee River. Prior to June 6, 1934, a staff gage 500 feet downstream was used. Zero of present gage is 1,595.46 feet and of former gage, 1,593.12 feet above mean sea level.

Drainage area.- 177 square miles.

Records available.- April 1912 to November 1917, January 1921 to September 1934.

Average discharge.- 18 years, 545 second-feet.

Extremes.- Maximum discharge recorded during year, 7,510 second-feet Mar. 3 (gage height, 5.50 feet); minimum, 82 second-feet Oct. 18.

Remarks.- Records fair to June 5 and good thereafter except those estimated for Aug. 15-23, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	113	88	1,850	224	501	670	409	391	442	257	330
2	130	110	91	825	250	770	625	390	286	410	247	278
3	161	108	110	361	184	5,140	580	372	310	432	234	260
4	116	119	246	286	184	4,370	540	356	324	424	228	260
5	105	130	126	335	196	2,730	501	356	433	342	222	267
6	102	154	140	277	196	1,720	467	372	495	318	210	234
7	99	116	212	1,280	180	1,400	467	356	525	310	381	228
8	102	105	140	822	173	1,160	433	571	856	342	415	222
9	96	99	116	540	180	930	580	384	1,080	350	318	216
10	96	96	116	409	177	822	467	351	806	358	264	204
11	102	99	113	356	180	720	467	372	689	484	250	202
12	102	105	116	351	241	625	421	340	1,090	464	240	202
13	99	108	133	351	216	580	415	324	728	354	256	210
14	94	108	136	296	184	540	402	319	560	338	348	216
15	102	102	136	272	188	540	378	384	520	299	300	231
16	84	91	126	283	192	467	433	540	466	296	280	243
17	140	96	123	259	188	467	433	467	428	281	500	210
18	99	113	116	232	188	433	467	372	1,210	264	400	196
19	88	102	133	220	228	427	540	351	940	288	350	188
20	91	102	250	216	165	501	501	340	700	267	320	182
21	91	99	165	216	158	433	467	324	590	250	270	182
22	105	300	147	204	192	421	427	346	585	240	230	202
23	123	143	140	204	216	433	421	351	480	225	300	188
24	136	110	130	196	188	1,100	467	319	451	225	485	188
25	108	102	126	192	268	1,590	467	310	419	225	552	190
26	108	102	216	208	2,420	1,160	415	300	392	337	500	190
27	99	96	192	196	875	1,460	427	296	371	335	384	219
28	102	94	154	188	580	1,160	402	281	412	448	334	210
29	108	96	140	184		930	402	351	507	384	303	204
30	105	88	136	168		822	415	319	516	330	338	333
31	165		158	180		720		314		274	318	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				161	84	107	0.605	0.70				
November				300	88	114	.644	.72				
December				250	88	144	.814	.94				
January				1,850	158	378	2.14	2.47				
February				2,420	158	315	1.78	1.86				
March				5,140	421	1,130	6.38	7.36				
April				670	378	470	2.66	2.97				
May				571	281	362	2.05	2.36				
June				1,210	286	580	3.28	3.66				
July				484	225	333	1.88	2.17				
August				552	210	324	1.83	2.11				
September				333	182	223	1.26	1.41				
The year.				5,140	84	374	2.11	28.72				

Tuckasegee River at Tuckasegee, N. C.

Location.- Water-stage recorder at Tuckasegee, Jackson County, three-quarters of a mile below East Fork of Tuckasegee River.

Drainage area.- 144 square miles.

Records available.- June to September 1934.

Extremes.- Maximum discharge during period, 1,160 second-feet July 28 (gage height, 3.31 feet); minimum, 144 second-feet Sept. 12 (gage height, 1.63 feet).

Remarks.- Records good except that for June 18, which was estimated.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										355	194	222
2										276	186	205
3										291	175	194
4										315	222	186
5										257	285	182
6										230	213	171
7										218	205	221
8										226	230	190
9										271	186	167
10										316	171	157
11										311	186	154
12										276	313	147
13										239	293	192
14										213	226	295
15										344	226	295
16										348	182	276
17										247	539	239
18									750	233	343	209
19									515	230	276	186
20									383	205	230	171
21									337	186	209	171
22									306	190	194	167
23									290	175	551	175
24									305	167	558	182
25									261	164	466	167
26									243	246	360	175
27									234	266	306	197
28									239	394	290	182
29									331	321	257	455
30									362	239	266	290
31										222	235	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May												
June 18-30					750	234	351	2.44	1.18			
July					394	184	257	1.78	2.05			
August					558	171	277	1.92	2.21			
September					455	147	207	1.44	1.61			
The year												

Tuckasegee River at Dillsboro, N. C.

Location.- Water-stage recorder at county footbridge, at Dillsboro, Jackson County, half a mile below mouth of Scott Creek. Prior to May 23, 1934, staff gage half a mile upstream was used. Zero of recording gage and of staff gage is 1,950.28 feet and 1,957.55 feet respectively above mean sea level.

Drainage area.- 348 square miles.

Records available.- June 1928 to September 1934.

Extremes.- Maximum discharge during year, 6,270 second-feet Feb. 26 (gage height, 6.0 feet, from graph based on gage readings); minimum, 146 second-feet Nov. 26, Dec. 2, 4 (gage height, 0.70 foot).
1928-34: Maximum discharge recorded, 14,000 second-feet Aug. 15, 1928 (gage height, estimated, 11.2 feet at former site); minimum (estimated), 140 second-feet Sept. 2, 3, 1930.

Remarks.- Records good. Slight diurnal fluctuation caused by operation of small power plant three-quarters of a mile upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	175	172	1,040	308	690	980	588	466	743	364	434
2	326	159	159	814	298	834	892	557	471	639	379	399
3	208	182	162	415	280	3,980	810	528	602	578	346	379
4	196	200	156	415	275	4,320	770	498	639	596	341	360
5	193	313	204	445	285	2,830	730	498	744	504	543	365
6	200	385	249	980	275	1,890	690	498	758	460	424	331
7	193	319	445	1,430	285	1,540	690	471	756	429	409	341
8	196	219	334	1,320	275	1,220	730	687	770	476	476	379
9	200	193	262	810	257	1,120	935	471	1,580	493	409	327
10	196	189	236	545	249	935	730	444	1,260	621	365	299
11	189	199	244	475	271	810	690	444	1,010	658	403	290
12	193	193	249	475	334	850	690	419	849	590	504	327
13	189	189	215	475	324	850	655	419	751	543	654	313
14	185	185	228	475	285	810	598	394	652	471	468	439
15	215	185	215	445	257	620	598	620	602	419	445	493
16	189	175	211	385	262	620	690	730	561	766	369	471
17	385	178	208	355	244	588	690	730	521	482	1,010	384
18	313	189	215	345	249	557	730	588	1,240	434	758	379
19	240	185	232	334	266	588	730	498	970	482	549	318
20	204	178	236	329	280	620	690	471	671	419	445	304
21	182	185	240	303	257	588	655	444	602	384	409	327
22	185	189	228	319	240	557	620	528	572	424	379	318
23	200	355	228	313	236	588	588	557	603	365	602	290
24	236	244	219	303	223	810	598	466	672	350	917	318
25	196	168	208	303	500	1,770	620	455	526	360	926	318
26	172	159	308	319	3,740	1,320	557	429	487	424	639	322
27	196	159	308	298	1,050	2,300	528	450	450	565	532	350
28	196	165	294	294	730	2,150	528	419	487	490	504	350
29	196	172	244	294		1,430	588	549	498	726	460	558
30	189	172	219	294		1,270	620	578	645	487	555	628
31	196		236	298		1,070		543		429	487	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	385	172	211	0.606	0.70
November	385	159	205	.589	.66
December	445	156	238	.684	.79
January	1,430	294	506	1.45	1.67
February	3,740	223	448	1.29	1.34
March	4,320	557	1,290	3.71	4.25
April	980	528	686	1.97	2.20
May	730	394	515	1.48	1.71
June	1,580	450	712	2.05	2.29
July	786	350	511	1.47	1.70
August	1,010	341	522	1.60	1.73
September	628	290	370	1.06	1.18
The year.	4,320	156	519	1.49	20.25

Tuckasegee River at Bryson, N. C.

Location.- Water-stage recorder 400 feet below bridge on State Highway 288 in Bryson, Swain County, and half a mile below mouth of Deep Creek. Zero of gage is 1,716.70 feet above mean sea level.

Drainage area.- 673 square miles.

Records available.- November 1897 to September 1934.

Average discharge.- 35 years (1899-1934), 1,590 second-feet.

Extremes.- Maximum discharge during year, 15,300 second-feet Mar. 3 (gage height, 8.13 feet); minimum, 295 second-feet Oct. 27 (gage height, 0.79 foot); minimum daily discharge, 313 second-feet Nov. 18, 1917.
1897-1934: Maximum discharge recorded, about 31,000 second-feet Nov. 19, 1906 (gage height, 13.2 feet). Maximum discharge, 39,600 second-feet, previously published for Mar. 19, 1899 (gage height, 11.0 feet), is much too large. Minimum, 27 second-feet Sept. 10, 1925 (gage height, 0.48 foot); minimum daily discharge, 31 second-feet Sept. 9, 10, 1925 (due to filling reservoir on Oconalufy River); minimum daily discharge (normal regulation), 196 second-feet Oct. 13, 1925.

Remarks.- Records good except those estimated for Apr. 5-27, which are fair. Some regulation caused by operation of power plant on Oconalufy River.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	470	376	340	2,630	740	1,420	2,010	1,190	966	1,290	707	884
2	652	367	340	1,930	707	2,470	1,820	1,100	932	1,390	764	776
3	674	376	385	1,190	696	10,000	1,680	1,040	1,100	1,030	663	740
4	500	480	570	968	674	10,300	1,580	1,010	1,140	1,140	630	707
5	460	470	440	1,190	696	6,980	1,500	980	1,380	980	860	776
6	440	590	460	1,330	674	4,550	1,500	1,110	1,510	956	729	674
7	430	450	740	4,320	620	3,480	1,450	1,060	1,630	836	908	641
8	430	385	600	3,100	610	2,980	1,550	1,080	1,390	908	944	707
9	421	331	460	1,910	610	2,530	2,150	1,160	2,280	980	788	620
10	421	340	421	1,460	570	2,150	1,750	944	3,110	1,060	707	600
11	403	331	403	1,220	550	1,910	1,600	1,010	2,440	1,190	729	580
12	412	350	394	1,150	696	1,720	1,500	920	1,860	1,110	956	600
13	403	358	421	1,150	685	1,630	1,400	860	1,580	1,010	896	652
14	394	349	421	1,010	600	1,520	1,400	860	1,360	1,110	1,560	718
15	385	331	412	944	590	1,440	1,350	944	1,240	944	1,210	824
16	385	313	403	872	610	1,350	1,300	1,260	1,120	1,210	956	788
17	590	313	403	824	590	1,290	1,300	1,520	1,060	920	1,800	707
18	652	322	394	776	570	1,240	1,450	1,120	2,420	836	1,660	674
19	430	340	460	776	610	1,220	1,700	1,010	2,260	866	1,190	610
20	403	340	812	768	570	1,480	1,850	932	1,500	812	993	570
21	403	394	685	740	570	1,280	1,750	908	1,310	729	884	580
22	376	685	520	729	600	1,180	1,600	1,100	1,170	812	812	610
23	412	510	480	752	610	1,310	1,450	1,240	1,100	696	894	600
24	421	394	412	707	550	2,420	1,350	968	1,310	663	1,710	590
25	385	367	450	696	854	4,080	1,450	896	1,070	641	1,690	570
26	385	358	809	729	5,890	3,080	1,300	848	956	707	1,290	600
27	358	349	800	696	2,500	4,090	1,200	848	920	980	1,080	620
28	376	340	610	663	1,680	4,290	1,210	812	980	944	1,030	685
29	367	340	560	630		3,080	1,140	1,040	956	1,170	920	909
30	355	331	520	450		2,530	1,190	1,420	1,040	944	920	1,340
31	367		540	500		2,260		1,110		788	1,010	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					674	358	438	0.651		0.75		
November					656	313	366	.574		.64		
December					812	340	505	.750		.86		
January					4,320	450	1,190	1.77		2.04		
February					5,890	550	926	1.38		1.44		
March					10,300	1,180	2,940	4.37		5.04		
April					2,150	1,140	1,520	2.26		2.52		
May					1,520	812	1,040	1.55		1.79		
June					3,110	920	1,440	2.14		2.39		
July					1,390	641	958	1.42		1.64		
August					1,860	630	1,040	1.55		1.79		
September					1,340	570	698	1.04		1.16		
The year.					10,300	313	1,090	1.62		22.06		

Scott Creek at Sylva, N. C.

Location.- Water-stage recorder just below Gunter Creek at Sylva, Jackson County.
Zero of gage is 2,033.38 feet above mean sea level.

Drainage area.- 56 square miles.

Records available.- February 1921 to March 1922; May 1928 to September 1934.

Extremes.- Maximum discharge during year, 4,000 second-feet May 8 (gage height, 4.90 feet); minimum, 5.0 second-feet Jan. 30 (gage height, 0.80 foot).
1928-34: Maximum discharge, 5,650 second-feet July 10, 1929 (gage height, 6.00 feet); minimum, that of Jan. 30, 1934.

Remarks.- Records good except those estimated for Oct. 1, 2, which are fair. Sylva Paperboard Co. diverts 2,000,000 gallons daily (3.1 second-feet) around station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	28	29	126	40	71	117	77	69	222	52	52
2	38	29	28	67	36	116	107	77	67	114	49	49
3	37	32	35	52	37	851	104	77	65	92	47	44
4	35	32	34	49	40	584	99	77	67	83	46	44
5	34	43	30	66	38	302	97	77	77	67	51	44
6	33	36	38	71	35	185	92	88	88	65	44	41
7	33	30	49	187	33	155	90	79	92	65	52	41
8	33	28	33	102	33	158	92	189	92	75	52	40
9	33	28	32	77	32	136	125	83	99	71	43	38
10	33	26	32	64	28	122	104	71	97	73	47	40
11	32	27	29	57	34	112	99	75	81	86	62	37
12	32	26	30	62	43	104	92	67	77	73	61	46
13	30	33	33	55	34	99	90	67	71	77	77	47
14	28	29	32	50	30	97	88	65	67	61	71	46
15	29	27	30	46	32	90	92	71	59	58	52	47
16	34	27	30	43	33	88	99	95	56	58	47	44
17	63	28	32	42	30	86	104	97	56	51	79	41
18	32	29	30	40	30	86	112	79	122	54	92	41
19	29	30	36	40	35	86	112	75	81	51	75	40
20	27	27	60	38	28	90	102	73	67	49	59	40
21	27	32	38	38	30	83	95	71	63	47	52	46
22	29	69	34	37	34	77	92	77	61	61	49	41
23	29	35	33	38	32	83	90	69	117	46	65	40
24	29	33	35	35	29	127	97	65	112	43	81	40
25	27	32	34	37	106	152	88	61	75	47	65	41
26	27	34	49	36	322	127	83	59	67	54	54	40
27	28	30	38	36	100	167	83	61	65	58	49	43
28	28	30	35	35	77	152	79	61	76	58	46	43
29	29	29	34	29	133	81	99	63	63	43	49	49
30	29	30	33	22	125	81	90	71	61	63	92	92
31	28		36	29	120			81		51	67	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				63	27	32.1	0.573	0.66				
November				69	26	31.5	.562	.63				
December				60	28	34.9	.623	.72				
January				187	22	55.0	.982	1.13				
February				322	28	50.4	.900	.94				
March				851	71	180	2.86	3.30				
April				125	79	96.2	1.72	1.92				
May				189	59	79.1	1.41	1.63				
June				122	56	77.3	1.38	1.54				
July				222	43	68.8	1.23	1.42				
August				92	43	57.8	1.03	1.19				
September				92	37	44.6	.796	.89				
The year				851	22	65.8	1.18	15.97				

Oconalufy River at Cherokee, N. C.

Location.- Water-stage recorder at cable footbridge a quarter of a mile above Cherokee Indian Reservation, three-quarters of a mile above Cherokee, Swain County, and 2 miles above mouth of Soco Creek. Prior to May 17, 1934, staff gage at same site and datum was used. Zero of gage is 1,938.51 feet above mean sea level.

Drainage area.- 133 square miles.

Records available.- January 1921 to September 1934.

Average discharge.- 13 years, 393 second-feet.

Extremes.- Maximum discharge during year, 5,320 second-feet Mar. 3 (gage height, 8.20 feet); minimum, 80 second-feet Nov. 25 to Dec. 3 (gage height, 7.66 feet).
1921-34: Maximum discharge recorded, 8,990 second-feet, estimated, Jan. 21, 1922 (gage height, 9.50 feet); minimum, 56 second-feet Sept. 9, 1925 (gage height, 3.49 feet).

Remarks.- Records good except those estimated for Jan. 31 to Feb. 2, which are fair. Slight diurnal fluctuation during low stages caused by operation of power plant a quarter of a mile above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	90	80	1,660	160	325	456	245	240	332	190	190
2	162	90	80	576	170	1,320	417	235	235	313	190	182
3	130	90	155	372	161	4,620	378	225	275	230	165	169
4	115	90	133	297	155	4,620	354	216	281	230	162	182
5	112	103	96	456	151	2,300	325	211	348	230	221	186
6	109	98	115	378	144	1,320	360	348	385	245	162	162
7	106	90	162	2,440	140	864	319	225	342	207	300	155
8	112	90	115	1,100	133	776	337	211	297	211	235	161
9	106	90	96	614	153	614	652	203	378	230	198	144
10	100	86	90	470	127	804	470	198	1,300	225	182	137
11	100	86	90	360	130	470	391	203	828	297	177	133
12	100	86	90	337	140	436	366	203	562	235	225	137
13	98	86	90	308	137	391	342	190	450	230	182	147
14	96	86	88	264	124	342	308	192	372	338	576	155
15	98	86	86	235	124	319	291	177	331	259	366	161
16	140	86	86	216	124	297	319	270	291	235	286	147
17	98	86	86	207	121	275	286	264	275	211	391	140
18	96	86	90	190	115	269	325	225	936	198	354	133
19	96	86	88	194	144	264	436	207	712	207	291	127
20	93	86	270	190	130	264	540	190	443	194	254	124
21	90	86	151	186	124	249	423	186	372	177	230	130
22	90	158	133	186	124	249	378	342	325	235	216	137
23	90	96	109	194	118	354	372	291	297	177	270	147
24	90	88	103	177	106	958	542	250	325	169	342	127
25	90	83	100	169	288	1,000	319	207	270	162	360	127
26	90	80	270	173	1,160	1,060	319	194	240	158	319	127
27	90	80	207	169	504	1,060	308	186	240	233	286	133
28	90	80	155	162	391	910	291	177	245	230	254	161
29	90	80	137	165	776	776	259	290	207	245	230	264
30	90	80	130	165	614	614	254	536	259	225	216	406
31	90		140	140		504		286		194	211	
Month				Maximum		Minimum		Mean		Per square mile	Run-off in inches	
October				162		90		102		0.767	0.86	
November				158		80		89.6		.674	.75	
December				270		80		123		.925	1.07	
January				2,440		160		411		3.09	3.56	
February				1,180		106		199		1.60	1.66	
March				4,520		249		907		6.32	7.86	
April				552		254		364		2.74	3.06	
May				536		177		237		1.78	2.05	
June				1,300		207		402		3.02	3.37	
July				338		158		228		1.71	1.97	
August				576		162		259		1.95	2.25	
September				406		124		160		1.20	1.34	
The year				4,520		80		291		2.19	29.73	

Tellico River at Tellico Plains, Tenn.

Location.- Water-stage recorder 200 feet above highway bridge on Tellico Plains-Murphy road and 1 mile northeast of Tellico Plains, Monroe County. Zero of gage is 846.84 feet above mean sea level.

Drainage area.- 120 square miles.

Records available.- July 1925 to September 1927, October 1930 to September 1934. October 1927 to September 1930 at station half a mile upstream.

Extremes.- Maximum discharge during year, 5,560 second-feet Mar. 3 (gage height, 8.90 feet); minimum, 13 second-feet Nov. 17 (gage height, 0.85 foot).
1925-34: Maximum discharge, about 9,560 second-feet Mar. 23, 1929 (gage height at upper station, 10.9 feet); minimum, 13 second-feet Sept. 7, 1925 (gage height, 0.25 foot).

Remarks.- Records good. Discharge estimated Jan. 13-20.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	36	36	668	118	225	420	211	110	183	140	231
2	57	38	38	330	111	708	375	203	294	249	124	215
3	48	38	49	199	100	3,460	354	195	370	167	124	195
4	46	44	112	155	95	2,430	312	187	350	167	117	347
5	40	42	61	172	93	1,240	280	187	497	152	148	266
6	38	42	85	182	90	770	266	270	987	150	110	207
7	38	44	114	1,510	88	580	253	183	920	140	256	183
8	36	40	74	548	88	520	248	155	630	378	294	163
9	33	36	61	315	88	420	343	155	480	272	241	149
10	33	33	57	232	83	370	258	127	500	199	167	140
11	33	33	52	199	83	325	280	152	465	194	146	133
12	31	33	50	219	95	280	276	146	335	266	297	133
13	31	33	65	209	100	258	136	330	179	244	130	130
14	33	33	65	193	86	231	231	133	266	155	1,650	130
15	34	31	72	178	86	219	223	149	231	171	695	159
16	40	31	67	163	86	199	231	345	207	195	385	133
17	160	27	67	150	83	197	359	361	203	136	962	127
18	63	36	70	136	81	187	356	244	840	136	1,180	117
19	46	31	76	124	86	235	610	195	480	122	845	110
20	44	31	79	116	80	475	515	163	338	110	580	106
21	40	38	74	116	83	380	395	149	271	102	440	100
22	40	161	65	111	88	320	343	286	235	98	356	96
23	40	70	61	111	93	348	312	252	207	92	334	96
24	38	48	63	106	83	1,990	280	179	195	89	400	105
25	36	40	63	102	222	1,640	253	149	235	89	612	102
26	36	40	138	106	1,580	913	223	136	175	107	625	98
27	34	38	116	102	428	987	227	124	155	157	475	166
28	40	36	93	102	264	925	227	122	146	375	385	130
29	36	38	86	95		695	215	136	179	440	325	133
30	36	36	81	57		565	215	130	143	290	289	373
31	36		86	131		490		114		175	262	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				160	31	43.1	0.359		0.41			
November				151	27	41.6	.347		.39			
December				138	36	73.4	.612		.71			
January				1,510	57	230	1.92		2.21			
February				1,580	80	166	1.38		1.44			
March				3,460	187	728	6.07		7.00			
April				515	215	301	2.51		2.80			
May				361	114	183	1.52		1.75			
June				987	110	360	3.00		3.38			
July				440	89	184	1.53		1.76			
August				1,650	110	426	3.55		4.09			
September				373	96	159	1.32		1.47			
The year				3,460	27	242	2.02		27.38			

Clinch River at Cleveland, Va.

Location.- Water-stage recorder 300 feet above highway bridge in Cleveland, Russell County.

Drainage area.- 536 square miles.

Records available.- October 1920 to September 1934.

Average discharge.- 12 years (1921-23, 1924-34), 707 second-feet.

Extremes.- Maximum discharge during year, 8,610 second-feet Mar. 3 (gage height, 11.62 feet); minimum, 39 second-feet Feb. 10 (gage height, 0.96 foot); minimum daily discharge, 83 second-feet Oct. 13.

1920-34: Maximum stage recorded, 21.1 feet (former site) Dec. 22, 1926 (discharge not determined); minimum discharge, that of Feb. 10, 1934; minimum daily discharge, 42 second-feet Oct. 5, 1930.

Remarks.- Records excellent. Discharge estimated because of ice Jan. 31.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	71	72	188	98	910	1,270	442	154	94	143	210
2	83	69	71	302	96	2,060	1,040	409	145	105	159	179
3	80	78	74	283	98	7,620	850	391	132	125	204	154
4	74	92	80	260	100	6,500	732	369	127	107	434	143
5	71	94	81	219	112	5,500	698	347	143	103	519	135
6	66	92	112	216	110	3,220	880	330	159	103	306	127
7	66	94	148	561	96	2,040	761	314	176	89	219	122
8	66	92	159	715	96	3,940	704	290	154	80	400	112
9	64	87	135	556	94	4,700	2,600	268	140	81	283	112
10	69	83	115	409	71	2,600	3,670	260	137	94	213	98
11	66	80	98	314	85	1,700	2,280	339	140	89	165	98
12	64	72	89	257	83	1,200	1,880	364	146	107	146	87
13	63	71	87	236	92	975	1,520	302	222	219	135	87
14	66	78	78	213	92	790	1,200	268	283	204	140	81
15	67	71	83	182	92	687	975	267	179	137	162	81
16	67	71	80	171	100	604	850	280	146	125	171	94
17	103	86	78	154	110	540	880	284	122	103	646	105
18	103	74	80	146	112	490	1,380	253	122	89	1,390	194
19	100	71	96	155	112	650	1,850	236	171	85	556	176
20	87	71	182	132	107	3,490	3,670	210	264	89	352	151
21	81	74	298	130	98	2,770	2,280	194	207	117	246	120
22	74	85	250	127	105	1,620	1,580	185	156	103	210	105
23	71	80	176	125	122	3,540	1,240	191	127	87	197	98
24	71	89	140	122	122	5,300	1,010	176	115	89	233	94
25	71	81	120	125	331	5,000	910	168	105	76	437	89
26	67	80	287	127	5,070	3,580	790	162	98	69	708	93
27	66	78	485	120	3,000	3,400	704	154	92	78	1,070	85
28	69	78	382	115	1,260	6,000	665	148	89	98	670	98
29	69	72	257	112		3,490	581	151	85	159	437	137
30	64	71	191	87		2,200	490	154	112	174	314	301
31	66		162	80		1,620		159		154	246	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				103	83	73.2	0.137		0.16			
November				94	66	78.8	.147		.15			
December				485	71	153	.285		.33			
January				715	80	223	.416		.48			
February				5,070	71	431	.804		.84			
March				7,620	480	2,859	5.23		6.14			
April				3,670	490	1,331	2.48		2.77			
May				442	148	259	.483		.56			
June				285	85	148	.276		.31			
July				219	69	111	.207		.24			
August				1,590	135	371	.692		.80			
September				301	81	125	.233		.26			
The year				7,620	63	515	.961		13.05			

Clinch River at Speer Ferry, Va.

Location.- Water-stage recorder at highway bridge half a mile below Copper Creek, three-quarters of a mile from Speer Ferry, Scott County, and $1\frac{1}{2}$ miles below Clinchport.

Drainage area.- 1,131 square miles (revised).

Records available.- October 1920 to September 1934.

Average discharge.- 14 years, 1,630 second-feet.

Extremes.- Maximum discharge during year, 17,000 second-feet Mar. 4 (gage height, 16.49 feet); minimum, 65 second-feet Oct. 14 (gage height, 1.10 feet); minimum daily discharge, 101 second-feet Oct. 12.

1920-34: Maximum discharge recorded, 37,200 second-feet Feb. 3, 1925 (gage height, 24.35 feet); minimum, 63 second-feet Sept. 19, 1932 (gage height, 1.07 feet); minimum daily discharge, 77 second-feet Oct. 7, 8, 14, 15, 22, 1930.

Remarks.- Records excellent. Low-water flow regulated by mill just above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	116	125	834	221	2,560	3,080	908	302	172	360	513
2	109	110	123	1,460	234	3,570	2,440	345	294	234	382	424
3	112	154	140	1,080	247	13,000	2,020	797	286	234	439	364
4	128	227	164	804	247	15,800	1,680	758	268	211	894	330
5	124	196	167	686	244	12,400	1,560	719	247	214	784	309
6	114	193	242	661	247	8,670	1,410	686	250	196	726	283
7	111	181	309	2,990	247	5,260	1,560	649	294	183	519	268
8	102	170	351	4,080	234	7,420	1,360	612	338	196	491	268
9	102	156	305	2,140	221	11,000	2,100	564	313	184	497	261
10	104	150	261	1,410	205	7,780	6,890	536	338	167	439	224
11	102	141	221	998	199	4,540	5,740	606	313	214	364	214
12	101	140	196	784	190	3,210	3,820	637	302	268	315	193
13	107	138	184	706	211	2,440	3,080	643	305	261	464	190
14	106	130	172	643	211	2,020	2,440	558	298	264	932	181
15	102	120	167	564	214	1,680	1,960	524	391	410	588	172
16	104	120	164	497	211	1,460	1,680	524	313	317	792	184
17	143	120	167	454	208	1,290	1,620	552	254	268	1,410	196
18	140	120	190	410	214	1,160	1,900	558	272	254	1,730	224
19	172	116	234	382	230	1,130	3,100	513	330	254	1,730	234
20	164	123	373	368	227	3,430	5,500	465	347	199	936	286
21	150	123	449	347	218	6,820	5,620	420	382	184	668	254
22	140	132	497	334	214	4,540	3,580	396	351	240	524	224
23	135	132	444	334	221	5,240	2,690	489	286	294	559	205
24	127	140	355	326	227	15,300	2,140	481	247	196	974	208
25	118	138	294	317	697	11,700	1,780	410	218	168	873	202
26	110	138	825	305	9,950	9,950	1,560	351	196	160	1,070	184
27	111	138	1,510	305	10,300	7,060	1,410	326	178	158	1,230	190
28	112	133	1,030	302	4,300	9,220	1,290	305	167	196	1,360	211
29	111	123	745	286		9,770	1,160	294	170	429	936	237
30	111	125	541	258		5,980	1,010	313	178	373	759	705
31	116		429	224		4,060		313		358	782	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	172	101	119	0.105	0.12
November	227	110	141	.125	.14
December	1,510	123	367	.324	.37
January	4,060	224	815	.721	.85
February	10,300	190	1,092	.956	1.01
March	15,800	1,130	6,421	5.68	6.55
April	6,890	1,010	2,573	2.27	2.53
May	908	294	540	.477	.55
June	391	167	281	.248	.28
July	429	150	240	.212	.24
August	1,730	315	791	.699	.81
September	705	172	265	.234	.26
The year.	15,800	101	1,141	1.01	13.69

Clinch River near Tazewell, Tenn.

Location.— Water-stage recorder at Evans Ferry, 600 feet below highway bridge on Tazewell-Morristown road, 2½ miles above mouth of Indian Creek, and 7 miles south-east of Tazewell, Claiborne County. Zero of gage is 1,012.55 feet above mean sea level.

Drainage area.— 1,500 square miles.

Records available.— August 1927 to September 1934.

Extremes.— Maximum discharge during year, 22,500 second-feet Mar. 24 (gage height, 10.84 feet); minimum, 134 second-feet Oct. 11 (gage height, 1.07 feet).
1927-34: Maximum discharge, 37,800 second-feet Jan. 31, 1932 (gage height, 14.9 feet); minimum, 122 second-feet Sept. 23, 1932 (gage height, 1.02 feet).

Remarks.— Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	154	149	171	950	348	3,780	4,210	1,350	430	296	462	942
2	149	158	166	1,850	331	3,970	3,360	1,220	416	268	490	673
3	145	175	184	1,850	336	12,100	2,770	1,130	404	296	512	558
4	149	207	207	1,380	348	20,500	2,380	1,070	391	336	512	498
5	149	290	226	1,110	354	17,600	2,150	1,020	398	307	1,010	468
6	166	296	313	1,020	348	12,430	2,000	974	398	373	916	430
7	166	268	442	3,380	342	7,560	1,930	927	398	348	870	391
8	154	247	449	5,700	342	6,380	1,860	870	416	313	692	615
9	149	231	449	3,840	336	11,560	2,310	804	462	307	644	404
10	142	212	398	2,380	319	10,980	5,540	751	847	290	576	373
11	138	202	360	1,720	296	6,610	7,800	782	846	268	567	331
12	145	198	319	1,330	290	4,210	5,260	804	550	325	482	302
13	142	195	302	1,130	279	3,180	4,010	814	505	472	410	279
14	142	184	279	1,010	290	2,610	3,560	814	456	425	1,150	263
15	142	171	268	892	290	2,220	2,770	750	416	552	1,387	258
16	154	171	258	782	296	1,930	2,380	711	490	1,476	858	241
17	202	162	252	702	302	1,720	2,220	720	475	658	1,320	241
18	202	154	296	635	290	1,580	2,300	720	449	442	1,930	247
19	202	162	360	592	302	1,580	2,840	711	505	423	2,150	263
20	188	166	475	550	313	3,840	5,370	654	490	360	1,710	279
21	217	162	558	598	307	6,840	7,080	592	492	319	1,080	325
22	207	175	592	498	302	6,610	5,370	550	482	296	793	331
23	198	184	610	475	302	6,630	3,820	520	490	274	748	307
24	184	188	567	468	302	17,900	3,020	567	512	408	2,460	274
25	171	175	475	466	557	19,200	2,450	584	373	325	2,080	252
26	166	184	1,460	449	8,520	13,920	2,150	512	325	252	2,450	263
27	154	179	2,000	430	14,520	10,140	1,930	462	285	226	2,080	258
28	154	179	1,820	416	8,240	10,140	1,780	436	263	343	1,900	247
29	145	186	1,310	410		12,720	1,640	423	313	360	1,650	313
30	154	179	962	395		8,610	1,500	423	302	545	1,180	857
31	145		730	360		5,590		430		505	996	
Month	Maximum			Minimum			Mean			Per square mile	Run-off in inches	
October	217			138			164			0.109	0.13	
November	296			149			193			.129	.14	
December	2,000			166			557			.371	.43	
January	5,700			360			1,215			.610	.65	
February	14,520			279			1,407			.938	.98	
March	20,500			1,580			8,221			5.48	6.32	
April	7,800			1,500			3,252			2.17	2.42	
May	1,350			423			744			.496	.57	
June	847			263			452			.301	.34	
July	1,476			226			400			.287	.31	
August	2,460			462			1,159			.773	.89	
September	942			241			382			.255	.28	
The year.	20,500			138			1,618			1.01	13.74	

Clinch River near Coal Creek, Tenn.

Location.- Water-stage recorder 300 feet upstream from highway bridge at Massengill's store, three-quarters of a mile above mouth of Coal Creek, and $3\frac{1}{2}$ miles east of town of Coal Creek, Anderson County. Zero of gage is 808.95 feet above mean sea level.

Drainage area.- 2,960 square miles.

Records available.- May 1927 to September 1934.

Extremes.- Maximum discharge during year, 43,000 second-feet Mar. 25 (gage height, 22.49 feet); minimum, 342 second-feet Oct. 11-15 (gage height, 0.57 foot).
1927-34: Maximum discharge, about 63,400 second-feet Mar. 23, 1929 (gage height, 30.7 feet); minimum discharge, that of Oct. 11-15, 1933; minimum gage height, 0.54 foot Oct. 20, 1930, Sept. 19, 20, 1932.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	381	358	389	2,130	1,020	13,000	10,100	2,880	957	1,050	1,490	1,780
2	373	365	397	2,640	1,000	10,400	7,790	2,670	957	1,490	1,200	1,680
3	366	469	445	3,410	975	25,500	6,300	2,470	939	1,010	1,150	1,360
4	358	666	542	3,630	939	32,400	5,340	2,370	921	860	1,440	1,200
5	350	584	559	3,410	948	38,500	4,700	2,220	976	807	1,550	1,120
6	350	584	821	3,740	948	28,100	4,220	2,170	1,050	851	1,490	1,030
7	350	602	1,390	14,600	939	19,200	3,870	2,070	984	912	1,870	966
8	350	584	1,440	15,800	921	12,600	3,760	1,970	921	1,250	1,780	904
9	350	509	1,220	13,800	912	12,200	3,870	1,820	939	1,000	1,540	957
10	350	493	1,060	9,070	695	20,300	5,080	1,730	1,170	921	1,300	948
11	342	485	965	5,470	868	17,900	8,750	1,820	1,730	939	1,160	939
12	342	453	830	4,100	851	11,000	10,300	2,220	2,420	851	1,250	851
13	342	445	765	5,430	842	7,640	7,640	2,020	1,750	966	1,040	754
14	342	421	776	2,990	816	5,880	6,160	1,870	1,400	1,180	2,120	711
15	342	405	722	2,670	798	4,820	5,210	1,820	1,200	1,350	2,770	702
16	350	381	695	2,370	798	4,220	4,580	1,730	1,080	3,100	2,880	668
17	421	365	666	2,120	789	3,760	4,220	1,730	1,000	3,100	2,130	643
18	477	373	776	1,920	798	3,410	3,980	1,680	1,160	1,870	2,880	609
19	437	373	1,100	1,780	798	3,650	4,460	1,580	1,190	1,490	3,210	618
20	445	365	1,580	1,630	789	8,270	7,490	1,540	1,120	1,350	3,210	609
21	453	373	1,530	1,540	789	10,100	11,900	1,440	1,070	1,040	2,880	592
22	437	373	1,480	1,490	816	12,400	13,000	1,400	1,010	921	2,080	601
23	461	397	1,440	1,400	816	12,600	9,070	1,550	1,010	807	1,730	643
24	469	389	1,440	1,350	798	20,800	6,740	1,250	1,040	745	1,680	634
25	429	405	1,290	1,300	1,070	38,200	5,470	1,160	1,060	711	3,540	601
26	413	397	2,860	1,250	9,240	35,300	4,580	1,200	895	789	3,870	576
27	381	373	4,820	1,250	19,200	25,000	4,100	1,160	798	685	3,980	568
28	373	351	4,580	1,200	24,500	19,700	3,760	1,070	737	660	3,760	568
29	365	397	3,860	1,120		19,200	3,430	1,020	720	1,580	3,100	643
30	356	389	2,660	1,060		19,900	3,210	1,000	1,060	1,350	2,770	807
31	358		2,230	1,020		14,200		993		1,300	2,170	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				477	342	384	0.130		0.15			
November				656	358	437	.148		.17			
December				4,820	389	1,470	.497		.57			
January				15,800	1,020	3,700	1.25		1.44			
February				24,500	789	2,674	.903		.94			
March				38,500	3,650	16,460	5.56		6.41			
April				13,000	3,210	6,103	2.06		2.30			
May				2,880	993	1,723	.582		.67			
June				2,420	720	1,108	.374		.42			
July				3,100	660	1,191	.402		.46			
August				3,980	1,040	2,220	.750		.86			
September				1,780	568	842	.284		.32			
The year				38,500	342	3,208	1.08		14.71			

Powell River near Jonesville, Va.

Location.- Water-stage recorder at highway bridge 2 miles southeast of Jonesville, Lee County, and 6 miles above Wallen Creek.

Drainage area.- 327 square miles.

Records available.- November 1931 to September 1934.

Extremes.- Maximum discharge during year, about 11,100 second-feet Mar. 3 (gage height, 17.93 feet); minimum, 18 second-feet Oct. 2, 3 (gage height, 0.86 foot).
1931-34: Maximum discharge, about 17,500 second-feet Jan. 30, 1932 (gage height, 25.64 feet); minimum, that of Oct. 2, 3, 1933.

Remarks.- Records excellent below 3,000 second-feet; fair above.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	24	27	206	86	742	725	290	81	97	128	122
2	22	24	27	642	94	1,330	590	266	90	113	162	102
3	18	29	33	445	97	8,740	490	249	137	137	172	89
4	19	34	54	301	95	4,900	423	233	92	99	508	82
5	23	38	74	243	95	2,740	394	218	82	115	365	92
6	22	42	113	236	90	1,710	346	207	84	97	221	86
7	22	43	218	2,200	86	1,140	319	196	81	78	160	76
8	21	43	141	2,250	79	3,650	294	179	82	62	257	70
9	19	38	92	839	79	4,390	443	160	82	95	146	64
10	19	34	73	514	72	1,890	851	152	120	109	109	58
11	21	29	58	357	60	1,110	775	233	179	177	95	54
12	21	29	52	283	70	775	650	230	141	169	94	51
13	21	27	49	266	76	605	595	193	135	113	89	48
14	21	25	49	240	78	509	552	174	107	141	117	70
15	22	27	47	204	73	440	514	160	94	128	117	66
16	23	25	47	162	73	373	476	174	81	295	237	57
17	44	27	49	167	73	330	495	190	73	170	381	52
18	67	27	62	150	68	301	595	169	74	122	440	52
19	61	25	74	143	68	400	1,740	152	117	95	327	51
20	43	25	210	141	68	1,330	3,290	137	150	76	227	49
21	34	27	256	130	64	1,380	1,630	117	117	74	162	47
22	29	29	162	122	64	905	1,020	118	95	67	130	45
23	27	29	117	120	73	3,050	800	117	82	60	141	43
24	24	31	95	126	76	6,350	640	126	74	56	230	38
25	24	34	62	118	304	3,450	528	111	70	51	297	40
26	23	30	399	115	6,450	2,220	449	100	66	45	381	45
27	23	28	720	111	2,480	1,940	410	92	64	53	357	62
28	23	28	352	109	1,040	2,960	398	87	67	223	280	57
29	22	27	224	107		1,880	346	86	70	277	204	66
30	23	27	160	97		960	312	84	113	201	155	378
31	23		128	79		905		82		198	128	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						67	18	26.6	0.081		0.09	
November						43	24	30.2	.092		.10	
December						720	27	137	.419		.48	
January						2,250	79	563	1.11		1.28	
February						6,450	60	433	1.32		1.38	
March						8,740	301	2,042	6.24		7.19	
April						3,290	294	703	2.15		2.40	
May						290	82	164	.502		.58	
June						179	64	96.7	.296		.33	
July						297	45	124	.379		.44	
August						508	89	220	.673		.78	
September						378	38	73.7	.225		.25	
The year.						8,740	18	369	1.13		15.30	

Powell River near Arthur, Tenn.

Location.- Water-stage recorder at highway bridge at McHenry's ford on U. S. Highway 25-E, 2-1/3 miles east of Arthur, Claiborne County, and 2 1/3 miles below mouth of Indian Creek. Zero of gage is 1,045.84 feet above mean sea level.

Drainage area.- 685 square miles.

Records available.- October 1919 to September 1934.

Average discharge.- 15 years, 1,225 second-feet.

Extremes.- Maximum discharge during year, 14,700 second-feet Mar. 4 (gage height, 15.48 feet); minimum, 76 second-feet Oct. 7 (gage height, 0.10 foot).
1919-34: Maximum discharge, about 27,800 second-feet Mar. 24, 1929 (gage height, 23.8 feet); minimum, that of Oct. 7, 1933; minimum gage height, 0.00 foot Sept. 10 and 11, 1925.
Maximum stage known, 27.2 feet Jan. 29, 1918.

Remarks.- Records good except those estimated Jan. 21, 22, 30, June 12-15, which are fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	82	90	98	455	235	2,040	1,970	722	243	222	396	339		
2	80	92	101	674	218	2,260	1,590	674	243	252	367	297		
3	80	110	131	1,040	222	7,570	1,350	636	235	202	269	274		
4	86	119	171	860	235	13,200	1,160	603	239	226	405	260		
5	82	125	186	746	248	7,480	1,040	570	283	292	498	256		
6	80	125	425	722	239	4,480	1,010	554	252	367	603	226		
7	76	122	642	3,790	235	3,050	890	520	248	367	450	218		
8	80	117	420	5,060	222	2,880	830	482	248	274	366	218		
9	82	114	376	3,780	214	5,940	1,160	450	230	283	320	320		
10	82	110	260	1,830	194	5,740	1,460	510	945	256	353	230		
11	86	108	190	1,200	190	3,220	1,590	1,040	980	243	365	182		
12	86	105	160	920	190	2,110	1,560	728	548	283	326	160		
13	80	98	146	800	175	1,590	1,360	598	396	420	306	153		
14	82	101	137	716	175	1,330	1,200	510	306	372	1,180	149		
15	82	103	128	642	179	1,130	1,100	466	310	410	576	140		
16	84	96	128	559	182	980	1,040	493	283	630	680	137		
17	105	94	143	488	175	860	1,010	455	252	482	1,070	164		
18	131	96	179	445	164	794	1,040	466	260	471	660	143		
19	119	101	248	410	179	980	1,790	425	292	324	640	125		
20	119	98	396	386	171	2,180	4,300	396	283	256	669	122		
21	137	103	420	376	168	2,720	4,770	357	287	210	515	119		
22	119	105	510	353	175	2,480	2,800	348	292	186	410	119		
23	108	108	400	339	175	3,810	2,040	324	248	175	367	112		
24	98	108	315	324	171	9,210	1,620	315	218	166	386	112		
25	92	108	256	306	788	10,500	1,330	301	194	149	510	103		
26	90	105	1,010	306	5,410	6,640	1,130	297	168	143	690	108		
27	92	103	1,490	292	5,770	4,860	1,010	269	153	131	1,170	101		
28	88	101	1,330	274	3,870	4,770	920	252	146	128	630	112		
29	88	105	800	265		4,860	860	252	146	226	690	146		
30	88	103	559	250		3,480	794	256	160	788	510	274		
31	90		435	235		2,480		248		520	410			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					137		76		93		0.136		0.16	
November					125		90		106		.155		.17	
December					1,490		98		393		.574		.66	
January					5,060		235		930		1.36		1.57	
February					8,770		164		842		1.23		1.28	
March					13,200		794		4,052		5.92		6.82	
April					4,770		794		1,527		2.23		2.49	
May					1,040		248		468		.683		.79	
June					930		146		303		.442		.49	
July					788		128		305		.445		.51	
August					1,180		206		554		.809		.93	
September					339		101		181		.264		.29	
The year					13,200		76		815		1.19		16.16	

Coal Creek at Coal Creek, Tenn.

Location.- Staff gage 700 feet below mouth of Valley Fork and half a mile above highway bridge at Coal Creek, Anderson County.

Drainage area.- 23.3 square miles.

Records available.- June 1932 to April 1934 (discontinued).

Extremes.- Maximum discharge recorded during period Oct. 1, 1933 to Apr. 30, 1934, about 1,850 second-feet Jan. 7 (gage height, 5.70 feet); minimum recorded, 1.0 second-foot Oct. 9, 15, 16, 22, Nov. 27 (gage height, 0.18 foot).
1932-34: Maximum gage height recorded, 12.4 feet (lower gage) Mar. 19, 1933 (discharge not determined); minimum discharge, 0.3 second-foot Sept. 15, 19, 1932.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	1.5	1.2	102	11	45	40					
2	1.3	1.5	1.2	62	11	1,260	35					
3	1.5	35	23	40	10	664	31					
4	1.4	6.0	12	31	9.3	380	29					
5	1.3	10	7.3	43	9.3	148	27					
6	1.3	6.8	51	74	9.3	86	26					
7	1.3	3.6	24	1,100	8.3	63	24					
8	1.2	2.4	14	148	7.8	56	24					
9	1.1	1.8	10	80	7.8	42	24					
10	1.3	1.7	7.8	52	6.8	35	22					
11	1.2	1.5	6.8	40	6.3	34	22					
12	1.3	1.4	5.5	40	7.8	31	19					
13	1.2	1.5	7.3	35	7.8	28	18					
14	1.2	1.7	6.3	31	6.8	27	17					
15	1.0	1.4	6.8	28	6.3	25	16					
16	1.1	1.4	7.3	26	6.3	24	17					
17	1.5	1.3	6.3	24	5.5	22	21					
18	1.4	1.2	20	22	5.5	21	18					
19	1.3	1.2	84	21	8.3	204	34					
20	1.4	1.2	58	19	7.8	238	39					
21	1.2	1.7	33	19	8.8	104	33					
22	1.1	2.4	24	18	6.3	67	28					
23	1.3	1.7	18	17	7.3	158	30					
24	1.5	1.5	15	15	6.8	250	27					
25	1.4	1.4	13	14	81	276	24					
26	1.3	1.3	290	14	238	158	23					
27	1.5	1.1	68	13	104	120	24					
28	1.6	1.2	30	13	62	63	20					
29	1.3	1.2	28	11		65	19					
30	1.2	1.2	23	10		53	19					
31	1.5		21	10		45						
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				1.6	1.0	1.31	0.057	0.07				
November				35	1.1	3.29	.142	.16				
December				290	1.2	29.8	1.29	1.49				
January				1,100	10	70.1	3.03	3.49				
February				238	5.5	24.1	1.04	1.20				
March				1,260	21	155	6.71	7.74				
April				40	16	25.0	1.08	1.25				
May												
June												
July												
August												
September												
The year												

Emery River near Wartburg, Tenn.

Location.- Water-stage recorder at highway bridge on Wartburg-Lancing road $1\frac{1}{4}$ miles northwest of Wartburg, Morgan County, $1\frac{1}{4}$ miles below mouth of Rock Creek, and $5\frac{1}{2}$ miles above mouth of Obed River. Zero of gage is 1,002.85 feet above mean sea level.

Drainage area.- 80.6 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 1,650 second-feet July 1 (gage height, 6.60 feet); minimum, 0.5 second-foot Aug. 11 (gage height, 1.32 feet).

Remarks.- Records fair except those estimated for July 4 to Aug. 8 and discharges below 100 second-feet, which are poor.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									3.6	320	3.5	16
2									3.4	431	2.7	13
3									3.2	114	3.0	10
4									3.0	60	3.0	13
5									3.4	35	2.0	13
6									3.4	25	1.4	9.5
7									6.0	20	1.0	8.2
8									4.8	80	1.3	7.2
9									5.2	68	1.0	6.4
10									36	56	.7	5.2
11									28	50	2.2	4.4
12									18	45	3.6	3.4
13									13	40	9.0	3.0
14									11	35	49	2.6
15									8.9	29	15	2.8
16									6.0	25	11	3.0
17								27	4.8	18	7.2	3.2
18								24	44	14	7.6	2.8
19								21	79	11	8.9	2.3
20								14	38	9.0	11	2.1
21								13	19	7.4	7.6	1.7
22								14	11	6.2	5.6	1.3
23								22	8.9	5.2	33	1.0
24								19	7.2	4.4	216	1.0
25								12	7.6	3.7	906	.9
26								9.5	4.4	3.2	466	.8
27								7.6	4.4	3.5	161	.8
28								6.8	3.2	2.5	92	.8
29								5.6	29	4.5	55	1.1
30								5.6	30	8.0	33	2.1
31								4.4		5.0	22	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October												
November												
December												
January												
February												
March												
April												
May 17-31					27	4.4	13.7	0.170		0.09		
June					79	3.0	14.9	.185		.21		
July					431	2.5	49.6	.615		.71		
August					906	.7	69.1	.857		.99		
September					16	.8	4.75	.059		.07		
The year												

Emery River at Oakdale, Tenn.

Location.- Water-stage recorder 1,000 feet below highway bridge at Oakdale, Morgan County. Mud Lick Creek enters from left just above highway bridge. Zero of gage is 783.26 feet above mean sea level.

Drainage area.- 758 square miles.

Records available.- October 1929 to September 1934.

Extremes.- Maximum discharge during year, 40,100 second-feet Mar. 3 (gage height, 19.16 feet); minimum, 11 second-feet Nov. 1, 2 (gage height, 1.50 feet).
1929-34: Maximum discharge, that of Mar. 3, 1934; minimum, 0.4 second-foot Sept. 6, 7, 1930; minimum gage height, 1.12 feet Oct. 24, 1931.
Maximum stage known, 39.22 feet Mar. 23, 1929.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	11	36	1,310	309	2,460	1,780	618	197	630	72	168
2	67	11	34	2,540	346	12,000	1,420	572	159	2,510	56	133
3	61	21	42	2,000	350	31,200	1,190	512	211	749	47	110
4	51	24	48	1,540	368	12,200	975	461	432	438	44	100
5	46	50	76	1,600	350	5,540	868	418	381	286	42	89
6	41	75	518	2,330	338	3,470	797	394	432	200	33	80
7	38	114	1,490	2,560	309	2,460	744	403	705	168	29	70
8	36	110	931	10,200	282	2,000	666	363	612	405	34	66
9	34	94	616	4,680	270	1,840	680	308	451	612	38	60
10	31	85	438	2,950	263	1,520	673	297	646	533	38	53
11	28	78	341	2,110	234	1,280	594	562	1,280	594	49	45
12	26	64	285	1,720	234	1,090	594	1,070	875	666	101	60
13	24	61	265	1,890	241	943	550	712	1,460	636	277	45
14	23	55	289	1,620	241	860	507	533	1,280	418	1,050	41
15	22	49	305	1,370	234	777	456	441	777	346	325	56
16	22	46	293	1,190	220	706	422	436	512	297	224	53
17	23	41	269	1,010	207	618	441	829	366	263	147	45
18	24	36	323	890	200	561	585	1,280	408	197	125	41
19	26	36	906	804	200	1,900	1,650	905	905	147	261	36
20	25	35	3,020	751	200	11,900	3,020	692	666	125	217	33
21	24	35	2,180	680	200	5,850	1,940	523	451	98	214	30
22	23	36	1,390	642	200	3,600	1,370	456	317	74	184	26
23	23	36	1,030	860	238	3,270	1,370	1,030	234	62	195	23
24	22	36	812	606	317	10,800	1,420	945	200	54	487	22
25	20	36	691	544	996	18,000	1,190	699	348	44	3,050	20
26	18	36	1,990	518	14,000	8,790	999	518	266	41	3,100	19
27	16	36	3,160	502	6,080	8,250	912	403	187	48	1,440	20
28	15	36	2,060	486	3,470	6,870	905	330	162	38	740	18
29	13	38	1,440	451		4,120	777	270	125	104	452	28
30	13	36	1,120	394		2,950	666	238	692	194	309	30
31	12		938	325		2,220		220		110	220	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	67	12	29.1	0.058	0.04
November	114	11	48.6	.064	.07
December	3,150	34	982	1.16	1.34
January	10,200	325	1,641	2.16	2.49
February	14,000	200	1,103	1.46	1.82
March	31,200	561	5,486	7.24	8.35
April	3,020	422	1,005	1.33	1.48
May	1,280	220	562	.741	.85
June	1,460	125	525	.639	.77
July	2,310	38	351	.463	.53
August	3,100	29	439	.579	.67
September	168	18	54.0	.071	.08
The year.	31,200	11	1,016	1.34	18.19

Daddy Creek near Crab Orchard, Tenn.

Location.- Water-stage recorder at site of former highway bridge on old State Highway 1, 3,000 feet above mouth of North Creek, 1.4 miles below mouth of Bird Creek, and 2 miles northwest of Crab Orchard, Cumberland County. Zero of gage is 1,571.31 feet above mean sea level. Prior to May 17, 1934, a staff gage at same site and datum was used.

Drainage area.- 93.8 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 4,760 second-feet Mar. 3 (gage height, 12.20 feet); minimum, 1.5 second-feet Oct. 15 (gage height, 0.71 foot). 1930-34: Maximum discharge recorded, that of Mar. 3, 1934; minimum, C.2 second-foot several days during October 1931 (gage height, 0.50 foot).

Remarks.- Records good above and fair below 50 second-feet.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	4.8	5.6	285	33	295	192	68	25	148	3.4	37
2	7.4	4.6	5.9	370	36	1,200	163	61	26	88	2.7	27
3	10	4.8	9.6	285	40	4,280	139	54	157	56	2.7	21
4	10	10	58	235	42	1,440	116	48	125	38	3.2	18
5	7.4	9.2	58	325	40	686	100	46	130	27	38	20
6	6.2	13	185	325	40	426	88	44	200	20	17	22
7	4.8	18	325	3,800	34	306	76	41	230	36	18	15
8	3.7	16	155	1,360	32	252	69	37	160	126	10	10
9	3.3	11	110	602	30	216	72	32	244	97	44	7.6
10	2.9	8.8	86	388	28	176	62	27	464	106	21	6.0
11	2.6	6.8	68	269	26	142	60	106	504	198	16	5.0
12	2.6	6.5	60	258	27	122	58	86	358	264	247	4.0
13	2.1	5.6	68	266	28	108	54	46	625	139	120	3.4
14	1.8	4.4	67	218	27	97	48	46	320	86	101	2.9
15	1.6	4.4	60	177	25	85	41	49	184	62	75	2.7
16	3.3	4.6	60	155	24	78	40	81	120	52	44	3.2
17	6.8	4.6	54	131	22	69	47	413	82	39	82	2.9
18	4.8	4.0	66	112	21	64	62	312	196	30	163	2.4
19	2.6	4.2	420	102	23	224	115	194	164	24	118	2.2
20	2.3	3.7	755	93	26	1,160	188	134	113	19	144	2.1
21	2.8	4.2	420	82	27	644	158	96	74	14	93	1.8
22	3.5	5.9	265	80	30	400	128	137	53	10	57	1.7
23	3.5	7.4	195	74	47	400	164	258	39	7.6	39	1.6
24	6.2	12	155	66	46	1,990	166	176	64	5.4	98	1.6
25	5.3	10	132	58	104	2,400	136	122	40	4.4	379	1.6
26	4.8	8.8	445	56	1,480	1,130	112	88	27	4.0	500	1.8
27	4.6	8.4	470	54	686	1,240	105	67	21	5.4	259	1.8
28	4.0	7.7	325	51	400	885	100	53	17	4.4	136	1.8
29	2.9	6.2	245	44		532	84	43	126	4.2	82	2.6
30	3.3	5.9	195	36		364	72	39	292	4.6	54	8.2
31	4.2		162	33		271		32		4.4	45	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				10	1.6	4.42	0.047		0.05			
November				18	3.7	7.52	.080		.09			
December				755	5.6	183	1.95		2.25			
January				3,800	33	355	3.57		4.12			
February				1,460	21	122	1.30		1.35			
March				4,280	64	699	7.45		8.58			
April				192	40	100	1.07		1.19			
May				413	27	97.9	1.04		1.20			
June				625	17	173	1.84		2.05			
July				264	4.0	55.6	.593		.68			
August				500	2.7	96.5	1.03		1.19			
September				37	1.6	7.96	.085		.09			
The year.				4,280	1.6	158	1.68		22.86			

White Creek near Glen Alice, Tenn.

Location.- Water-stage recorder a quarter of a mile above Hines Creek, half a mile above Cincinnati Southern Railroad bridge, and $1\frac{1}{2}$ miles southwest of Glen Alice, Roane County. Zero of gage is 758.41 feet above mean sea level.

Drainage area.- 127 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 1,440 second-feet Aug. 11 (gage height, 6.59 feet); minimum, 3.7 second-feet Sept. 23, 29 (gage height, 0.97 foot).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									28	67	16	59
2									23	89	12	47
3									20	44	13	36
4									18	29	112	48
5									18	20	48	45
6									18	15	27	30
7									31	66	52	24
8									26	104	77	20
9									31	76	53	18
10									53	72	33	15
11									59	91	523	12
12									64	75	400	12
13									67	52	237	12
14									45	38	412	10
15									31	26	231	9.1
16									24	26	190	9.9
17									20	20	448	10
18								326	40	18	414	8.4
19								209	51	31	271	7.3
20								149	36	18	198	6.5
21								112	27	12	136	5.5
22								152	20	8.4	103	5.2
23								160	16	6.7	79	5.7
24								126	14	5.4	178	5.4
25								98	14	4.6	376	5.2
26								78	11	112	433	4.5
27								64	9.1	66	257	4.0
28								53	17	33	175	3.8
29								43	19	29	125	5.2
30								39	42	26	92	21
31								33		19	79	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October												
November												
December												
January												
February												
March												
April												
May 16-31				326		33		117		0.921		0.48
June				67		9.1		29.7		.234		.28
July				112		4.6		42.0		.331		.38
August				523		12		187		1.47		1.70
September				59		3.8		16.8		.132		.15
The year												

White Creek at Glen Alice, Tenn.

Location.- Staff gage at highway bridge 1 mile southwest of Glen Alice, Roane County.

Drainage area.- 136 square miles.

Records available.- October 1930 to June 1934 (discontinued).

Extremes.- Maximum discharge recorded during year, about 35,500 second-feet Mar. 2 (gage height, 10.70 feet); minimum discharge recorded, 5.1 second-feet Oct. 23, 24; minimum gage height recorded, 1.44 feet Oct. 14, 15.
1930-34: Maximum discharge recorded, that of Mar. 2, 1934; minimum discharge recorded, 0.7 second-foot Oct. 27, 1931; minimum gage height recorded, 1.30 feet Sept. 29, 30, 1931.

Remarks.- Records fair below and poor above 4,000 second-feet.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.8	5.7	6.5	275	50	365	255	84	31			
2	11	5.7	6.5	445	53	11,900	208	79	27			
3	10	22	32	318	53	5,450	174	69	25			
4	9.4	15	24	255	50	1,650	150	62	22			
5	8.5	14	19	475	49	780	130	68	20			
6	7.7	15	48	535	47	535	113	85	20			
7	7.3	12	66	5,450	42	390	105	66	41			
8	7.1	9.8	41	1,080	41	318	103	55	32			
9	6.7	7.9	32	665	38	255	109	48	32			
10	6.4	7.1	27	418	36	215	89	42	99			
11	6.1	6.7	22	318	35	174	86	66	69			
12	6.1	6.7	20	295	37	153	81	53	79			
13	6.1	6.7	22	340	38	132	74	42	77			
14	5.7	6.1	22	318	36	123	68	38	53			
15	5.7	5.7	21	275	35	107	60	46	39			
16	6.4	5.7	21	239	32	100	57	70	28			
17	6.5	5.7	22	194	30	113	80	740	24			
18	6.1	5.7	27	166	29	82	61	365	53			
19	5.7	5.7	255	145	39	204	247	231	49			
20	5.6	5.7	565	128	39	1,080	295	162	47			
21	5.4	5.9	231	113	34	630	251	117	35			
22	5.4	8.5	159	99	41	445	208	159	25			
23	5.1	7.9	132	91	58	390	227	171	20			
24	5.1	7.9	103	85	60	5,450	198	132	22			
25	5.4	7.9	86	79	138	1,980	171	102	18			
26	5.7	7.9	740	75	2,030	1,080	150	81	15			
27	5.7	7.3	535	70	825	1,490	136	69	13			
28	5.7	6.7	340	65	505	920	121	57	20			
29	5.7	6.7	231	57		598	102	47	24			
30	5.7	6.5	174	48		418	92	43	24			
31	5.7		150	36		318		38				
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October				11	5.1	6.80	0.049	0.06				
November				22	5.7	8.26	.061	.07				
December				740	6.5	135	.993	1.14				
January				5,450	36	424	3.12	3.60				
February				2,030	29	161	1.18	1.23				
March				11,900	82	1,219	6.96	10.33				
April				295	67	141	1.04	1.16				
May				740	38	112	.824	.95				
June				99	13	36.1	.265	.30				
July												
August												
September												
The year.												

Suee Creek near Decatur, Tenn.

Location.- Water-stage recorder half a mile below Dry Fork, $4\frac{1}{2}$ miles above mouth of creek, and 5 miles north of Decatur, Meigs County. Zero of gage is 693.32 feet above mean sea level.

Drainage area.- 117 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge for period, 3,180 second-feet Aug. 23 (gage height, 8.57 feet); minimum, 13 second-feet Aug. 10 (gage height, 0.23 foot).

Remarks.- Records fair.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									54	54	18	54
2									51	302	18	44
3									51	65	18	40
4									51	51	78	58
5									130	40	28	58
6									99	34	18	40
7									113	58	65	30
8									58	157	44	30
9									58	65	20	28
10									86	51	18	28
11									58	44	34	25
12								95	82	34	28	28
13								82	58	30	25	28
14								69	51	30	544	25
15								95	44	28	58	99
16								174	44	40	34	34
17								272	54	23	95	30
18								151	119	30	237	25
19								119	68	40	252	23
20								99	44	25	99	23
21								86	40	23	51	23
22								342	34	20	40	23
23								192	30	20	720	23
24								130	30	20	564	23
25								99	34	18	232	20
26								86	30	23	204	23
27								78	25	25	108	23
28								69	28	25	82	23
29								65	28	28	65	85
30								65	25	25	78	198
31								58		20	113	
Month				Maximum	Minimum	Mean	Per square mile	Run-off in inches				
October												
November												
December												
January												
February												
March												
April												
May 12-31				342	58	121	1.03	0.77				
June				130	25	55.6	.475	.53				
July				302	18	46.7	.399	.46				
August				720	18	129	1.10	1.27				
September				193	20	59.8	.340	.38				
The year												

Richland Creek near Dayton, Tenn.

Location.- Water-stage recorder at Morgantown, Rhea County, $1\frac{1}{2}$ miles northwest of Dayton and $1\frac{1}{2}$ miles below mouth of Gooch Creek.

Drainage area.- 49.7 square miles. Former station at Dayton, 52.7 square miles (revised).

Records available.- June to September 1934. June 1927 to September 1931 for station at Dayton.

Extremes.- Maximum discharge during period, 230 second-feet June 12 (gage height, 2.20 feet); minimum, 0.5 second-foot Sept. 28, 29 (gage height, 0.00 foot).

Remarks.- Records good above 10 second-feet, fair below.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										21	2.9	22
2										15	2.0	18
3										14	1.9	14
4										8.6	13	15
5									17	5.7	9.5	16
6									26	4.6	5.6	12
7									37	17	3.6	9.4
8									28	80	17	17
9									125	56	26	10
10									182	40	11	6.7
11									172	36	8.2	5.8
12									232	32	151	5.2
13									150	22	105	4.4
14									90	15	47	3.9
15									62	12	28	3.9
16									42	14	20	3.7
17									30	13	104	3.3
18									74	14	160	3.1
19									51	17	197	2.5
20									32	9.2	176	1.6
21									23	6.6	102	1.1
22									17	3.9	71	1.0
23									13	2.9	50	.9
24									12	2.0	45	.8
25									11	1.8	95	.7
26									10	1.6	222	.6
27									6.6	1.9	132	.6
28									4.4	6.2	85	.5
29									32	9.6	59	.9
30									42	7.4	42	2.5
31										4.8	29	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October												
November												
December												
January												
February												
March												
April												
May												
June 5-30					232	4.4	58.5	1.18		1.14		
July					80	1.6	16.0	.322		.37		
August					222	1.9	65.2	1.31		1.51		
September					22	.5	6.24	.126		.14		
The year												

Hiwassee River below Hayesville, N. C.

Location.- Water-stage recorder three-quarters of a mile below mouth of Tusquitee Creek and 2 miles below Hayesville, Clay County. Zero of gage is 1,759.32 feet above mean sea level.

Drainage area.- 256 square miles.

Records available.- June to September 1934.

Extremes.- Maximum discharge during period, 2,610 second-feet Aug. 25 (gage height, 5.81 feet); minimum, 172 second-feet July 23, 25 (gage height, 2.30 feet).

Remarks.- Records good except those estimated, Aug. 4, 5, 7, 17, 18, 23, 24, which are fair.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1										313	253	353		
2										322	245	315		
3										370	233	292		
4										329	340	283		
5										270	380	279		
6										249	233	258		
7										258	600	245		
8										301	424	237		
9										310	306	220		
10										301	258	212		
11										495	330	208		
12										438	423	204		
13									438	306	433	212		
14									382	266	454	288		
15									343	241	428	253		
16									315	266	348	270		
17									310	233	500	224		
18									1,450	208	700	208		
19									846	258	689	197		
20									593	233	576	190		
21									480	201	459	186		
22									423	186	387	194		
23									377	186	600	212		
24									348	190	750	190		
25									324	381	1,230	246		
26									301	372	967	208		
27									288	553	641	241		
28									279	387	825	241		
29									283	470	449	297		
30									289	382	473	407		
31										292	372			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October														
November														
December														
January														
February														
March														
April														
May														
June 15-30					1,450		279		448		1.75		1.17	
July					553		186		309		1.21		1.40	
August					1,230		233		494		1.93		2.22	
September					407		186		246		.961		1.07	
The year														

Hiwassee River at Murphy, N. C.

Location.- Water-stage recorder 500 feet below concrete bridge in Murphy, Cherokee County, and half a mile above mouth of Valley River. Zero of gage is 1,510.62 feet above mean sea level.

Drainage area.- 410 square miles.

Records available.- June 1896 to June 1917, October 1918 to September 1934.

Average discharge.- 34 years (1898-1916, 1918-34), 969 second-feet.

Extremes.- Maximum discharge during year, 15,200 second-feet Mar. 3 (gage height, 10.87 feet); minimum, 68 second-feet several times in November and December (gage height, 1.50 feet); minimum daily discharge, 84 second-feet Nov. 26.
1896-1917, 1918-34: Maximum discharge, 23,100 second-feet Mar. 19, 1899 (gage height, 18.4 feet, old datum); minimum (estimated), 10 second-feet Dec. 3, 1924 (caused by filling of Andrews Reservoir); minimum daily discharge, 10 second-feet Dec. 3, 1924 (caused by ice and filling of Andrews Reservoir); minimum daily discharge (normal week-end regulation), 84 second-feet Nov. 26, 1933.

Remarks.- Records good except those estimated for Jan. 29-31, Sept. 15-17, which are fair. Flow regulated by power plant upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	169	207	250	1,770	428	806	1,010	761	404	361	397	526
2	309	207	238	1,130	456	934	899	680	612	530	413	494
3	393	207	92	658	423	9,020	834	611	456	538	362	444
4	225	257	319	501	257	6,980	782	564	490	638	336	426
5	238	253	238	508	319	3,910	751	564	626	495	782	429
6	190	170	257	475	296	2,260	710	592	956	398	375	394
7	201	207	334	1,280	294	1,620	700	545	992	390	754	364
8	145	190	312	1,180	276	1,450	670	517	775	561	948	356
9	207	190	290	782	316	1,160	899	482	962	568	546	340
10	174	207	119	580	306	1,010	720	491	1,190	489	403	293
11	218	225	197	499	162	899	710	611	930	729	499	311
12	174	120	218	617	380	792	670	566	792	726	708	305
13	169	214	238	545	333	741	621	355	710	498	623	304
14	180	185	270	455	281	720	602	464	621	474	731	356
15	140	196	283	397	336	670	592	575	564	305	591	440
16	186	150	250	380	312	651	670	690	555	409	474	380
17	270	180	104	348	179	542	751	680	401	403	765	320
18	231	290	238	334	317	564	762	555	1,810	318	1,310	304
19	190	94	263	319	242	621	792	573	1,420	371	1,080	300
20	185	212	305	305	278	877	813	390	997	326	761	283
21	232	190	319	298	250	690	731	456	792	421	621	276
22	196	372	305	312	287	641	628	561	686	179	529	283
23	145	298	305	325	352	614	631	649	654	250	1,010	323
24	212	218	214	272	325	2,420	656	466	532	283	1,270	283
25	201	320	198	274	891	3,440	798	437	572	326	1,800	283
26	196	84	278	290	4,360	2,170	631	422	499	678	1,670	362
27	212	218	348	288	1,610	1,970	592	340	461	590	1,040	353
28	270	185	276	230	982	1,890	611	398	468	872	813	374
29	155	169	302	220		1,490	564	414	464	782	690	416
30	163	207	332	200		1,250	690	434	506	592	670	591
31	212		212	290		1,110		406		473	573	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	393	140	207	0.505	0.68
November	372	84	207	.505	.56
December	348	92	255	.632	.72
January	1,770	200	515	1.26	1.46
February	4,360	162	840	1.32	1.38
March	9,020	542	1,740	4.24	4.39
April	1,010	564	715	1.75	1.95
May	751	340	524	1.28	1.48
June	1,810	401	726	1.77	1.98
July	872	179	483	1.18	1.36
August	1,800	336	759	1.85	2.13
September	591	276	363	.886	.99
The year.	9,020	84	587	1.43	19.47

Hiwassee River near Reliance, Tenn.

Location.- Water-stage recorder just above notch between rock bluffs, half a mile below mouth of Spring Creek, and 3 miles below highway bridge at Reliance, Polk County. Zero of gage is 718.66 feet above mean sea level.

Drainage area.- 1,220 square miles.

Records available.- October 1926 to September 1934. Records obtained at Reliance, 3 miles upstream, from August 1900 to December 1913, February 1919 to September 1926.

Extremes.- Maximum discharge during year, 30,000 second-feet Mar. 4 (gage height, 17.9 feet); minimum, 390 second-feet Nov. 20 (gage height, 2.63 feet).
1926-34: Maximum discharge, 40,600 second-feet Dec. 28, 1932 (gage height, 22.0 feet); minimum, 286 second-feet Sept. 5, 1930 (gage height, 2.33 feet).

Remarks.- Records good. Discharge estimated Jan. 19-24. Possibly slight diurnal fluctuation caused by operation of power plants near headwaters.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	633	563	574	1,560	810	2,310	2,800	1,940	1,150	1,300	1,180	1,510
2	639	580	645	4,390	1,220	4,500	2,660	1,840	1,490	1,300	1,040	1,420
3	1,070	591	663	2,200	1,220	16,300	2,420	1,740	1,940	1,360	1,040	1,340
4	865	608	574	1,560	1,110	23,700	2,310	1,640	1,640	1,300	1,000	1,420
5	687	675	765	1,560	895	12,200	2,200	1,600	2,200	1,460	1,890	1,510
6	639	627	630	1,600	895	6,590	2,090	1,740	3,750	1,260	1,500	1,220
7	585	568	930	5,010	895	4,580	1,990	1,640	5,290	1,110	1,110	1,150
8	585	591	895	4,890	862	3,700	1,990	1,510	3,420	1,300	2,900	1,070
9	581	574	791	2,780	850	3,580	2,310	1,600	2,780	1,590	1,940	1,040
10	536	558	735	2,040	862	2,780	2,200	1,420	3,700	1,510	1,340	1,000
11	546	568	552	1,640	862	2,480	2,040	1,420	3,160	1,460	1,110	930
12	558	621	615	1,510	753	2,260	2,040	1,340	2,480	1,940	1,420	930
13	580	541	705	1,690	1,040	2,040	1,840	1,340	2,360	1,560	1,510	895
14	530	502	717	1,560	965	1,940	1,790	1,180	2,040	1,260	2,200	930
15	546	546	759	1,380	862	1,840	1,690	1,300	1,740	1,220	1,640	1,180
16	597	591	759	1,260	895	1,740	1,790	2,030	1,600	1,040	1,510	1,180
17	862	602	735	1,180	895	1,740	2,640	2,640	1,460	1,110	2,060	1,110
18	791	530	591	1,110	711	1,560	2,310	1,890	2,580	1,040	3,100	1,000
19	729	645	723	1,070	862	1,690	2,420	1,640	3,980	950	3,940	930
20	597	497	830	1,040	765	2,660	2,540	1,560	2,720	965	2,420	895
21	597	563	862	1,020	817	2,600	2,260	1,340	2,090	895	1,840	830
22	597	1,040	862	1,000	810	2,090	2,040	1,820	1,790	965	1,560	824
23	645	1,150	798	1,000	830	2,140	1,940	2,200	1,640	717	1,460	817
24	585	830	778	1,000	895	8,130	1,940	1,640	1,560	741	2,750	895
25	661	675	675	930	1,540	12,200	2,460	1,590	1,420	810	3,700	830
26	615	735	895	930	10,600	7,180	2,090	1,300	1,380	1,040	5,050	830
27	574	519	965	930	5,440	5,370	1,890	1,260	1,220	1,420	3,100	1,000
28	563	519	1,000	895	3,030	5,710	1,840	1,150	1,180	1,860	2,310	1,000
29	591	568	862	810		4,580	1,740	1,180	1,220	2,310	1,940	1,150
30	591	558	830	784		3,700	1,970	1,300	1,220	1,840	1,690	1,560
31	530		830	645		3,290		1,180		1,460	1,940	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						1,070	530	639	0.524		0.60	
November						1,150	497	621	.509		.57	
December						1,000	552	766	.628		.72	
January						5,010	645	1,644	1.35		1.56	
February						10,600	711	1,808	1.23		1.28	
March						23,700	1,560	5,063	4.15		4.78	
April						2,900	1,090	2,121	1.74		1.94	
May						2,640	1,150	1,870	1.29		1.49	
June						5,290	1,150	2,206	1.81		2.02	
July						2,310	717	1,308	1.07		1.23	
August						5,050	1,000	2,038	1.67		1.92	
September						1,560	817	1,080	.885		.99	
The year						23,700	497	1,717	1.41		19.10	

Hiwassee River at Charleston, Tenn.

Location.— Water-stage recorder at Epperson packing plant, 250 feet above Southern Railway bridge at Charleston, Bradley County. Zero of gage is 665.53 feet above mean sea level.

Drainage area.— 2,300 square miles.

Records available.— January 1899 to December 1902, October 1920 to September 1934.

Records for November 1898 to April 1903, October 1919 to September 1924 published in reports of State geologist.

Average discharge.— 15 years (1919-34), 4,808 second-feet.

Extremes.— Maximum discharge during year, about 32,000 second-feet Mar. 4 (gage height, 23.5 feet); minimum, 960 second-feet Dec. 12 (gage height, 1.33 feet).

1920-34: Maximum discharge, 55,800 second-feet Dec. 29, 1932 (gage height, 28.58 feet); minimum, 280 second-feet Sept. 14, 1925 (gage height, 0.22 foot).

Maximum stage known, 34.0 feet Mar. 31, 1866.

Remarks.— Records good. Considerable regulation during low and medium stages caused by operation of power plants on Ocoee River.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	1,740	2,270	1,690	1,190	5,040	4,630	2,950	1,600	3,020	2,900	2,800
2	2,060	2,250	1,740	4,900	1,400	8,230	4,700	2,900	1,750	2,890	2,660	2,930
3	2,860	1,910	2,160	3,660	1,730	21,100	5,130	2,780	2,440	2,910	2,580	2,860
4	2,410	1,620	1,590	3,100	1,480	*27,000	5,060	2,790	3,290	2,440	2,460	2,860
5	3,100	1,560	1,580	2,980	1,370	*20,000	4,790	2,440	3,370	2,350	2,960	3,280
6	1,730	1,850	1,900	3,090	1,350	*13,000	4,590	2,320	5,650	2,720	3,430	2,970
7	1,260	2,210	1,630	9,680	1,380	*9,000	4,000	2,330	8,800	2,520	2,720	2,700
8	1,230	2,730	*1,400	11,700	1,280	*7,000	3,020	2,590	7,120	3,460	4,080	2,500
9	*1,120	2,720	*1,310	7,480	1,340	*6,000	3,520	2,740	5,700	3,880	3,820	2,060
10	*1,600	2,440	*1,160	4,580	1,310	*5,000	4,750	3,020	6,130	3,460	3,060	1,700
11	2,150	2,280	1,180	3,160	1,300	4,100	4,450	2,810	5,140	2,840	2,640	2,720
12	2,110	1,300	1,010	2,870	1,340	3,930	4,470	2,350	4,150	3,410	2,320	2,730
13	2,170	1,840	1,100	2,720	1,280	4,200	4,420	1,970	3,580	3,100	2,420	2,630
14	1,520	1,580	1,270	2,390	1,570	4,140	3,980	1,870	3,040	2,870	4,160	2,700
15	1,320	1,650	1,180	2,230	1,300	3,850	3,600	2,480	2,500	2,660	4,580	2,530
16	1,860	1,760	1,800	2,620	1,210	3,430	3,320	3,510	2,800	2,610	3,550	2,820
17	2,090	1,770	1,540	2,400	1,260	3,040	3,520	4,920	2,070	2,000	3,490	2,430
18	2,030	1,430	2,580	2,550	1,160	2,530	3,780	3,780	2,540	1,460	6,100	2,780
19	2,170	1,460	2,300	2,630	1,130	3,340	4,150	2,420	6,270	1,640	6,880	2,640
20	2,060	1,630	1,440	2,520	1,170	5,750	4,790	2,140	4,840	1,790	4,940	2,670
21	1,770	1,550	1,290	2,440	1,180	5,580	4,280	2,260	3,660	2,120	3,610	2,600
22	1,630	2,400	1,330	2,400	1,170	5,440	3,220	3,710	3,220	2,290	3,190	2,330
23	1,850	2,080	1,350	3,200	1,190	5,000	3,050	4,240	2,570	2,140	2,840	1,790
24	1,910	2,480	1,250	1,930	1,220	11,400	3,640	3,660	1,960	2,010	3,930	2,190
25	1,730	1,820	1,180	2,120	1,690	*18,000	3,650	2,870	2,320	2,160	6,530	2,350
26	1,800	1,760	1,480	1,640	11,400	*14,000	3,660	2,380	2,360	1,820	6,290	2,900
27	1,970	*1,320	1,570	1,540	*12,600	*12,000	3,930	1,870	2,540	2,300	5,840	2,500
28	1,610	*1,070	1,640	1,510	*6,510	*9,000	3,200	1,790	2,560	3,450	4,200	2,600
29	1,070	*1,970	1,460	1,430	*7,500	*2,500	2,580	1,910	2,200	4,910	3,490	2,690
30	1,250	2,630	1,280	1,420		*6,500	2,560	1,750	2,400	4,330	2,980	3,260
31	1,650		1,390	1,260		5,390		1,700		3,260	2,770	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3,100	1,070	1,842	0.801	0.92
November	2,730	1,070	1,897	.620	.91
December	2,580	1,010	1,515	.659	.76
January	11,700	1,260	3,227	1.40	1.61
February	12,600	1,130	2,268	.986	1.03
March	27,000	2,530	8,371	3.64	4.20
April	5,130	2,560	3,951	1.72	1.92
May	4,920	1,700	2,685	1.17	1.35
June	8,800	1,600	3,619	1.57	1.75
July	4,910	1,460	2,762	1.20	1.38
August	6,880	2,320	3,749	1.63	1.38
September	3,280	1,700	2,617	1.14	1.27
The year.	27,000	1,010	3,217	1.40	18.98

*Estimated.

Valley River at Tomotla, N. C.

Location.- Water-stage recorder at highway bridge at Tomotla, Cherokee County, half a mile above Rodgers Creek. Prior to May 11, 1934, chain gage w'th same datum at same site was used. Zero of gage is 1,555.64 feet above mean sea level.

Drainage area.- 106 square miles.

Records available.- June 1904 to December 1909, January 1914 to April 1917, October 1918 to September 1934.

Average discharge.- 22 years (1904-9, 1914-18, 1919-34), 274 second-feet.

Extremes.- Maximum discharge recorded during year, 5,200 second-feet Mar. 3 (gage height, 13.01 feet); minimum, 24 second-feet Nov. 16 (gage height, 0.63 foot).
1904-9, 1914-17, 1918-34: Maximum discharge recorded, 7,780 second-feet, estimated, Nov. 19, 1906 (gage height, 17.3 feet); minimum, 12 second-feet several times in August and September 1925 (gage height, 0.52 foot).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	37	38	934	132	258	295	187	98	169	84	153
2	40	37	69	556	106	488	270	176	106	142	86	142
3	95	42	61	187	97	2,960	234	164	112	178	77	132
4	132	39	54	153	97	2,210	222	164	122	166	81	128
5	55	41	48	164	95	1,130	210	153	122	122	93	132
6	47	40	51	142	89	660	198	198	178	106	72	118
7	36	41	44	881	82	456	198	176	166	108	173	114
8	36	38	39	522	77	394	187	153	167	134	236	106
9	37	39	44	282	82	308	210	164	311	146	153	104
10	38	37	39	222	84	270	198	142	246	134	118	96
11	38	37	44	164	79	254	198	142	212	173	163	95
12	36	37	42	198	116	210	187	132	277	146	158	93
13	35	34	54	176	86	198	176	126	236	126	126	89
14	32	29	62	142	84	187	164	122	182	142	270	89
15	30	26	56	132	79	187	164	132	153	134	162	93
16	37	24	48	122	82	164	187	265	132	120	130	95
17	34	38	51	116	82	153	282	265	128	110	331	89
18	40	29	51	106	79	153	258	192	488	108	353	86
19	38	29	61	97	84	153	258	162	336	106	344	81
20	39	38	81	106	77	198	258	144	244	102	251	77
21	36	39	61	96	76	164	198	132	203	88	192	72
22	34	69	55	97	102	153	210	185	173	81	164	70
23	38	54	54	97	89	176	210	155	157	77	194	69
24	47	46	47	89	81	804	556	132	146	89	395	72
25	41	44	46	93	122	1,210	246	122	138	84	379	72
26	37	42	120	95	948	804	234	114	132	84	333	69
27	36	40	108	86	356	876	234	110	136	77	258	77
28	37	37	62	84	282	732	210	108	128	100	215	91
29	38	37	54	79		522	198	122	128	132	187	91
30	38	38	55	62		424	210	114	128	108	171	128
31	37		79	86		350		104		88	176	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				132	30	43.2	0.408		0.47			
November				69	24	36.6	.364		.41			
December				120	38	67.4	.642		.62			
January				934	62	198	1.87		2.16			
February				948	76	137	1.29		1.34			
March				2,960	153	554	5.23		6.03			
April				556	164	229	2.16		2.41			
May				265	104	153	1.44		1.66			
June				488	98	182	1.72		1.92			
July				176	77	119	1.12		1.29			
August				395	72	197	1.88		2.14			
September				153	69	97.6	.921		1.03			
The year				2,960	24	168	1.58		21.48			

Nottely River near Ranger, N. C.

Location.- Water-stage recorder 200 feet above highway bridge half a mile below Ranger, Cherokee County, and 7½ miles southwest of Murphy. Prior to May 10, 1934, staff gage at same site and datum was used. Zero of gage is 1,544.56 feet above mean sea level.

Drainage area.- 272 square miles.

Records available.- February 1901 to December 1905, January 1914 to April 1917, October 1918 to September 1934.

Average discharge.- 21 years (1901-5, 1914-16, 1919-34), 540 second-feet.

Extremes.- Maximum discharge recorded during year, 5,410 second-feet Mar. 3 (gate height, 13.00 feet); minimum, 123 second-feet Dec. 2.

1901-5, 1914-17, 1918-34: Maximum gage height recorded, 21.0 feet Feb. 28, 1902 (discharge not determined); minimum discharge, 41 second-feet Sept. 6, 7, 23, 24, 1925.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	137	126	810	253	479	559	416	289	326	255	270
2	384	143	123	559	329	479	463	416	480	289	247	271
3	192	146	189	511	298	3,750	447	388	350	286	241	206
4	169	143	224	447	262	4,300	431	357	431	347	274	197
5	163	148	218	335	224	1,830	416	332	479	428	590	182
6	157	157	209	259	201	1,070	416	378	1,260	274	235	179
7	154	151	195	860	180	788	559	350	1,040	265	610	173
8	148	146	183	623	174	805	495	380	689	494	614	167
9	143	140	169	431	169	890	447	332	543	372	280	164
10	140	134	163	329	163	772	416	319	903	369	230	155
11	134	137	192	543	169	623	416	313	672	473	209	152
12	131	137	186	479	177	495	391	307	543	416	230	155
13	134	151	177	463	186	431	378	301	511	292	283	158
14	126	143	163	463	189	416	366	307	416	265	287	305
15	137	137	160	381	192	394	360	381	372	247	273	306
16	143	137	157	283	186	381	431	495	344	241	212	251
17	256	134	163	192	180	375	559	495	329	221	227	212
18	192	140	157	183	177	372	479	391	1,060	212	509	191
19	157	137	163	209	174	495	511	350	929	215	405	173
20	143	137	163	204	174	607	495	326	627	209	277	164
21	137	146	169	186	183	543	495	310	431	201	235	167
22	134	172	166	183	186	527	479	375	381	192	227	173
23	157	186	160	180	183	527	463	416	344	195	301	203
24	146	169	157	192	180	927	495	326	332	224	400	167
25	146	163	204	201	1,200	1,460	463	304	326	271	391	188
26	151	157	218	183	2,500	926	416	289	304	357	834	164
27	146	148	189	198	591	839	400	286	295	292	363	164
28	140	137	174	192	511	755	398	286	295	477	324	240
29	140	134	163	183		722	416	292	316	667	281	368
30	143	128	157	183		672	431	310	354	431	243	358
31	137		235	204		623		310		298	253	
Month						Maximum	Minimum	Mean	Per square mile		Run-off in inches	
October						384	126	165	0.592		0.68	
November						186	123	146	.537		.60	
December						235	123	177	.651		.75	
January						860	180	344	1.26		1.45	
February						2,500	163	343	1.26		1.31	
March						4,300	372	912	3.35		3.86	
April						559	360	449	1.65		1.84	
May						495	286	349	1.28		1.48	
June						1,260	289	515	1.89		2.11	
July						667	192	318	1.17		1.35	
August						834	209	330	1.21		1.40	
September						568	152	207	.761		.85	
The year						4,300	123	354	1.30		17.68	

Turtletown Creek at Turtletown, Tenn.

Location.- Water-stage recorder a third of a mile north of Turtletown, Polk County, and half a mile below mouth of Nigger Creek. Zero of gage is 1,491.16 feet above mean sea level.

Drainage area.- 30.8 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 540 second-feet June 6 (gage height, 4.68 feet); minimum, 21 second-feet June 1 (gage height, 1.04 feet).

Remarks.- Records good. Operation of gristmills causes slight diurnal fluctuation at low water.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									22	34	30	35
2									109	34	29	32
3									75	33	27	31
4									52	32	31	31
5									158	31	40	42
6									260	31	28	34
7									254	34	98	31
8									157	62	56	29
9									139	57	42	28
10								29	154	43	31	27
11								28	85	129	29	26
12								28	71	69	33	26
13								27	68	47	31	26
14								28	57	42	31	26
15								29	50	35	31	28
16								60	47	34	28	28
17								46	47	31	79	26
18								34	88	30	48	26
19								31	61	29	40	25
20								28	47	31	36	25
21								26	42	35	31	24
22								45	39	35	31	24
23								36	37	34	39	24
24								30	41	34	105	26
25								27	46	35	69	26
26								25	38	34	55	25
27								23	36	59	40	27
28								23	34	60	35	26
29								24	34	84	32	30
30								26	34	37	77	44
31								24		31	55	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October												
November												
December												
January												
February												
March												
April												
May 10-31				80		23		30.8		1.00		0.82
June				280		22		80.1		2.60		2.80
July				129		29		43.4		1.41		1.63
August				105		27		43.7		1.42		1.64
September				81		24		30.3		.984		1.10
The year												

Toccoa River near Dial, Ga.

Location.- Water-stage recorder half a mile above Shallow Ford, 1 mile above Stanley Creek, and 4 miles northwest of Dial, Fannin County. Zero of gage is 1,761.13 feet above mean sea level.

Drainage area.- 175 square miles.

Records available.- January 1913 to September 1934. May 1907 to June 1908 at Butts Bridge, 2 miles above Dial.

Average discharge.- 21 years, 513 second-feet.

Extremes.- Maximum discharge during year, 5,560 second-feet Mar. 3 (gage height, 7.05 feet); minimum, 106 second-feet Jan. 30 (gage height, 0.68 foot).
1913-34: Maximum discharge, about 9,200 second-feet July 9, 1916 (gage height, 10.0 feet); minimum, 60 second-feet Sept. 6, 1925 (gage height, 0.4 foot).

Remarks.- Records good except those above 4,000 second-feet, which are fair. Records estimated Oct. 16-20, 23-27, 31, and Nov. 1. Slight diurnal fluctuation caused by operation of small mills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	186	137	124	1,020	313	401	498	437	305	463	330	277
2	162	138	124	546	266	572	480	417	365	421	312	270
3	167	139	176	338	233	4,040	463	397	349	426	294	260
4	162	162	233	284	227	3,770	454	385	357	450	277	263
5	154	146	176	327	220	1,780	446	385	389	429	441	266
6	151	146	154	339	214	1,160	437	381	772	369	298	249
7	149	143	154	760	202	920	429	373	796	353	357	239
8	146	141	146	530	199	810	454	357	561	385	365	233
9	143	138	138	393	193	710	480	346	489	421	302	230
10	146	136	131	327	181	660	426	342	615	437	277	220
11	143	136	131	288	184	615	421	342	507	592	302	217
12	141	138	131	334	252	570	401	334	498	441	421	214
13	141	136	133	353	227	538	397	327	450	385	409	220
14	138	138	136	294	205	516	393	323	409	353	327	319
15	136	138	136	270	199	484	393	502	385	338	305	252
16	136	138	138	260	205	467	454	433	365	330	284	246
17	136	138	133	249	196	446	409	397	381	312	274	233
18	138	138	133	239	196	446	405	373	1,590	312	365	217
19	138	138	136	236	208	572	425	346	892	327	334	208
20	138	138	233	233	184	660	413	330	658	302	316	199
21	143	143	205	233	187	534	393	319	561	291	288	196
22	212	254	165	223	199	498	389	351	498	284	277	205
23	150	187	143	220	202	484	389	357	467	270	417	230
24	145	165	141	211	187	552	409	323	480	274	570	211
25	143	146	138	211	857	566	494	312	454	277	437	205
26	143	143	198	223	1,380	520	421	302	413	441	393	196
27	143	136	252	205	592	656	413	296	389	365	365	196
28	143	131	208	205	450	638	401	294	351	658	421	280
29	143	126	179	190	570	401	323	373	525	334	291	291
30	141	126	167	143	538	467	312	421	458	305	308	308
31	139		179	186	516				373	294		

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	212	136	147	0.840	0.97
November	254	126	145	.829	.92
December	252	124	160	.914	1.05
January	1,020	143	318	1.82	2.10
February	1,380	181	298	1.70	1.77
March	4,040	401	846	4.83	5.58
April	498	389	428	2.45	2.73
May	502	294	366	2.03	2.34
June	1,590	305	518	2.96	3.30
July	658	270	369	2.22	2.56
August	570	274	345	1.97	2.27
September	319	196	238	1.36	1.52
The year	4,040	124	350	2.00	27.11

Toccoa River near Blue Ridge, Ga.

Location.- Water-stage recorder 1,900 feet below Blue Ridge Dam of Tennessee Electric Power Co., 2 miles west of Morganton, and 2½ miles east of Blue Ridge, Fannin County. Zero of gage is 1,538.90 feet above mean sea level.

Drainage area.- 232 square miles.

Records available.- November 1898 to March 1903, April 1913 to September 1934.

Average discharge.- 21 years (1913-34), 617 second-feet.

Extremes.- Maximum discharge during year, 1,810 second-feet June 26 (gage height, 5.14 feet); minimum, 0.4 second-foot Jan. 30 (gage height, 0.62 foot).
1913-34: Maximum discharge, about 13,900 second-feet July 9, 1916 (gage height, 13.0 feet); no flow Dec. 6, 1930, to Mar. 3, 1931, caused by closing of Blue Ridge Dam.

Remarks.- Records good. Discharge estimated Oct. 16-18. Considerable regulation caused by operations at Blue Ridge Dam. Part of monthly table corrected for storage in Blue Ridge Reservoir.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	645	556	4.5	6.6	7.0	11	392	53	240	750	66
2	1,150	677	78	25	6.2	7.0	9.0	386	64	684	742	45
3	1,090	682	305	4.5	6.2	14	11	376	61	378	726	245
4	1,030	466	813	4.5	6.2	9.9	12	241	69	222	601	826
5	1,270	263	796	1.5	6.2	8.5	10	58	51	692	227	974
6	1,350	903	748	4.0	6.6	8.5	10	176	61	698	817	1,130
7	1,380	859	830	5.0	6.6	8.0	12	394	61	330	833	1,130
8	1,040	843	514	2.5	6.6	8.5	13	343	39	205	824	1,120
9	1,270	849	108	1.2	6.6	9.6	10	340	41	710	818	1,150
10	988	682	256	.9	6.6	10	10	318	48	684	830	1,120
11	973	90	722	.7	6.2	8.5	11	233	40	705	820	1,150
12	941	250	787	3.2	6.2	7.6	42	46	39	706	688	1,160
13	1,020	964	678	1.7	6.2	7.4	10	156	46	719	831	1,170
14	85	986	619	1.5	6.2	7.4	9.0	354	46	608	830	1,170
15	284	956	386	1.0	6.2	7.4	17	351	53	237	848	1,170
16	600	941	4.8	1.0	6.2	7.4	361	237	77	717	854	927
17	950	502	215	1.0	6.2	7.4	352	284	50	796	858	1,190
18	840	64	582	1.0	7.0	7.4	289	241	62	794	526	1,190
19	750	315	598	1.0	7.0	8.0	163	60	315	791	252	1,210
20	830	728	653	1.0	6.2	7.4	55	42	575	790	843	1,160
21	64	712	340	1.0	6.2	7.4	55	162	408	362	853	1,080
22	281	976	3.7	.9	6.6	7.4	162	314	232	232	856	1,000
23	711	710	3.3	.9	6.6	14	354	330	66	273	870	984
24	858	692	3.3	.9	6.6	10	349	308	146	815	402	1,030
25	784	523	3.3	.9	8.4	25	370	242	521	787	113	1,030
26	706	284	3.7	.9	8.2	9.0	368	62	644	807	223	1,040
27	755	739	3.7	.9	7.0	12	270	160	670	822	536	1,040
28	517	742	3.3	.9	7.0	23	90	355	585	743	547	1,030
29	284	562	3.1	.9		9.0	203	396	524	217	523	1,080
30	737	345		12		9.0	370	401	291	728	563	1,080
31	665		3.3	7.5		8.5		267		743	370	
Month	Observed						Corrected for storage					
	Maximum	Minimum	Mean				Mean	Per square mile	Run-off in inches			
October	1,380	64	809				194	0.836	0.96			
November	986	64	632				166	.716	.80			
December	830	3.1	342				209	.901	1.04			
January	25	.7	3.05				393	1.69	1.95			
February	8.4	6.2	6.59				286	1.23	1.28			
March	25	7.0	9.72				986	4.25	4.90			
April	370	9.0	134				473	2.04	2.28			
May	401	42	258				320	1.58	1.59			
June	670	39	198				718	3.10	3.46			
July	822	205	588				409	1.76	2.03			
August	870	113	657				437	1.88	2.17			
September	1,210	45	989				233	1.00	1.12			
The year	1,380	.7	388				404	1.74	23.58			

Ocoee River at McHarge, Tenn.

Location.- Water-stage recorder half a mile below highway bridge, 1 mile below McHarge railroad siding, Polk County, 1 mile below Potato Creek, and 3 miles below Copper-hill. Zero of gage is 1,427.82 feet above mean sea level.

Drainage area.- 453 square miles.

Records available.- May 1917 to September 1934.

Average discharge.- 15 years (1919-34), 1,125 second-feet.

Extremes.- Maximum discharge during year, 5,380 second-feet Mar. 3 (gage height, 4.70 feet); minimum, 166 second-feet Sept. 3 (gage height, 0.55 foot).
1917-34: Maximum discharge, 13,100 second-feet Jan. 21, 1922 (gage height, 11.4 feet, former datum); minimum, about 105 second-feet Oct. 3, 4, 1931 (gage height, estimated, -0.1 foot, former datum).

Remarks.- Records good. Discharge estimated Feb. 13-15. Discharge regulated by Blue Ridge Dam.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,380	892	1,030	850	301	342	542	770	340	422	1,040	345
2	1,460	972	248	487	240	524	510	780	903	940	990	226
3	1,290	922	258	303	234	3,380	486	726	526	1,030	960	296
4	1,180	942	1,130	245	210	2,470	454	696	472	393	1,120	1,140
5	1,440	265	1,010	290	200	1,270	446	390	732	994	518	1,230
6	1,470	1,130	1,060	516	191	833	430	470	1,460	1,020	988	1,460
7	1,460	1,190	1,110	2,140	186	671	430	730	965	906	1,490	1,470
8	1,210	1,090	980	688	186	708	446	722	596	472	1,277	1,470
9	1,520	1,130	284	446	182	582	582	720	554	878	1,160	1,480
10	1,510	1,130	266	362	186	510	446	688	644	1,060	1,100	1,420
11	1,200	333	880	310	220	462	430	688	526	1,070	1,080	1,460
12	1,210	200	986	370	234	430	478	362	510	1,090	1,070	1,470
13	1,120	1,080	946	342	196	408	392	342	486	1,140	1,120	1,500
14	525	1,180	836	284	182	392	362	640	430	1,030	1,100	1,490
15	201	1,180	828	251	178	370	370	743	430	442	1,080	1,520
16	1,110	1,150	191	240	182	348	774	1,070	430	972	1,070	1,220
17	1,160	972	186	234	342	342	1,040	626	438	1,070	1,140	1,510
18	1,090	268	773	224	174	329	1,070	700	849	1,080	1,170	1,500
19	972	254	852	229	186	454	943	400	772	1,070	370	1,510
20	1,010	964	916	224	162	664	637	342	1,050	1,070	1,037	1,460
21	472	1,000	780	210	178	430	549	322	874	870	1,060	1,380
22	231	1,320	186	210	182	385	517	1,050	734	284	1,040	1,310
23	935	1,060	182	200	196	499	777	814	404	962	1,417	1,280
24	1,070	922	182	191	186	1,920	844	706	488	1,140	1,300	1,340
25	1,050	948	178	215	426	1,580	824	676	785	1,140	821	1,320
26	930	277	229	210	1,610	976	780	404	1,000	1,080	995	1,320
27	956	942	200	196	572	971	784	339	1,040	1,090	932	1,350
28	736	973	182	186	408	860	482	656	1,070	1,530	885	1,370
29	238	998	178	178		707	477	810	933	750	837	1,410
30	986	260	178	220		635	824	787	848	1,040	976	1,480
31	896		191	218		590		756		1,040	854	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,520	201	1,026	2.26	2.61
November	1,320	200	861	1.90	2.12
December	1,130	178	562	1.24	1.43
January	2,140	178	363	.801	.92
February	1,610	174	278	.614	.64
March	5,380	329	808	1.78	2.05
April	1,070	352	604	1.35	1.48
May	1,070	322	643	1.42	1.64
June	1,450	340	706	1.56	1.74
July	1,140	284	938	2.07	2.39
August	1,490	370	1,032	2.28	2.63
September	1,520	296	1,294	2.86	3.19
The year.	3,380	174	762	1.68	22.84

Ocoee River at Emf, Tenn.

Location.- Water-stage recorder 700 feet below Tennessee Electric Power Co.'s plant no. 2 (Caney Creek plant), half a mile upstream from Emf, Polk County, and 1½ miles downstream from mouth of Goforth Creek. Zero of gage is 830.00 feet above mean sea level.

Drainage area.- 530 square miles.

Records available.- January 1913 to September 1934.

Average discharge.- 21 years, 1,242 second-feet.

Extremes.- Maximum discharge during year, 7,690 second-feet June 6 (gage height, 8.5 feet); minimum, 5.0 second-feet Apr. 14 (gage height, 2.10 feet).
1913-34: Maximum discharge, about 21,400 second-feet July 10, 1916 (gage height, 13.7 feet); minimum, that of Apr. 14, 1934.

Remarks.- Records good. Flow regulated by operation of power plants above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	1,010	1,020	762	415	389	689	868	436	478	1,080	662
2	1,310	978	388	640	415	923	650	862	1,290	836	1,060	540
3	1,200	1,020	320	428	345	4,160	606	824	1,000	978	1,020	536
4	1,060	1,030	1,090	336	295	3,000	686	766	872	438	1,100	1,170
5	1,400	479	1,020	361	260	1,750	876	507	962	830	920	1,180
6	1,460	970	1,110	375	250	1,170	542	590	2,730	977	924	1,400
7	1,460	1,210	1,170	2,710	240	772	544	760	1,930	964	1,410	1,400
8	1,210	1,140	1,100	1,120	230	818	546	754	1,120	650	1,370	1,380
9	1,500	1,140	446	652	230	810	665	792	920	1,130	1,260	1,400
10	1,480	1,160	398	579	225	672	523	732	885	1,160	1,140	1,370
11	1,200	801	884	428	240	564	574	726	765	1,320	1,120	1,380
12	1,210	408	1,000	426	275	530	509	461	668	1,100	1,190	1,390
13	1,140	730	1,040	541	280	504	504	438	628	1,090	1,130	1,420
14	668	1,190	934	420	260	480	439	688	548	1,260	1,130	1,460
15	350	1,240	864	365	230	466	476	768	540	654	1,130	1,420
16	1,200	1,240	383	356	230	466	788	1,180	510	835	1,090	1,260
17	1,360	1,210	320	345	230	432	1,080	886	540	1,050	1,150	1,370
18	1,240	390	774	345	220	434	1,210	798	877	1,070	1,200	1,410
19	1,180	375	931	345	225	555	1,090	534	930	1,100	708	1,430
20	1,110	924	957	335	220	932	900	470	1,130	1,100	988	1,410
21	732	976	903	330	225	645	667	436	992	996	1,170	1,340
22	344	1,340	355	320	250	552	680	1,080	860	378	1,170	1,250
23	985	1,290	280	320	245	638	990	916	480	865	1,320	1,240
24	1,130	988	275	320	230	3,890	942	794	520	1,100	1,540	1,280
25	1,160	982	260	315	391	2,380	956	703	766	1,130	898	1,260
26	1,050	418	315	320	1,890	1,420	878	476	961	1,080	1,430	1,260
27	1,060	927	310	320	890	1,290	869	596	1,020	1,070	1,080	1,260
28	994	972	260	320	566	1,170	589	692	966	1,570	1,020	1,290
29	426	962	245	295		943	580	864	826	1,290	974	1,310
30	942	420	240	285		804	878	852	866	954	1,100	1,440
31	1,060		266	290		742		800		1,090	990	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	1,500			344			1,091			2.06		2.58
November	1,340			375			953			1.76		1.96
December	1,170			240			641			1.21		1.40
January	2,710			285			494			.932		1.07
February	1,890			220			356			.872		.70
March	4,160			389			1,106			2.09		2.41
April	1,210			439			714			1.55		1.81
May	1,150			366			752			1.58		1.87
June	2,730			436			916			1.73		1.93
July	1,570			378			988			1.66		2.14
August	1,540			708			1,122			2.12		2.44
September	1,450			536			1,262			2.58		2.66
The year	4,160			220			866			1.63		22.17

Ocoee River at Parksville, Tenn.

Location.- Water-stage recorder 1,500 feet downstream from dam and power plant ro. 1 of Tennessee Electric Power Co. at Parksville, Polk County. Zero of gage is 717.58 feet above mean sea level.

Drainage area.- 600 square miles.

Records available.- January 1911 to September 1916, March 1921 to September 1934.

Average discharge.- 18 years, 1,246 second-feet.

Extremes.- Maximum discharge during year, 5,370 second-feet Mar. 25 (gage height, 8.20 feet); minimum, 50 second-feet Apr. 25 (gage height, 2.80 feet).
1911-16, 1921-34: Maximum discharge, 17,000 second-feet July 10, 1916 (gage height, 15.75 feet); minimum mean daily discharge, 8 second-feet Oct. 28, 1925.

Remarks.- Records good. Flow regulated by operation of power plants above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	680	1,180	962	198	122	868	190	446	178	828	1,340	1,280
2	1,780	1,350	1,040	282	125	954	1,220	478	115	995	1,300	1,140
3	1,170	799	1,300	828	121	1,490	1,540	574	470	1,140	1,310	1,330
4	1,590	745	796	878	120	1,310	1,480	685	1,210	292	1,210	1,230
5	1,500	624	309	656	162	1,270	1,440	168	965	924	1,060	1,440
6	473	645	978	200	192	1,180	1,510	88	1,990	965	1,260	1,360
7	440	1,980	140	157	155	2,040	362	268	2,160	1,210	1,320	1,350
8	129	1,810	266	1,360	182	1,980	114	878	1,980	1,370	1,270	1,020
9	545	1,960	142	738	274	1,460	1,420	1,050	1,940	1,290	1,220	109
10	1,250	1,510	218	399	201	262	1,520	1,030	630	1,070	1,270	1,490
11	1,390	912	133	472	111	120	1,520	864	839	1,020	1,100	1,630
12	1,300	500	168	500	250	869	1,540	125	478	1,090	362	1,480
13	1,130	1,160	243	120	147	914	1,840	292	264	1,040	1,170	1,650
14	413	767	263	88	350	1,120	1,250	794	344	1,160	1,580	1,510
15	828	1,060	161	615	116	866	890	797	430	1,090	1,540	1,430
16	1,320	1,100	418	672	100	714	943	753	454	1,020	1,200	866
17	798	940	1,000	988	107	220	618	747	141	108	966	1,560
18	1,150	668	1,760	914	86	132	832	267	1,170	176	1,210	1,550
19	1,190	722	612	912	102	1,470	918	129	1,190	590	820	1,530
20	1,060	711	241	926	122	390	1,480	130	919	1,060	649	1,610
21	722	842	208	1,020	102	1,450	440	782	1,120	1,110	1,160	1,590
22	1,010	1,010	302	1,250	108	1,290	178	566	924	1,060	1,020	842
23	907	840	228	1,260	110	1,660	866	358	144	1,040	1,010	865
24	1,020	1,340	182	445	150	1,980	1,060	692	128	1,310	1,260	1,280
25	948	716	178	810	126	3,520	584	564	750	611	668	1,470
26	1,010	1,220	174	249	437	2,550	986	194	958	1,040	544	1,910
27	1,240	800	165	326	820	1,890	1,260	76	961	1,150	1,220	1,250
28	284	550	328	128	980	1,230	426	519	840	917	1,110	1,340
29	193	1,400	274	282		1,230	98	208	766	1,050	900	772
30	778	2,010	377	342		1,290	675	102	952	1,330	860	382
31	1,000		222	126		332		100		1,280	778	
Month	Maximum			Minimum			Mean			Per square mile		Run-off in inches
October	1,780			129			943			1.57		1.81
November	2,010			500			1,062			1.77		1.98
December	1,780			133			445			.742		.86
January	1,360			88			585			.975		1.12
February	930			86			212			.353		.37
March	3,520			120			1,228			2.06		2.36
April	1,840			98			974			1.62		1.81
May	1,050			76			478			.797		.92
June	2,160			115			848			1.41		1.57
July	1,370			108			978			1.63		1.88
August	1,540			362			1,084			1.81		2.09
September	1,910			109			1,276			2.13		2.38
The year	3,520			76			846			1.41		19.15

Potato Creek near Ducktown, Tenn.

Location.- Water-stage recorder 50 feet above highway bridge on Ducktown-Copperhill road, $1\frac{1}{2}$ miles south of Ducktown, Polk County. Zero of gage is 1,492.90 feet above mean sea level.

Drainage area.- 13.2 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 2,160 second-feet July 28 (gage height, 4.46 feet); minimum, about 5.8 second-feet Sept. 22 (gage height, 1.54 feet).

Remarks.- Records poor. Reports include an average daily diversion from Brush Creek of about three-quarters of a second-foot.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									17	10	19	28
2									120	10	16	17
3									41	11	13	16
4									29	11	54	59
5									103	10	17	17
6									139	10	11	14
7									75	13	54	13
8									38	45	38	12
9									46	29	13	12
10								12	19	29	13	11
11								12	17	68	17	11
12								11	14	19	24	11
13								11	14	43	19	11
14								13	14	17	19	10
15								22	14	16	16	12
16								66	12	14	14	11
17								17	29	13	46	9.4
18								16	64	13	29	9.4
19								13	29	12	19	9.4
20								13	14	12	16	8.8
21								14	13	11	13	8.8
22								92	12	10	14	8.2
23								22	12	10	38	8.2
24								17	38	12	86	13
25								14	11	11	54	12
26								14	10	11	26	11
27								14	14	12	16	11
28								16	10	167	13	13
29								38	10	98	12	24
30								22	11	17	98	16
31								16		13	46	
Month				Maximum		Minimum		Mean		Per square mile		Run-off in inches
October												
November												
December												
January												
February												
March												
April												
May 10-31				92		11		22.0		1.67		1.37
June				139		10		33.0		2.50		2.79
July				167		10		25.1		1.90		2.19
August				86		11		28.5		2.16		2.49
September				59		8.2		14.2		1.08		1.20
The year												

Brush Creek near Ducktown, Tenn.

Location.- Water-stage recorder 200 feet below highway bridge on Ducktown-Parksville road, three-quarters of a mile above mouth, and 3 miles west of Ducktown, Polk County. Zero of gage is 1,421.75 feet above mean sea level.

Drainage area.- 14.2 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, about 3,050 second-feet June 6 (gage height, 6.45 feet); minimum, 8.3 second-feet Sept. 25 (gage height, 0.70 foot).

Remarks.- Records good except those estimated or partly estimated for June 10-28, July 7-9, 29, Aug. 5-8 and maximum for period, which are fair. The Tennessee Copper Co. diverts an average of three-quarters of a second-foot to Potato Creek about 5 miles above gage.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1									12	15	13	17		
2									231	16	12	17		
3									57	16	11	15		
4									59	16	31	85		
5									97	15	20	20		
6									457	16	15	16		
7									220	17	52	15		
8									55	50	3	13		
9									85	30	17	12		
10								16	25	16	13	12		
11								15	20	64	13	12		
12								14	20	20	20	12		
13								14	15	47	15	11		
14								15	15	19	13	11		
15								18	15	16	12	12		
16								55	15	15	11	12		
17								23	15	14	31	11		
18								19	50	13	24	10		
19								17	25	16	22	9.6		
20								15	20	19	16	10		
21								15	15	18	14	9.6		
22								49	15	18	12	10		
23								17	15	18	20	9.6		
24								15	25	18	67	10		
25								14	20	18	42	11		
26								14	15	17	33	9.6		
27								14	15	17	22	12		
28								14	15	90	19	13		
29								18	16	25	16	24		
30								15	16	17	46	23		
31								13		14	22			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October														
November														
December														
January														
February														
March														
April														
May 10-31					55		13		19.0		1.34		1.10	
June					457		12		55.8		3.93		4.38	
July					90		13		23.2		1.63		1.88	
August					67		11		22.9		1.61		1.86	
September					85		9.6		15.5		1.09		1.22	
The year.														

Chickamauga Creek near Chickamauga, Tenn.

Location.- Water-stage recorder a quarter of a mile above bridge on Chattanooga-Cleveland highway, $1\frac{1}{4}$ miles south of Chickamauga, Hamilton County, and 12 miles above confluence with Tennessee River. Zero of gage is 650.85 feet above mean sea level.

Drainage area.- 426 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge during year, 13,500 second-feet Mar. 4 (gage height, 15.95 feet); minimum, 101 second-feet Oct. 15 (gage height, 0.73 foot).
1928-34: Maximum discharge, 15,400 second-feet Mar. 15, 1929 (gage height, 15.95 feet); minimum, 66 second-feet Oct. 17, 1932; minimum gage height, 0.48 foot Sept. 10, 1931.

Remarks.- Records good except those estimated for Dec. 18 to Jan. 6, June 2-9, June 22 to July 14, July 19-21, July 28 to Aug. 4, Aug. 20-30, which are fair. Possibly slight regulation caused by operation of small gristmills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	111	111	350	198	637	617	237	143	230	180	210
2	113	113	120	600	271	3,520	537	222	231	250	160	176
3	123	123	113	550	253	7,750	451	201	163	160	150	153
4	120	179	113	500	210	12,600	433	196	146	150	204	214
5	116	163	132	550	198	8,140	403	193	300	140	360	485
6	116	135	125	674	184	4,320	379	204	500	130	327	224
7	111	126	153	4,540	176	2,270	358	222	600	150	201	163
8	114	116	150	3,810	173	1,180	337	201	500	500	179	150
9	107	114	132	1,980	160	883	323	204	679	350	171	139
10	114	111	125	719	155	719	304	210	2,000	300	153	125
11	108	114	111	537	160	617	294	213	1,910	250	148	126
12	111	113	123	674	171	537	271	160	946	400	204	135
13	111	111	126	967	193	485	256	155	577	500	210	179
14	111	113	114	617	196	446	240	155	438	400	234	265
15	108	113	114	477	179	403	234	240	358	207	143	146
16	108	110	113	405	171	376	237	399	307	262	139	137
17	128	111	114	362	163	354	351	1,140	281	210	137	139
18	126	111	200	330	155	330	310	446	262	150	235	130
19	114	111	700	314	155	1,140	535	330	256	234	292	123
20	114	108	1,000	297	155	3,080	322	271	213	400	297	121
21	111	128	600	271	150	1,300	461	240	190	314	155	116
22	111	276	400	259	153	842	362	228	176	168	141	116
23	111	228	330	234	155	1,170	337	320	163	143	130	118
24	113	148	270	225	150	4,230	334	234	150	163	450	116
25	110	130	240	222	872	4,140	287	187	163	153	3,000	111
26	108	113	270	234	3,540	1,960	262	173	150	166	3,300	114
27	111	111	350	225	2,490	1,320	246	163	146	146	2,000	118
28	111	121	600	207	925	1,480	240	155	141	500	300	120
29	111	111	400	193		1,030	234	153	137	700	300	128
30	111	111	350	179		822	229	153	250	300	240	455
31	113		300	173		698		150		200	201	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					128	107	113	0.265		0.31		
November					276	108	129	.303		.34		
December					1,000	111	261	.613		.71		
January					4,540	173	699	1.64		1.89		
February					3,840	150	443	1.04		1.08		
March					12,600	330	2,235	5.25		6.05		
April					322	225	357	.838		.94		
May					1,140	150	266	.624		.73		
June					2,000	137	416	.977		1.09		
July					700	130	268	.629		.73		
August					3,300	130	479	1.12		1.29		
September					485	111	169	.397		.44		
The year					12,600	107	489	1.15		15.59		

Sequatchie River near Whitwell, Tenn.

Location.- Water-stage recorder at highway bridge 2 miles east of Whitwell, Marion County. Zero of gage is 632.30 feet above mean sea level.

Drainage area.- 389 square miles.

Records available.- December 1920 to September 1934.

Average discharge.- 13 years (1921-34), 751 second-feet.

Extremes.- Maximum discharge during year, 16,100 second-feet Mar. 3 (gage height, 15.65 feet); minimum, 30 second-feet Nov. 2 (gage height, 1.12 feet).
1920-34: Maximum discharge, about 19,000 second-feet (revised) Mar. 24, 1929 (gage height, 16.0 feet, from high-water mark); minimum, 19 second-feet Sept. 6-21, 27, 28, 1925 (gage height, 0.73 foot).

Remarks.- Records good below 5,000 second-feet, fair between 5,000 and 12,000 second-feet, and poor above 12,000 second-feet. Discharge estimated Oct. 15-20, Apr. 29 to May 6. Slight regulation caused by operation of two small mills above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	35	55	452	220	958	1,330	380	200	256	245	461
2	91	34	57	656	217	3,840	1,100	400	298	269	205	348
3	91	68	65	640	212	14,980	922	380	400	203	181	271
4	88	91	88	592	208	11,020	814	370	377	172	458	240
5	82	79	93	840	200	7,270	724	360	463	152	761	240
6	73	88	146	1,030	196	3,760	665	350	868	145	314	222
7	61	79	236	5,060	188	2,240	604	350	886	223	225	191
8	50	79	249	7,510	181	1,790	556	342	621	651	198	179
9	47	73	195	4,170	176	1,330	524	314	540	446	648	184
10	46	65	161	2,170	174	1,070	476	297	1,230	320	361	156
11	43	55	129	1,330	169	904	461	287	1,640	277	243	145
12	43	52	107	1,030	167	778	461	279	1,220	430	778	169
13	43	54	100	958	167	689	431	269	740	476	706	160
14	57	52	93	850	162	638	401	256	904	345	572	152
15	52	52	95	760	155	572	374	253	655	269	508	157
16	52	47	100	672	152	540	353	266	508	274	362	157
17	58	52	105	604	150	492	557	445	416	230	303	140
18	58	45	148	540	145	461	655	868	386	232	1,670	136
19	56	48	491	492	143	694	706	655	401	209	2,020	131
20	53	48	1,150	461	145	3,300	886	476	386	290	1,100	121
21	50	52	974	431	143	3,280	904	363	325	186	742	117
22	48	136	640	386	143	2,320	742	433	271	167	540	108
23	50	100	487	362	145	1,710	655	615	248	150	416	103
24	50	82	364	334	145	4,840	572	446	222	140	353	103
25	50	69	314	317	211	8,860	524	371	238	128	1,050	101
26	47	59	330	297	1,670	6,560	476	308	217	128	1,370	105
27	47	54	512	290	2,090	5,500	446	271	186	498	1,410	108
28	55	57	688	274	1,520	4,610	416	245	176	605	814	105
29	37	55	528	258		3,200	410	230	179	1,080	556	133
30	36	55	422	258		2,130	390	220	394	461	446	198
31	40		364	222		1,670		205		517	371	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					95	36	56.4	0.145		0.17		
November					136	34	63.8	.164		.18		
December					1,150	55	302	.776		.89		
January					7,510	222	1,104	2.34		3.27		
February					2,090	143	343	.882		.92		
March					15,000	461	3,290	8.46		9.75		
April					1,330	353	618	1.59		1.77		
May					868	205	365	.938		1.08		
June					1,640	176	520	1.34		1.50		
July					1,080	128	314	.807		.93		
August					2,020	181	642	1.65		1.90		
September					461	101	171	.440		.49		
The year					15,000	34	655	1.68		22.85		

Little Sequatchie River at Sequatchie, Tenn.

Location.- Staff gage at concrete highway bridge 1 mile north of Sequatchie, Marion County.

Drainage area.- 115 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period, about 11,700 second-feet Mar. 2 (gage height, 12.40 feet); minimum, 1.2 second-feet Oct. 29-31 (gage height, 1.40 feet).
1932-34: Maximum discharge, that of Mar. 2, 1934; no flow Sept. 19, 1932 (gage height, 0.94 foot).

Remarks.- Records poor. Small diversion 1 mile above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	1.9	16	25	35	460						
2	17	2.8	10	34	44	4,990						
3	17	7.5	16	64	41	6,490						
4	14	14	17	127	38	2,160						
5	12	21	16	342	36	1,340						
6	11	20	16	702	35	930						
7	10	20	17	4,860	34	702						
8	9.0	18	13	1,820	34	550						
9	9.0	18	10	995	32	337						
10	8.0	18	13	550	30	255						
11	8.0	17	20	490	26	205						
12	7.0	17	24	359	30	166						
13	6.5	18	20	88	35	150						
14	6.0	20	20	184	33	127						
15	5.4	18	24	215	29	106						
16	7.5	18	24	166	29	92						
17	7.5	17	44	142	28	80						
18	8.0	12	215	121	25	82						
19	10	9.0	520	112	28	520						
20	10	10	930	103	35	1,730						
21	10	16	1,200	88	30	930						
22	10	17	1,060	90	35	832						
23	7.5	17	1,060	73	41	702						
24	4.5	18	30	64	35	6,630						
25	3.3	16	24	57	90	2,440						
26	3.9	16	19	55	1,200	1,280						
27	4.2	18	17	53	1,060	1,900						
28	2.8	16	14	50	800	1,340						
29	1.2	16	11	46		930						
30	1.2	17	13	39		768						
31	1.2		17	55		590						
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					20	1.2	8.15	0.071		0.08		
November					21	1.9	15.5	1.135		.16		
December					1,200	10	176	1.53		1.76		
January					4,860	25	392	3.41		3.93		
February					1,200	25	141	1.23		1.28		
March					6,630	80	1,284	11.17		12.88		
April												
May												
June												
July												
August												
September												
The year.												

Flint River near Chase, Ala.

Location.- Water-stage recorder in sec. 25, T. 2 S., R. 1 E., 600 feet below Nashville, Chattanooga & St. Louis Railway bridge 5 miles northeast of Chase, Madison County. Prior to May 18, 1934, a staff gage at railroad bridge was used. Zero of both gages is 639.87 feet above mean sea level.

Drainage area.- 353 square miles.

Records available.- May 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, about 18,400 second-feet Mar. 2 (gage height, about 17.3 feet); minimum, 6.7 second-feet Aug. 16 (gage height, 0.93 foot).

1930-34: Maximum discharge recorded, that of Mar. 2, 1934; minimum discharge, 44 second-feet Sept. 20, 27, 30, 1931; minimum gage height, that of Aug. 16, 1934.

Remarks.- Records fair. Regulation during low stages caused by operation of gristmills upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	101	112	226	209	395	546	251	164	125	153	122
2	109	96	114	226	178	7,380	466	230	160	145	125	109
3	117	96	139	202	170	13,100	430	226	156	142	112	109
4	112	103	139	269	206	4,120	390	212	268	128	106	252
5	109	262	132	277	195	1,780	375	226	350	122	98	209
6	112	212	230	277	192	1,040	345	269	665	112	98	132
7	112	184	181	4,940	179	739	350	301	740	187	96	120
8	112	146	174	1,730	184	618	345	248	362	404	94	117
9	112	132	139	697	153	546	345	212	301	209	92	106
10	114	120	122	582	164	462	325	198	1,520	204	92	106
11	112	120	117	472	174	425	305	305	558	301	92	103
12	112	114	132	415	192	385	315	206	365	286	109	154
13	112	112	139	455	202	360	289	192	840	178	98	271
14	98	120	142	400	192	340	265	181	408	153	98	146
15	96	112	117	325	184	305	248	1,530	258	143	51	147
16	109	112	142	305	178	297	248	1,600	220	128	51	164
17	114	114	132	248	167	289	970	711	202	117	744	139
18	112	112	226	254	163	277	534	405	230	106	1,630	125
19	112	103	935	230	178	1,600	1,420	310	216	112	254	113
20	112	112	618	202	170	1,740	795	265	181	114	167	109
21	101	112	301	178	174	1,320	1,140	237	167	114	639	104
22	96	198	345	139	188	678	582	788	150	106	373	102
23	98	174	259	240	160	732	816	900	142	101	230	105
24	106	156	220	226	160	2,920	494	385	136	101	202	101
25	106	139	209	226	184	3,160	380	281	136	101	527	98
26	101	139	281	226	3,580	2,280	315	244	150	100	717	100
27	96	120	305	223	872	4,030	305	220	125	96	254	92
28	94	114	315	230	494	1,670	297	206	122	125	168	96
29	92	114	277	212		1,700	269	192	147	509	153	163
30	96	109	225	178		767	258	184	139	265	132	299
31	96		202	174		630		178		164	178	
Month				Maximum		Minimum		Mean		Per square mile	Run-off in inches	
October				117		92		106		0.300	0.35	
November				262		96		132		.374	.42	
December				935		112		230		.652	.75	
January				4,940		139		485		1.37	1.58	
February				3,580		153		337		.955	.99	
March				13,100		277		1,810		5.13	5.61	
April				1,420		248		472		1.34	1.60	
May				1,600		178		384		1.09	1.26	
June				1,520		122		320		.907	1.01	
July				509		96		168		.476	.55	
August				1,630		81		257		.728	.84	
September				299		92		137		.388	.43	
The year				13,100		81		405		1.15	15.59	

Elk River at Estill Springs, Tenn.

Location.- Water-stage recorder at highway bridge 400 feet downstream from Nashville, Chattanooga & St. Louis Railway bridge, 800 feet below Estill Springs hydroelectric plant, and three-quarters of a mile southeast of Estill Springs, Franklin County. Zero of gage is 850.25 feet above mean sea level.

Drainage area.- 263 square miles.

Records available.- December 1920 to September 1934.

Average discharge.- 13 years (1921-34), 489 second-feet.

Discharge.- Maximum discharge during year, 11,600 second-feet Mar. 3 (gage height, 14.0 feet); minimum, 50 second-feet Nov. 29, to Dec. 2 (gage height, 1.06 feet). 1920-34: Maximum discharge, about 19,800 second-feet Mar. 23, 1929 (gage height, 20.2 feet); minimum, 10 second-feet Oct. 9, 10, 1925.

Remarks.- Records good. Discharge estimated Mar. 1, 2. Regulation during low water caused by operation of Estill Springs hydroelectric plant.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	52	50	191	94	409	898	268	85	106	148	85
2	55	52	50	204	114	3,040	760	206	105	148	82	94
3	54	52	52	260	116	9,440	685	239	110	125	92	80
4	54	52	51	234	134	7,210	610	179	138	56	100	93
5	54	53	52	186	112	3,100	554	218	124	116	76	88
6	54	53	53	400	100	1,500	560	219	149	86	100	92
7	54	53	58	1,850	106	1,090	506	206	194	112	72	56
8	54	53	56	2,090	104	952	472	243	196	434	73	85
9	53	53	55	1,360	96	870	418	336	302	288	62	56
10	53	53	54	747	92	760	438	274	850	148	90	56
11	53	53	54	518	102	660	366	225	740	236	66	60
12	53	53	54	477	90	585	376	219	978	248	86	114
13	53	53	55	418	90	524	348	195	974	253	75	224
14	53	52	55	354	85	474	328	190	732	196	875	124
15	53	52	55	300	92	438	308	181	520	99	144	145
16	53	52	54	278	87	402	294	198	350	151	111	90
17	53	52	54	263	82	372	711	255	311	96	94	90
18	53	52	57	237	93	360	696	274	255	110	214	74
19	55	51	59	195	79	891	826	248	396	110	102	86
20	52	51	183	200	86	911	640	167	330	95	101	66
21	52	52	204	192	85	1,550	551	172	251	107	110	56
22	52	52	204	192	100	1,250	498	164	220	72	80	77
23	52	52	99	172	78	1,100	461	251	165	92	38	52
24	52	52	120	181	100	4,920	443	226	146	93	60	56
25	52	52	100	145	145	8,300	380	146	168	74	240	71
26	52	52	160	139	1,120	5,060	396	120	130	94	478	60
27	52	51	350	146	1,110	3,500	244	130	122	72	206	72
28	52	51	273	130	644	2,640	281	128	128	328	158	60
29	52	50	208	147		1,780	296	118	121	290	116	83
30	52	50	166	128		1,300	292	109	136	174	104	292
31	52		111	128		1,060		118		144	92	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					65	52	53.3	0.203		0.23		
November					53	50	52.0	.198		.22		
December					350	50	105	.392		.45		
January					2,090	128	402	1.55		1.76		
February					1,120	78	191	.728		.76		
March					9,440	360	2,143	8.15		9.40		
April					898	244	498	1.86		2.08		
May					336	109	201	.764		.88		
June					978	85	314	1.19		1.33		
July					434	56	153	.582		.67		
August					675	60	138	.525		.61		
September					292	52	91.2	.347		.39		
The year					9,440	50	364	1.38		18.78		

Elk River above Fayetteville, Tenn.

Location.- Water-stage recorder at highway bridge $1\frac{1}{2}$ miles southeast of Fayetteville, Lincoln County, and 4 miles above mouth of Norris Creek.

Drainage area.- 800 square miles.

Records available.- August to September 1934.

Extremes.- Maximum discharge during period, 2,140 second-feet Sept. 11 (gage height, 5.23 feet); minimum, 206 second-feet Sept. 11, 25, 28, 29 (gage height, 1.58 feet).

Remarks.- Records excellent.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												253
2												255
3												239
4												488
5												322
6												275
7												253
8												239
9												212
10												222
11												537
12												746
13												550
14												540
15												420
16												332
17												301
18												275
19												250
20												246
21												219
22												232
23												226
24												229
25												212
26											425	219
27											713	215
28											425	206
29											360	250
30											320	506
31											275	
Month				Maximum		Minimum		Mean		Per square mile		Rin-off in inches
October												
November												
December												
January												
February												
March												
April												
May												
June												
July												
August 26-31				713		275		421		0.526		0.12
September				746		206		316		.395		.44
The year												

Elk River near Fayetteville, Tenn.

Location.- Water-stage recorder at dam and power house of Tennessee Electric Power Co. 2 miles southwest of Fayetteville, Lincoln County. Zero of gage is 637.67 feet above mean sea level.

Drainage area.- 857 square miles.

Records available.- October 1925 to September 1934 (discontinued).

Extremes.- Maximum during year, 29,200 second-feet Mar. 3 (gage height, 24.32 feet); minimum, 93 second-feet Nov. 11 (gage height, 1.02 feet).
1925-34: Maximum, about 45,600 second-feet Mar. 23, 1929 (gage height, from high-water mark, 28.2 feet); minimum, 40 second-feet Oct. 15, 16, 1931 (gage height, 0.73 foot).

Remarks.- Records good except those estimated for Dec. 25, Mar. 21, 24-27, which are fair. Considerable diurnal fluctuation caused by operation of power plant just above gage.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	254	192	193	646	440	1,700	2,820	790	385	490	511	288		
2	266	192	201	660	428	8,130	2,420	760	436	488	420	296		
3	226	202	495	662	435	27,500	2,120	700	432	406	373	226		
4	198	212	391	1,010	416	24,400	1,940	687	601	372	323	502		
5	170	866	304	1,170	408	19,300	1,780	682	664	356	303	362		
6	142	572	1,870	3,320	418	10,400	1,640	714	1,000	312	302	290		
7	209	312	632	8,200	396	5,580	1,580	745	1,060	521	266	248		
8	166	216	330	5,680	352	2,860	1,490	676	898	1,200	283	232		
9	188	208	336	4,090	368	2,550	1,400	848	852	942	262	193		
10	185	202	305	3,020	374	2,290	1,350	780	1,770	710	266	212		
11	185	200	294	2,040	352	2,010	1,260	816	3,300	880	238	490		
12	186	198	277	1,610	347	1,790	1,160	687	4,710	858	248	1,090		
13	182	197	260	1,420	361	1,620	1,140	590	3,620	661	243	654		
14	190	190	244	1,240	340	1,460	1,080	572	2,440	586	832	597		
15	184	188	247	1,110	349	1,350	1,020	630	1,790	522	790	478		
16	198	187	243	1,010	334	1,260	1,080	750	1,390	482	503	391		
17	200	186	234	876	322	1,160	1,260	721	1,130	408	555	357		
18	198	188	514	830	309	1,130	1,420	945	1,020	374	2,080	301		
19	194	180	2,100	776	319	2,120	2,130	770	852	488	522	285		
20	193	182	1,370	680	321	3,910	1,920	668	876	548	448	272		
21	202	198	908	699	294	4,750	1,580	598	767	396	326	224		
22	196	330	618	671	316	3,560	1,400	1,480	650	328	340	233		
23	224	298	622	638	336	4,420	1,360	1,010	607	343	306	234		
24	171	252	547	594	319	17,400	1,220	748	536	299	337	254		
25	180	221	572	584	1,820	19,800	1,130	710	544	296	361	196		
26	182	206	1,162	544	4,200	20,000	1,040	576	484	291	492	221		
27	180	202	841	524	3,020	17,800	985	524	454	352	764	222		
28	195	200	788	506	2,310	11,800	914	464	428	391	479	200		
29	190	200	750	496		5,970	797	443	436	878	395	254		
30	192	192	636	458		3,420	829	422	470	1,230	346	563		
31	193		538	448		3,160		409		600	294			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					266		142		195		0.228		0.26	
November					866		180		246		.287		.32	
December					2,100		193		607		.708		.82	
January					8,200		448		1,491		1.74		2.01	
February					4,200		294		714		.833		.87	
March					27,500		1,130		7,503		8.75		10.09	
April					2,820		797		1,442		1.68		1.87	
May					1,490		409		707		.825		.95	
June					4,710		385		1,153		1.35		1.51	
July					1,230		291		549		.641		.74	
August					2,080		238		458		.534		.62	
September					1,090		193		345		.403		.45	
The year					27,500		142		1,294		1.51		20.51	

Elk River near Prospect, Tenn.

Location.- Water-stage recorder at highway bridge 1 mile below mouth of Richland Creek, $3\frac{1}{2}$ miles east of Prospect, Giles County, and 6 miles above mouth of Fords Creek.

Drainage area.- 1,666 square miles.

Records available.- January to September 1934.

Extremes.- Maximum discharge during period, 42,100 second-feet Mar. 4 (gage height, 31.12 feet); minimum, 236 second-feet Sept. 11 (gage height, 1.07 feet).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					760	3,280	4,900	1,110	520	1,140	760	330
2					795	12,800	4,090	1,110	1,290	1,460	520	308
3					760	34,200	3,600	1,040	1,110	690	490	308
4					690	41,300	3,120	970	2,500	550	430	273
5					655	34,500	2,900	970	2,340	490	380	530
6					690	26,300	2,560	1,040	1,560	460	355	411
7					655	13,100	2,400	1,340	1,640	1,440	330	330
8					620	5,440	2,240	1,040	1,480	1,180	308	308
9					585	4,720	2,160	970	1,260	1,260	450	285
10					585	4,900	2,080	1,110	1,410	1,260	380	261
11					585	3,520	2,010	1,040	3,200	935	308	372
12					550	3,120	1,940	1,040	4,990	1,340	285	1,510
13					585	2,720	1,780	900	5,620	865	308	1,940
14					550	2,480	1,640	830	3,600	760	647	1,260
15					520	2,240	1,560	865	2,480	690	760	935
16					520	2,080	1,480	970	1,860	655	830	970
17					490	1,940	1,780	1,040	1,480	520	490	760
18					520	1,860	1,780	1,040	1,640	490	2,340	550
19					490	2,840	2,240	1,040	1,410	620	1,600	450
20					490	6,200	2,480	935	1,110	900	555	380
21					490	8,200	2,240	865	1,040	655	1,300	330
22					490	7,100	1,860	2,420	970	490	887	308
23					520	6,400	1,860	2,080	830	405	520	308
24				1,040	490	19,200	1,710	1,260	760	405	657	308
25				1,040	2,200	32,600	1,560	970	1,040	330	512	308
26				935	9,700	32,800	1,480	900	795	751	830	257
27				900	5,800	25,400	1,340	725	655	490	690	265
28				965	4,360	24,000	1,340	655	620	330	530	269
29				795		15,800	1,180	620	585	934	520	277
30				760		8,600	1,180	585	655	1,640	430	550
31				725		6,200		550		1,340	380	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October					
November					
December					
January 24-31	1,040	725	882	0.530	0.16
February	9,700	490	1,291	.775	.81
March	41,200	1,860	12,870	7.72	8.90
April	4,900	1,180	2,146	1.29	1.44
May	2,420	550	1,035	.620	.71
June	5,620	520	1,662	1.01	1.13
July	1,640	330	822	.493	.57
August	2,340	285	649	.389	.45
September	1,940	257	521	.313	.35
The year					

Elk River near Elkmont, Ala.

Location.- Chain gage at highway bridge $2\frac{1}{2}$ miles above mouth of Shoal Creek, 4 miles below Tennessee State line, and 5 miles northwest of Elkmont, Limestone County. Zero of gage is 549.45 feet above mean sea level.

Drainage area.- 1,700 square miles.

Records available.- July 1904 to February 1908, January 1919 to March 1934 (discontinued).

Average discharge.- 14 years (1919-33), 3,240 second-feet.

Extremes.- Maximum discharge during year, 45,000 second-feet (estimated) Mar. 4 (gage height not determined); minimum, 191 second-feet Oct. 8, 26 (gage height, 1.34 feet).

1904-8, 1919-34: Maximum discharge, about 51,800 second-feet Mar. 24, 1929 (gage height, from high-water mark, 30.5 feet); minimum discharge, 85 second-feet Sept. 18-20, 1925, Sept. 11, 1931; minimum gage height, 0.98 foot Sept. 11, 1931.

Remarks.- Records good except those above 27,000 second-feet, which are fair. Some regulation at low stages caused by operations at hydroelectric plant at Fayetteville, Tenn.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	395	265	284	960	830	3,520						
2	421	278	324	1,150	830	7,220						
3	395	317	414	1,000	830	36,000						
4	382	675	1,000	1,050	750	44,000						
5	356	950	712	790	750	36,000						
6	330	1,630	6,350	2,680	712	30,000						
7	304	830	2,800	11,800	750	17,200						
8	191	565	1,520	11,100	712	5,720						
9	291	440	1,000	8,250	712	5,100						
10	235	376	830	5,850	675	4,120						
11	245	362	712	4,120	712	3,520						
12	255	362	675	3,040	638	3,040						
13	255	336	872	2,560	675	2,800						
14	278	298	530	2,200	675	2,440						
15	278	324	565	1,850	638	2,320						
16	235	298	530	1,740	638	2,080						
17	600	298	530	1,630	675	1,960						
18	343	260	790	1,410	675	1,850						
19	330	388	6,600	1,300	565	2,200						
20	291	284	5,100	1,300	600	6,720						
21	343	310	2,920	1,200	600	7,860						
22	265	565	1,960	1,200	565	7,730						
23	265	565	1,630	1,150	600	5,850						
24	278	530	1,360	1,050	600	13,800						
25	356	460	1,100	1,000	600	26,700						
26	191	376	1,850	960	10,500	33,500						
27	245	298	1,850	915	6,480	30,000						
28	255	336	1,360	915	4,600	26,700						
29	382	310	1,200	830		19,900						
30	199	324	1,200	830		9,550						
31	199		1,000	790		6,720						
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October					600	191	303	0.178	0.21			
November					1,630	260	454	.267	.30			
December					6,600	284	1,599	.941	1.08			
January					11,800	790	2,472	1.45	1.67			
February					10,500	565	1,378	.811	.84			
March					44,000	1,850	13,170	7.75	8.94			
April												
May												
June												
July												
August												
September												
The year												

Elk River near Rogersville, Ala.

Location.- Staff gage in sec. 1, T. 3 S., R. 7 W., at highway bridge on road between Huntsville and Florence, 4 miles east of Rogersville, Lauderdale County. Zero of gage is 518.02 feet above mean sea level.

Discharge area.- 2,100 square miles.

Records available.- October 1927 to September 1934.

Extremes.- Maximum discharge recorded during year, about 45,800 second-feet Mar. 5 (gage height, 18.0 feet); minimum, 300 second-feet Oct. 27; minimum gage height, 0.9 foot Oct. 27, Sept. 5, 10, 11.
1927-34: Maximum discharge recorded, about 61,600 second-feet Mar. 25, 1929 (gage height, 22.4 feet, from high-water mark); minimum, 110 second-feet Sept. 12, 1931 (gage height, 0.5 foot).

Remarks.- Records good. Discharge estimated Mar. 9-14.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	540	330	425	1,300	950	4,600	8,230	1,340	720	810	1,460	468
2	580	330	399	1,180	1,000	14,200	6,590	1,250	720	1,720	720	435
3	540	360	950	1,300	1,060	39,000	4,790	1,280	1,720	1,000	640	405
4	425	418	1,430	1,300	1,000	41,800	4,030	1,280	1,590	765	570	435
5	360	1,180	1,060	2,160	950	45,400	3,490	1,340	3,670	720	500	405
6	360	1,780	3,490	2,640	900	37,900	3,140	1,340	1,860	640	435	640
7	360	1,300	6,390	12,700	900	28,600	2,800	1,460	1,935	1,280	435	500
8	360	850	2,320	15,700	900	13,200	2,800	1,460	1,790	2,160	500	435
9	360	580	1,570	10,100	850	6,500	2,480	1,340	1,590	1,790	720	405
10	360	540	1,180	7,810	850	6,500	2,480	1,220	1,460	1,340	640	375
11	348	500	950	5,990	850	5,000	2,320	1,220	2,480	1,590	500	375
12	330	425	850	3,850	850	4,000	2,320	1,220	4,220	1,220	435	640
13	330	412	750	3,140	850	3,500	2,160	1,220	6,590	1,340	435	2,320
14	330	386	705	2,800	850	3,200	1,860	1,110	4,600	900	500	2,160
15	330	380	660	2,480	850	2,800	1,860	1,220	3,140	765	720	1,400
16	750	380	620	2,160	850	2,480	1,790	1,340	2,160	765	810	1,340
17	1,000	380	660	1,940	800	2,320	1,790	1,220	1,790	720	500	1,110
18	540	392	1,000	1,860	800	2,320	1,940	1,220	1,590	640	550	810
19	425	392	5,390	1,710	800	2,800	2,160	1,220	1,560	570	2,480	640
20	412	425	8,660	1,570	850	5,590	2,800	1,160	1,400	1,660	550	640
21	373	392	4,220	1,500	850	8,560	2,480	1,110	1,220	1,110	1,110	535
22	385	540	2,800	1,430	800	9,070	2,320	2,160	1,110	765	2,160	468
23	360	660	2,160	1,360	750	7,190	2,480	2,970	1,000	640	900	435
24	348	660	1,780	1,300	750	13,400	2,160	1,790	900	555	640	435
25	348	620	1,500	1,300	950	26,500	1,860	1,340	855	500	720	405
26	342	580	2,800	1,240	10,400	33,900	1,720	1,160	1,110	500	680	435
27	318	440	2,320	1,180	9,280	35,400	1,660	1,060	810	1,060	1,000	405
28	342	425	1,860	1,120	5,790	31,400	1,590	900	765	640	810	405
29	360	425	1,570	1,120		25,200	1,520	765	765	720	810	435
30	373	425	1,500	1,060		14,200	1,460	765	765	2,320	640	640
31	342		1,300	950		10,400		720		1,860	535	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,000	318	417	0.199	0.23
November	1,780	330	564	.269	.30
December	8,650	392	2,041	.972	1.12
January	15,700	950	3,137	1.49	1.72
February	10,400	750	1,688	.804	.84
March	45,400	2,320	15,880	7.47	5.61
April	8,230	1,460	2,703	1.29	1.44
May	2,970	720	1,898	.618	.71
June	6,590	720	1,873	.892	1.00
July	2,320	500	1,066	.508	.59
August	2,480	435	816	.389	.45
September	2,320	375	684	.326	.36
The year	45,400	318	2,686	1.28	17.37

Boiling Fork Creek at Winchester, Tenn.

Location.- Staff gage at highway bridge half a mile northwest of Winchester, Franklin County, and 2 miles above confluence with Elk River.

Drainage area.- 83.3 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period, about 4,880 second-feet Mar. 2 (gage height, 9.70 feet); minimum, 11 second-feet several days in October, November, and December 1933 (gage height, 0.30 foot).
1932-34: Maximum and minimum discharge, those of Mar. 2, 1934, and October, November and December 1933.
Maximum stage known, 12.3 feet Mar. 23, 1929.

Remarks.- Records fair. Slight regulation at low water caused by operation of milldam several miles upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	13	15	58	47	119						
2	16	13	12	50	48	2,670						
3	15	13	14	44	47	2,320						
4	17	15	15	44	45	695						
5	15	17	14	74	44	681						
6	15	13	27	70	47	531						
7	14	14	18	945	40	461						
8	13	14	22	320	40	380						
9	13	14	19	228	37	320						
10	13	13	15	185	37	292						
11	14	13	21	154	35	252						
12	15	16	18	136	36	240						
13	15	14	18	127	34	206						
14	14	13	15	111	34	196						
15	13	15	17	111	33	185						
16	13	13	14	104	33	174						
17	13	12	14	91	32	164						
18	13	13	27	91	30	154						
19	13	13	104	85	33	720						
20	15	12	86	80	31	568						
21	13	16	58	74	34	444						
22	16	37	45	80	33	320						
23	13	22	42	68	32	568						
24	13	17	40	65	30	3,610						
25	13	16	33	63	45	1,320						
26	14	15	54	60	461	805						
27	13	17	55	58	136	1,200						
28	13	17	48	55	240	720						
29	13	14	43	53		605						
30	13	14	41	50		531						
31	13		40	48		444						
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					17	13	13.9	0.167		0.19		
November					37	12	15.3	.184		.21		
December					104	12	32.4	.389		.45		
January					945	44	122	1.46		1.68		
February					461	30	63.4	.761		.79		
March					3,610	119	713	8.66		9.37		
April												
May												
June												
July												
August												
September												
The year												

Richland Creek near Pulaski, Tenn.

Location.- Water-stage recorder, 1,500 feet above highway bridge on U. S. Highway 64, $3\frac{1}{2}$ miles west of Pulaski, Giles County.

Drainage area.- 360 square miles.

Records available.- April to September 1934.

Extremes.- Maximum discharge during period, 3,420 second-feet June 4 (gage height, 9.18 feet); minimum, 28 second-feet Sept. 11 (gage height, 1.77 feet).

Remarks.- Records good except those estimated July 19-21, which are fair.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								148	99	123	78	35
2								158	855	161	68	32
3								154	171	97	58	31
4								129	1,690	83	50	35
5								124	426	73	45	37
6								169	397	65	43	33
7								166	295	150	39	31
8								158	226	141	96	31
9								127	188	99	149	29
10								122	352	85	60	29
11								161	286	73	45	54
12								116	1,190	66	40	218
13								104	379	62	56	598
14								102	246	54	43	204
15								107	192	83	33	132
16								111	157	59	32	327
17								111	209	49	42	169
18								111	458	48	132	116
19								97	217	235	52	88
20								83	163	149	43	73
21								127	136	64	425	62
22								399	118	53	119	58
23								172	109	46	62	59
24								120	164	41	58	49
25								102	374	52	160	49
26								92	122	477	127	45
27								87	106	70	70	41
28							169	78	94	58	53	41
29							159	73	90	798	46	64
30							149	70	99	166	41	143
31								66		102	38	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May												
June												
July												
August												
September												
The year												

Shoal Creek at Lawrenceburg, Tenn.

Location.- Staff gage at Lawrenceburg municipal pumping station 1,000 feet below Beeler Fork and 1 mile west of Lawrenceburg, Lawrence County.

Drainage area.- 44.9 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period, 1,580 second-feet Mar. 24 (gage height, 5.70 feet); minimum, 23 second-feet Oct. 28, Nov. 11, 18 (gage height, 1.74 feet).

1932-34: Maximum gage height recorded, 14.06 feet May 7, 1933 (discharge not determined); minimum discharge, that of Oct. 28, Nov. 11, 18, 1933.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	26	28	32	37	44						
2	29	26	25	36	32	805						
3	26	170	31	32	35	520						
4	27	29	27	51	31	232						
5	26	36	25	37	34	144						
6	28	28	215	288	37	107						
7	27	29	49	255	32	92						
8	26	23	41	114	31	144						
9	26	27	55	90	31	100						
10	27	28	34	70	31	82						
11	28	25	31	63	31	72						
12	26	26	34	63	34	65						
13	28	26	29	59	34	63						
14	26	26	28	52	34	59						
15	26	26	30	48	29	58						
16	29	25	30	46	36	54						
17	27	26	27	44	36	51						
18	27	25	180	41	26	52						
19	28	26	164	44	28	129						
20	27	32	61	43	28	215						
21	26	26	48	41	29	150						
22	26	26	43	41	30	97						
23	27	25	41	36	30	164						
24	27	25	38	36	30	1,320						
25	26	25	36	36	138	520						
26	29	25	38	36	104	302						
27	28	25	36	43	56	302						
28	25	25	31	34	46	215						
29	26	25	31	35		170						
30	26	26	31	35		141						
31	26		32	32		120						
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				29	25	26.9	0.599		0.69			
November				170	25	31.6	.704		.79			
December				215	25	49.3	1.10		1.27			
January				255	32	62.1	1.38		1.59			
February				138	28	39.7	.884		.92			
March				1,320	44	215	4.74		5.46			
April												
May												
June												
July												
August												
September												
The year												

Shoal Creek at Iron City, Tenn.

Location.- Water-stage recorder 700 feet above Louisville & Nashville Railroad bridge, a quarter of a mile east of Iron City, Lawrence County, and a third of a mile below mouth of Holly Creek. Zero of gage is 534.28 feet above mean sea level. Prior to Oct. 1, 1933, staff gage with same datum 100 feet downstream was used.

Drainage area.- 355 square miles.

Records available.- July 1925 to September 1934.

Extremes.- Maximum discharge during year, 13,100 second-feet Mar. 3 (gage height, 12.90 feet); minimum, 55 second-feet June 17 (gage height, 0.20 foot).
1925-34: Maximum discharge recorded, about 26,000 second-feet Oct. 17, 1932 (gage height, 16.0 feet); minimum, 39 second-feet Sept. 22, 1925 (gage height, 0.80 foot, original gage datum).

Remarks.- Records good except those estimated, which are fair. Some regulation caused by operation of power plant at Lawrenceburg.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*160	148	148	202	205	*219	756	285	146	215	175	85
2	140	142	146	213	222	*1,760	648	267	144	230	166	86
3	150	346	177	192	210	*7,130	585	267	*146	189	172	91
4	136	*366	267	233	202	*3,360	525	255	*160	172	133	98
5	130	*446	219	360	178	1,900	478	243	168	168	106	134
6	130	*424	1,790	682	175	1,270	442	219	150	144	120	102
7	126	*360	598	2,970	192	965	378	228	180	231	244	88
8	120	*300	501	2,340	195	995	392	216	150	266	*165	82
9	126	*249	349	1,410	195	865	360	202	156	234	*176	92
10	138	*190	300	956	192	738	346	195	333	168	*150	96
11	134	*148	246	690	178	696	342	289	*310	245	*98	126
12	128	*146	228	550	172	600	352	340	*213	156	106	740
13	134	*165	219	473	160	515	304	258	188	134	160	2,040
14	120	*156	198	419	165	450	300	228	165	140	122	1,060
15	148	*126	182	363	170	394	291	228	130	154	102	410
16	146	*126	175	338	150	346	282	231	126	227	92	561
17	148	*126	*240	294	140	328	314	225	*116	144	84	501
18	144	132	*815	288	*168	324	304	213	92	126	106	298
19	150	122	*321	273	*180	428	375	210	104	347	96	213
20	126	138	*234	*264	*136	585	338	205	90	190	126	175
21	*120	147	*198	*261	*142	1,180	291	190	92	138	126	186
22	*140	252	*182	*246	*190	1,380	288	403	90	130	124	134
23	*208	228	*328	*216	*144	600	358	342	136	158	114	134
24	*156	178	300	*252	*136	*4,820	414	249	136	130	112	132
25	*148	152	246	*258	*510	4,310	356	222	142	129	97	128
26	*144	146	231	*210	*2,260	3,270	324	210	152	254	299	130
27	*144	146	216	*228	*1,340	2,710	300	192	141	168	204	124
28	*156	148	*185	195	*525	2,040	304	178	134	143	146	118
29	152	146	*192	180		1,520	288	180	142	420	104	118
30	142	150	*190	172		1,900	270	158	346	508	91	265
31	144		202	180		920		148		222	94	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	208	120	142	0.400	0.46
November	446	122	201	.567	.63
December	1,790	146	317	.893	1.03
January	2,970	172	510	1.44	1.66
February	2,260	136	315	.688	.92
March	7,130	219	1,562	4.40	5.07
April	756	270	376	1.06	1.18
May	403	148	254	.659	.76
June	346	90	189	.448	.50
July	508	126	203	.572	.66
August	299	64	136	.383	.44
September	2,040	82	284	.800	.89
The year	7,130	82	372	1.05	14.20

*Estimated.

Cypress Creek near Florence, Ala.

Location.- Water-stage recorder in sec. 9, T. 3 S., R. 11 W., at highway bridge on Florence-Waterloo road 4 miles below Cocks Creek and 2 miles west of Florence, Lauderdale County. Zero of gage is 423.76 feet above mean sea level.

Drainage area.- 208 square miles.

Records available.- May to September 1934.

Extremes.- Maximum discharge during period, 4,170 second-feet June 4 (gage height, 5.33 feet); minimum, 56 second-feet Aug. 17 (gage height, 0.44 foot).

Remarks.- Records good below 200 second-feet, fair above.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									75	110	79	59
2									75	202	71	58
3									194	169	67	58
4									954	116	65	64
5									209	106	67	62
6									742	156	65	59
7									272	286	62	58
8									514	238	67	58
9									429	144	69	58
10									1,130	113	59	58
11									426	110	58	58
12									270	102	58	193
13									205	88	112	759
14									170	83	67	149
15									144	81	64	88
16									132	114	59	107
17									487	92	58	146
18									799	81	672	88
19									281	120	235	79
20									216	241	737	75
21									180	116	378	69
22									156	88	158	65
23									140	83	96	65
24									128	77	85	64
25									120	73	76	64
26									113	73	85	64
27									106	71	75	64
28									152	150	69	65
29									106	168	65	84
30								83	129	110	64	88
31								79		83	62	
Month					Maximum	Minimum	Mean	Per square mile	Run-off in inches			
October												
November												
December												
January												
February												
March												
April												
May												
June					1,130	75	295	1.42	1.58			
July					286	71	124	.694	.68			
August					737	58	129	.620	.71			
September					759	58	101	.486	.54			
The year.												

Bear Creek at Bishop, Ala.

Location.- Water-stage recorder in T. 4 S., R. 15 W., at highway bridge half a mile below Little Bear Creek and three-quarters of a mile southwest of Bishop. Prior to May 23, 1934, a staff gage at same site with datum 5.00 feet lower was used. Zero of present gage is 419.85 feet above mean sea level.

Drainage area.- 621 square miles.

Records available.- August 1926 to March 1932, June 1933 to September 1934.

Extremes.- Maximum discharge recorded during year, 17,000 second-feet June 7 (gage height, 17.83 feet); minimum discharge, 67 second-feet Oct. 14; minimum gage height, 0.84 foot Sept. 28.

1926-34: Maximum discharge recorded, about 21,400 second-feet Dec. 26, 1926 (gage height, 22.0 feet, present datum, from high-water mark); minimum, 28 second-feet Sept. 21, 1927 (gage height, 0.2 feet, present datum).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	100	202	325	305	1,580	1,180	442	140	645	136	200
2	358	107	196	455	335	3,530	1,020	418	156	779	158	170
3	260	174	1,580	592	332	15,600	900	392	122	786	117	154
4	143	455	690	455	340	16,300	790	380	239	442	107	147
5	158	738	455	675	318	13,400	738	368	1,120	430	96	140
6	109	600	3,320	772	292	6,740	675	355	6,530	340	177	125
7	81	392	2,420	4,140	260	3,460	675	355	13,800	1,040	112	110
8	91	282	1,220	2,520	268	2,320	650	352	11,300	1,960	109	106
9	82	222	720	2,070	260	1,580	615	330	5,420	1,030	253	103
10	84	192	525	1,220	270	1,320	570	298	3,990	712	228	100
11	84	170	442	900	262	1,100	540	280	2,720	468	161	96
12	74	165	392	790	285	960	510	258	1,820	401	188	93
13	74	150	355	705	310	860	510	240	1,180	368	149	123
14	68	145	340	630	292	790	480	230	1,000	278	117	420
15	78	140	318	585	288	720	468	235	755	248	106	365
16	188	143	322	525	275	675	455	270	630	248	91	259
17	240	154	302	480	262	630	455	312	1,050	214	86	489
18	405	145	630	442	255	600	615	405	1,270	214	282	406
19	392	154	980	418	285	690	920	332	880	349	185	224
20	220	165	880	405	285	900	920	268	660	718	178	154
21	167	190	690	392	278	1,540	1,020	238	540	442	1,200	120
22	123	1,970	600	392	295	1,270	790	300	455	270	1,400	106
23	285	720	468	380	312	1,140	880	292	392	194	1,770	100
24	185	468	413	368	292	1,000	880	260	345	161	1,240	89
25	145	392	380	348	442	980	790	226	310	143	418	93
26	117	320	392	335	3,200	1,360	660	190	280	156	355	79
27	143	238	380	325	2,900	3,460	600	185	258	174	1,070	74
28	133	226	355	308	2,670	2,780	585	194	232	176	965	76
29	122	222	345	298		2,520	525	194	790	174	468	222
30	96	208	322	280		1,870	468	154	1,420	154	320	398
31	103		308	265		1,400		149		136	250	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	405	68	159	0.256	0.30
November	1,970	100	325	.523	.68
December	3,320	196	678	1.09	1.26
January	4,140	265	729	1.17	1.35
February	3,200	255	578	.931	.97
March	16,300	600	3,002	4.83	5.67
April	1,180	466	695	1.12	1.26
May	442	149	297	.462	.53
June	13,800	122	2,059	3.32	3.70
July	1,960	136	450	.725	.84
August	1,770	86	402	.647	.75
September	489	74	178	.287	.32
The year.	16,300	68	797	1.28	17.37

Horse Creek near Savannah, Tenn.

Location.- Staff gage 700 feet above highway bridge, $1\frac{1}{2}$ miles east of Savannah, Hardin County, and $4\frac{1}{2}$ miles above confluence with Tennessee River.

Drainage area.- 146 square miles.

Records available.- August 1929 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period, about 2,210 second-feet Mar. 3 (gage height, 8.04 feet); minimum, 44 second-feet Oct. 6, 8, 11, 15 (gage height, 0.88 foot).
1929-34: Maximum discharge recorded, above 4,670 second-feet Jan. 30, 1932 (gage height, 13.5 feet); minimum, 22 second-feet Oct. 2, 4-8, 1931 (gage height, 0.57 foot).

Remarks.- Records fair. Discharge estimated Oct. 27, Nov. 2.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	56	56	73	76	138						
2	51	66	56	73	73	755						
3	48	77	95	70	70	1,930						
4	46	76	81	81	68	720						
5	46	122	76	87	68	356						
6	44	87	276	114	68	276						
7	46	76	162	825	65	219						
8	44	68	146	377	65	257						
9	45	65	114	257	65	210						
10	46	63	98	200	65	200						
11	44	60	95	164	64	173						
12	46	63	87	146	68	155						
13	46	60	81	138	65	138						
14	46	58	78	122	63	130						
15	44	58	76	111	63	122						
16	68	58	76	104	63	114						
17	73	58	81	98	63	111						
18	60	58	101	95	60	104						
19	46	58	111	90	68	111						
20	53	59	114	87	63	114						
21	51	76	130	87	60	122						
22	51	76	122	87	73	114						
23	122	70	108	64	68	130						
24	81	68	98	81	65	296						
25	65	65	95	76	257	257						
26	60	63	90	76	356	590						
27	60	60	97	76	200	755						
28	60	58	78	76	164	441						
29	56	58	76	70		316						
30	56	56	73	68		238						
31	56		73	68		219						
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				122	44	55.3	0.379		0.44			
November				122	56	66.6	.455		.51			
December				276	56	100	.685		.79			
January				825	68	134	.916		1.06			
February				356	60	91.6	.627		.65			
March				1,930	104	316	2.16		2.49			
April												
May												
June												
July												
August												
September												
The year												

Duck River near Manchester, Tenn.

Location.- Chain gage at highway bridge $1\frac{1}{2}$ miles northwest of Manchester, Coffee County, and $1\frac{1}{2}$ miles above mouth of Little Duck River.

Drainage area.- 57.1 square miles.

Records available.- June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge recorded during period October 1933 to March 1934, about 8,300 second-feet Mar. 24 (gage height, 11.30 feet); minimum, 9.0 second-feet Oct. 2 (gage height, 1.80 feet).
1932-34: Maximum discharge recorded, that of Mar. 24, 1934; minimum, 6.0 second-feet Aug. 8-10, 1932 (gage height, 1.52 feet).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	10	14	22	22	62						
2	9.5	11	14	22	21	325						
3	11	11	16	20	20	2,500						
4	11	11	16	22	20	580						
5	11	14	18	25	22	280						
6	11	18	24	29	19	142						
7	11	19	30	475	19	94						
8	11	19	37	182	18	132						
9	11	17	31	101	16	106						
10	9.5	17	28	65	16	79						
11	9.5	16	34	57	16	62						
12	10	16	28	49	18	50						
13	11	16	21	48	19	44						
14	9.5	16	22	45	18	42						
15	10	16	21	39	17	43						
16	11	16	23	36	16	37						
17	11	15	23	34	16	34						
18	11	14	29	33	16	37						
19	9.5	15	32	31	18	142						
20	9.5	15	34	30	18	545						
21	10	15	26	29	18	340						
22	11	17	24	29	16	148						
23	11	17	29	29	16	110						
24	11	16	36	27	16	4,460						
25	11	16	37	27	17	1,410						
26	11	16	30	27	205	990						
27	11	16	24	25	113	790						
28	11	15	22	25	70	580						
29	11	14	20	24		165						
30	11	14	21	23		113						
31	11		22	23		88						
Month						Maximum	Minimum	Mean	Per square mile	Run-off in inches		
October						11	9.5	10.8	0.186	0.21		
November						19	10	15.3	.268	.30		
December						39	14	25.5	.447	.62		
January						475	20	52.7	.923	1.06		
February						205	16	29.8	.523	.55		
March						4,460	34	469	8.21	9.46		
April												
May												
June												
July												
August												
September												
The year.												

Duck River below Manchester, Tenn.

Location.- Water-stage recorder at highway bridge 3 miles west of Manchester, Coffee County, 3 miles below mouth of Little Duck River, and 5 miles above mouth of Crumptions Creek.

Drainage area.- 109 square miles.

Records available.- April to September 1934.

Extremes.- Maximum discharge for period, 978 second-feet June 12 (gage height, 3.87 feet); minimum, 8 second-feet Aug. 12 (gage height, 0.58 foot).

Remarks.- Records good.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							210	48	33	31	22	17
2							172	46	35	34	21	16
3							130	46	37	30	20	16
4							117	43	46	27	20	25
5							104	42	36	26	16	21
6							96	50	37	25	16	17
7							89	60	40	51	17	17
8							97	55	35	51	18	17
9							93	47	32	45	18	16
10							93	43	48	42	36	15
11							84	41	40	38	27	43
12							102	41	500	39	10	118
13							80	39	472	37	11	56
14							70	38	145	35	17	29
15							64	50	74	35	16	24
16							65	51	58	30	17	22
17							123	46	53	27	17	21
18							129	43	54	26	23	20
19							96	39	50	27	24	19
20							89	38	48	24	23	19
21							74	38	46	24	22	19
22							66	45	43	23	22	22
23							64	55	41	21	21	21
24							61	72	46	20	20	20
25							57	50	41	19	33	19
26							54	42	37	19	27	16
27							53	38	34	20	21	16
28							51	35	38	21	21	18
29							52	33	42	24	19	30
30							49	35	53	25	18	38
31								52		23	17	
Month							Maximum	Minimum	Mean	Per square mile	Run-off in inches	
October												
November												
December												
January												
February												
March												
April							210	49	89.4	0.820	0.81	
May							83	32	45.4	.417	.48	
June							500	32	75.8	.695	.78	
July							51	19	29.6	.272	.31	
August							36	10	20.4	.197	.22	
September							116	15	25.7	.236	.26	
The year												

Duck River near Shelbyville, Tenn.

Location.- Water-stage recorder at highway bridge on highway between Shelbyville and Farmington, 2 miles below mouth of Flat Creek, 2 miles above mouth of Sugar Creek, and $2\frac{1}{2}$ miles west of Shelbyville, Bedford County.

Drainage area.- 489 square miles.

Records available.- April to September 1934.

Extremes.- Maximum discharge during period, 2,760 second-feet June 12 (gage height, 6.48 feet); minimum, 38 second-feet Sept. 1, 9 (gage height, 0.88 foot).

Remarks.- Records good. Diurnal regulation caused by hydroelectric plant at Shelbyville.

Discharge, in second-feet, 1934

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								218	124	174	64	62
2								204	114	228	66	59
3								194	112	138	64	74
4								182	714	116	76	72
5								194	256	104	60	76
6								208	158	102	60	82
7								261	171	475	72	76
8								218	135	570	67	72
9								208	114	300	136	56
10								190	958	178	77	78
11								340	822	230	72	67
12								192	1,770	242	76	244
13								152	1,550	168	134	967
14								208	965	144	773	338
15								152	528	100	160	191
16								194	343	171	104	102
17								228	240	124	102	140
18								156	361	292	110	114
19								152	326	447	60	90
20								116	225	152	112	90
21								172	171	110	61	76
22								389	150	84	66	94
23								379	142	110	74	59
24								210	122	84	66	92
25								226	254	80	160	83
26								172	166	80	216	74
27								124	135	70	174	74
28								258	177	109	222	102
29								230	137	112	713	69
30								264	124	124	710	71
31								126		126	78	180
Month								Maximum	Minimum	Mean	Per square mile	Run-off in inches
October												
November												
December												
January												
February												
March												
April												
May								389	116	200	0.409	0.47
June								1,770	109	382	.781	.87
July								713	70	221	.452	.52
August								773	60	124	.254	.29
September								967	56	131	.268	.30
The year												

Duck River at Columbia, Tenn.

Location.- Water-stage recorder at highway bridge two blocks north of public square at Columbia, Maury County, and three-quarters of a mile below Columbia hydroelectric plant. Gage datum lowered 2.37 feet Oct. 1, 1933. Zero of present gage 535.41 feet above mean sea level.

Drainage area.- 1,210 square miles.

Records available.- October 1904 to December 1908, April 1920 to September 1934.

Average discharge.- 14 years (1920-34), 1,911 second-feet.

Extremes.- Maximum discharge during year, 30,600 second-feet Mar. 26 (gage height, 35.96 feet); minimum, 16 second-feet Aug. 5, 10 (gage height, 1.58 feet).
1904-8, 1920-34: Maximum discharge, about 43,000 second-feet, probably on Mar. 25, 1929 (gage height, 43.1 feet, present datum, from high-water mark); no flow Oct. 22, 1922, owing to regulation.
Maximum stage known, 48.0 feet, present datum, Mar. 30, 1903.

Remarks.- Records good. Discharge partly estimated June 21, 22. Low-water flow is completely regulated at power plant above gage. There are three other small power dams above station.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	76	135	468	342	2,060	2,700	396	322	404	353	129
2	93	92	158	446	312	5,280	2,250	418	263	389	291	68
3	98	422	186	511	362	20,300	1,870	395	981	364	108	95
4	110	294	304	589	326	25,300	1,600	406	797	332	186	146
5	132	442	510	848	366	22,000	1,430	446	1,120	334	148	85
6	122	1,210	6,420	2,690	304	7,830	1,240	390	926	148	137	76
7	220	893	7,640	10,900	294	3,780	1,080	442	525	243	123	44
8	94	437	2,920	10,100	304	2,930	1,030	438	534	746	119	131
9	62	347	1,540	5,700	254	2,770	1,160	440	395	941	35	31
10	57	262	1,050	3,340	258	2,330	1,020	404	755	576	177	54
11	66	328	780	2,310	224	1,910	960	404	1,490	408	93	53
12	85	56	620	1,810	262	1,600	872	644	1,760	266	106	119
13	97	160	503	1,580	254	1,390	619	524	2,890	210	133	172
14	136	150	476	1,440	268	1,220	698	446	2,440	242	151	368
15	133	148	363	1,220	250	1,040	685	422	1,530	251	210	699
16	108	152	404	1,050	224	944	680	394	896	379	508	617
17	69	148	294	814	268	889	832	396	925	148	251	370
18	58	139	552	798	190	798	816	403	1,600	167	173	233
19	72	126	4,390	746	251	1,780	772	426	1,250	600	225	116
20	93	118	6,990	714	240	7,680	734	336	961	797	234	179
21	143	152	2,840	592	208	9,230	696	662	614	516	130	142
22	122	194	723	646	254	6,220	524	420	482	276	156	140
23	126	182	1,240	638	245	4,360	654	508	300	281	178	73
24	142	218	983	576	256	17,700	572	812	265	143	276	114
25	66	314	798	540	626	29,000	538	642	468	224	594	64
26	202	83	696	518	4,990	30,300	476	392	361	207	806	80
27	115	159	622	463	5,630	26,500	484	315	308	110	617	68
28	69	162	588	392	3,120	13,500	463	343	264	307	366	112
29	66	160	622	472	7,460	396	297	292	1,540	205	357	357
30	62	146	426	394	4,880	486	274	202	1,490	209	299	299
31	64		460	342	3,440		282		573			

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	220	57	103	0.085	0.10
November	1,210	56	259	.214	.24
December	7,640	136	1,456	1.20	1.36
January	10,900	342	1,730	1.43	1.55
February	5,630	190	746	.617	.64
March	30,300	798	8,594	7.10	8.19
April	2,700	396	951	.786	.88
May	812	274	436	.360	.42
June	2,880	202	864	.714	.80
July	1,540	110	459	.363	.42
August	817	35	230	.190	.22
September	689	31	175	.146	.16
The year	30,300	31	1,345	1.11	15.10

Duck River at Centerville, Tenn.

Location.- Water-stage recorder at old highway bridge three-quarters of a mile north of Courthouse at Centerville, Hickman County, and 1 mile above Nashville, Chattanooga & St. Louis Railway bridge. Zero of gage is 451.33 feet above mean sea level.

Drainage area.- 2,070 square miles.

Records available.- March 1919 to September 1934.

Average discharge.- 14 years (1920-34), 3,050 second-feet.

Extremes.- Maximum discharge during year, 36,000 second-feet Mar. 25 (gage height, 24.40 feet); minimum, 210 second-feet Sept. 8, 9 (gage height, 1.10 feet).
1919-34: Maximum discharge, about 45,400 second-feet Mar. 27, 1929; maximum gage height (estimated), 28.0 feet Apr. 2, 1920; minimum discharge, 68 second-feet Aug. 30, 1925 (gage height, 0.39 foot).

Remarks.- Records good. Some regulation at low water, caused by operation of power plant at Columbia.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	456	265	392	960	791	4,160	5,540	842	444	798	1,030	376
2	343	260	397	912	805	4,750	4,560	756	420	1,150	696	316
3	300	456	727	912	763	22,800	3,900	784	480	1,120	613	290
4	270	1,240	1,040	1,010	777	27,900	3,250	735	1,740	770	492	326
5	265	960	896	1,330	742	29,500	2,590	728	2,080	742	438	594
6	270	1,070	6,520	1,940	756	25,900	2,530	721	1,750	594	332	423
7	300	1,540	9,700	14,000	707	8,760	2,240	714	1,460	594	230	326
8	290	1,260	7,450	18,300	679	5,680	2,070	764	1,000	958	235	280
9	376	865	3,460	11,800	672	4,980	2,020	735	850	1,340	230	235
10	285	652	2,240	7,300	639	4,420	2,070	686	1,040	1,330	370	250
11	260	582	1,630	4,840	606	3,770	1,960	693	1,560	977	230	255
12	230	528	1,380	3,770	620	3,130	1,850	686	2,080	756	270	895
13	225	535	1,140	3,130	620	2,770	1,630	866	2,290	620	235	648
14	255	343	1,000	2,770	620	2,410	1,530	805	3,770	558	270	1,090
15	255	398	944	2,410	558	2,070	1,380	865	2,590	522	270	775
16	316	382	865	2,070	558	1,900	1,380	960	1,740	510	235	1,890
17	432	397	904	1,800	576	1,740	1,330	828	1,470	576	607	1,480
18	392	397	1,130	1,680	558	1,630	1,430	707	5,320	426	532	980
19	305	382	3,340	1,480	570	1,950	1,530	679	2,710	456	456	665
20	270	376	9,250	1,380	540	4,940	1,380	652	1,950	918	434	540
21	255	376	9,050	1,330	546	15,100	1,310	652	1,500	1,100	414	462
22	270	382	3,900	1,280	564	12,300	1,260	1,010	1,140	888	334	462
23	673	450	2,830	1,250	600	8,650	1,140	945	842	549	679	480
24	462	450	2,180	1,150	582	20,100	1,150	695	742	510	933	354
25	409	462	1,740	1,090	694	35,500	1,050	1,090	700	370	632	354
26	370	474	1,580	1,040	4,220	35,700	986	996	693	573	1,470	310
27	321	498	1,390	1,000	8,200	35,100	936	779	865	700	1,330	245
28	414	348	1,230	928	6,250	35,100	936	522	693	558	838	295
29	332	398	1,120	980		15,700	880	570	646	1,950	632	316
30	285	398	1,040	858		9,550	820	540	1,040	2,210	436	1,220
31	265		944	784		7,000		486		1,840	414	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	673	825	327	0.158	0.18
November	1,540	260	570	.275	.31
December	9,700	397	2,593	1.25	1.44
January	18,300	784	3,074	1.49	1.72
February	8,200	540	1,243	.600	.62
March	35,700	1,630	12,610	6.09	7.02
April	5,640	820	1,898	.917	1.02
May	1,080	486	755	.365	.42
June	5,320	420	1,520	.734	.82
July	2,210	370	870	.420	.48
August	1,400	265	538	.260	.30
September	1,890	235	571	.276	.31
The year	35,700	225	2,234	1.08	14.64

Duck River near Hurricane Mills, Tenn.

Location.- Water-stage recorder at bridge on road between Waverly and Buffalo, 4 miles south of Hurricane Mills, Humphreys County, and 5 miles above mouth of Buffalo River. Prior to Feb. 20, 1934, a staff gage at same site and datum was used. Zero of gage is 362.30 feet above mean sea level.

Drainage area.- 2,610 square miles.

Records available.- July 1925 to September 1934.

Extremes.- Maximum discharge during year, 45,800 second-feet Mar. 26 (gage height, 21.82 feet); minimum, 450 second-feet Oct. 14 (gage height, 0.92 foot).
1925-34: Maximum discharge recorded, about 50,500 second-feet Mar. 14, 1927 (gage height, 24.95 feet); minimum, 185 second-feet Sept. 11, 12, 1925; minimum gage height, 0.39 foot Oct. 6, 1931.

Remarks.- Records good. Possibly slight regulation during low water caused by operation of small power plants upstream.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	770	510	600	1,490	1,260	5,890	7,490	1,260	850	1,380	1,980	756
2	735	510	600	1,410	1,260	6,100	6,150	1,300	790	1,180	1,340	689
3	650	540	770	1,330	1,260	24,200	6,240	1,180	790	1,460	1,040	645
4	540	700	1,260	1,330	1,260	30,000	4,520	1,180	850	1,420	975	667
5	510	1,570	1,260	1,570	1,180	31,000	3,930	1,180	2,110	1,150	850	712
6	480	1,410	1,650	1,900	1,120	31,400	3,600	1,180	2,120	1,080	760	850
7	510	1,410	9,650	7,210	1,150	20,900	3,270	1,180	2,020	975	724	790
8	540	1,730	9,650	19,200	1,080	8,750	3,050	1,150	1,710	1,010	662	694
9	510	1,490	4,950	17,000	1,080	7,490	2,750	1,180	1,360	1,340	596	654
10	510	1,190	3,200	9,650	1,040	6,410	2,650	1,150	1,340	1,640	596	564
11	540	1,050	2,360	6,670	1,010	5,500	2,750	1,120	1,540	1,540	645	579
12	510	770	1,900	5,120	940	4,640	2,650	1,080	1,840	1,300	612	584
13	480	805	1,650	4,280	910	4,040	2,450	1,080	2,350	1,080	656	1,080
14	450	840	1,570	3,710	1,010	3,600	2,250	1,260	2,660	975	584	1,040
15	480	735	1,490	3,380	975	3,270	2,160	1,420	3,710	880	579	1,300
16	570	700	1,730	2,950	940	2,850	2,020	1,380	2,650	890	579	1,420
17	840	665	2,280	2,550	880	2,650	1,980	1,420	2,160	910	664	2,020
18	770	630	2,670	2,250	850	2,450	1,940	1,220	4,090	880	850	1,660
19	700	600	4,690	2,070	910	2,350	2,120	1,150	5,240	850	820	1,260
20	600	570	8,610	1,940	880	3,020	2,020	1,080	3,160	940	760	975
21	510	600	9,200	1,800	880	8,750	1,840	1,080	2,450	1,220	760	880
22	510	600	5,730	1,890	910	13,600	1,800	1,040	1,940	1,300	748	940
23	570	600	5,340	1,760	910	11,000	1,710	1,380	1,580	1,150	1,010	940
24	665	735	4,470	1,660	940	16,800	1,660	1,260	1,340	880	1,130	820
25	735	700	3,870	1,620	1,040	35,500	1,620	1,120	1,260	820	1,260	694
26	700	665	2,560	1,540	2,360	44,700	1,500	1,380	1,150	1,480	975	700
27	570	700	1,990	1,500	7,070	44,700	1,460	1,260	1,080	1,040	1,580	640
28	570	805	1,810	1,420	8,330	42,600	1,420	1,120	1,220	1,380	1,420	596
29	600	570	1,730	1,380		37,400	1,380	940	1,080	1,080	1,150	689
30	570	570	1,650	1,300		17,300	1,380	940	1,010	2,350	975	975
31	540		1,670	1,260		9,650		910		2,070	820	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				840	450	588	0.225		0.26			
November				1,730	510	832	0.319		.36			
December				9,650	600	3,298	1.26		1.45			
January				19,200	1,260	3,682	1.41		1.63			
February				8,330	850	1,550	.594		.62			
March				44,700	2,550	15,760	6.04		6.96			
April				7,490	1,380	2,699	1.03		1.15			
May				1,420	910	1,180	.452		.52			
June				5,240	790	1,915	.734		.82			
July				2,350	820	1,211	.464		.53			
August				1,980	579	905	.347		.40			
September				2,020	579	893	.343		.38			
The year				44,700	450	2,910	1.11		15.08			

Little Duck River at Manchester, Tenn.

Location.- Chain gage at highway bridge 2 blocks northwest of courthouse at Manchester, Coffee County, and 1 mile above confluence with Duck River.

Drainage area.- 28.3 square miles.

Records available. June 1932 to March 1934 (discontinued).

Extremes.- Maximum discharge during period, 1,730 second-feet Mar. 3 (gage height, 5.82 feet); minimum, 7.5 second-feet several days in October and November (gage height, 1.05 feet).

1932-34: Maximum discharge, 2,920 second-feet Feb. 14, 1933 (gage height, 7.06 feet); minimum, 2.6 second-feet Sept. 9, 1932 (gage height, 0.92 foot).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	7.9	7.7	11	14	37						
2	8.5	7.7	7.7	11	13	388						
3	8.1	11	11	11	14	1,590						
4	8.8	9.6	7.9	11	12	610						
5	8.3	20	7.9	23	11	156						
6	8.1	12	16	35	11	94						
7	7.9	9.6	20	80	11	72						
8	7.7	8.1	11	135	11	73						
9	7.6	8.1	11	71	11	82						
10	7.7	7.9	16	41	10	73						
11	7.5	7.5	11	35	11	53						
12	7.9	7.9	11	35	11	44						
13	7.7	7.9	9.2	33	11	44						
14	7.9	7.9	9.9	28	10	35						
15	7.7	7.9	8.5	24	11	30						
16	8.3	7.9	8.1	23	10	28						
17	7.9	7.9	8.3	20	11	25						
18	7.9	7.9	10	19	10	27						
19	8.8	7.9	12	18	11	380						
20	7.9	7.9	14	18	9.9	450						
21	7.5	13	12	17	9.9	53						
22	7.5	11	11	18	11							
23	7.9	7.9	11	16	11							
24	7.9	7.9	11	16	24							
25	7.5	7.9	11	15	31							
26	7.5	7.9	20	15	555							
27	7.7	7.7	16	14	94							
28	7.7	7.9	12	12	42							
29	7.7	7.7	11	12								
30	7.5	7.5	11	11								
31	7.9		11	11								
Month						Maximum	Minimum	Mean	Per square mile	Run-off in inches		
October						8.8	7.5	7.90	0.279	0.32		
November						20	7.5	8.90	.514	.55		
December						20	7.7	11.5	.406	.47		
January						135	11	27.1	.958	1.10		
February						555	9.9	35.8	1.27	1.32		
March 1-21						1,590	25	207	7.31	5.71		
April												
May												
June												
July												
August												
September												
The year.												

Piney River at Vernon, Tenn.

Location.- Water-stage recorder at highway bridge half a mile west of Vernon, Hickman County. Pretty Creek enters 600 feet below and Mill Creek 2 miles above gage. Zero of gage is 470.67 feet above mean sea level. Same site and datum was used July 1925 to February 1931. February 1931 to May 11, 1934, staff gage half a mile downstream was used. Zero of staff gage was 467.90 feet above mean sea level.

Drainage area.- 201 square miles at staff-gage site; 192 square miles (revised) at site of water-stage recorder.

Records available.- July 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,350 second-feet Mar. 3 (gage height, 9.60 feet); minimum, 53 second-feet Sept. 2 (gage height, 1.41 feet). 1925-34: Maximum discharge, 32,500 second-feet (revised) Dec. 21, 1926 (gage height, 16.5 feet, original gage datum); minimum, 42 second-feet Oct. 13, 14, 1928.

Remarks.- Records good. Possibly slight regulation caused by operation of small milldam at Pinewood.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	70	67	147	120	358	534	112	90	100	103	63
2	71	70	87	129	112	1,320	444	112	92	111	104	60
3	70	71	120	120	112	4,070	386	112	144	90	77	69
4	68	70	92	156	109	1,450	358	110	131	94	70	134
5	67	317	84	197	106	918	317	109	107	84	64	77
6	67	120	688	230	104	720	304	110	98	85	62	66
7	67	98	254	1,360	102	564	291	106	92	122	62	69
8	67	87	176	918	101	986	266	102	92	113	61	77
9	67	82	138	656	99	884	242	99	115	84	59	68
10	65	78	120	534	96	686	230	104	195	79	56	66
11	65	77	112	444	96	564	242	111	113	77	59	66
12	67	75	107	386	99	474	208	109	98	75	59	65
13	68	74	101	330	96	414	197	107	90	73	58	103
14	65	73	96	291	96	386	197	207	88	72	59	72
15	65	70	96	254	87	330	186	203	84	96	59	86
16	156	70	344	230	87	304	186	153	84	84	65	302
17	109	68	784	208	87	278	176	135	410	72	116	95
18	78	68	1,060	186	92	266	166	128	701	92	70	77
19	73	68	1,240	176	96	278	156	119	242	77	64	69
20	70	68	850	166	87	266	147	113	183	84	61	66
21	70	74	624	176	87	358	147	113	147	73	61	80
22	70	71	474	156	101	396	138	113	133	69	207	232
23	107	70	386	147	96	386	147	107	122	64	361	96
24	81	70	317	138	87	1,930	138	100	187	64	170	80
25	73	67	266	138	156	2,440	129	98	135	67	89	74
26	70	67	254	129	752	1,400	129	94	113	79	80	71
27	70	66	197	129	504	1,240	138	92	107	85	74	68
28	70	65	186	129	414	986	129	90	96	118	68	69
29	70	66	166	120		616	120	90	96	81	66	240
30	70	67	166	112		688	120	92	134	73	66	169
31	70		147	112		594		90		73	65	
Month					Maximum	Minimum	Mean	Per square mile		Run-off in inches		
October					156	65	74.9	0.373		0.43		
November					317	65	81.9	.407		.45		
December					1,240	67	315	1.57		1.81		
January					1,360	112	278	1.36		1.59		
February					752	87	149	.741		.77		
March					4,070	266	863	4.29		4.95		
April					534	120	219	1.09		1.22		
May					207	90	114	.588		.68		
June					701	84	150	.781		.87		
July					122	64	84.2	.439		.51		
August					361	58	87.1	.454		.52		
September					302	60	96.4	.512		.57		
The year					4,070	58	211	1.06		14.37		

Note.- In run-off computations, 201 square miles used Oct. 1 to May 10, 192 square miles May 11 to Sept. 30.

Buffalo River near Flatwoods, Tenn.

Location.- Water-stage recorder a quarter of a mile upstream from highway bridge on Flatwoods-Linden road, half a mile below mouth of Little Opossum Creek, and 1½ miles north of Flatwoods, Wayne County. Zero of gage is 513.47 feet above mean sea level. Prior to June 1, 1934, staff gage at same site and datum was used.

Drainage area.- 439 square miles.

Records available.- May 1920 to September 1934.

Average discharge.- 14 years, 728 second-feet.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1933, 22,300 second-feet Oct. 17 (gage height, 21.8 feet); minimum discharge, 148 second-feet Sept. 27; minimum gage height, 1.51 feet Aug. 26.

Maximum discharge recorded during year ending Sept. 30, 1934, 15,400 second-feet Mar. 25 (gage height, 17.25 feet); minimum, 119 second-feet Aug. 17 (gage height, 1.22 feet).

1920-34: Maximum discharge recorded, about 34,800 second-feet Mar. 13, 1927 (gage height, 29.3 feet); minimum, 65 second-feet Sept. 9, 1925.

Remarks.- Records good below and fair above 10,000 second-feet.

Discharge, in second-feet, 1932-33

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	500	730	630	6,690	585	780	10,000	520	355	292	289	212		
2	425	680	562	2,780	585	730	3,710	680	343	294	233	203		
3	372	585	520	1,900	540	630	2,160	730	331	272	777	397		
4	355	520	480	1,480	500	565	1,600	562	325	251	708	390		
5	500	520	460	1,200	480	562	1,310	7,360	317	241	442	286		
6	442	595	425	1,040	460	540	2,440	12,400	311	229	546	241		
7	372	520	460	930	730	585	3,310	3,390	306	222	204	222		
8	325	500	460	930	3,630	630	2,100	15,100	300	217	237	205		
9	295	520	442	1,140	2,720	650	1,600	7,710	294	227	235	198		
10	280	520	1,040	1,420	1,660	880	1,310	2,940	289	286	235	208		
11	280	500	3,240	1,310	1,360	1,090	1,360	6,890	289	410	239	203		
12	285	480	2,580	1,140	1,140	980	1,200	6,010	300	311	232	200		
13	250	442	2,230	1,040	980	930	1,040	4,790	322	256	234	203		
14	235	425	1,970	930	2,640	880	930	2,440	368	262	239	244		
15	235	408	1,790	830	16,200	830	1,040	1,660	314	623	231	205		
16	442	408	1,540	730	6,580	830	1,780	1,260	278	638	232	208		
17	17,600	408	1,310	730	3,240	730	1,840	1,020	264	346	212	232		
18	4,810	408	1,090	780	2,230	980	1,600	846	262	289	238	220		
19	2,100	442	930	730	2,780	12,700	1,360	754	256	264	217	194		
20	1,360	480	830	680	15,000	10,300	1,140	664	251	256	212	178		
21	1,040	480	730	630	8,190	4,030	980	578	246	251	210	169		
22	630	460	730	830	3,390	2,440	930	638	241	262	200	161		
23	730	442	680	980	2,040	1,780	680	518	244	267	174	164		
24	585	442	730	1,090	1,600	1,420	830	558	251	246	199	150		
25	520	442	1,090	1,040	1,310	1,260	830	479	280	267	185	164		
26	1,090	585	1,090	980	1,140	1,200	780	456	294	664	190	150		
27	2,640	880	1,040	930	980	980	730	479	287	498	232	150		
28	1,840	980	1,200	830	930	880	630	518	266	407	269	198		
29	1,310	780	1,260	730		830	685	438	343	355	212	234		
30	1,040	680	1,200	680		780	562	397	300	294	232	239		
31	880		9,470	630		3,550		371		280	224			
Month					Maximum		Minimum		Mean		Per square mile		Run-off in inches	
October					17,600		255		1,418		3.23		3.72	
November					980		408		542		1.23		1.37	
December					9,470		425		1,361		3.10		3.57	
January					6,690		630		1,218		2.77		3.19	
February					16,200		460		2,915		6.64		6.91	
March					12,700		540		1,805		4.11		4.74	
April					10,000		562		1,686		3.84		4.28	
May					15,100		371		2,678		6.10		7.03	
June					368		241		294		.670		.75	
July					923		217		325		.740		.85	
August					777		180		277		.631		.73	
September					397		150		214		.487		.54	
The year					17,600		160		1,220		2.78		37.68	

Note.- Records May 9 to Sept. 30, 1933, supersede those published in Water-Supply Paper 743.

Buffalo River near Flatwoods, Tenn.

(Continued)

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	165	200	272	251	664	918	294	194	371	297	132
2	185	187	200	267	264	942	800	289	189	283	249	130
3	174	215	334	262	262	8,310	686	283	198	244	220	128
4	166	314	377	267	256	8,290	599	283	198	212	196	180
5	158	334	300	349	251	2,250	538	278	217	191	191	191
6	156	352	2,510	424	251	1,450	494	275	308	198	174	187
7	154	286	1,540	4,790	246	1,060	487	278	349	294	165	158
8	154	251	918	4,140	246	942	449	280	259	558	154	152
9	150	229	498	1,840	241	942	435	269	249	538	146	148
10	150	220	404	1,200	236	846	404	256	371	334	150	144
11	148	210	352	894	229	731	410	267	446	269	163	150
12	150	203	322	754	224	642	417	292	311	256	140	165
13	150	208	306	642	222	578	384	269	259	215	134	564
14	148	208	286	558	222	518	358	283	232	194	130	1,060
15	146	205	278	479	220	483	346	278	212	194	126	500
16	185	203	278	435	217	438	358	278	203	196	121	558
17	203	198	278	390	217	410	380	264	289	183	119	558
18	205	196	456	364	217	387	380	251	763	178	121	374
19	185	196	800	346	220	428	371	241	544	178	128	278
20	172	194	754	331	222	538	358	232	355	234	130	234
21	167	203	664	328	217	823	346	224	286	174	134	215
22	180	251	538	331	224	1,310	346	275	249	163	136	205
23	371	246	446	317	227	1,230	355	278	227	150	178	217
24	286	227	407	300	232	5,900	346	251	210	144	180	196
25	227	217	371	286	275	13,600	334	227	205	148	158	165
26	203	212	352	278	1,140	4,890	325	217	203	254	154	174
27	187	203	354	272	1,060	3,390	325	215	191	306	174	169
28	194	200	306	269	800	2,650	326	210	194	627	161	163
29	189	198	289	262		1,840	317	208	189	370	146	216
30	187	198	278	254		1,390	303	205	466	945	136	461
31	185		272	244		1,140		203		447	132	
Month					Maximum		Minimum	Mean	Per square mile		Run-off in inches	
October					371		146	184	0.419		0.48	
November					352		165	225	.513		.87	
December					2,510		200	505	1.15		1.35	
January					4,790		244	714	1.63		1.88	
February					1,140		217	317	.722		.75	
March					13,600		387	2,129	4.85		5.59	
April					918		303	430	.979		1.09	
May					294		203	257	.585		.67	
June					763		189	286	.651		.73	
July					945		144	291	.663		.76	
August					297		119	189	.362		.42	
September					1,060		128	272	.620		.69	
The year					13,600		119	484	1.10		14.96	

Buffalo River near Lobelville, Tenn.

Location.- Water-stage recorder at Standing Rock Bridge, 4 miles north of Lobelville, Perry County. Prior to June 1, 1934, staff gage at same site and datum. Zero of gage is 403.54 feet above mean sea level.

Drainage area.- 723 square miles.

Records available.- November 1927 to September 1934.

Extremes.- Maximum discharge recorded during year, 11,500 second-feet Mar. 26 (gage height, 13.80 feet); minimum, 221 second-feet Sept. 3 (gage height, 0.90 foot).
1927-34: Maximum discharge recorded, about 15,200 second-feet Mar. 24, 1929 (gage height, 16.25 feet); minimum, 142 second-feet Oct. 1-8, 1931 (gage height, 0.35 foot).

Remarks.- Records good. Slight regulation caused by operation of mill and power plant at Lobelville.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	354	309	375	498	442	1,500	2,020	515	321	535	595	243
2	356	318	360	480	428	1,500	1,670	515	318	595	635	234
3	315	324	462	480	480	8,850	1,450	498	315	595	495	227
4	300	356	635	462	445	9,000	1,340	498	324	480	424	245
5	280	535	655	498	445	6,050	1,190	480	351	410	365	268
6	272	595	850	635	431	3,170	1,120	480	354	400	336	270
7	268	615	2,260	1,620	414	2,380	1,040	480	396	386	330	300
8	262	515	2,140	4,710	406	2,020	990	480	498	555	345	282
9	258	445	1,400	5,250	396	1,780	895	462	462	760	327	268
10	255	424	990	2,700	392	1,620	850	445	445	872	315	258
11	250	403	805	2,080	392	1,450	828	445	498	695	291	250
12	260	389	675	1,620	389	1,400	805	480	635	555	300	421
13	268	366	595	1,400	389	1,220	782	480	555	462	288	858
14	272	345	555	1,220	386	1,140	715	434	480	406	275	1,500
15	265	382	515	1,060	382	1,020	695	417	410	369	272	1,450
16	262	369	575	965	375	940	675	445	375	382	262	1,140
17	339	351	655	850	369	872	675	445	477	354	258	965
18	366	336	782	782	353	805	695	431	1,020	350	253	918
19	330	330	1,450	715	369	828	675	403	1,060	318	250	738
20	309	321	1,620	675	372	850	655	389	990	315	243	555
21	297	315	1,500	655	369	990	635	378	760	342	255	462
22	291	303	1,290	655	375	1,560	615	369	615	321	294	424
23	382	339	1,140	635	400	1,900	615	375	498	291	366	378
24	410	389	955	595	396	3,450	635	445	434	288	336	351
25	431	375	828	555	424	11,100	615	417	410	282	330	336
26	403	369	782	535	1,290	11,500	595	363	375	494	312	315
27	372	357	695	515	1,840	8,270	575	354	366	434	288	294
28	354	345	655	498	1,670	5,070	575	342	342	840	282	285
29	327	336	575	480		3,590	565	333	336	850	285	338
30	321	333	555	462		3,380	535	330	442	782	270	515
31	315		615	462		2,320		327		1,060	253	
Month	Maximum					Minimum	Mean		Per square mile	Run-off in inches		
October	431					250	314		0.434	0.50		
November	615					303	382		.528	.59		
December	1,620					360	899		1.24	1.43		
January	5,250					462	1,121		1.55	1.79		
February	1,840					363	530		.733	.76		
March	11,500					805	3,275		4.53	5.22		
April	2,020					535	657		1.19	1.35		
May	615					327	428		.592	.68		
June	1,060					315	495		.685	.76		
July	1,060					282	512		.708	.82		
August	895					243	337		.466	.54		
September	1,500					227	503		.696	.78		
The year	11,500					227	809		1.12	15.20		

Big Sandy River at Bruceton, Tenn.

Location.- Chain gage at highway bridge two-thirds of a mile above mouth of Cherry Creek and three-quarters of a mile northeast of Bruceton, Carroll County.

Drainage area.- 171 square miles.

Records available.- July 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,140 second-feet Dec. 18 (gage height, 12.94 feet); minimum, 50 second-feet Aug. 11-13, 15-17, 21, Sept. 3; minimum gage height, 2.37 feet Aug. 13, 16.

1929-34: Maximum discharge recorded, 3,640 second-feet Jan. 11, 1930 (gage height, 13.98 feet, from high-water mark); minimum, 42 second-feet Aug. 12, 1930; minimum gage height, 2.24 feet Sept. 28, 30, 1931.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	88	105	157	117	178	194	105	59	79	64	51
2	88	88	105	136	178	373	171	99	59	79	64	51
3	77	88	186	130	157	2,170	164	99	55	69	60	50
4	77	86	164	143	130	2,210	157	93	55	69	56	64
5	77	1,610	124	171	117	1,970	143	88	55	64	56	60
6	72	300	900	143	117	318	143	117	93	64	56	52
7	72	150	1,160	1,220	117	217	1,500	111	194	69	52	56
8	72	124	1,130	592	117	1,690	318	88	65	69	52	69
9	72	117	171	217	111	1,690	201	82	59	69	52	60
10	72	111	143	186	105	318	171	77	88	64	51	56
11	72	105	136	164	117	233	171	77	825	64	50	56
12	72	105	124	164	130	194	136	72	675	64	50	237
13	82	111	186	171	124	171	130	72	233	60	50	102
14	72	105	143	150	111	164	124	68	32	60	52	402
15	77	99	136	136	111	143	124	610	68	60	50	84
16	88	99	1,300	136	105	143	124	300	63	64	50	255
17	164	99	2,090	143	105	136	124	99	63	60	50	79
18	88	105	3,140	136	117	150	117	88	2,170	60	84	69
19	77	105	2,830	157	171	217	143	77	2,250	60	56	60
20	77	105	2,740	150	111	201	117	72	2,250	516	52	60
21	77	111	2,050	164	117	233	105	72	135	79	50	56
22	99	111	392	164	171	171	136	88	96	69	74	1,260
23	111	111	354	143	150	164	136	77	75	64	64	421
24	99	111	186	130	124	2,050	117	77	79	60	60	203
25	82	111	186	130	336	2,830	105	72	96	56	255	96
26	77	105	217	124	1,580	2,700	99	63	79	60	122	79
27	82	105	150	124	1,440	2,420	124	63	64	60	60	74
28	88	105	136	124	318	1,500	178	63	74	56	56	69
29	68	105	143	117		336	124	59	74	56	52	364
30	82	105	150	105		249	105	59	74	64	52	1,500
31	82		150	93		164		59		69	52	
Month				Maximum	Minimum	Mean	Per square mile		Run-off in inches			
October				164	72	84.1	0.492		0.57			
November				1,610	66	163	.953		1.06			
December				3,140	105	682	3.99		4.60			
January				1,220	93	168	1.10		1.27			
February				1,560	105	239	1.40		1.46			
March				2,830	136	842	4.92		5.87			
April				1,500	99	190	1.11		1.24			
May				610	59	105	.614		.71			
June				2,250	55	344	2.01		2.24			
July				516	56	79.2	.463		.53			
August				255	50	64.0	.374		.43			
September				1,500	50	203	1.19		1.33			
The year				3,140	50	266	1.56		21.11			

Cache River at Forman, Ill.

Location.- Wire gage in NE $\frac{1}{4}$ sec. 31, T. 13 S., R. 3 E., at Chicago, Burlington & Quincy Railroad bridge at Forman, Johnson County, 1 mile below Dutchman Creek.

Drainage area.- 240 square miles.

Records available.- October 1922 to September 1934.

Average discharge.- 10 years (1924-34), 310 second-feet.

Extremes.- Maximum discharge recorded during year, 935 second-feet Mar. 23 (gage height, 9.89 feet); minimum recorded, 0.6 second-foot Oct. 9 (gage height, 0.68 foot).
1922-34: Maximum discharge recorded, 9,030 second-feet Jan. 1, 1933; maximum gage height, 17.5 feet (present datum) Jan. 26, 1929; no flow July 31, Aug. 1, 1923, July 29 to Sept. 15, 1930, Sept. 24, 25, Oct. 16-27, 1931.

Remarks.- Records poor. Discharge estimated Apr. 23, July 27-31.

Discharge, in second-feet, 1933-34

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	7.4	5.4	9.3	10	11	494	83	3.8	237	452	4.2
2	77	7.0	5.4	8.9	9.7	107	301	65	3.8	128	746	3.8
3	19	6.4	5.4	8.4	9.3	494	183	56	3.8	40	690	8.9
4	6.0	5.5	5.4	6.1	9.1	774	158	44	3.8	18	494	7.6
5	3.8	14	5.4	150	8.9	774	262	40	6.7	12	314	6.8
6	2.4	262	5.4	225	8.7	704	193	44	5.2	8.2	262	6.1
7	1.6	249	5.4	158	8.7	634	150	36	19	69	203	5.4
8	2.0	107	5.4	135	8.5	522	128	33	13	95	89	10
9	.6	56	5.4	121	8.4	354	107	28	28	59	50	13
10	1.6	36	5.4	95	8.0	59	95	25	13	41	33	12
11	1.3	15	5.4	68	7.9	107	89	21	9.5	14	26	9.9
12	1.3	11	5.4	50	7.6	95	77	18	8.5	13	22	480
13	1.3	9.3	5.4	44	7.3	107	68	16	7.3	16	20	327
14	1.3	7.3	5.4	38	7.0	68	62	14	6.1	37	15	237
15	1.3	6.7	5.4	36	6.8	62	53	59	4.9	74	13	438
16	50	6.4	5.4	33	6.6	56	50	39	3.8	95	12	438
17	214	5.0	40	26	6.2	50	50	31	2.8	33	9.7	596
18	174	5.5	150	21	6.2	150	47	22	1.5	9.7	71	275
19	135	5.5	107	20	6.0	249	41	18	1.3	7.0	53	128
20	13	5.5	107	18	5.8	249	37	15	1.3	6.7	19	74
21	12	5.5	95	17	5.4	166	33	12	1.3	6.8	16	62
22	203	5.5	101	16	5.4	135	30	9.9	1.3	8.9	13	40
23	214	5.5	26	16	5.2	89	28	8.5	1.3	9.9	12	35
24	135	5.5	71	13	5.0	59	26	7.0	1.3	9.3	11	34
25	95	5.5	24	13	5.0	44	23	6.2	5.5	7.3	9.9	50
26	71	5.5	18	13	5.0	606	19	5.5	11	5.4	9.5	22
27	16	5.4	14	12	4.9	816	410	5.2	68	4.0	8.5	16
28	12	5.4	13	12	4.9	920	410	4.9	18	3.7	7.3	11
29	7.9	5.4	11	12		860	203	4.4	14	3.3	6.2	166
30	6.4	5.4	10	11		788	114	4.0	11	2.8	5.4	676
31	8.0		9.7	11		718		3.8		2.6	4.9	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	214	0.6	51.2	0.213	0.25
November	262	5.4	29.4	.122	.14
December	150	5.4	28.5	.119	.14
January	225	8.4	45.8	.191	.22
February	10	4.9	7.05	.029	.03
March	920	11	349	1.45	1.67
April	494	19	131	.546	.61
May	33	3.8	25.1	.104	.12
June	68	1.3	9.33	.039	.04
July	237	2.6	35.4	.148	.17
August	746	4.9	119	.496	.57
September	676	3.8	132	.550	.61
The year	920	.6	81.0	.330	4.57

In addition to the records of flow obtained at the gaging stations and reported in the preceding pages, measurements were made at other points, as shown by the following table:

Miscellaneous discharge measurements in Ohio River drainage basin during the year ending Sept. 30, 1934.

Date	Stream	Tributary to-	Locality	Discharge Sec.-ft.
Dec. 5	Ohio River.....	Mississippi River....	Wheeling, W. Va.....	21,300
Jan. 9	.....do.....	.....do.....	.....do.....	165,000
Mar. 27	.....do.....	.....do.....	.....do.....	32,600
Apr. 10	.....do.....	.....do.....	.....do.....	63,110
Apr. 27	.....do.....	.....do.....	.....do.....	26,580
May 8	.....do.....	.....do.....	.....do.....	10,880
May 21	.....do.....	.....do.....	.....do.....	8,690
Aug. 21	.....do.....	.....do.....	.....do.....	13,300
Nov. 27	Chartiers Creek..	Ohio River.....	Gaging station at Carnegie, Pa.	31.6
Nov. 29	.....do.....	.....do.....	.....do.....	32.1
Feb. 16	.....do.....	.....do.....	.....do.....	98.3
Apr. 12	.....do.....	.....do.....	.....do.....	649
Apr. 12	.....do.....	.....do.....	.....do.....	637
May 28	.....do.....	.....do.....	.....do.....	52.6
Aug. 10	.....do.....	.....do.....	.....do.....	39.0
Aug. 10	.....do.....	.....do.....	.....do.....	37.3
Aug. 27	Olentangy River..	Scioto River.....	South line of northeast quarter of T. 5 N., R. 19 W., Ohio.	.79
Aug. 27	.....do.....	.....do.....	0.6 mile above south line of northeast quarter of T. 5 N., R. 19 W., Ohio.	.69
Aug. 27	.....do.....	.....do.....	.....do.....	.75
July 18	Pigeon River.....	French Broad River...	Newport, Tenn.....	1,360
Oct. 2	Little Limestone Creek.	Nolichucky River.....	Telford, Tenn.....	3.81
Oct. 2	Big Limestone Creek.	.....do.....	Limestone, Tenn.....	11.1
Oct. 2	Lick Creek.....	.....do.....	Near Mohawk, Tenn.....	16.1
Oct. 11	Elk Creek.....	Watauga River.....	Near Butler, Tenn.....	19.8
Oct. 11	Roane Creek.....	.....do.....	Butler, Tenn.....	40.8
Oct. 11	Watauga River....	Holston River.....	Near Stump Knob, Tenn.....	51.0
Oct. 4	Big Creek.....	Clinch River.....	Lafollette, Tenn.....	.67
Oct. 3	Cove Creek.....	.....do.....	Careyville, Tenn.....	1.32
Oct. 4	Indian Creek.....	Poplar Creek.....	Oliver Springs, Tenn.....	.36
Feb. 16	Richland Creek...	Tennessee River.....	Morgantown, Tenn.....	14.4
Nov. 4	Hyatt Creek.....	Valley River.....	2 miles above Marble, N. C...	2.53
Mar. 24	Chattanooga Creek	Tennessee River.....	Chattanooga, Tenn.....	634
Mar. 24	Paint Rock River..	.....do.....	Near Gurley, Ala.....	1,046
Oct. 24	.....do.....	.....do.....	Paint Rock, Ala.....	6.01
Nov. 2	Flintville Mill Spring.	Flint River.....	Flintville, Tenn.....	2.80
Nov. 1	Evans Spring near house.	.....do.....	Near Corders Cross Roads, Tenn.	.998
Nov. 1	Evans Spring east of house.	.....do.....	.....do.....	.18
Nov. 1	Higgins Spring...	.....do.....	.....do.....	.36
Nov. 1	Quaddello Hamilton Spring.	Head of Lee's Creek...	.....do.....	.25
Nov. 1	Crystal Spring...	Head of Crystal Creek.	Crystal Spring, Tenn.....	.101
Oct. 14	Huntsville Spring	Tennessee River.....	Huntsville, Ala.....	.29
Oct. 12	Flint Creek.....	.....do.....	Near Huntsville, Ala.....	8.87
Nov. 10	Elk Head Spring...	Headwaters of Elk River.	Near Pelham, Tenn.....	9.47
Nov. 10	Sartain Spring...	Elk River.....	.....do.....	.261
Nov. 10	Wonder Cave Spring.	.....do.....	.....do.....	1.14
Nov. 9	Cherry Spring....	Head of Spring Creek..	Near Estill Springs, Tenn...	.343
Nov. 9	Boswell Springs..	Elk River.....	.....do.....	.437
Nov. 9	Blue Spring.....	Spring Creek.....	.....do.....	.303
Nov. 9	Call Spring.....	.....do.....	.....do.....	.234
Nov. 9	Ice Spring.....	Elk River.....	1/2 mile south of Est'll Springs, Tenn.	4.54
Nov. 9	Morgan Spring....	.....do.....	3 miles north of Estill Springs, Tenn.	.364
Nov. 16	Blue Spring.....	Head of Rock Creek...	About 4 miles west of Tulla- homa, Tenn.	.547
Nov. 14	Tullahoma Spring.	Rock Creek.....	Tullahoma, Tenn.....	.217
Nov. 16	Gannaway Spring..	Elk River.....	Near Tullahoma, Tenn.....	.135
Nov. 10	Miller Spring....	Boiling Fork.....	Cowan, Tenn.....	.841
Nov. 2	Winchester Water- Supply Spring.	.....do.....	1 mile north of Winchester, Tenn.	.118
Nov. 9	Winchester Springs.	Winchester Springs Branch.	Winchester, Tenn.....	3.11
Nov. 14	Cumberland Springs (Right Spring).	Hurricane Creek.....	Near Lynchburg, Tenn.....	.287
Nov. 14	Cumberland Springs (Left Spring).	.....do.....	.....do.....	.30
Nov. 14	Holder Spring be- low Cumberland Spring Dam.	Elk River.....	.....do.....	.255
				.143

Miscellaneous discharge measurements in Ohio River drainage basin during the year ending Sept. 30, 1934-- Continued.

Date	Stream	Tributary to-	Locality	Discharge Sec.-ft.
Nov. 11	Mulberry Spring...	Elk River.....	Near Mulberry, Tenn. (below forks).	9.65
Nov. 1	Luton Jones Spring	....do.....	Near Camargo, Tenn.....	.096
Nov. 4	Higgins Spring....	....do.....	.....do.....	.11
Nov. 1	Boon Falls Spring.	....do.....	Near Skinnum, Tenn.....	.28
Oct. 20	Sugar Creek.....	....do.....	3 miles southwest of Minor Hill, Tenn.	39.6
Nov. 2	Right Cascade Spring.	Duck River.....	Near Normandy, Tenn.....	1.61
Nov. 3	Left Cascade Spring.	....do.....	.....do.....	1.73
Nov. 16	Huge Ledford's Spring (upper).	....do.....	.....do.....	.82
Nov. 16	Huge Ledford's Spring (lower).	....do.....	.....do.....	.235
Nov. 16	Slate Falls Branch.	....do.....	.....do.....	.114
Nov. 16	Calanthe Lake overflow.	....do.....	3½ miles north of Tullahoma, Tenn.	1.27
Nov. 16	Carroll Spring...	....do.....	Near Tullahoma, Tenn.....	8.77
Oct. 26	Garrison Fork Creek.	....do.....	Near Wartrace, Tenn.....	5.85
Nov. 14	Garrison Fork Creek.	....do.....	.....do.....	14.1
Mar. 22	Lewisburg Lake overflow.	....do.....	Near Lewisburg, Tenn.....	3.59
Oct. 18	Rutherford Creek..do.....	Near Columbia, Tenn.....	4.82
Oct. 18	Bigbee Creek.....do.....	Near Mount Pleasant, Tenn..	8.77

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